Doctoral Dissertation
Double Doctoral Program Politecnico di Torino – Tsinghua University
Curriculum Transnational Architectural models in a globalized world
(35th cycle)

The Legacy of the Involvement

Unfolding academic design *praxis*

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Politecnico di Torino
2024

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Camilla Forina
Turin, June 14th, 2024

***** This dissertation is presented in partial fulfillment of the requirements for **Ph.D. degree** in the Graduate School of Politecnico di Torino (ScuDo).

Summary

In September 2019, Politecnico di Torino signed the initiative Polito STUDIO in collaboration with Ordine degli Architetti di Torino (OAT, Turin Chambers of Architects) to steer the first project of technology transfer (TT) in the field of Architecture. The project aims to boost an iterative model of collaboration between scholars in architecture and private firms registered at OAT for knowledge exchange and production. Such a framework can be explained as the reflection of a tendency in academic production that frequently encompasses interests and accountabilities rooted outside the scientific community towards increasingly application-oriented approaches, as well as an effect of the intensification of European legislation demanding public engagement in the redistribution of products and systems likely to promote technical or economic progress.

This research takes such an initiative — that is part of the University's Third Mission (TM) mandate that as ANVUR suggests encompasses the gathering of all results and knowledge transfer initiatives closely associated with economic stakeholders, with the ultimate goal of generating economic advantages for universities and institutions, while also contributing to the overall improvement of the regions in which they are situated — as a premise and empirical field to unpack the Italian dichotomy that counterposes practice and research in architecture. Indeed, the two poles of the discipline are in the Italian context moving progressively apart because of a normative framework that prevents scholars from practicing and an academic environment that rarely pitches professionals within the educational path.

The Polito STUDIO approach is intended as a mode to move beyond established Italian academic boundaries towards a more applied branch of the research. More specifically, towards a research attitude that intends design practice as an arena for empirical investigation — as also endorsed by the National Agency for the Evaluation of University and Research (ANVUR) that maintain, although in an intricate system of evaluation, design projects among the scientific outputs recognized in the 08a disciplinary sector of Architecture. In this sense, it is partly inspired by the functioning of University-led Design Institutes (UDIs). Specifically, it relates to the phenomenon of university-based architects who serve as both professors within the university and designers in its Design Institute. In a publication for the 60th anniversary of THAD, Zhuang Weimin, the dean of the Architectural Design and Research Institute of Tsinghua University and professor in architecture, underscored that professors-designers envision their firms within the UDI as a space dedicated to the accumulation of knowledge, the advancement of research, and students' education. This vision emphasizes a strong symbiosis between education and research, where architects, engineers, professors, and students all form an integral part of its personnel. Consequently, the institution's design projects and day-to-day practices are inherently research-oriented.

The hypothesis of the work is hence that in retrospectively retracing the edges of knowledge production in the development of a project within the university it is appropriate to define an evaluative model that takes into account (and highlights) the various iterative exchanges (and advancements) that have been performed. By ideally building upon Amirante's pursuit of a more performative mode of assessing architectural projects as scientific outputs, this work capitalizes on the insights gained from observing the research group engaging in third-mission activities and technology transfer to advance the research agenda and drawing on experimental approach in steering scientific investigation.

The theoretical framework broadens to consider the scientific debate investigating contemporary processes of knowledge production and future patterns more generally. This perspective, on one side, detects an intensifying external steer (economic, political, social, and so forth) among the main actors in the arena that push towards applied approaches. On the other side, it highlights the

pervasiveness of the evaluation culture propelled (in many yet not all sectors) by bibliometric indicators that is gradually leading towards a quantitative yet not qualitative growth in academic production. In this perspective, using the ANVUR regulations concerning ASN, VQR, and VQR-TM, the work's intent is to contribute to the broader debate on how and when the project can be considered a scientific research product by precisely identifying in technology transfer a possible endorsement. Hence, by leveraging the scheme adopted for the third VQR exercise to assess TM activities, this work proposes the development of a similar structure to evaluate the architectural design as a scientific product. Precisely defining the knowledge produced through its transmission, the depicted scheme establishes a shared model for validating projects. This document will then consist of the design proposal per se but supplemented with a range of other information highlighting its margins for generalizability, transferability, and replicability. The proposal recommends seizing the opportunity presented by the cumulative efforts of the scientific community in VQR-08a to refine more appropriate criteria and indicators. The ultimate goal is to integrate this model into individual-focused systems, such as the ASN.

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Glossary of English and Italian Acronyms and Abbreviations

ACE Architects' Council of Europe
Am *Raccomandazione* Amendament
ANVUR *Agenzia per la valutazione del sistema Universitario e della ricerca* National Agency for the Evaluation of Universities and Research Institutes
ASN *Abilitazione Scientifica Nazionale* National Scientific Qualification
CNAPPC *Consiglio Nazionale degli Architetti Pianificatori Paesaggisti e Conservatori*
CR China Room Research Group (Politecnico di Torino)
CUN *Consiglio Universitario Nazionale* Italian National University Council
EEC *Comunità Economica Europea* European Economic Community
EC *Comunità Europea* Eropean Community
DD *Decreto direttoriale* Directorial Decree
Dir. *Direttiva* Directive
DIs Design Institutes
DLgs *Decreto Legislativo* Legislative Decree
DM *Decreto Ministeriale* Ministerial Decree
DPR *Decreto Presidenziale* Presidential Decree
GEV *Gruppo di Esperti Valutatori (incaricati per la VQR)* Group of Expert Evaluators (appointed for VQR)
HES Higher Education System
L *Legge* Law
MIUR *Ministero dell'Istruzione, dell'Università e della Ricerca* Ministry of Education, University and Research (Italy)
MOE Ministry of Education (China)
MOST Ministry of Science and Technology (China)
MOHURD Ministry of Housing and Urban-Rural Development (China)
MSC *Macro Settore Concorsuale* Group of academic recruitment field
NPK New Production of Knowledge
OAT *Ordine degli Architetti di Torino* Turin Chamber of Architects
PDIs Private Design Institutes
Polito Politecnico di Torino
SC *Settore Concorsuale* Academic Recruitment Field

SCUT South China University of Technology
SCUTAD Architectural Design & Research Institute of SCUT
SoDIs State-owned Design Institutes
SSD *Settore scientifico-disciplinare* Academic Discipline
TEIs Tertiary Education Institutions
THAD Architectural Design and Research Institute of Tsinghua University
TDH Turin Design Hub
TM Third Mission
TSH Tsinghua University
TT Technology Transfer
TJAD Tongji Architectural Design and Research Institute
UDIs University-led Design Institutes
VQR *Valutazione della Qualità della Ricerca* Research Quality Assessment
VQR3 *Terzo esercizio di Valutazione della Qualità della Ricerca* Third excercise of the Research Quality Assessment (2015-2019)
VQR-08a *Valutazione della Qualità della Ricerca Area 08a* Research Quality Assessment for the 08a area
VQR-TM *Valutazione della Qualità della Ricerca-Terza Missione* Research Quality Assessment-Third Mission
VQR3-TM *Terzo esercizio di Valutazione della Qualità della Ricerca-Terza Missione T*hird excercise of the Research Quality Assessment-Third Mission (2015-2019)

For proper name abbreviations refer to the credits of the individual project in the appendixes.

Glossary of English and Italian academic positions

The translation of Italian academic positions has been carried out based on the guidelines provided by MIUR in 2010, as outlined in the document titled *Definizioni della tabella di corrispondenza tra posizioni accademiche italiane cd estere*. In particular, the reference system used for this translation was the one adopted in the United States.

Rector *Rettore*
Full Professor *Professore Ordinario (I fascia)*
Associate Professor *Professore Associato (II fascia)*
Assistant Professor *Ricercatore a tempo indeterminato*
Assistant Professor with time contract *Ricercatore a Tempo Determinato di tipo B (RTDb)*
Research Associate with time contract *Ricercatore a Tempo Determinato di tipo A (RTDa)*
Research Fellow *Assegno di ricerca*
Research Grant *Borsa di ricerca*

English translations of all documents and references originally published in Italian are to be considered the sole responsibility of the author unless explicitly stated otherwise. In the case of direct quotations within the text, it has been chosen for reading convenience to include the translated text; original excerpts are rather included in the relevant footnotes.

Prologue

Reasons and origins of the work

Research background

The research is part of the Joint Ph.D. curriculum named "**Transnational Architectural Models in a Globalized World**" within the framework of the *Doctoral Program in Architecture. History and Project* at Politecnico di Torino and the *Doctoral Program in Architecture, Urban and Rural Planning* at Tsinghua University in Beijing. The terms of the agreement stipulate that the participants spend the 3-year working under the joint supervision of professors from Polito and Tsinghua, attending training courses in both institutions, and foresee a period of study of 18 months in the hosting university to allow the direct observation of the studied phenomena as well as the consultation of archival sources. Nevertheless, initiating the Ph.D. scholarship in November 2019, COVID-19 restrictions impacted the entire study period preventing the possibility of traveling to China. The Joint Ph.D. program proceeded thus remotely through the collaboration among tutors from both universities and the remote attendance of all the required activities. At the same time, the prolonged restrictions due to the pandemic break out — and yet the impossibility of direct exposure to places, sources, processes etc. — determined a constant state of uncertainty throughout the 3-years investigation as to whether or not conducting a field survey; such uncertainty culminated in the corroboration of a radical rearrangement of the research that progressively reduced the importance of the Chinese benchmark

privileging the Italian (and Turinese) panorama.

This research thus takes its clue from a specific circumstance within the China Room research group (hereafter CR) and thus some reflections resulting from experiences collected in the two years preempting the beginning of my Ph.D. (2018-2019) and further explored during the years of the doctoral study. More specifically two Research Grants carried out in the same research group and strongly permeated by the participation in design proceedings and then unleashed into other projects over the following years.

In January 2018 I was involved as a research grant holder within CR to take part in the design team appointed to develop the *Olympic Experience* project: the refurbishment of the Main Oxygen Factory Workshop in Shougang (Beijing) — the very same site tackled in the master thesis (2016-2017) — for the Big Air Venue Beijing Winter Olympic Games 2022. The project has been realized in collaboration with THAD - Architectural Design and Research Institute of Tsinghua University and Atelier TeamMinus. Back at the time, the project constituted the largest of the engagements conducted so far as well as one of the firsts design of the yet newly established research hub in Politecnico di Torino that was attempting to launch a platform for applied and on-field experimentation focused on Chinese urbanization and architecture. The group, now in its sixth year of activity (among which only two as formalized research center), includes scholars from DAD - Department of Architecture and Design, and DIST - Interuniversity Department of Regional and Urban Studies and Planning. Apart from the design exercise per se, the project has been faced since the very start with the specific intention to later pursue a scientific output consisting of the reconstruction of its process. In this perspective, I was charged — in addition to being part of the design team and main appointed for the implementation of all the design materials besides the 3d model (floor plans, elevations, sections, axonometric views, etc.) — to keep track of all the material evidence/exchanges/ communications occurred in its course. Based on this archive in 2022 has been published the book *The Story Of A Section. Designing The Shougang Oxygen Factory* in which the authors Michele Bonino, Edoardo Bruno, Alessandro Armando, and Giovanni Durbiano meticulously reconstruct the process of project implementation by carefully interpreting the archive of the documents and

exchanges realized during the design. Such involvement has been the first pin for further exploration of what would mean to approach a design proceeding within the academia, as well as the first field trial of a broader ontology recognizing not only the materiality of the project but also the wide spectrum of the socio-technical features designating the architectural practice: documents, interactions, negotiations; thus identifying the project as the larger process of actions and reactions occurring among the involved actors. It is also thanks to this first experience that the collection and archiving of all documents, meetings and exchanges continued in the projects developed in subsequent years.

Besides this case, further activities led within CR to the sedimentation of a number of design projects and curatorship before and after Shougang. Such projects in the majority embrace the specificity of the research branches and doctoral dissertations, to further enhance the understanding and critical capacity of the group researchers through practical first-hand involvement in the object and field of study. Just to name a few: the refurbishment of the Pearl River Piano Factory in Guangzhou (Guangdong Province, China) inaugurated in 2021, the concept plan of the Yanzhou Island (Zhaoqing, Guangdong Province, China) realized in 2016, the curatorship of the exhibition *CHINA GOES URBAN The City to Come* hosted in 2020 at MAO Museo d'Arte Orientale (Turin) and the installation *Hutong Playground* for the 2017 Beijing Design Week in collaboration with EPFL and Tsinghua University[2]. In this sense, the proceedings and design projects developed within CR consisted of the premises/hints/case study/supports for the research conducted within the group and frequently involved doctoral students and professors belonging not just to China Room or Politecnico di Torino, but also to foreign institutions and in particular Chinese universities and agencies. In most cases indeed, the partners were figures belonging to China's top-ranked universities such as Tsinghua University (Beijing) and South China University of Technology (Guangzhou), and more specifically their operative wing: the Design Institutes. The collected

[2] For further information see the very first report published by the research group in 2021 in which the activities carried out in about a decade of collaborations with China are systematized to "underline the strategic role of research both as a discovery and a systematization of practices which allows to carry out scientific knowledge land design practices - and where the referred geography becomes the occasion to test instruments of investigation" (Bruno et al, 2021: 9).

collaborations led therefore to a gradual mutual understanding of the notions of design and more specifically its role within the educational and research field in China, as well as an insightful gaze at modes, actors, and strategies of design practice in PRC from within.

In my case, by contrast, the procedure progressed in the opposite direction; or rather broadening from a specific field study, towards a theoretical and generalizable approach. Indeed, over the course of my four years within China Room, I have been part of other four design proceedings developed by CR and Chinese Design Institutes. Although these projects did not start with the same assumptions and systematization as Shougang's and only in some cases constituted direct material for observation and experimentation of other doctoral research, it is possible to find in them several elements in common. First and foremost, an incremental methodological progression capable of disentangling the logic of design praxis in China. Nonetheless, what makes it even more intriguing is the exploration of the research group's behavior as they strive to align their applied research with Italian regulations. However, it is important to note that this issue will be further examined and problematized in Chapter 4 by retrospectively unfolding the sequence of designs analyzed in this study.

Among the aforementioned projects, I have been assistant curator of the 2019 Bi-city Shenzhen Biennale of Urbanism/Architecture main venue exhibition *Eyes of the City* curated by Carlo Ratti Associati, Politecnico di Torino/China Room and South China University of Technology (February 2019 - March 2020), as well as part of the design team appointed for the unrealized Masterplan realized for the Square of Futian Station (Sunken Plaza, Shenzhen), located in front of the site hosting the 2019 UABB. The design has been developed by the curatorial team along with invited international practitioners such as Atelier Bow-Wow+Tokyo Tech Tsukamoto Lab, NODE Architecture and Urbanism, HIL Architects, Jiang & Associates Design with the support of Guangzhou Architectural Engineering Design Institute Co., Ltd. The project exploited the design for the reconfiguration of the existing infrastructure as a cue to further reflect on the impact that the contemporary notion of infrastructure and hyper-mobility have in urban design. The design though has not been realized and neither discussed in public/ institutionalized spheres, therefore it will not be included as one of the cases

analyzed in this study.

Moreover, in 2020 (June-October) I have been project architect for the design *Prosperous Lishui* realized by Politecnico di Torino/China Room and IAM-Institute of Mountain Architecture in collaboration with the South China University of Technology. It was awarded 3rd prize in the "Future Shan Shui City International Urban Design Competition". The design, located in a valley in the southern Zhejiang province, has been the opportunity for a broader design-based reflection on the consequences that urban development has on the agricultural terrains, questioning innovative models of agricultural production and traditional landscape safeguard yet not renouncing a high raise of urbanization. At the same time, the project has been the opportunity to experiment with a broader network of mutual enhancement including in the design team professors and researchers from various departments that worked simultaneously in smaller subgroups. The enlargement of partakers required a consistent increase in the number of exchange opportunities among Polito internal teams as well as Chinese partners and most importantly a systematization of the cooperation, thus defining an even more aptly interdisciplinary and transnational stream of work.

Even more crucial to the development of this dissertation, was the project POLITO Studio signed on September 21, 2020 (corresponding to the conclusion of my first year as a Ph.D. student) by Polito Rector Guido Saracco and Oat President Massimo Giuntoli. Its premises consist of the commitment of both institutions to strengthening the relationship between academia and professional practice in Turin by deploying the *know-how* gathered from Polito in abroad scenarios to embody a project for training-in-practice in the field of architecture. Consistent with the explicit mandate of MIUR that reclaims the Third Mission among the institutional responsibilities of each university as well as the Polito 2018-2024 Strategic Plan aiming to multiply the amount of "models for technology transfer in the field of architecture, planning and design" (70) and the "applied research aimed at industrial innovation and societal challenges" (35), China Room has been appointed to the development of the first model to be staged in China. Apart from being a forecasting chance to smooth the interplay among the two institutions (Oat and Polito) notoriously witnessing frictions during much of the latter decades, such an initiative has been an opportunity for

the researchers involved to further explore an innovative model of approaching design-oriented research involving external practitioners and reflect upon the opportunities and potentialities of a community of practice mediating between Academia and Profession. In this sense, has been launched a wider research project that takes its cue from the cooperation experiences described so far as well as the testimony of the Chinese context, in which the apparent split between professional practice and academic research is approached with fewer limitations. The project's main attempt is to identify and test the threshold between speculative investigation and concrete relapse of design practice, observing the innovation potentials linked to a direct mixing of different competencies, examining the specific (Italian) institutional framework as well as already existing models to encourage such permeation and open up towards incremental modes of innovation. In such a framework, the team involved first participated in the definition of the operative mechanism and later also in the concrete design activities questioning both from a theoretical, bureaucratic, and empirical point of view the epistemic framework as well as its margins for innovation. Although being still too early to catch the effects/achievements/conclusions of this joint venture, some preliminary considerations have been presented to a wider public in international conferences in these years (Bonino et al, 2021; Bonino et al., ongoing). This thesis, handed three years after the launch of the initiative, consists of one of the first outcomes of the research, and this initiative is the core of the chapter 6-7.

Framing the research questions

My background as the author of a Ph.D. dissertation, thus, is pervaded by the struggle to recognize the aforementioned kinds of activities (design projects, exhibition curatorship, design consultancies, etc.) as part of my mandate, and by extension of a scholar mandate in general. The many efforts and debates that took place both inside the research group (with tutors and fellows) and outside of it (in the department, as well as in wider collective discussions held with members of other universities), concerning if and how to improve their recognition to assessable scientific outputs (and thus to publish), confirms the perception that, at least in the Italian academic sector, the architecture discipline is still in a position of uncertainty as to whether or not to claim the validity of one of its main

competencies: the design act. This condition has been even stressed in recent decades and is echoed in national and international threads of debate. On one side it is the reflection of a notion of design and project that is complex, volatile, and exposed to various facets and intertwinings: from the social to the political, from the historical to the formal, from the technical to the functional, etc. On the other side, it is due to the socio-political and economic changes that occurred during much of the latter half of the century resulting in the intensification of systematization in the field of education and training culminating in the sharpening of a discrepancy among the academic disciplinary specialization and the practical procedures.

Indeed, the proliferation of norms adopted in the Italian, as well as European settings, led on one side to a shared, hyper-connected system, while on the other to a waiver of the dissimilarities (or peculiarities) among vocational and degree courses, polytechnics, and universities. The necessity to standardize specific items for the course program indeed seems to result nowadays in a perfectly coordinated structure among all the national schools, to a struggle to distinguish a teaching approach (or educational program) that is shared, specific, and exclusive to one university only. Such a condition is recognizable also in the loss of the sense of common belonging or a unitary statement of the single institutions or departments; and has as well been the perception as an in-mobility student first — B.Arch. at Roma Tre University in 2014, Erasmus at Bauhaus Universitat in Weimar in 2015, and M.Arch. at Politecnico di Torino in 2017 — and researcher later. Although some schools managed to keep a recognizable common approach, in the great majority it takes to a fragmented environment in which methods, interpretations, and influences are more related to the will of the single teacher than to a broader shared plan. This tendency of renouncing the renowned and centralized authorship that for decades characterized the architectural environment, overdraw a multiplication (or fragmentation) of the adopted perspective, as well as redundant rhetoric deployed by such institutions in the attempt to diversify (at least on a promotional level) a rather identical route.

This attitude has moreover been flanked by progressively distancing the study of the discipline from its practice due to the tendency to increasingly bound the limits of action of the academic sector to preserve the integrity of an already

overcrowded professional market. A contingency that consisted in intensifying the limits for scholars to exercise the matter/substance they are supposed to eventually teach, or rather "theoretical and methodological aspects, concerning issues and techniques of contemporary design and environmental transformations, as well as in applied and experimental aspects, aimed at mastering typological, compositional, processual and constructive characters of different architectural scales, as well as connections with structural and plant engineering problems"[3] (CUN, 2015: 29-30). Nevertheless, these norms actually overdraw to an intensification of alternative ways to keep in informally realize projects although within the Academia. Thus constituting de facto the molding of space among the main competencies belonging (almost) exclusively to the figure of the architect (intended as a graduate in architecture, not necessarily a professional), it is debatable and also non-productive to preventing the exploitation of such an ability. Quoting Laura Ricci, full professor of Urban Planning at the Department of Planning, Design, Technology of Architecture at Sapienza University (Rome) during the conference "Sperimentare il progetto. Insegnamento e Ricerca scientifica nelle Scuole di Architettura" ("Experimenting the design project. Teaching and Scientific Research in Schools of Architecture", held on June 19th, 2014 in Rome) "the interdiction for university professors in the design disciplines to engage in professional experimentation and on-field validation is thereby demarcating the misleading identity of a faculty that must teach design without being able and knowing how to design, establishing a sterile and theoretical disciplinary self-referentiality"[4] (Ricci, 2014a: 16).

Such issues led to an increasing estrangement among the two spheres of the discipline: theoretical reflections and design practice. Indeed, although being generally esteemed in the academic environment an aptitude to recognize the

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[3] "Aspetti teorici e metodologici, concernenti i problemi e le tecniche della progettazione contemporanea e delle trasformazioni dell'ambiente, e in aspetti applicativi e sperimentali, finalizzati al controllo dei caratteri tipologici, compositivi, processuali e costruttivi delle diverse scale architettoniche, nonché alle connessioni con i problemi strutturali e impiantistici" (CUN, 2015: 29-30).

[4] "Il divieto per i professori universitari delle discipline del progetto di svolgere attività professionale di sperimentazione e di validazione sul campo sta dunque delineando la fuorviante identità di un corpo docente che deve insegnare a progettare senza potere e sapere progettare, affermando una sterile e teorica autoreferenzialità disciplinare" (Ricci, 2014a: 16).

project as a retrospective object of knowledge in itself (of society, culture, contexts, space, processes, techniques, habits, policies, etc), is less acknowledged to the design (intended as the concrete action of modifying the space) the ability to produce knowledge in the interim, and yet be ascribable as research output. It becomes even more controversial while considering that, although being design projects listed among the possible research products to be delivered for the National Scientific Qualification (ASN) as well as the national Research Quality Assessment (VQR), its evaluation is still tricky and furthermore is exclusively related to post-doctoral positions (first- and second-tier professors).

Consequently, nowadays in many cases, the most effective method deployed in obtaining acknowledged scientific products through the design still consists in its translation into scientific texts (monographs, articles, etc.) and thus the superimposition of a theoretical, and therefore more scientifically ascribable, perspective on the work performed. This is also due to the constant and necessary confrontation with the scientific productivity of bibliometric indicators and evaluation policies, which is triggering a process of quantitative, and not necessarily qualitative, intensification of publications meant more for evaluation purposes than for the opportunity to share results per se. Both aspects are retraceable, for example, considering the results of the VQR 2015-2019[5]. Of the 5434 products evaluated for this purpose indeed, 99,06% consisted of written contributions, and of these merely 14 % were rated of excellent and relevant quality deserving the highest "class A" label (ANVUR, 2021a). The remaining 0.94% pertained to the category defined as "other", i.e. design, drawing, exhibition, architectural project, art prototype, and related projects; the amount has been even less than those submitted in the previous VQR despite the various initiatives predisposed to prove and reclaim its validity happened in the last years.

As will further be explored within the work, such considerations cross national borders and witnessed a series of booms and busts also outside the Italian academic environment in particular since the 80s. The topicality and the relevance of this issue is yet demonstrated by a growing number of national and international publications and conferences addressing it as well as Ph.D. programs

[5] The VQR mechanism, its effects and the related national debate are touched in Chapter 1.

that are struggling to update the common procedure of scientific production to a more properly architectural scale — namely the Architectural Design Ph.D. held at the UCL Bartlett School of Architecture where candidates are required to develop a thesis concerning "a project and a text that share a research theme and a productive relationship"[6] or the Dap-R (Design and Architecture Practice Research) held in 2016/2017 in the RMIT University's School of Architecture and Design "an inter-institutional research project examining and mobilizing a practice-based approach to doctoral research and training in design and architecture"[7].

Nevertheless, in the case of this thesis, the intent is not to claim a scientificity intrinsically embedded in the architectural project, but rather to set the scene for its plausibility or the potential profitability that the project can infuse into the research. This consideration steers from the assumption that considering the deepest nature of the project as being in its effectuality, such ought also to be (or be allowed to) its theory and thus the academic performances.

It is thereby appropriate to explicitly disclose an aspect that has been so far implicitly stated, i.e. the interpretation that this work adopts in referring to *design*: an iterative mode of shape, transforming and implementing the space through architectural objects. In other words, this work is mainly related to the disciplinary sector 08/D1: ICAR/14, and in particular in the exposition of the project as a recurrent process nurturing the reconfiguration of the space as a response to real-world's issues and in compliance with codified models and regulations. Nevertheless, the elusiveness, or rather extensiveness, nature of design is yet consistent also in the statement of the scientific-disciplinary contents of this academic branch[8], that MIUR defines as following: "the scientific-disciplinary contents refer to architectural design, in its extension from detail to the urban dimension, as a process and synthetic occasion. They are divided into methodological aspects, concerning the theories of contemporary design;

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[6] Extract from the Ph.D. course presentation page at the following link: www.ucl.ac.uk/prospectve-students/graduate/research-degrees/architectural-design-mphil-phd

[7] Extract from the Ph.D. course presentation page at the following link: www.dap-r.info/about

[8] For a better understanding of Italian organization of the university see Chapter 1.

analytical-instrumental, for the study of the distributive, typological, morphological, and linguistic characters of architecture and the city; compositional, concerning the aggregative and formal logic by which the organism is defined in its elements and parts and is in relationship with its context; and designing, for the solution of specific issues related to interventions ex novo or on the constructed object"[9] (DM October 4th, 2000: all. B). In this sense, quoting the words of Jeremy Till (2007), "architecture exceeds the building as object, just as art exceeds the painting as object", but it is still in the ability to design that lies the architect's distinctiveness, and the researcher-designer should be able to deploy this advantage.

At this point, it is necessary to introduce as well the interpretation that this work adopts referring to *research*: the production or codification of knowledge that could be generalized, falsified and repeated. Yet again, it is necessary to better specify the approach/lens deployed towards the modalities of producing knowledge and innovation in this sense. The hegemony that academic institutions had since their inception in producing and distributing knowledge has been progressively flanked in the last decades by new interests, practices, and dynamics that pull near the academic and governmental institutions a wide range of heterogeneous locations and organizations. Academic institutions, in collaboration with governmental ones, are gradually expanding their missions and role as entrepreneurial agencies through a wide range of heterogeneous locations and organizations such as research centers, think tanks, spin-offs, and so on. Such institutions enable their members to expand their field of activity. In most cases, however, their studies are more related to applied sciences (physics, chemistry, biology, engineering, etc.) and less concerning other disciplines among which architecture. In this account, the researcher can not anymore (or at least not always) be considered an independent individual acting merely through the willingness to chase a broader level of knowledge. Indeed, Universities dynamics

[9] "I contenuti scientifico-disciplinari si riferiscono al progetto architettonico, nella sua estensione dal dettaglio alla dimensione urbana, come processo e momento di sintesi. Si articolano in aspetti metodologici, concernenti le teorie della progettazione contemporanea; analitico-strumentali, per lo studio dei caratteri distributivi, tipologici, morfologici, linguistici dell'architettura e della città; compositivi, riguardanti la logica aggregativa e formale con cui l'organismo si definisce nei suoi elementi e parti e si relaziona col suo contesto; progettuali, per la soluzione di tematiche specifiche relative ad interventi ex novo o sul costruito" (DM October 4th, 2000: all. B).

expose (through strategic plans, networks, rankings, etc.) an increasing interplay existing between scientific research and external interests (economic, political, social, etc.), thus corroborating a stream of research products and behaviors resulting of (or triggered by) the specific contingency to which they are intrinsically linked. Such a condition progressively led "the hegemony of theoretical or, at any rate, experimental science [...] the autonomy scientists and their host institutions" (Nowotny et al. 2003: 179) to be by necessity placed beside an approach that is "application-oriented, trans-disciplinary, and subject multiple accountabilities". These dynamics are further exacerbated by recent years' policies due to the financial and environmental crises on one side and the rise of a *knowledge society* on the other.

Nonetheless, the newsworthiness of the issue is gaining attention in all the academic sector and more specifically for single institutions. In Italy, ANVUR is already in its third exercise in evaluating Universities performances related to industrial property management, spin-off enterprises, third-party activities, and intermediation offices; in sum, all the institutional activities complying with the definition of *Third Mission* as "aperture to the socio-economic environment through the enhancement and transfer of knowledge"[10] (ANVUR, 2011: 18). About that, it is interesting to note that Area 08 (Civil Engineering and Architecture) is among the four disciplinary areas that acknowledge *technology transfer* among the parameters for the scientific evaluation of candidates[11], however, intended as "brevetti o licenze" (patents or licenses) that are hardly tailored to the activities inherent in the competition sector Area 08a that gathered ICAR/10 - Architectural Engineering, ICAR/11 - Building Production, ICAR/12 - Architectural Technology, ICAR/13 - Design, ICAR/14 - Architectural and Urban Composition, ICAR/15 - Landscape Architecture, ICAR/16 - Interior Architecture and Design, ICAR/17 - Rapresentation of Architecture, ICAR/18 - History f Architecture, ICAR/19 - Conservation and Restoration of Architecture, ICAR/20 - Urban and Regional Planning, ICAR/21 - Urban Design and Landscape.

[10] "Apertura verso il contesto socio-economico mediante la valorizzazione e il trasferimento delle conoscenze" (ANVUR, 2011: 18).

[11] Together with: area 01 - mathematics and computer science; area 06 - medical sciences; area 07 - agricultural and veterinary sciences (CUN, 2011).

Nevertheless, in a different document released by ANVUR the knowledge dissemination is not limited to *licenze* or *brevetti* but extended to the "multiple activities through which original knowledge produced by universities and research institutions is transformed and eventually made available to society and the economic system"[12] (ANVUR, 2015a: 4), thus forecasting a wider spectrum of actions.

What does this entail in the domain of architecture? What scenarios is it likely to lead to and what are the potential structures? What are the new aspects of exploitation in light of the opportunities for intra-disciplinary and extra-disciplinary collaboration? To what extent can the field of applied research be interwoven and what products can be introduced?

As a result, research questions gradually evolved over time in tandem with the accumulation of experiences and expertise. In other words, from a wider perspective, the research grafted within the debate on the strong mutual correlation between theory and practice, scientificity and design, Academia and Profession, progressively evolving toward the specificity of the technology transfer in architecture. Therefore, the work identifies in the Third Mission (TM) the juncture to bridging the production of applied knowledge with its measurability or at least the prompt for its claiming (as a scientific product).

With that in mind, the work is configured as a design-driven research traced back to my situated position as a researcher and architect involved mainly in design projects within a research group dedicated to applied investigations in collaboration with Chinese Universities and Design Institutes. In this sense, the interest in understanding the possibility to deploy design action in the Academic environment is faced, therefore, a system that apparently already succeeds where ours (Italian) stops, depicting consistent modalities of approaching scientific behaviors in a multi competencies, design-oriented mode. The contacts with the Chinese educational (and professional) model, founded on empirical experimentation, demonstrated indeed a rather opposite attitude to the Italian

[12] "Molteplici attività attraverso le quali la conoscenza originale prodotta dalle università e dagli enti di ricerca viene trasformata e resa disponibile alla società e al sistema economico" (ANVUR, 2015a: 4).

environment: a praxis that notoriously let professors, researchers, and post-graduate students carry out practical experiences within the academic path, legitimizing and claiming a multidisciplinary and pragmatic approach addressed in obtaining scientific deductions through empirical research.

Starting from such a specific field of study and application — corresponding to the various design experimentations first-hand collected within the research group and only to a minor extent prior to my entry — this work progressively expands the lens of observation to investigate some gray areas in regard to the pivotal role that the project holds within the established field of academic research, especially within the Italian panorama. The attempt is then to translate the empirical experiences layered over the past four years into critical legacy, or rather considerations embedded within a broader theoretical framework, so as to retrospectively frame/problematize what has been done so far in an increased scientific awareness compared to the purely technical approach that marked my first involvement in projects. Part of the investigation thus revolves around the Chinese enterprises, to better understand and verify the coherence between their self-definement and actual operating conditions. The purpose, however, is not to attempt a comparison between the two models.

Methodological notes

This thesis is embedded in the context framed so far, holding together the researcher's own perspectives, the institutional mandate entrusted to her by the research group, and the university's concern underlying the observed initiative (Polito Studio). The approach undertaken is hence based on the mobilization of theoretical perspectives and practical methodologies based on the active and participatory involvement of the researcher. In this perspective, the linchpin of the work is thus the result first of all of the background of the author mainly ascribable to the most applied branch of the discipline — namely architectural design, that profoundly permeated also her first contact with the professional academic sphere — then of a specific contingency that allowed the author a firsthand engagement in beholding the main applied research projects held within the China Room research group since its formalization in 2016. As a result, the research has been developed within an evolving situated perspective, allowing a direct experimentation of the subsequent advancements broadened to other third-

party institutions to include local professional association. This obviously leads to a necessity to problematize both the internal perspective and the not-disinterested mandate of the author, a matter which will be addressed in the opening of the second part of the work, where dynamics/data/documents collected as an actress involved in the action are effectively wielded.

To better introduce the structure of this text, the first part focuses on an investigation of the current conditions for professional and academic practice in Italy, and a framing of the Chinese context on the same issue. In the first case, the study is elaborated through a systematization of current Italian regulations, starting from a (sectoral) enactment of the stratification that led to the current situation. An operation conducted mainly through the study of bureaucratic documents produced by national institutional bodies, reports of national and European professional conditions, but also publications and proceedings of the main conferences on project teaching and research in Italy. In the second case, an operation mainly of state-of-the-art research expanded by some key interviews conducted with leading figures of the main university design institutes in China (THAD, TJAD, SCUTAD). Stating the impossibility of visiting the institutions remotely observed, the data were collected to the possible extent from Chinese sources so as to avoid, in addition to the first English transposition, further additional sifting given by the perception of a foreign observer.

The second part is a systematization of a retrospective reflection on CR, PS and TDH designs as a researcher in-action. Although describing the participation in international design competitions, the main interests - as a researcher - do not involve the design objects in themselves, but rather the functioning leading to the proposal. By peering at the design projects the consistency of the approached designs is indeed not yet detectable in the typology nor in the technical features, or in the formal appearance of the proposals, but rather in the less tangible matter concerning the approach employed, the procedural development wrought within the institutional bureaucratic backdrop as well as the interests underlying the action of the various partakers. The process, therefore, is not influenced by the design choices nor evaluating the results obtained, while understanding the nodes that triggered the iterative trend proper of design from a standpoint of acquiring knowledge at first, and transferring it then. The observation of the projects is thus

led *in-the-making* (Yaneva, 2009b; Todella, 2020), and not on the outcome, as longly investigated within Polito (Gabetti, 1997; Armando & Durbiano, 2017) and the wider international debate (Rust et al., 2007; Till, 2007). Thus the analysis is conducted as an active CR component, namely in a declared internal perspective that is useful in retracing the activities carried out, as well as proposing further approaches gathered from the analytical inquiry. Guiding this approach is the conception of inductively identifying recurrence conditions to be considered as principles for general knowledge in architectural practice throughout the observation of a specific case so as "to make architecture speak [...] to improve the communication of the tacit research carried out in practice" (Till, 2007: 8).

Out of that, the theoretical framework on *practice-oriented research* and *mode-2 production of knowledge* (Gibbons et al, 1994; Nowotny et al., 2001) is used to expand the perspective and generalize the observation.

Research structure

The research organizes the five chapters into three parts that intend to directly express the work's project-based origins.
The **first part** settles the stage of the action, introducing the main actors to the scene and locating them within their surroundings. The **first chapter** expands to theoretical treatments, positioning the research in a more defined bibliographic field that tries to establish a relationship between the concept of Mode-2 in producing knowledge and the field of practice-oriented research thus recognizing the investigation of design activities, behaviors, and learning mechanisms as a concrete subject of scientific investigations. The **second chapter** focuses on the Italian environment, thus aiming to frame the institutionalization and development of Italian policies concerning the organization and access to universities as well as the main norms introduced to settle the overlap with professional practice. In the meanwhile, the chapter retraces the main phases of the relationships among the schools of Architecture and the professional associations, as well as the main actors and features of scientific production and evaluation for research in Architecture in Italy (namely ANVUR, ProArch, and so forth). The narration proceeds with the **third chapter** that positions the Chinese partaker, thus unpacking University-led Design Institutes' development and functioning. It opens framing the institutionalization and development of the Design Institutes in general, thus retracing the architectural practice and education in PRC from

Maoist China towards contemporary conditions positioning in the last part University-led DIs as a *de facto* contact point and exception in a general strict process. This chapter primarily relies on secondary sources, particularly those from Chinese scholars. These sources are supplemented by conversations, discussions, and interviews conducted with Tongji, Thad, and Scutad affiliates.

The **second part** constitutes the core of the research and encompasses the empirical aspect of the work. It reorders the main events in a logical and operational sequence. This central part hence heavily relies on firsthand sources and materials collected over the past five years within the China Room research group and the Polito Studio board, restructuring them through a retrospective *reflection-in-action*. In the **fourth chapter**, the focus is on introducing and positioning the case study, the author's perspective, and the adopted approach. Then, **Chapter five** introduces the three participating institutions in the subsequent designs: Politecnico di Torino/China Room, THAD - Architectural Design and Research Institute of Tsinghua University, and SCUTAD - Architectural Design Research Institute of the South China University of Technology. It sheds light on the challenges and endeavors undertaken by the Politecnico di Torino China Room research group to enhance access to insights and data in a foreign and complex context, specifically China, through applied research, then exploring the first block of designs, known as the projects carried out before the establishment of the PS mechanism, and delves into how the insights gathered through these projects were capitalized upon. The **sixth chapter** then analytically retraces the various phases and objectives of the conception of the Polito Studio initiative, examining the specific issues addressed in approaching technology transfer in the field of architecture. It introduces the prototype, referring to the VQR-TM worksheet, and highlights both its functionality and impact. Moving on to the **seventh chapter**, it further delves into the effective functioning of the model by observing two designs developed by participants of the PS initiative.

The **third part** summarizes the experiment conducted by situating it within a broader literature and critical context. The **eighth chapter** offers a final reflection on the investigation, putting forth a new worksheet for evaluating design as a scientific practice within the university, utilizing the potential of VQR-TM.

PART I

Setting the stage

Chapter 1

Introduction to the observation

As already established in the prologue, this dissertation consists in its central section of an overall self-reflection approach related to the author's mandate to problematize and investigate what are the conditions in the architectural field in which the (architectural) project ceases to be exclusively a professional domain and become (formally and bureaucratically) an activity plausibly conducted by a research group and by extension University and Academia. This research topic is far from new in both European and italian literature and is founded on the matter of assessing design as a scientific behavior and thus a disciplinary field in its own right. In this sense, it is relevant to point out that this does not mean understanding the design act per se as a scientific praxis, nor its functioning is to be considered as overlapping with science-based practices, rather that its results can be a scientific output 'in some conditions'. In 1979 the Design Studies journal first posed such issues as a question, which is still relevant today: "to what questions should the discipline address itself in both research and teaching? What methodology does it use? What results — what applications — should it be trying to achieve?" (Design studies, 1979, 1(1): 17). In this section of the work my attempt is, therefore, to better define, starting from theoretical references, the lens/ approach through which I will be unpacking the case studies.

In 2008 Francesco Garofalo, architect and full professor of architectural and urban design (ICAR/14) at Università di Chieti-Pescara, wrote in one of his last

books that "research in architecture is more akin to artistic and literary research than to scientific research, and thus is prone to require some sort of preliminary and contingent foundation"[1] (48). By placing the notion of scientificity in approaching practice-oriented research in the disciplinary apparatus while still broadening it towards contemporary dynamics of knowledge production, these pages aim to identify the investigation of design — and thus its activities, behaviors, and learning mechanisms — as a concrete subject of scientific investigations that can't be detached in its more practical branches by the Third Mission (TM) mandate of University. On the contrary, TM can constitute a plausible field to foster at its core the testing, dissemination, and validation of applied research in the architectural field.

1.1 A matter of scientificity

Engaging in scientific pursuits within the academic discipline of ICAR/14 immediately highlights the fact that design, as a field of study, apprises a weak scientific status.

> **Spec I: On the organization of the academic fields in the Italian University**
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> In Italy, the higher education system is organized according to fourteen academic scientific areas which are in turn organized into 86 groups of academic recruitment fields (*macro settori concorsuali* or MSC); each one of the 190 recruitment fields (*settore concorsuale* or SC) grouped different academic disciplines (*settori scientifico-disciplinari* or SSDs) that correspond the 383 discipline domains to which individual teachers refer (L 341/1990; DM 855/2015). The field of

[1] "La ricerca in architettura è molto più simile a quella artistica e letteraria che non a quella scientifica, e quindi tende a richiedere una sorta di fondazione preliminare e contingente ogni volta" (Garofalo, 2008: 48).

Architecture pertains to Area 08, which merges civil engineering and architecture. It is constituted by 6 MSC corresponding to 12 SC and 25 SSD labeled with the ICAR prefix **[1_01]**. The 08/ D1-Architectural Design recruitment field includes the subsequent academic disciplines: ICAR/14 – Architectural and Urban Design; ICAR/15 – Landscape Architecture; ICAR/16 – Interior and Exhibit Design **[1_02]**. MIUR defined its fundamentals for teaching and scientific activity as follows: "The field focuses on the scientific and didactic training activities in the thematic realm of architectural design at various scales, including exhibitions, buildings, urban areas, and landscapes. It is organized based on theoretical and methodological aspects, addressing contemporary design problems and techniques, as well as environmental transformations. Moreover, it explores applicative and experimental aspects that aim to control typological, compositional, processual, and constructive aspects of architecture at different scales, while also considering connections with structural and plant engineering challenges. The sector delves into the examination of buildings, ranging from their formal structures and constituent elements to their internal spatiality. This encompasses interior architecture, furnishings, fittings, and extends to museography and scenography. Additionally, it investigates the interplay between buildings and their urban or natural surroundings, considering the intricate relationships between nature, objects, people, and images. The field also studies contemporary urban forms and the factors influencing their evolution and transformation. It applies and experiments with morphologies and processes for modifying different components of the city. Furthermore, it examines landscape architecture and open spaces in diverse human-influenced conditions and at varying scales. The field recognizes geographical and topographical conditions, environmental diversity, as well as historical, architectural, cultural, ecological,

> and formal pre-existing elements as defining characteristics for sustainable transformations. It also addresses the interaction between infrastructure and the landscape, urban green systems, the revitalization of abandoned or deteriorated areas, and the design of parks, gardens, squares, and other open spaces in general" (DM 855/2015: Allegato B)[2].

The very issue of architectural design itself is of being characterized by a high level of uncertainty that prevents considering it as a linear process (problem-hypothesis-solution) while being more assessable to a kind of *wicked problem* (Rittel and Webber 1973; Schön 1983), characterized by complexity in determining and handle the questions and implications that it raises. Its intrinsic features do differentiate it from what are commonly known as *hard sciences* (i.e. formal and natural sciences) as well as *human sciences*, while at the same time sharing common features with both. This has led, especially in reaction to the

[2] "Il settore si interessa dell'attività scientifica e didattico-formativa dell'intero campo tematico e scalare del progetto di architettura per allestimenti, edifici, città e paesaggio. Si articola in aspetti teorici e metodologici, concernenti i problemi e le tecniche della progettazione contemporanea e delle trasformazioni dell'ambiente, e in aspetti applicativi e sperimentali, finalizzati al controllo dei caratteri tipologici, compositivi, processuali e costruttivi delle diverse scale architettoniche, nonché alle connessioni con i problemi strutturali e impiantistici. Il settore studia l'edificio nella struttura formale e negli elementi che lo compongono, nella spazialità interna che include problemi di architettura degli interni, di arredo e di allestimento anche nel campo della museografia e scenografia, nei rapporti con la città o il paesaggio condizionati dalla complessità delle relazioni materiali e immateriali tra natura, oggetti, persone e immagini. Studia inoltre le forme della città contemporanea e i fenomeni che ne hanno determinato evoluzioni e trasformazioni, applica e sperimenta morfologie e processi per la modificazione delle sue parti. Studia l'architettura del paesaggio e gli spazi aperti in tutte le condizioni antropiche e a tutte le scale, riconosce nelle condizioni geografiche e topografiche, nelle diversità ambientali e nelle preesistenze storiche, architettoniche, culturali, ecologiche e formali i caratteri qualificanti per la sostenibilità delle trasformazioni, si occupa dell'interazione delle infrastrutture con il paesaggio, dei sistemi di verde urbano, della riqualificazione delle aree dismesse o degradate, del disegno di parchi e giardini, piazze e spazi aperti in generale" (DM 855/2015: Allegato B).

academisation and standardization processes of the second academic revolution[3], firstly to the very practical claim of defining what aspects (and products) are unique to the disciplinary field, and secondly how to investigate them. Frequently, though, the approach in the literature — especially in the English language literature — has been focused not so much on architectural design but rather on the broader interpretation of design as an *action*, that is the condition of doing *something*. At a glance, it consists of the creative (and technical) act of intentionally conceiving an object (artifact) for a designated purpose. Such an action although, is common to several disciplines: architecture as well as engineering, product design, and so on. This resulted in the (not yet ended) struggle about this branch of the discipline — which therefore gathers all the design-related fields of study — in self-defining its operative boundaries to the point of speculating (or even revendicating) the codification of new sectors or modes of assessing (Cross 2006, Dorst 2015, Redström 2017). In other words, it consists of the attempt of framing the *epistemic culture* (Knorr Cetina, 1991; 1999) in knowledge production in architecture by unpacking its empirical, ontological, and social facets. On this basis, in many cases the debate led to the revendication of disciplinary autonomy from external fixed methods or theories, such as the oft-cited third area (besides science and humanities) stated by Bruce Archer in 1979 and labeled as Design "with a capital D". In arguing the issues of this third area, he specified that "where Science is the collected body of theoretical knowledge based upon observation, measurement, hypothesis, and test, and the Humanities is the collected body of interpretive knowledge based upon contemplation, criticism, evaluation, and discourse, the third area is the collected

[3] The term refers to the field of studies that tracing the patterns of the higher education system codified two radical changes labeled as the first and second academic revolutions (Compagnucci & Spigarelli, 2020; Etzkowitz, 2001; Etzkowitz & Webster, 1998; Grant & Murray,1995; Rüegg, 2004). While the emergence of the first universities dates back to the 11th century — the most important of which was founded in Bologna in 1088 — the first breakthrough has been traced to the University of Berlin, which in the early 19th century initiated the routine of combining teaching with the dual role of research later affecting all other institutions. Building upon it, the second academic revolution began in the United States (MIT and Stanford) in the late 1980s, when universities embraced economic development by increasing their entrepreneurial activities in the so-called Third Mission mandate. Together with the multiplication of the interactions between universities and society at large, have thus also increased trends of economization, auditing, and evaluation of universities, high education and research.

body of practical knowledge based upon sensibility, invention, validation and implementation" (Archer, 1979: 20). This highlights a specific problem of the field of study that is characterized by an in-betweenness that further led to initiate a layering of theoretical reasoning often borrowing methods, approaches, and content from other scientific arenas. With these issues in mind, although this research focuses on architecture, a broader perspective has been maintained in some of the arguments tackled in this first part of the chapter, to eventually return it to the disciplinary content under investigation. This chapter intends to (theoretically) introduce the similarities/differences between research and design to then discuss the (relative or potential) credibility of the blending between practice and research as standards for activity and measurement in the context of academia.

Whereas what was stated by the committee of expert evaluators in the national research assessment in the architectural field, "architecture is a multifaceted area that has at its core the study and construction of the physical environment in its broadest sense" hence "in it different modes of research are closely interrelated with design practices, professional attitudes, theoretical-critical reflections"[4] (Anvur, 2013: 8).

Which substance to look at?

Starting from the terms *pratiche progettuali* and *attitudini professionali*, to claim an acknowledged validity that interrelates the design activity in and of itself — i.e. the architectural practice — as a subject for scientific observation and investigation means in the first place to acknowledge in its mechanism and patterns a certain degree of effectiveness in developing systematic knowledge and set it in motion. In other words, it consists of the claim that although "the act of designing itself is not and will not ever be a scientific activity […] the study of designing may be a scientific activity; that is, design as an activity may be the subject of scientific investigation" (Grant, 1979: 47). Nevertheless, the difficulties

[4] "Quella dell'Architettura è un'area composita che ha al centro lo studio e la costruzione dell'ambiente fisico nella sua più ampia accezione […] In essa modi diversi della ricerca sono strettamente interrelati a pratiche progettuali, attitudini professionali, riflessioni teorico-critiche" (Anvur, 2013: 8).

encountered in any epistemological investigation attempting to establish a clear separation between the possibility of treating design as a (totally, partially, or by no means) scientific object, the subsequent definition of its (eventual) scientific contribution, and the locus in which to grasp it — be it be in its physical configuration, or its unspoken practical patterns, or in the network it plunges, etc. — raises to the non-trivial issue of pin down the essence of what to be intended as *design* and its relationship with *science*. In willing to locate a precise demarcation scope between the two areas, the field of inquiry is boundless and there is no univocal solution.

A growing number of scholars have attempted to frame architectural design knowledge as research and these can be likened to what Thomas F. Gieryn defined as *boundary-work* (1983). Or rather a concern shared in a scientific group in defining or describing a clear perimeter helpful in distinguishing a specific field of knowledge production with objective, measurable, and falsifiable substance. As mentioned above, in the architectural field this has resulted in a complex landscape of arguments that began in proximity to each other, but that have, over time, progressively drifted apart. In this process, the solutions produced in the attempt to reconceptualize design according to fixed scientific categories by which to claim the autonomy of the project as a knowledge-generating activity in itself (Aureli 2008, 2011; Grassi, 1967), thus identifying the value as intrinsically embedded in the physical artifact, seem (at least to the author) by no means to be sufficient, nor stable, or irrefutable. Rather, quoting Archer's text again “in Design, the repository of knowledge is not only the material culture and the contents of the museums but also the executive skills of the doer and maker” (Archer, 1979: 20).

In this sense, there is a component in design that goes beyond the form of knowledge that can be communicated explicitly through concepts or disclosure, this component starts from the explicit notions and then is learned and improved through the action itself. The two features evolve in parallel, interfering with each other, yet still existing as two distinct and complementary aspects peculiar to the (conceptual and practical) activity of project making. Such convergence has been captured in the distinction between *knowing that* and *knowing how* (Ryle, [1946] 2009). In which, *knowing that* address the base of antecedents, procedures, and

prescriptions that are (rationally) acquainted with the modes and reasons of performing — thus related in the first stance with the theory — and *knowing how to* involve the cognitive repertoire that is (spontaneously) deployed and improved in the concrete acting — thus related with the non-verbal performance of doing. Although the two aspects frequently interfere with each other, sometimes they can be mutually independent. In other words, while it is not necessary to be aware of the operating principle to be able to use an artifact, it is not enough as well. Similarly, it is not enough for the designer or architect to simply adhere to all the normative codes in order to achieve a project that effectively meets the original goal (i.e., the mandate) (Cross, 1982). At the same time, determining an balance between the two poles is not so obvious, indeed if "efficient practice precedes the theory of it; methodologies presuppose the application of the methods, of the critical investigation of which they are the products" (Ryle, [1946] 2009: 19), thus overturning the premise. Nonetheless, what is evident is that in the design both aspects concur — especially when thinking about professional practice (Cross et al., 1981; Cross, 2006): on one side, the theories, codes, norms, and technicalities relapsing on the project, on the other the ability of the architect to approach and modify them according to their own experience and skills. At this point then, seems to be more appropriate to place the learning process in design *in the making* of the project, it commences indeed long before the building of the object-artifact while occurring in the entire back-and-forth process of ideation-verification-modification embedded in the eventual project proposal (Galle, 2018). Such an approach undeniably entails the active involvement and empirical experimentation of the very inexplicable knowledge — aka that *tacit knowledge* defined by Polanyi as "the things that we know but cannot tell" […] "an act of indwelling by which we gain access to new meaning" (1962: 601, 606) — developed through a trans-disciplinary and cross-cultural mixing of theory and practice. That is, the notion arose in opposition to the technical rationality whereby real-world problems (professional problems) are not as rigorous and relevant as scientific categories claim, but rather are often unique, unstable, and conflicted. In this sense, professionals improved their skills by grasping such issues to (then) hypothesize a solution. In doing so, the behavior (at least at the beginning *and* in the world of professional practice) is spontaneous, intuitive, and unaccountable, it consists in deploying a *tacit knowing* which is "implicit in our patterns of action

and in our feel for the stuff with which we are dealing" therefore "it seems right to say that our knowing is *in* our action" (Schön, 1983: 49).

The learning stance

In these terms, though the ultimate object by which scientific knowledge is transmitted is a *cognitive-descriptive artifact* (a theory), architectural knowledge is also transmitted through *practical-prescriptive artifacts*, i.e. the design proposal (Galle & Kroes, 2014: 223). In such a perspective, the object doesn't have to assume A physical form because the project proposal — expressed through its own specific artifact — already includes the result of the cognition held through the circular process of project-implementing. The dissemination of such cognition therefore occurs through its language (drawings, models, etc.) which is the very exclusive cipher of the architect, or rather "the manipulation of non-verbal codes in the material culture; these codes translate 'messages' either way between concrete objects and abstract requirements; they facilitate the constructive, solution-focused thinking of the designer" (Cross, 1982: 225).

As a result, if the knowledge in the design is produced in its acting, it means it's already embedded in its result or demonstration, i.e. the project. To grasp and trace this aspect, it is hence essential to turn the focus to (professional) architectural practice, as mutual collaboration, and interference, among academic and practice methods, can enhance the production, understanding, and dissemination of both the rational and implicit skills. Grounded on this backdrop, there has been a change in the paradigm approaching research in architecture moving the lens towards the dynamics of professional practice and the very mechanisms behind the action. That is, since the 80s academia saw an increased interest in a full understanding of the modes behind the architectural practice processes and education. Looking at the problem from this direction, it is twofold (and also interconnected or sequential): on one side there is the creative (and technical) performance of the designer as a doer, consisting of their learning, doing, and knowing gears, on the other the understanding of the larger scheme that overpasses the solitary performance of the designer-author towards a broader system of interactions and over imposition (social, economic, political, bureaucratic, regulatory).

To start with, the explorations concerning the relationship between academia and practice through the lens of education such as the *learning by doing* (Dewey, 1916), the already mentioned *designerly ways of knowing* (Archer, 1979; Cross, 1982; 2006), and the *reflective practice*, that look at the becoming of the project as an object, and at the architect as the one who acquires (and transfers) through their making a cognitive heritage in becoming.

At the outset, the well-known *learning by doing* principle that although being expounded and popularized by the American philosopher and educationalist John Dewey (1916) was already discussed since the Ancient Greece. This approach is mainly related to the field of education and has been deployed to emphasize implicit learning mechanisms pledged by practical experiences. It consists in equipping learners with explicit doctrines, but also with useful critical skills that can enable them to navigate exploratory actions leading to the independent discovery of new principles. In investigating the opportunities of such a notion, a broad body of literature stated slightly different variants (Reese, 2011; Verderber et al.,2019), such as *discovery vs instruction* binomial, p*ractical experience vs book learning*, *practice-theory-practice* dialectic, *proof upon practice* dynamic, but also the *design thinking* expanding thus the fields of application also to third level education, professional communities, and research modes.

In continuity with this, the work of the American philosopher and professor in urban planning Donald Schön (1983; 1987) is among the first to explicitly refer to architectural education in approaching the rift witnessed between the knowledge produced in academia and its practical application. According to Schön, the first issue in this rupture is that technical rationality epistemology "leads to a view of professional knowledge as a hierarchy in which 'general principles' occupy the highest level and 'concrete problem solving' the lowest"(Schön, 1983: 24), this has progressively been reflected in the curriculum adopted within the academic path organizing "first, the relevant basic and applied science; then, the skills of application to real-world problems of practice" (Schön, 1983: 24). By looking at different practitioners in exercising their profession (i.e. architects, planners, managers, and psychotherapists) the organizational learning system is retracted up from relationships and exchanges between practitioners and junior staff members. According to Schön, experience in the professional environment is layered with

knowledge-in-action that, although not explicitly communicable, allows for the spontaneous collection of specific skills associated with a particular epistemology. In this sense, knowledge gained in tackling a problem (albeit unique, unstable, and conflicted) is reworked through reflection and thinking to be re-used in other forthcoming conditions — that is the very same mechanism behind architectural design studios and teaching circumstances. To this extent though, the rigor employed is simultaneously similar and dissimilar to that in academic research and controlled experiments.

Similarly, the British academic, design researcher and professor in design studies Nigel Cross (1981; 1982; 2006) argues that the way of thinking and problem-solving inherent to design practice, which he calls *designerly knowing*, is distinct from scientific or analytical thinking, and is characterized by a focus on exploration, synthesis, and creativity. According to Cross, *designerly knowing* is based on an iterative process of exploration and synthesis, in which designers generate ideas and then refine and re-evaluate them through a process of iteration. This process is characterized by a willingness to take risks, experiment, and explore new ideas and possibilities, bringing together diverse sources of information and knowledge in order to create new insights and solutions. This process hence requires a deep understanding of the context in which the design problem is generated, as well as an ability to communicate and collaborate effectively with others, cultivating and mediating this way of thinking in both designers and non-designers alike.

The ethnographic turn

Building on these theories, a lively debate related to a pragmatic approach led to what can be defined as the *ethnographic turn in architecture* (Yaneva, 2017) that overcame the subject-object dichotomy (architect-project) deploying the amid behaviors as a concrete subject of scientific investigations founded on the direct observation. This approach hastened the progressive detachment from the figure of the heroic author started around the 80s towards the adoption of a broader perspective that flanks the solitary action of the designer as the result of a collaborative model based on the combination of divergent skills and various figures — among which the architect. While the concept of reflective practice

remains as a foundation, it is recognized as the premise to focus on how the project conception is a collective process daily influenced by negotiations and conflicts.

The first boost in shifting the observation to the architectural profession is the 1984 *Architects and Firms: A Sociological Perspective on Architectural Practice* in which the American sociologist and professor Judith Blau unfolds from a specific sociological perspective the balances and dynamics in the everyday practice of 152 architectural firms in Manhattan along five years (1974-1979). Blau highlights the contradictions inherent in the professional environment which can be arranged according to three main vectors: the values and *voices* that are proper of the individual practitioners vs the *convictions and agenda* of the firm as an entity; the economic pressures in which the profession is embedded and to which it must adhere (both in its technical as much as in its more 'creative' facets); the variety of nuances that architects have to fulfill in their role while taking part of a design. However, considerable weight is given to those narratives that the profession proposes to the external environment for self-positioning and asserting its role thus this perspective remains deeply tied to the aesthetic feature of the profession and therefore to the figure of the architect as a stand-alone professional.

Following this perspective, the American architecture theorist, full professor, and practitioner Dana Cuff (1992) spent six months in three architectural firms in San Francisco looking at the customary routine actions behind the interactions among all the figures involved in a design process (within and outside the space of the office). Thanks to her training as an architect, Cuff acted as an *indigenous ethnographer* (Clifford & Marcus, 1986) and return a *thick description* (Geertz 1973) of the very meaning and mechanism of the architectural practice as a "social construction". Based on a series of dialectical dualisms (ideology vs action, individual vs collective, design vs business, decision-making vs making sense, specialized figure vs qualified generalists), it outlined the picture of the designer as an item in a broader network. In this concern, the book delineates an empirical framework that draws on Arygris's *theories of action* ([1974]1992) depicting the architect in interchanging *espoused theory* — that is, the theory used to explain and justify their actions (self-narrative, vision, compositional theories,

approach, and so on) — and *theory in use* — that is, the theory deployed to guide their actions — to steer their action among the whole range of external contingencies, ambiguities, and contradictions raised by the project. In this perspective, architectural practice is the result of the two; the effectiveness of the designer's actions is identifying a mediation between both these and the external agents.

Thus, if according to Ryle's perspective design practice had more to do with *knowing how* than *knowing that*, the ethnographic studies brought the lens of observation back to a combination of the two. Such a change of perspective launched at the same time a mutation of the conception of architecture as well as project (Vaughan, 2012; Avermaate & Teerds, 2016) contributing to highlighting their social and political role and expanding the definition not only to the activities revolving around the molding of the object — hence language, behaviors, learning mechanisms, images produced, and strategies adopted — but also towards the implication of the formal act as a social object. Consequently, the act of design has been broadened from being considered an activity merely aimed at transforming existing conditions to a wider interpretation of a problem-solving behavior (Groat & Wang, 2013) which can be adapted to various conditions (of which it is actually the result).

On this wise, a conspicuous body of scholars such as the oft-cited Albena Yaneva (2009a; 2012; 2017) addresses the architectural practice and its routine as a laboratory, looking at the material evidence on which the architectural practice is grounded —- drawings, models, renderings, etc. — to retrace the conception, negotiations, exchanges, and solutions occurred during the design and not yet tackling the ideologies or theories behind the action. At a glance, it consists of an understanding of the architectural design process as a composite result of interactions among human and nonhuman actors producing designs and then buildings. Therefore, the network-oriented ethnographic reconstruction of design operations attempts to retrace the *modus operandi* by mapping the trajectories through the changing position accorded in the single actions. This way, with hindsight, it refers back to the recurring moves and identifies the implications and performativity of the design strategy (Yaneva, 2009a; 2012).

Such a research strand opened thus towards the exploration of the relationship between architecture and society and the modes of representing it. Among the authors, also the work of some practitioners that firsthand reasoning about the various implications of their practice. Mention one, the book *The Architecture Chronicle. Diary of an Architectural Practice* by the practitioner Jan Kattein (2014) that, as declared by the same author, "started life as a Ph.D. thesis at the Bartlett School of Architecture in London"[5] (13) evolving into a form of storytelling to reflect and shape the understanding of the world starting from personal (and professional) experiences of an architect. In his work, Kattein uses the metaphor of a 'chronicle' to describe the way that architecture serves as a record of the social, cultural, and political forces that shape the built environment. He argues that architects have a responsibility to use their work to tell the stories of the communities they serve and to create buildings and spaces that reflect the values and aspirations of those communities. Overall, it is a compelling exploration of the role that architecture plays in shaping our understanding of the world. By emphasizing the importance of storytelling and community engagement in the design process, Kattein challenges architects to think beyond the physical form of their buildings, and to consider the social and cultural contexts in which they are situated.

A more performative objectification of the research

Nevertheless, such approaches, despite stating the validity of inquiring about the design process, still do not raise the issue of how to combine the creative-practical process — that is transposed as a number of images, maquette, design ideas, etc. — and theoretical research — that is still based, though this is increasingly debated, on treatises and texts. This is probably related to the fact that a large amount of those involved in these approaches do not belong to the architectural environment, embracing it just as the background to their

[5] It is a doctoral program, namely the Architectural Design Ph.D., that equally combines in the research period design work and text. In a nutshell, candidates are required to develop a thesis concerning "a project and a text that share a research theme and a productive relationship", thus reflecting on the practice as an architect and a writer where one discipline is pivotal to make sense of the other. See the Ph.D. course presentation page at the following link: www.ucl.ac.uk/prospectve-students/graduate/research-degrees/architectural-design-mphil-phd

investigations. They look at architectural theory only as 'guests' and hence maintain a certain detachment. Conversely, in the architectural field, the limitedness of research production through treatise texts is more problematic and not straightforward. Several scholars attempted to outline a field of applied research that does not rely on other human sciences to stabilize architectural research while achieving a complementarity between observation committed to theoretical development and one finalized instead to potential practical elaborations (Geiser, 2008; Sequeira, 2011). The results can be referred to through as *research-by-design*, *practice-oriented research,* or even *research-by-action.* They cluster various types of research that can be summarized in two types of knowledge structuring: *practice-led* and *practice-based* research (Candy, 2006; McNamara**,** 2012). While both modes attempt to acquire new knowledge 'concerning the practice', there is a slight difference in the substantive use that they deploy through the practice. *Practice-based* research is an inquiry aimed at acquiring new knowledge through practice and in particular through its results. The final outcome, therefore, consists of an original creative production (a *practical-prescriptive artifact*) that includes a critical contextualization of the work. *Practice-led* instead refers to the understanding and advances in the operational significance of the observed practice. It is thus concerned with increasing knowledge about a specific practice only occasionally advancing it to practical achievements. While it includes practice as its investigative tool, the final product of this research is a *cognitive-descriptive artifact*, or written texts describing the results of the research.

These procedures can therefore be considered among the main models in contemporary architectural research to pursue knowledge thanks to patterns and standards resulting from the same practice observed. To pursue this path, it must be admitted that architectural design is a form of knowledge that can and should be expanded through research; to improve its efficacy though it is necessary to expose, as stated by the British architect, writer, and educator Jeremy Till (2007), three myths that lay behind the interpretation of its modes, models, and functions. First, that architecture is a unique form of knowledge that can't be approached as other scientific disciplines and so the architect is a genius comprehensible exclusively by their peers. Second, and conversely, that to strengthen the

epistemology of architecture it is essential to force it into paradigms and methodologies of other disciplines. Third, that design can be assimilated into a form of research, thus identifying the knowledge as entirely embedded in the constructed building. Contrariwise, Till distills the essence of architectural research into three strands (to be intended as concurrent but also interlaced, if necessary): architectural processes (in both the designing or construction of the building), architectural products (intended as aesthetics solutions, materials, or constructional techniques deployed in the building as object or system), and architectural performance (occurring in the building after its completion). However, this paper addresses more to a vision than a practical strategy, the proposal delineated in the last paragraph does not add that much to the abovementioned works, remaining on a very general scale of action. What is interesting though, is the attempt to broaden the reasoning also towards the contemporary dynamics of premises, relevance, aims, and tools of research (in general) and society. According to Till, a substantial scope for innovation is recognized in research that is deeply rooted in practice, whose achievements although frequently remain tacit and not disseminated. The role of academic research is thus to 'make architecture speak'. In doing so, it has to be considered first the "new role for academia to link up with practice to carry out an *archaeology* of the processes of architectural production, in a non-threatening but critical manner" and then "funding for research has to shift from sliced areas of knowledge controlled by various sectors of academia to a more coherent strategy shared by both academics and practitioners" (Till, 2007: 3-4).

Nevertheless, the issues illustrated so far in defining the *epistemic culture* in architecture, make it hardly compatible with audit and valuation criteria that steer contemporary economization of research (Kurath, 2015). Indeed, on one hand the result of research conducted in this way is not assessable according to current patterns — apart from a translation/reinterpretation/transcription by widespread templates. On the other hand, as already mentioned the knowledge and learning systems in academia and professional practice are generated in different and scarcely adaptable consuetudines. In other words, it is a matter of tacit knowledge and competencies enabling, that in order to be to put on the same pitch "may require *converting* if it is to be *readable*" (Amin & Wilkinson, 1999: 121). In this

sense, it is a two-pronged effort of both translation and adaptation. On this basis, one option might be to re-configuring research in architecture by taking a hint (and not duplicating) from other academic disciplines with a higher level of application and dissemination (Borrelli, 2011; Garofalo, 2008). In particular, stressing the potential of a cross-disciplinary mixing of theory and practice will heighten the training of the full-fledged practitioner as well as proposing innovative models of teaching and research through practice (Geiser, 2008; Reese, 2011; Verderber et al., 2019; Hauberg, 2011). In this perspective, the progressive detachment that opposes the perception of the architectural practice (embedded in the Architect) to the field of rigorous scientific research (embedded in academia) could be re-defined in contemporary terms — and one could argue less delusional/ idealized than in the past. The attempt is not to claim a melancholic return to the profile of the architect-author that emerged in the 20th century (Hill, 2013; Rust et all, 2007), i.e. renowned teachers as proponents and experimenters of a mythicized professional impulse, and neither to return to the 19th century École des Beaux-Arts that claimed a scientific and experimental character complementary to the profession. Rather, the objective is to look beyond the understanding of the observation of design practice as a systematizable and codifiable form of knowledge (as already ascertained by the ethnographic turn) while rejecting the autonomist perception of the discipline and its inquiry models. The aim, instead, is to acknowledge design as a tool for communicating and transmitting knowledge that rightfully fits into a broader stream of concerns and steers. Within this approach, therefore, the project simultaneously becomes a *theoretical-cognitive* and a *practical-prescriptive artifact* by embedding them into each other. In all of this, since to "participate in architecture means to deal with an established body of knowledge and to confront and relate to […] a certain community of practice" (Avermaate & Teerds, 2016: 10), to rethink its premises and approaches it is first necessary to reflect on the actual role that the architect (and research) can assume not by looking "at theoretical perspectives from other fields, but rather 'harvest' from the practices within the architectural field itself" (Avermaate & Teerds, 2016: 11).

To this extent, it is by no means a reclaim of architecture as a profession-based field (Kurath, 2021), that would indeed estrange scientific (academic) research

from its program. Rather, the struggle is to define a possible margin for deploying/ exploiting practice within the academic environment at a time of increasingly pressing external trends urging the economization of universities and the creation of new structures for the direction and management of science policy (Perotti, 2002; Schimank, 2005; Etzkowitz, 2003b). In other terms, to challenge the issues in rooting applied research in architecture through the intensification of externally-driven instances and accountabilities that heteronomously steer academic policies and priorities toward applied grounds and commercial and industrial stakeholders.

1.2 Towards new perspectives: a(-nother) mode of approaching science

Modern scientific culture has indeed been firmly tied with social and political trends, *in primis* the democratization and massification of society post-WWII (Gibbons et al., 1994) that lead to Universities being seen as having not an exclusively scientific role, but also a broader social purpose in society. At the same time, though, role splitting (scientific vs social) proceeds according to two parallel and non-overlapping paths, resulting in a contradiction that is not easy to reconcile: on the one hand the need to maintain an elitist environment — in the sense of selected, controlled, closed-numbered — useful for preserving research excellence, and on the other hand the need to satisfy social pressures for greater access in higher education. Such a condition is moreover compounded by considerable economic pressure; the national and international logics of distributing funds increases the competitiveness among institutions rather than encourages a collective and shared approach. This further emphasizes the hierarchy among those involved. That said, even the funds allocated are not always sufficient (or accessible) to entirely satisfy the economic needs, thus leading universities to turn to other sceneries, namely the private sector and market dynamics.

On this backdrop, the *mode-2* and *triple helix* paradigms are in this thesis adopted as conceptual frameworks for the inquiry. By keeping the Italian

backdrop as fieldwork, the research tries to bridge the debate concerning practice-oriented research in the architectural discipline within the contemporary academisation process. That is, to identify a *mode 2* of producing knowledge in architecture through the exploration and maximization of the threshold between speculative investigation and concrete relapse of design practice. Indeed, as already stated, the academic sector is increasingly more interested in a full understanding of the modes behind the architectural practice processes, at the same time contemporary settings for innovation and research witnessed a gradual transformation during much of the latter half of the century. New interests, practices, and dynamics pull near the academic and governmental institutions in a wide range of heterogeneous locations and organizations such as research centers, think-tanks, and spin-offs. To keep up with the actual need of non-academic society, it is paramount that research groups find new methods to flank the ones that hitherto shaped scholarly research.

'Mode 2' of knowledge enacting

In such a perspective six authors belonging to different disciplines (…) published *The New Production of Knowledge: The Dynamics of Science and Research in Contemporary Societies* (Gibbons et al., 1994) and a further revision of its content in *RE-THINKING SCIENCE Knowledge and the Public in an Age of Uncertainty* (Nowotny et al., 2001). Both the manifests outline a post-modern mode of approaching research (i.e. *mode 2* or NPK) that is emerging alongside the 'traditional academic discourse' (i.e. *mode 1*). *Mode 2* results from the increasing interactions between science and society that overpass the one-way flux witnessed so far (*from* science *to* society) towards mutual coevolution (*from* science *to* society *and vice-versa*). In a sense, this paradigm is the result of an increase in the number of highly trained experts that, being unable to squeeze themselves in an ever-shrinking academic milieu, supplemented 'traditional forms' of research with new structures and methods, thus undermining universities' hegemony in producing knowledge. The foundation of such an argument is to recognize the increasing interplay among scientific research and external interests and priorities (economic, political, social, and so on), thus corroborating a stream of research products and behaviors as a result of the specific contingency by which they are intrinsically linked. In this perspective, this is defined as a mode of producing

knowledge that supersedes "the hegemony of theoretical or, at any rate, experimental science [...] the internally-driven taxonomy of disciplines [...] the autonomy of scientists and their host institutions" (Nowotny et al., 2003: 179) towards a "socially distributed, application-oriented, trans-disciplinary, and subject multiple accountabilities" approach.

Great importance is thus ascribed to the 'context of application' in which *Mode 2* knowledge arose, that is the overall scenario in which scientific problems and methodologies emerge and whose results and uses are released and shaped. It is, moreover, a contextualization that takes into account (and is strongly influenced by) the needs of society from the very early stages of research projects. In a nutshell, it refers to the mutual interpenetration of scientific knowledge and the social contexts in which it is generated. These developments gradually become part of the machinery of knowledge production, in the same way as some facets of science gradually turned outward. The result is a context of action with open and changing borders, characterized principally by a socially distributed application purpose. It is moreover characterized by a trans-disciplinarity grounded on the mobilization of both theoretical perspectives and practical methodologies for knowledge exchange and production as a prerequisite for a more social distribution of science. Features include a high level of reflexivity nurtured by an intense back-and-forth dialogic among research actors and research subjects that cannot be produced in conventional sites while taking strength from a new-fangled heterogeneous network of transnational, cross-cultural, and multifaceted practices. The results obtained through *Mode 2* hence elude the codes of traditional scholarly publications and discipline, as well as the encasement in an assessment taxonomy. In other words, according to the authors *Mode 2* outputs exceed the logic of peers and single-definition of quality control.

In the second publication (2001) the authors further deepened the *Mode 2* paradigm by introducing a further specification of the place in which all these interactions took part. The *context of application* is then accompanied by the *agora* defined as "the new public space where science and society, the market and politics, co-mingle" (Nowotny et al, 2001: 203) and "the arena in which social movements have first articulated their criticisms of science, in particular, their demands for different priorities or for 'alternative research'" (212). The

elusiveness of the *agora* with its unsharp boundaries is what enables it to find room "for the wide range of people who engage in material scientific activities and are linked in concrete ways to other social spaces […] that go far beyond the laboratory" (197). In this perspective therefore research spreads beyond the disciplinary framework, engaging the interplay among many actors and even professional groups from broader social and economic contexts. This attempt of taking into account different perspectives results in *Mode 2* research engages a shift to a (reflexive) investigation that is oriented towards contextualized results and performed by experimental practice.

Entrepreneurial shift

On this backdrop, the sociologists Henry Etkowitz and Loet Leydesdorff (1998; 2000) further investigated the dynamics of the research system in the wider social structure in which *Mode 2* emerged, defining the organizational and institutional drifts that were being witnessed through the well-known Triple Helix thesis (TH). TH counterposes to the Humboldtian dualistic academic model (combining teaching and research), the tripartition University-Industry-Government assessing an "enhanced role in innovation in increasingly knowledge-based societies" (Etkowitz & Leydesdorff, 2000: 109) by generating "alternative strategies for economic growth and social transformation" (110). According to the relationship (and power) among the three extremes, three different configurations have been delineated. The third type is the more blended, as well as the one that can be more related to the European (and Italian) environment; it is constituted by a tri-lateral network among superimposition of various "institutional spheres […] with hybrid organizations emerging at the interface" (111). It consists of an unstable model (to the extent that it follows unsteady logic, orders, and priorities) in which each strand is linked to the other by a growing overlapping of communications, networks, and organizations. In this sense, the authors call attention to the escalating significance of universities' contribution to economic improvement captured in the term *entrepreneurial*

university[6] thereafter expanded in subsequent studies by Etzkowitz (2003a; 2003b; 2004; - & Webster, 1998; Dzisah & -, 2012). In particular, the *entrepreneurial turn* inheres to the very recent (endogenous or exogenous) phenomenon whereby science has emerged since the second academic revolution as an agent for economic growth in adjunct to the classic triad of land, labor, and capital. The result is the advent of university institutions as agencies of collective entrepreneurship directly addressing social needs and industrial goals in antithesis to the 'ivory tower' stance of the traditional (and ancient) academic model. As a counterpoint, the term defines a model for industry and university to rise in tandem through a shift from the individual to a group approach involving all three academic missions (teaching, research, dissemination) through an extensive array of activities with external agencies. This includes a ramification (or fragmentation) into a series of smaller structures internal to the universities that function as incubators in charge of "move commercializable research across institutional borders and finally the integration of academic and non-academic organizational elements in a common framework" (2003: 113). This very same tearing due to political and economic forces that started mainly in the USA — other studied examples have also been Sweden and Brazil — progressively took ground in the European environment as a top-down solution (Etkowitz, 2004).

Advancement of the Third Mission

A series of public policies, as well as globalization, financial and environmental crises, served as a catalyst by foreseeing in universities a renewed interest in narrowing the gap with abroad scenarios and non-academic externalities, progressively integrating the academic institution with the so-labeled

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[6] In the principal bibliography of the 2018-2024 Polito Strategic Plan (Politecnico di Torino, 2019), direct reference is made to *entrepreneurial university* and Etzkowitz (2017). This testify that the institution has developed in the last years an increasing interest in non-institutional activities and specifically commercial or business development. From this point of view, PolitO benefits from a long-standing culture of collaboration with external non-academic actors, which is more widespread than, for example, its 'younger sister' UniTO (Università di Torino). This situation may depend either on being a specialized technical university that corresponds to solid traditions of intra-university cooperation (PoliTo is a polytechnic university concerning the field of Engineering and Architecture exclusively while UniTo is a generalist university), or on strategic choices of cultural dissemination (Rolfo & Finardi, 2014).

Third Mission mandate (TM)(Rubens et al., 2017). TM is a non-univocal and yet evolving concept, subject to various interpretations. Although informally conducted for a long time, only in recent decades has it been codified and emphasized (Geuna & Muscio, 2009). From a very general perspective, it encompasses a broad range of activities carried out by higher education institutions and external actors in the attempt to "transfer knowledge to society in general and to organizations, as well as to promote entrepreneurial skills, innovation, social welfare and the formation of human capital" (Compagnucci & Spigarelli, 2020: 120). In other words, TM can be defined as the totality of activities dealing with the production, application, use, and exploitation of academic knowledge, expertise, and resources within the interactions with non-academic stakeholders. Among the wider spectrum of activities pertaining to TM, it is possible to summarize the variety of mechanisms according to the branch involved. *Technology transfer* (TT), patents, licensing, spin-offs are mainly related to the research field; student placements, personnel exchanges, *lifelong learning, continuing education* are related mainly to the education task; consulting, *dissemination* and *public engagement* are mainly related to the university commitment in social and cultural life[7] (Geuna & Muscio, 2009). Precisely because of this blended character, and the economic pressure behind it, TM is the most controversial and debated among the missions of the universities, while undoubtedly one of the crucial factors for contemporary institutions. It indeed especially concerns the commitment to *knowledge transfer* activities as a source of social innovation and economic development (Tuunainen, 2002; Benneworth et al., 2015) in strong relation to the concept of *knowledge commercialization*. Nevertheless, the main aim is to broaden various modes of fostering public debates and cultural activities with a wider (and also generalist) audience or obtaining innovative and practical products through scientific knowledge.

The most common, yet not the only, 'spaces' for these third-stream activities are *technology transfer* facilities (Nelles & Vorley, 2009; 2010a; 2010b; 2011).

[7] These terms are widespread in the literature on the topic, and they are also the same terms that are used by VQR-TM and the European Commission to refer to the evaluation and quantification of third mission.

Just as TM, *technology transfer* is a not straight object, neither in its definition nor in the measurement of its impact or effectiveness. It is indeed exposed to various (and varying) definitions from one discipline to the other but also in different countries or institutions, and even in relation to the pertaining research involved (Bozeman, 2000). In general, it consists of miscellaneous units that, by maintaining ties with research groups in different fields as well as external figures, act as informal facilitators in the creation of synergies across disciplinary boundaries "serving as a transport mechanism for knowledge spillover" (Etzkowitz, 2003a: 118). In other words, TT facilities — which include technology transfer offices, science technology parks, business incubators, etc. — translate academic knowledge into applied (or commercial) knowledge, by overcoming the evident differences that exist between the two poles while enabling constructive exchanges (Laino, 2019). Notwithstanding, the meaning of applied knowledge is to be understood in a sense that goes beyond the conception of commercial products or specific artifacts to be 'utilized' in certain conditions quite expanding the object of the technology transfer also towards *tacit knowledge* (Grant & Gregory, 1997). Indeed, just "a minority of interactions are motivated by the prospect of directly realized commercial products" (Bozeman, 2000: 642) rather a more strategic awareness to approach future endeavors to the extent that it "has a major impact on the effectiveness of manufacturing technology transfer" (642). Such studies, therefore, highlight the importance of informal and experimental models among academic and professional spheres, as well as the relevance of the role of formation, training activities, and exchange among personnel in TT processes (Rosenkopf & Almeida, 2003).

Considering therefore that the TM interaction between practice and university takes place in very different forms, the recognition (and exploitation) of these diversities is precisely a crucial factor in the development of possible innovative and efficient networks (D'Este & Patel, 2007; Muscio, 2008), it then becomes critical to understand what its outcomes (or structures) might be especially if looking toward those academic research branches that cannot be subject to patenting such as architecture. In doing so, (and by taking the architectural practice as object *and* subject of the transfer) a possible approach should be able to refine theoretical and practical implications for the study of the behavior and

dynamics of architectural practice from within as well as (in a broader perspective) engage and ease the coordination with other related academic and professional fields.

1.3 Design as auditable scientific output

In the realm of a department of Architecture, to talk about TM means (also and above all) talking about projects that involve the design act (being it on the technical, architectural, urban, or territorial scale). Nevertheless, as further contextualized in the second chapter of the work, the current normative framework in Italy strongly limits the possibilities for professoriate to practice within the academic environment, relegating this activity to the exclusivity of professionals or part-time professors that pair to the academic career the private practice (*libera professione*). Despite this, in the last decades gradually gained ground among Italian scholars in architecture, especially in the 08\D1 recruitment field, the claim of the validity of design act as an object and tool of research. This turn has been particularly evident since the inception of the already mentioned VQR exercises (L 286/2006; DPR 76/2010).

> **Spec II: on the *Research Quality Assessment* or 'VQR exercise'**
>
> It is a national-scale evaluation procedure with the aim of "rationalizing the system for assessing the quality of the activities carried out by universities as well as public and private research institutions benefiting from public funding, and the efficiency and effectiveness of state programs for financing and encouraging research and innovation activities"[8] (L 286/2006,

[8] "Razionalizzare il sistema di valutazione della qualità delle attività delle università e degli enti di ricerca pubblici e privati destinatari di finanziamenti pubblici, nonché dell'efficienza ed efficacia dei programmi statali di finanziamento e di incentivazione delle attività di ricerca e di innovazione" (L 286/2006, art. 2, comma 138).

art. 2, par. 138). It is carried out every five years under the supervision of the Italian National Agency for the Evaluation of Universities and Research Institutes (ANVUR). The exercise retrospectively evaluates the research according to the systematic assessment of scientific outputs submitted by the single institutions related to the observation period. ANVUR is entrusted with the recruitment of a total of 17 committees of expert evaluators (*Gruppo di Esperti Valutatori* or GEV) that spans the various aforementioned academic domain. Till now, three exercises have been fully delivered by ANVUR: the first one covers the years 2004-2010 (Anvur, 2013); the second one covers the years 2011-2014 (Anvur, 2017b); the third one covers the years 2015-2019 (Anvur, 2021a). The final judgment is based on the criteria of originality, methodological rigor **[1_03]**, and impact through five ratings: excellent and extremely significant; excellent; standard; sufficient significance; low significance or not admissible (ANVUR, 2021e:6-7). In the case of Area 08a/Architecture, the evaluation of outputs is not based on bibliometric models but through an informed peer review. This means that the evaluators from the GEV assess each product based on the three aforementioned factors. It's moreover important to note that every academic domain has its own evaluation methods for outputs and various types of outputs that can be presented **[1_04]**. National funding is allocated to a single institution (and department) based on the results of the VQR.

Problematizing the VQR

In relation to the VQR, it is paramount to (summary) tackle that since the very first exercise the GEV members in the field of architecture wholeheartedly clamored for the demand to define more performative criteria for assessing the architectural discipline. The results of such clamor can be summarized mainly into

two issues: the titling of a specific (and autonomous) disciplinary area, and the pretense of more disciplinary-related outcomes. Above all, the first 08 GEV asserted (and actually implemented) the urge to differentiate the 'engineering side' from the 'architectural side' and consequently the evaluation modes adopted. In this first evaluation exercise indeed the dominion defined as Civil Engineering and Architecture grouped together all the SC belonging to the 08 Area (A/B/C/D/E/F), and thus the ICARs from 01 to 22 **[1_01]**. During this first exercise though, the GEV members, as stipulated in the DM defining the procedures for the evaluation of products (DM 8/2010; DM 458/2015; DM 1110/2019), split into two sub-groups (Civil Engineering - Architecture) that proceeded simultaneously but alongside their own activities deploying two distinct evaluation methods. Bibliometric indicators were adopted for the SSDs attributable to the sub-area of civil engineering (ICAR/01 - ICAR/09), and peer review for the SSDs attributable to the sub-area of architecture[9] (ICAR/10 - ICAR/22). As a result of precisely such an experience and the final area report (*rapporto d'area*) (Anvur, 2013), Area 08 was officially split into two sub-areas[10]: 08a for gathering the architecture-related recruitment fields, and 08b for gathering civil engineering-related recruitment fields. At the same time, the experts demanded to thrive space for more coherent disciplinary products, above all the *project* — and especially for the figures pertaining to the most involved academic disciplines comprising

[9] In the essay *L'irresistibile ascesa dei modelli computazionali* (2018), Marco Gaiani gives back a fairly sharp picture of the reasons (and supporting data) behind this choice. He expands on his personal experience in the 2004-2010 VQR GEV (the pioneer that structured the 08 area into two sub-groups: bibliometrics vs non-bibliometrics) through the considerations expressed by the 2011-2014 VQR GEV. Bibliometric indicators are, in the field of architecture (in Italy) very limiting and almost useless considering first of all the lack of an established shared bibliometric tradition at the European level, which results in a different repartition of disciplinary strands (some ssd of the 08a Area are placed in engineering or humanities). Moreover, traditionally the dissemination occurred in generalist (mainly hard copy) magazines, with a propensity to reference 'well-known' books rather than scientifically relevant contributions. Although recent production veered toward specialized (and indicized) journals, these conditions resulted in an unreliable quantification of pre-2010 citations. This problem still persists, considering that a large number of articles are yet published in formats midway between journals and magazines that do not fit into the indexed databases.

[10] The internal organization of the two subareas exists exclusively within the VQR domain, for any other feature in fact MIUR still maintains the general definition of Area 08 - Civil Engineering and Architecture.

ICAR 14/15/16. GEV asserts an emphasis on the centrality of the project as a tool for research, but also for teaching, denouncing with concern its low presence among the materials submitted in VQR-08a and attributing this attitude to the unclear and ill-defined evaluation methods. As a result, in the 2011-2014 VQR-08a among the products pertaining to the area appeared the label '*progetti architettonici*' (architectural design) intended as "a study/project aimed to clarify relevant aspects for the design procedure in the area of all disciplines included in the domain 08a Architecture [...] architectural projects, urban projects, territorial projects, etc. [...] In order to be evaluated, the project must have been awarded, in the four-year period of the evaluation exercise, as a winning or meritorious project in a competition, bid, or award, or must have been the object of a publication, including an on-line publication"[11] (Anvur, 2015b).

As a matter of fact, the dispute (or disputes) has not been confined to the 'enclosed' environment of the VQR. Some of the engaged experts continued and expanded the arguments initiated during their appointment even after 'returning' to their hosting institutions. The main concerns will here be presented not according to the chronological order of the publications, and neither the GEV belongings, while attempting to reconnect the argumentations to the two branches of the debate: one that addresses the effects of VQR on general patterns of research in Architecture, and the other looking at the particular aspect of the project value in the practice of research by problematizing the effects that a bibliometric-based evaluation has in forcing it into a categorization where it can barely adapt. This reduction has to be seen as a simplification, or rather a pretext to highlight some of the main features of the interventions, to the extent that each of the authors has addressed in its texts both the questions mainly stressing one side of the coin.

The first direction is the one pursued by the book titled *La ricerca in*

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[11] "Uno studio/progetto teso a chiarire aspetti necessari per la progettazione nell'ambito di tutte le discipline comprese nell'area 08a Architettura […] progetti di architettura, progetti urbani, territoriali, eccetera […] Per essere oggetto di valutazione deve essere risultato, nel quadriennio di riferimento di questo esercizio di valutazione, vincitore o meritevole di menzione in concorso o gara, o premiazione, oppure deve essere stato oggetto di pubblicazione anche on line" (Anvur, 2015b).

architettura. Temi di discussione (2018a), edited by Cristina Bianchetti — full professor of Urban Design And Landscape[12] (ICAR/21) at Politecnico di Torino and coordinator of the 2011-2014 VQR-08a GEV — which also includes (among the others) two former members of the VQR: Carlo Olmo — emeritus professor of History of Architecture (ICAR/18) at Politecnico di Torino and member of both the 2004-2010 and 2011-2014 VQR-08a GEV — and Marco Gaiani — full professor of Representation of Architecture (ICAR/17) at Universita di Bologna, and member of the 2004-2010 VQR 08 GEV.

The book, published just one year after the conclusion of the second VQR exercise, retraced patterns and trends that emerged in the first ten years of VQR (2004-2014). In doing so, are tackled some recurrent concerns (hierarchies, conformity, internationalization, research structures, etc.) that connote architectural research in the radical turning point that the contemporary (academic) world in flux is witnessing. Changes in national and European policies, research practices, and researcher profiles are embedded in a series of tensions starting, in the Italian scenario, from the relationship with construction engineering[13] frequently recalled in the national debate that Bianchetti defines as its 'technical twin'. In this direction, the challenge that VQR-08a is launching in defining a new value assessment matrix highlighted that architecture still requires an effort to strengthen its status, and especially in making explicit its production mechanisms. In other words to better position the discipline perception to internal and external bodies (among which ANVUR). What happened is that, instead of capitalizing the circumstances to effectively commit the academic institutions in their social role, — shortening the distance between universities' inner and outer mechanisms, or making the management arrangements of departments more transparent — the architectural field passively soaks the process (Olmo, 2018). Inputs from a variety of parties including ANVUR, resulted in a radical

[12] For translations of the pertaining scientific-disciplinary fields, it is used the translation proposed by MIUR in the DM 855/2015 (Allegato C).

[13] Inteded here as 'ingegneria edile'. It is worth noting that in the Italian context, exists a degree program that pulls together the two disciplines under the single definition of 'Civil Engineering-Architecture' (Ingegneria Edile-Architettura). Upon graduation, the graduate may choose the professional body (and profession) to join, undertaking the professional examination as an engineer or architect.

transformation of the professors' anthropology, that from being mentors mainly engaged in the production and transmission of a research school, became 'bureaucrats' seeking forms of funding. From this perspective, Olmo regrets a severe failure in the separation of GEVs, which has led to the radicalization of the technical dimension of the 08b area and the hybrid dimension of the 08a area by forsaking the intermingling of tools and forms of communication.

The most evident result of the assessment, not only in Architecture, has instead been that it has further emphasized the inequalities and power mechanisms among universities (and departments), exacerbating the chances for the larger institutions to persist in obtaining funds to the detriment of the smaller ones. As stated by Olmo, the potential of the *reception* of VQR results for better understanding/ problematizing/steering the research agenda beyond European or entrepreneurial mechanisms remained unexpressed. Instead, the tendency consisted in an over-productivity finalized in accessing funds/awards/qualifications/etc. This has moreover resulted in a progressive tendency towards uniformity in either the products delivered or the topics tackled (Bianchetti, 2018b; Gaiani, 2018) that, considering as primary role of research to create knowledge and disseminate it, is a huge issue of effectiveness. In particular, in Architecture this is an issue of concern because the rise of bibliometric-based (or at least indexing-based) evaluation systems has resulted in the consequence that some of the more traditionally popular channels (as widely popular journals or exhibitions) are no longer worthwhile as they fail to comply with acceptance mechanisms first of all of other disciplines, and then by the scientific community itself (see Roberta Amirante on the following pages).

On the first hand, it evolved in a growing tendency to avoid controversial topics and rather concentrate efforts on those projects that are expected to gain community consensus, and thus (again) political and economic support (Bianchetti, 2018b). An approach that yet over-limits the potential for testing and explorations rather letting to those products that are codified and more easily measured (because they respond at least to peer-review mechanism for instance) to take priority over the others. It is particularly evident in the increasing number of articles, that are the quickest-production outcomes thus better fitting the ever-faster pace of those research that does not boast economic support — which vice

versa bear a genuine 'publishing bulimia'. Such standardization comes at the cost of those other activities or products that deviate from the dominant taxonomy, thereby penalizing all those that diverged from the standard of a scientific paper or book. Still, among the 'others' are precisely the ones that are proper of an area of 'practical orientation' based on the essence of the research-action paradigm that eludes as well strict bounds of research disciplines. Indeed, applied speculative products such as design or curating lead in architecture to wider margins of possible experimentation and moreover represent the "typical dissemination formats of the architect's research and the product more closely aligned with sta professional goals "[14] (Gaiani, 2018: 89).

Other GEV members, which not-oddly affer to ICAR/14 SSD, while agreeing in seeing the (yet mostly untapped) opportunity of capitalize VQR to interject and provide the tools to enhance research in Italy, felt the urge of using their experience to state further considerations mainly related to the assessment of the project.

This is the case of Alessandra Capuano — architect, full professor of Architectural and Urban Design (ICAR/14), director of the Department of Architecture and Design at La Sapienza University (Rome), and member of the 2011-2014 VQR - 08a GEV. In her article titled *Per un ritorno del progetto al centro,* published in the second issue of the magazine Ardeth (2018), Capuano moves the lens towards the architectural design, emphasizing the urgency in addressing the issue of the design assessment not simply for the valuation itself, but especially for the role that VQR plays in steering future patterns in the academic environment. By recognizing architecture as a field that spans between *hard* and *soft sciences*, she thrusts the emphasis toward the ultimate goal of architecture, which is first of all to train technicians in the field. Moreover, she flanks the attitude of those literature strands that in the last decades move the observation towards the architectural performance and its products — i.e. the object-project intended as the wider set of tools, actors, and interactions that it mobilizes and yet not the formal intentions (Armando & Durbiano, 2017) — to the analogous concern of academic governance of allocate funds based on the

[14] "Tipiche forme disseminative della ricerca dell'architetto e il prodotto più vicino agli obiettivi professionali più propri" (Gaiani, 2018: 89).

evaluation of the institutions' performances and their scientific production. In the VQR operation and furthermore in the current restrictive legislation in Italy[15], Capuano recognizes the reasons for the contemporary trend of architecture professoriate of being 'text writers before project authors' (285). Hence the controversial theme of how it would be possible for future generations of architects to be trained by figures that are incrementally excluded from the opportunity to personally experience the complexity of projects carried out beyond the borders of university simulation, that is, in the very midst of contingency of the real. To this end, Capuano pleads first and foremost the necessity to wonder whether (and if so, where) exists a definable boundary between research and design practice, a central contention to be defined in order for the sake of readjusting the research and the execution of its evaluation, as well as the practice itself, and ensuring that the project 'returns to the center'.

Another work to mention is that of Francesco Garofalo (2008, 2016) — architect and full professor of architectural and urban design (ICAR/14) at Università di Chieti-Pescara, and coordinator of the 2004-2010 VQR 08 GEV. Although the book *Architettura Scritta. Otto testi per sei dilemmi* (2008), has been written four years before the starting of the proceedings of the very first GEV (thus not directly addressing the issue of VQR) it anticipates some of the key concerns that always lie behind the debate as if 'exists the research in design' (47-54). First of all, the discussion on the very essence of the terms research and scientific community in the field of architecture that, being absorbed into a radical subjective dimension, acquire in his perspective more value than a metaphor (50). Then even the existence of the Ph.D. in *progettazione* (design) and what it's for. In this respect in particular, he points out that while this is a doctorate in design, it at least has design rather than architecture as its object, however, does not extend the reasoning in considering it as the final product of the research. Indeed, the book attempt to manifest the iterative process behind the architectural writing that, in order to disclose something about the physical object, starts *from* and arrives almost always *at* a pre-existing text (10). In this

[15] As will further be explored in Chapter 2, nowadays Italian norms prevent full, associate, or assistant professors with a full-time contract to practice architecture outer the border of the institution, moreover, the institutions themselves have strict limits in participating in professional activities even for projects developed in collaboration with external ventures.

perspective, Garofalo delineates the research in architecture as a particular lens of the doer, therefore not the whole form of architecture nor the profession in its 'craft', while a critical, conscious, and self-reflective practice which takes its start of the project. In a later publication (2016), titled *Cos'è successo all'architettura italiana?*, he further unpacks his observations concerning the Ph.D. in architectural design and the more appropriate investigations pertaining, as well as the mechanism of research assessing (both on a departmental than personal scale).

Last and foremost, the oft-cited work by Roberta Amirante (2014; 2018; 2021) — full professor of architectural and urban design (ICAR/14) at Università degli Studi di Napoli Federico II, and member of the 2004-2010 VQR 08 GEV. The little more than a hundred-page brochure goes even further, purposing a concrete mode of facing the evaluation exercise in architecture with a precise lens on the project. In the 2018 book *Il progetto come prodotto di ricerca. Un'ipotesi,* Amirante deconstruct a 2014 article — thus written just after the experience in the GEV whose activities spanned between January 2012 - May 2013 — to assert a specific procedure, or *format* as it is called by the author, in which the project 'can be worth as' scientific research. The cunning endorsement offered in the pamphlet consists in stacking the design process to the abductive reasoning, that is making an inference in which to insight from what is *known* what is *probable* (aka to guess right). In this sense the obtained result, just as the architectural object, consists of an *uncertain hypothesis* constructed based on evidence (or prescriptions in the case of the architectural project) that is empirically validated only in terms of probability: the gained rule is valid mainly in the observed scenario and cannot be absolutely confirmed by logics nor data. Grounded on this backdrop, the argumentation is mainly related to the issue of how to approach (not theoretically while practically) the evaluation of the project in the VQR, and thus which "material configuration the project may take to present itself as a research product"[16] (34). It is presented in a sense of urgency that calls all the scholars in composition (ICAR/14) to pledge to the issue 'before it's too late'. The concrete proposal drawn up by Amirante consists not in tackling the scientific contribution of the project in its making that would according to her reduce the possibility to

[16] "Materiale configurazione può assumere il progetto per presentarsi come prodotto di ricerca" (Amirante, 2018: 34).

several 'theoretical circumvolutions' whiles in manifest it through a (later) transcription, just as in other disciplines the experiments are written down in an article. Such a condition obviously would impose the definition of a protocol logic that deploys conventional languages to expose the increase in knowledge that the transcribed operation (aka the project) has produced for the ones involved (the researchers). In this perspective there would be a shift from the current policy that assesses the project mainly according to the awards won in design contests and competitions — which respond to the logic of judging committees that are completely extraneous to the reasons for academic research — towards measures more related to the scientific agenda. In a glance, according to Amirante the product should be able to "enhance the project's process to make it more explicit, understandable, and traceable (although it is done retrospectively and with the intention of not necessarily providing an absolute truth, the primary goal is to enhance the project's capacity to generate *knowledge* by enabling others to *experience it*" [17](59). However, in the meantime, it is imperative to be aware that falsifiability (or the process whereby a particular transition can be re-experienced in precisely the same form) cannot be meant exactly as in the scientific experiments, it is indeed impractical to retrace the progression of a project in an identical sequence (2021).

It is clear from the heterogeneity of these lines both the connection with NPK and practice-oriented research and how within contemporary evaluation dynamics these become push/pulls of each other. Albeit not explicitly mentioned, some of the issues that emerged can be linked back to the broader discourse of models of research evaluation even outside the area of architecture as well as the need for a further characterization of those disciplines that are placed on the fringes of the fixed spectrum of the contraposition among hard sciences and soft sciences. What remains as the bottom line in the case of architectural design in Italian Academia is a critical twist in the need to ensure a greater emphasis on the project that also means differentiating the outcomes pertaining to the disciplinary area according to the ICAR mandate. In doing so, the issue mainly revolves around the attempt to

[17] "Rendere più esplicito, comprensibile, ripercorribile il percorso del progetto (seppure a cose fatte e puntando non necessariamente a dire la verità ma più semplicemente ad aumentare il livello di *conoscenza* che il progetto può produrre attraverso il fatto di consentire ad altri di *farne esperienza*" (Amirante, 2018: 59).

define more performative modes of assessing the final (objectual) outcome to retrospectively claim its scientific contents. Such a need is a recurring topic that arose in the literature but as a consequence of institutional assignments; therefore it is equally prominent within institutional records and 'in the pipeline' of national agencies. In *Analisi e Proposte (Sessione 84) - Criteri, parametri e indicatori per l'abilitazione scientifica nazionale*, CUN[18] (2011) proposed some updates in the criteria deployed in various disciplinary areas including 08 - Civil Engineering And Architecture.

Bridging the VQR third-stream

The proposal (not yet adopted in its integrity) consisted in providing enhanced emphasis to those research products "on a publicist basis, with further enlargement to the project and its articulations and manifestations" (20) including "scientific activities related to the collective and cultural dimensions of research, such as leading and participating in scientific and/or editorial projects and committees, technology transfer, scientific communication, as well as organizing or guiding educational-scientific projects"[19] (20). It is interesting to point out that the item *technology transfer* appears in only four areas (including the 08), or rather 01 - Mathematics And Computer Science, 06 - Medicine, 07 - Agricultural Sciences And Veterinary Medicine.

Despite the broader definition, the only scientific products proposed by CUN

[18] *Consiglio Universitario Nazionale* or CUN is a national board established in 1979 as a consultive and advisory body to the Ministry of Education (MIUR) (L 18/2006, DM 76/2012). Its tasks include defining the academic disciplines/academic recruitment fields/scientific areas; monitoring the funding system of universities; identifying high-skill research programs funded by the European Union or MIUR; defining the criteria for the scientific qualification of publications; and periodically auditing the criteria and parameters for the evaluation for national scientific qualification (Abilitazione Scientifica Nazionale ASN) and VQR. CUN comprises fifty-eight councilors, including forty-two faculty members representing the fourteen disciplinary areas; the appointing is for a four-year term with a limit on a dual mandate.

[19] "Su base pubblicistica, con ulteriore allargamento al progetto ed alle sue articolazioni e manifestazioni […] Le attività scientifiche relative alla dimensione collettiva e culturale della ricerca, come la direzione e la partecipazione in progetti e comitati scientifici e/o editoriali, il trasferimento tecnologico, la comunicazione scientifica, nonché l'organizzazione o la direzione di progetti didattico-scientifici" (CUN, 2011: 20).

that seem to be referred to TT are the items patents or licenses; which hardly fit the mandate and modalities of 08/D1 recruitment field or rather ICAR 14/15/16. Even though this proposal has not been included in the subsequent regulatory changes, an effect of such a consideration that is recognizable in the subsequent VQR is the appearance among the so-called 'other products' of the term 'architectural project'. There remains yet the difficulty in evaluating it, to the extent that it is still far from being a common practice to submit this type of output in the quinquennial valuation exercises; as is pretty clear from the evidence that of the more than 3'000 products evaluated in the 2019 VQR, merely 40 are projects and these are traceable to only 7 faculties.

In this sense, the interest of this work is not to claim an absolute scientificity of the project but rather a possible approach/mode/behavior in which to identify in its making the production and communication of knowledge, to make it recognizable and evaluable. In other words, the intent is to demonstrate the conditions for the scientific validity of a design project developed in certain specific conditions, or rather in the context of a *technology transfer* framework, so that it can then be used as a product for the evaluation of the individual researcher introducing, alongside written texts, a new category yet to be defined but which specifically identifies the architectural project developed according to certain criteria, as the scientist in the laboratory.

At this point, it is of paramount relevance to defining these criteria and conditions. In doing so, this thesis relies on the evidence — even more evident along these last lines than in the previous arguments —of the blurring conditions existing between the second and third mandate of all the figures involved in the academia — aka the production and exploitation of the research. It is still something that has been institutionalized in the Italian environment through the VQR and in particular with its business-steered branch which is the Research Quality Assessment of the Third Mission in Universities (DM 458/2015).

Spec III: on the *Research Quality Assessment of the Third Mission* or VQR-TM exercise

> VQR-TM "gathers all the outputs and knowledge transfer activities directly related to economic users (businesses), with an economic return for universities and institutions as well as the improvement of the territories in which these institutions are located"[20] (Anvur, 2016: 17). Accordingly, VQR-TM considers first of all the typical activities of technology transfer and academic entrepreneurship, though extending the scope to other and variable related features. In contrast to the 'traditional' VQR, it is a voluntary effort on the part of universities and, although adhering to common timelines, follows a different and independent methodology in the evaluation of the outputs. So far, the results are not yet concurrent in determining the final indicator for departments and universities, limiting to providing considerable insights for policymakers and governing bodies of individual institutions. The evaluation is carried out by informed peer reviewing entrusted to an interdisciplinary Commission of Third Mission Evaluation Experts (labeled as *Commissione di Esperti della valutazione della Terza Missione* or CETM in the first edition 2011-2014, and then *Gruppo di Esperti della Valutazione Interdisciplinare Impatto/Terza Missione* or GEV-TM in the second edition 2015-2019). The group consists of 28 to 30 experts including professors, researchers, directors and stakeholders with diverse expertise and afferent to different institutions; the evaluation proceeds by dividing the products into different fields of action at the committee discretion.

Each university is required to submit a number of case studies equal to half of its departments, with a maximum of two case studies per department. Each case study should be presented in a sheet of no more than 1'200 characters, as specified in the files provided by GEV **[6_16]**. The submitted products must pertain to the seven fields of action outlined by GEV **[6_18]** and will be evaluated

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[20] "Raggruppa gli output e le attività di trasferimento di conoscenza più direttamente connessi a utilizzatori economici (imprese), con un ritorno economico per le università e per gli enti oltre che sullo sviluppo dei territori in cui queste istituzioni sono localizzate" (Anvur, 2016: 17).

based on four criteria: the social, economic, and cultural dimensions of impact, relevance to the context, added value for the beneficiaries, and contribution of the proposing structure, emphasizing the scientific aspect where applicable **[6_17]**. The ratings will fall into five categories: excellent and extremely relevant, excellent, standard, sufficient relevance, low relevance, or not acceptable.

Bridging assessment models of the research and entrepreneurial academic outputs to the actual actions of research making and 'postproduction' (i.e. its translation in common research outcomes), this research attempt to define a new field in the production of knowledge in the architectural environment that starts from the reflectivity held by active involvement in design proceedings conducted in a mixed-professional environment to enhanced and advanced the acquired of knowledge through its transmission and transformation. Said in a different way, the hypothesis of this work is that the mechanisms of TM (and particularly TT) embed the production of *a certain* knowledge. First of all the production of K1, or rather the knowledge which is precisely transferred *from* the academy *to* the external stakeholders. At the same time, though, this transfer of knowledge if observed can *in turn* become additional acquired knowledge, or rather K2, that is a knowledge that accounts for a considerable extent of extra-academic dynamics and that may prompt further investigations of matters which might be enacted by both the academic and the professional environment (whereby *socially distributed knowledge*). In this view, such knowledge is transformed and further implemented in the very act of knowledge transfer and acquisition. If these exchanges occur through the implementation of an architectural project, this knowledge will be contained within the final project proposal itself. The hypothesis is therefore that it is appropriate to define the project proposal as a scientific output in itself, thus needing an evaluative document that takes into account (and highlights) the various iterative exchanges (and advancements) that have been performed. This document will then consist of the design proposal *per se* but supplemented with a range of other information to make it generalizable, transferable, and replicable. Given that this sort of 'context of the action' still solely belongs to the realm of VQR-TM, there is no choice but to start from that and seek to return the specifics of the 'product of the action' to the 'traditional' VQR.

1_01 Scheme of the Area 08 academic recruitment fields (DM 855/2015, All. C).

AREA 08 - Civil Engineering and Architecture			
Recruitment field (SC)		**Academic discipline (SSD)**	
MSC 08/A – Landscape and Infrastructural Engineering			
08/A1	Hydraulics, hydrology, hydraulic and marine constructions *Idraulica, Idrologia, Costruzioni Idrauliche e Marittime*	ICAR/01	Hydraulics *Idraulica*
		ICAR/02	Hydraulic Structures, Maritime Engineerins and Hydrology *Costruzioni Idrauliche e Marittime e Idrologia*
08/A2	Sanitary and environmental engineering, hydrocarbons and underground fluids, safety and protection engineering *Ingegneria Sanitaria – Ambientale, Ingegneria degli Idrocarburi e Fluidi nel Sottosuolo, della Sicurezza e Protezione in Ambito Civile*	ICAR/03	Sanitary and Environmental Engineering *Ingegneria Sanitaria-Ambientale*
		ING-IND/28	Excavation Engineering and Safety *Ingegneria e Sicurezza degli Scavi*
		ING-IND/29	Engineering of Raw Materials *Ingegneria delle Materie Prime*
		ING-IND/30	Hydrocarbons and Underground Fluids *Idrocarburi e Fluidi del Sottosuolo*
08/A3	Infrastructural engineering and economic evaluation *Infrastrutture e sistemi di trasporto, estimo e valutazione*	ICAR/04	Roads, Railways and Airports *Strade, Ferrovie ed Aeroporti*
		ICAR/05	Transportation *Trasporti*
		ICAR/22	Real Estate Appraisal *Estimo*
08/A4	Geomatics *Geomatica*	ICAR/06	Surveying and Mapping *Topografia e cartografia*
MSC 08/B – Structural and Geotechnical Engineering			
08/B1	Geothecnics *Geomatica*	ICAR/07	Geothecnics *Geomatica*
08/B2	Structural Mechanics *Scienza delle Costruzioni*	ICAR/08	Structural mechanics *Scienza delle Costruzioni*
08/B3	Structural Engineering Tecnica delle Costruzioni	ICAR/09	Structural Engineering *Tecnica delle Costruzioni*

MSC 08/C – Design and Technological Planning of Architecture			
08/C1	Design and technological planning of architecture *Design e progettazione tecnologica dell'architettura*	ICAR/10	Architectural Engineering *Architettura Tecnica*
		ICAR/11	Building Production *Produzione Edilizia*
		ICAR/12	Architectural Technology *Tecnologia dell'Architettura*
		ICAR/13	Design *Disegno Industriale*
MSC 08/D – Architectural Design			
08/D1	Architectural Design *Progettazione Architettonica*	ICAR/14	Architectural and Urban Design *Composizione Architettonica e Urbana*
		ICAR/15	Landscape Architecture *Architettura del Paesaggio*
		ICAR/16	Interior and Exhibit Design *Architettura degli Interni e Allestimento*
MSC 08/E – Representation, Conservation, Restoration and History of Architecture			
08/E1	Representation of Architecture *Disegno*	ICAR/17	Representation of Architecture *Disegno*
08/E2	Conservation, Restoration and History of Architecture *Restauro e storia dell'architettura*	ICAR/18	History of Architecture *Storia dell'Architettura*
		ICAR/19	Conservation and Restoration of Architecture *Restauro*
MSC 08/F – Urban and Territorial Planning and Design			
08/F1	Urban and Territorial Planning and Design *Pianificazione e progettazione urbanistica e territoriale*	ICAR/20	Urban and Regional Planning *Tecnica e Pianificazione Urbanistica*
		ICAR/21	Urban Design and Landscape *Urbanistica*

1_02 Definition of the recruitment field (DM 855/2015: Allegato B).

08/D1 Architectural Design

Progettazione Architettonica

The field focuses on the scientific and didactic training activities in the thematic realm of architectural design at various scales, including exhibitions, buildings, urban areas, and landscapes. It is organized based on theoretical and methodological aspects, addressing contemporary design problems and techniques, as well as environmental transformations. Moreover, it explores applicative and experimental aspects that aim to control typological, compositional, processual, and constructive aspects of architecture at different scales, while also considering connections with structural and plant engineering challenges. The sector delves into the examination of buildings, ranging from their formal structures and constituent elements to their internal spatiality. This encompasses interior architecture, furnishings, fittings, and extends to museography and scenography. Additionally, it investigates the interplay between buildings and their urban or natural surroundings, considering the intricate relationships between nature, objects, people, and images. The field also studies contemporary urban forms and the factors influencing their evolution and transformation. It applies and experiments with morphologies and processes for modifying different components of the city. Furthermore, it examines landscape architecture and open spaces in diverse human-influenced conditions and at varying scales. The field recognizes geographical and topographical conditions, environmental diversity, as well as historical, architectural, cultural, ecological, and formal pre-existing elements as defining characteristics for sustainable transformations. It also addresses the interaction between infrastructure and the landscape, urban green systems, the revitalization of abandoned or deteriorated areas, and the design of parks, gardens, squares, and other open spaces in general.

Il settore si interessa dell'attività scientifica e didattico-formativa dell'intero campo tematico e scalare del progetto di architettura per allestimenti, edifici, città e paesaggio. Si articola in aspetti teorici e metodologici, concernenti i problemi e le tecniche della progettazione contemporanea e delle trasformazioni dell'ambiente, e in aspetti applicativi e sperimentali, finalizzati al controllo dei caratteri tipologici, compositivi, processuali e costruttivi delle diverse scale architettoniche, nonché alle connessioni con i problemi strutturali e impiantistici. Il settore studia l'edificio nella struttura formale e negli elementi che lo compongono, nella spazialità interna che include problemi di architettura degli interni, di arredo e di allestimento anche nel campo della museografia e scenografia, nei rapporti con la città o il paesaggio condizionati dalla complessità delle relazioni materiali e immateriali tra natura, oggetti, persone e immagini. Studia inoltre le forme della città contemporanea e i fenomeni che ne hanno determinato evoluzioni e trasformazioni, applica e sperimenta morfologie e processi per la modificazione delle sue parti. Studia l'architettura del paesaggio e gli spazi aperti in tutte le condizioni antropiche e a tutte le scale, riconosce nelle condizioni geografiche e topografiche, nelle diversità ambientali e nelle preesistenze storiche, architettoniche, culturali, ecologiche e formali i caratteri qualificanti per la sostenibilità delle trasformazioni, si occupa dell'interazione delle infrastrutture con il paesaggio, dei sistemi di verde urbano, della riqualificazione delle aree dismesse o degradate, del disegno di parchi e giardini, piazze e spazi aperti in generale.

1_03 VQR-08a: evaluation criteria (ANVUR, 2021e: 6-7).

a) originality

which refers to the level at which the product introduces a new way of thinking and/or interpreting in relation to the scientific object of research, distinguishing itself and innovating compared to previous approaches on the same subject.

Da intendersi come il livello al quale il prodotto introduce un nuovo modo di pensare e/o interpretare in relazione all'oggetto scientifico della ricerca, e si distingue e innova rispetto agli approcci precedenti sullo stesso oggetto.

b) methodological rigor

which refers to the level at which the product clearly presents the research objectives and the state of the art in the literature, adopts an appropriate methodology for the research object, and demonstrates that the objectives have been achieved.

Da intendersi come il livello al quale il prodotto presenta in modo chiaro gli obiettivi della ricerca e lo stato dell'arte nella letteratura, adotta una metodologia appropriata all'oggetto della ricerca e dimostra che gli obiettivi sono stati raggiunti.

c) impact

which refers to the level at which the product exerts, or is expected to exert, an influence on the international scientific community or, where appropriate, the national community in relevant disciplines.

Da intendersi come il livello al quale il prodotto esercita, o è presumibile che eserciterà, un'influenza sulla comunità scientifica internazionale o, per le discipline in cui è appropriato, su quella nazionale.

1_04 VQR-08a: eligible products for evaluation (ANVUR, 2021e: 22-23).

a) Scientific monograph and related products:

1. Scientific monograph (including non-strictly educational content manuals, descriptive, historical, and scientific dictionaries)
2. Coherent collection of research essays (predominantly or entirely within the period 2015-2019)
3. Critical or reasoned bibliography
4. Critical edition of texts (including critical edition of manuscripts)
5. Publication of unpublished sources (only if accompanied by an introduction and commentary)
6. Critical manuals of non-strictly educational content
7. Scientific grammars and dictionaries

b) Contribution to journals, limited to the following types:

1. Scientific article
2. Critical review of scientific literature

c) Book contribution:

1. Contribution to a book (chapter or essay, including short critical text editions)
2. Introduction/Preface/Afterword
3. Editorship of a book with introductory essay
4. Entry in a dictionary or encyclopedia

d) Conference proceedings:

1. Contribution to conference proceedings in a journal
2. Contribution to conference proceedings

e) Other types of scientific products (only if accompanied by official elements allowing identification of the author and production date)*:

1. Drawings
2. Architectural projects or design works**
3. Art prototypes and related projects (including prototypes of technological instruments or devices and their projects)
4. Exhibitions or shows
5. Databases and software
6. Thematic maps
7. Digital and interactive artifacts

f) Granted patents during the VQR quinquennium (from 1/1/2015 to 31/12/2019)*

* Products presented within the framework of the Third Mission evaluation are not eligible.

** Intended as "Studies/projects aimed at clarifying necessary aspects for design within all disciplines encompassed in the Architecture sector (08a). This category includes, for example, architectural projects, urban plans, urban and territorial projects, landscape projects, restoration projects, artifacts and industrial product designs, technological projects, and more. In order to be evaluated, a product/project **must have achieved recognition or a commendation** in a competition, tender, or award during the reference five-year period of this evaluation. Alternatively, it **must have been published**, including online publication with an ISBN or ISSN, by the author themselves or others. Additionally, it must be uniquely identifiable and attributed to the author/authors as the result of a research and experimentation process. It should be accompanied by documentation closely related to the presented product and capable of facilitating adequate evaluation, such as a portfolio in PDF format" (ANVUR, 2021e: attachment 1, p 8).

"Studi/progetti tesi a chiarire aspetti necessari per la progettazione nell'ambito di tutte le discipline comprese nell'area 08a Architettura. La tipologia comprende a titolo di esempio: progetti di architettura, piani urbanistici, progetti urbani, territoriali, di paesaggio, di restauro, di artefatti e prodotti industriali, progetti di design, progetti tecnologici, ecc. Per essere oggetto di valutazione un prodotto/progetto deve essere risultato, nel quinquennio di riferimento di questo esercizio di valutazione, vincitore o meritevole di menzione in concorso o gara, o premiazione, oppure deve essere stato oggetto di pubblicazione anche on line, dotata di ISBN o ISSN, da parte dell'autore stesso o di altri. Deve inoltre essere univocamente identificato e riferibile all'autore/agli autori come esito di un percorso di ricerca e sperimentazione. Deve essere corredato da documentazione strettamente attinente al prodotto presentato e atta a consentire adeguata valutazione costituita da un portfolio, ovvero un documento in formato pdf" (ANVUR, 2021e: attachment 1, p 8).

Chapter 2

Research and Practice in Italy, a controversial dichotomy

Before delving into the case study, the following two chapters are intended to provide context for the *agora* (Nowotny et al., 2001) where knowledge is produced and exchanged. Therefore, the following pages present an overview of the Practice/Academia relationship in two distinct scenarios: Italy and China. The first scenario represents the operational setting where the case study unfolds, while the second scenario serves as the 'host environment' influencing the actions. A deep understanding of both contexts is essential to grasp the push behind the initiation of the technology transfer mechanism along with the ongoing interconnection of events, forming a symbiotic relationship where the two environments mutually reinforce and inspire the launch and continuous refinement of the experimentation.

In this regard, this chapter aims to provide an understanding of the institutionalization and evolution of Italian policies regarding the organization and accessibility of universities together with the key regulations implemented to address the intersection with professional practice.

Such a normative excursus starts in this work from the 1980s, it is however to

be briefly contextualized within the broader discourses of the previous decade. While it is accurate that these discussions did indeed kickstart a process of gradual detachment between academic discourse and professional practice, it is also true that this endeavor stemmed from a reaction to the significant changes occurring within architecture schools. In the 1970s, Italian architecture schools were grappling with a surge in student numbers following the liberalization of university access, already not comparable with concrete market demands; in the meantime, the freely manageable academic programs afforded students to organize their curriculum without specific cornerstones, often resulting in individuals thoroughly prepared in certain areas while completely ignorant in others. Furthermore, a profound disillusionment with modernism and its formalist approach was spreading. The contradictory results of a series of unsuccessful attempts at reinterpreting and standardizing architectural typologies, especially related to domesticity and housing design, were indeed clearly showing the limits of the great masters and their approaches. This disillusionment led to a shift away from the notion of architecture's supposed autonomy towards a more holistic perspective, in particular questioning the essence of teaching models. This perspective views architecture as the outcome of a broader process encompassing economic, social, and cultural factors, involving many responsibilities and competencies apart from architects. Within this backdrop, the seemingly endless stream of national standards introduced in the 1980s accompanied the shift towards mass university education, progressively blurring the lines between academic reflection and practical design work, thereby affecting the interplay between professional practice and architectural education. The debates on how to move forward exploded in many places throughout the national panorama, particularly during the Gibilmanna seminars, which began in 1971 and were mainly led by the young professor Alberto Samonà, son of the most renowned Giuseppe Samonà. Gibilmanna Seminars were the occasion in which young and well-known scholars were asked to reflect together, and even defiantly, on how schools of architecture could react to the ongoing crisis through a design theory based on scientific foundations (Samonà, 1973a; 1973b; 1974; 1976). The main attempt was hence to question and develop a series of tools capable of transmitting the essential principles of architectural design practice in relation to the historical period that the schools were facing, as clearly declared by the title of

the second seminar: Architectural Design Tools in Relation to the Transformation of Reality. Teaching and Research in Architecture Faculties (Gli strumenti della progettazione architettonica in relazione alla trasformazione della realtà. Didattica e ricerca nelle facoltà di architettura).

During these seminars, the concept of the design process is viewed as an essential component of the continuous transformative nature of reality. In this context, the architect operates with autonomy, but the outcomes and origins of the process are shaped by the surrounding context (social, economic, cultural, political, etc.). This perspective shifts the perception of design away from a moralistic action to one where it serves as a tool for fostering students' awareness of their involvement in a broader process. It hence emphasizes the development of skills and capacities pertinent to only a specific aspect of this process, rather than aiming for the complete resolution of an absolute problem (i.e. the problem of dwelling, the city as planning, etc.). In other words, considering that only a very small percentage of students become practitioners, it is evident that design should be understood as just one of a number of tools of knowledge, and hence as a non-totalizing and disinterested moment. This hypothesis, along with taking the distance to from the aforementioned modernist glance, raises the question of whether to approach teaching starting from the external issues and the complexities that the project faces or to delimit the margins for a reflection on the case-specific qualities. The first phase can be done through a systematic analysis of design processes taken as emblematic references for their unfolding as a process using tools such as urban analysis, morphology, etc. The delimitation mentioned in the second phase instead entails constructing a cognitive process of architecture through practice, but also distancing it from external contingencies. Thus, on the one hand, there is the architectural theory, and on the other, its exercise — an exercise that, to be instrumental at the educational level, must detach itself from the real world and project into a dimension where it can be repeated, updated, and continuously improved. In this scheme, particularly championed by Samonà, it is possible to discern the seed of the progressive separation between the two roles of practicing architecture and educating in architecture that will be enforced by the norms touched in the following pages.

These initial ideas, initially discussed in the third conference and subsequently

elaborated in the following years, have indeed defined the Italian academic landscape in architecture. Other points touched upon during these seminars have also sculpted the characteristics of contemporary national academic system. Such as the discussions revolved around the unit values to be attributed to each course, which can now be readily identified in the ECTS credits, or those rational systems of knowledge control that strongly resemble the SSD. These, among other aspects, have gradually favored the stratification of norms and practices that have, over time, juxtaposed the real market of professional practice with the sheltered and simulated dimension of design exercise in academia, both in terms of teaching and research. Starting from these assumptions, the chapter proceds trying to recollect the main bureaucratic steps that set the recent debate about how evaluating the project as a product and not just a tool of scientific research. To do so, the chapter goes through the main norms that, as a reflection of this debate, influenced over the years the structure of the educational program and those that regulate the research tasks (theoretical and applied) of faculty and institutions as economic entities.

Although the cited references primarily pertain to national or European standards, the chapter aims to untangle the main bureaucratic complexities underlying the debate within the D1 disciplinary field. When structuring the text, therefore, the use of publications resulting from discussions held in collective settings such as Pro-Arch or related conferences has been crucial (Bartocci et al., 2022; Borrelli, 2011; Calderoni et al., 2019; Cellini, 2018; Comoglio & Marcuzzo, 2013; Ferrari et a., 2020; Massarente, 2012; Melluso et al., 2015; Raitano, 2014; Ricci, 2014b; Vadini, 2021).

1.1 1980s-90s: First setbacks and European standardization in Architecture

As mentioned, in Italy, the regulatory framework concerning university teaching, architectural education, and the relationship between academic and the professional field has undergone a progressive detachment, leading to a complexification and limitation of exchange possibilities between the two realms — ‘theoretical vs applied’, or ‘simulated vs actual’ — of the discipline. The enactment of Law 240/2010 (commonly known as *Gelmini Reform*) marked the

culmination of a lengthy and intricate process aimed at standardizing and harmonizing academic prerequisites and qualifications, while also safeguarding the limited professional market. Upon reviewing the regulatory complexity stratified over the past four decades, it becomes evident that the educational role (first mission), research role (second mission), and the role of external agreements and consultations (third mission) have developed almost independently of one another. This has led to an operational framework that, on the one hand, imposes limitations on those actions that are instead encouraged on the other. This is quite significant, considering that these three components are intricately intertwined, if not overlapping, in the very nature of architectural projects, encompassing practical application, educative simulation, and scientific investigation.

One of the earliest was the **DPR 382/1980**, *Riordinamento della docenza Universitaria* (Reorganization of university teaching), further modified and expanded with L 118/1989. It was a turning point, given the significant role that scholars played in the post-World War II reconstruction. In addition to introducing the position of assistant professor (art.1), it also established a distinction between full-time and part-time professors (*regime a tempo pieno e a tempo definito*). This distinction is defined in the Article 11 as follows:

> "The part-time regime: […] is compatible with the performance of professional activities and continuous external consultancy, as well as the assumption of paid assignments, but it is incompatible with engaging in commerce and industry.
>
> The full-time regime: is incompatible with any form of professional activity and external consultancy, as well as the assumption of any paid assignment, and engaging in commerce and industry. However, exceptions are made for judicial expert opinions and participation in technical-scientific advisory bodies of the State, local public entities, and research institutions. Additionally, activities carried out on behalf of the government, public entities, or predominantly state-owned organizations are allowed, provided they are performed as experts in their respective disciplines and in accordance with their institutional

duties"[1] (DPR 382/1980; art. 11).

Therefore although it prohibited "any form of professional activity", it also allowed undertaking consultancies and collaborations with other public administrations, entities, or private organizations if proven that those are performed as experts in the respective disciplines and in accordance with institutional duties.

In this norm hence, although restrictions are being imposed to faculty members activities, there is still considerable flexibility when it comes to direct appointments from other public institutions. What is even more interesting to note is that this legislation outlined the provision for universities also to engage in research and consulting services for private entities under the label of 'third-party activities' (referred to as *attività conto terzi*). This label encompassed a diverse range of activities that could be assigned to departments, organizational units, or even individual professors. It is probably a legacy stemming from the privileged position they held in previous years, but which would be gradually redefined and rebalanced in subsequent years. Specifically, according to Article 66:

> "Universities, as long as it does not hinder their scientific and educational function, have the authority to conduct research and consulting activities through contracts and agreements with public and private entities. The execution of such contracts and agreements will generally be entrusted to departments, or in the absence of departments, to institutes or university clinics, or to full-time

[1] "Il regime d'impegno a tempo definito: […] è compatibile con lo svolgimento di attività professionali e di attività di consulenza anche continuativa esterne e con l'assunzione di incarichi retribuiti ma è incompatibile con l'esercizio del commercio e dell'industria. Il regime a tempo pieno: è incompatibile con lo svolgimento di qualsiasi attività professionale e di consulenza esterna e con l'assunzione di qualsiasi incarico retribuito e con l'esercizio del commercio e dell'industria; sono fatte salve le perizie giudiziarie e la partecipazione ad organi di consulenza tecnico-scientifica dello Stato, degli enti pubblici territoriali e degli enti di ricerca, nonché le attività, comunque svolte, per conto di amministrazioni dello Stato, enti pubblici e organismi a prevalente partecipazione statale purché prestate in quanto esperti nel proprio campo disciplinare e compatibilmente con l'assolvimento dei propri compiti istituzionali" (DPR 382/1980; art. 11).

individual professors."[2] (DPR 382/1980: art. 66).

Essentially, this regulation enables university departments to participate in external activities, including those within the architectural field, giving them the opportunity to compete for design projects and commissions. Moreover, since the department was not yet legally recognized as a distinct entity or economic actor in 1980, it relied on the collective strength and support of the entire university to secure job assignments, leveraging on the importance and credibility of renowned and respected institutions like universities are. Therefore, while this provision was intended to enable TEIs in exploring alternative funding options during a time when the state still held significant influence, it also recognized the distinctive characteristics typically associated with professional services, allowing professor-architects the flexibility to engage in professional activities.

These controversial issues hence start to delineate the boundaries of an intricated narrative that will become even more evident in the following pages.

Ten years later, the incongruity of the DPR 382/1980 was further amplified by a new enactment **L 241/1990**, *Nuove norme in materia di procedimento amministrativo e di diritto di accesso ai documenti amministrativi* (New rules on administrative procedure and the right of access to administrative documents). It introduced new regulations regarding administrative procedures, emphasizing the possibility for public administrations of unrestricted opportunities to engage in activities of common interest through agreements between parties (L 241/1990: art.15)[3]. This, obviously, facilitated collaboration among public administrations, including universities and local authorities. These collaborations could even include tenders for design services. Indeed, as stated few years later by the L 109/1994 'La nuova legge quadro in materia di lavori pubblici' (New framework

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[2] "Le Università, purché non vi osti lo svolgimento della loro funzione scientifica didattica, possono eseguire attività di ricerca e consulenza stabilite mediante contratti e convenzioni con enti pubblici e privati. L'esecuzione di tali contratti e convenzioni sarà affidata, di norma, ai dipartimenti o, qualora questi non siano costituiti, agli istituti o alle cliniche universitarie o a singoli docenti a tempo pieno" (DPR 382/1980, art. 66).

[3] ''Anche al di fuori delle ipotesi previste dall'articolo 14, le amministrazioni pubbliche possono sempre concludere tra loro accordi per disciplinare lo svolgimento in collaborazione di attivita 'di interesse comune'" (L 241/1990: art. 15).

law on public work), and even later by the judgment of the European Court Case C-305/08.

> "The services related to preliminary, final, and executive design, as well as site supervision and technical-administrative support tasks to the activities of the sole responsible person in the procedure and the competent officer in charge of the three-year program referred to in Article 14, are carried out by:
> a) the technical offices of the contracting authorities;
> b) the consortia offices for design and site supervision that municipalities, their consortia and unions, mountain communities, local health units, consortia, industrialization bodies, and reclamation bodies may establish [...];
> c) the organizations of other public administrations that the individual awarding authorities may avail themselves of by law"[4] (L 109/1994: art.17)[5].

> "In the light of that case-law, the Consiglio di Stato states that the admission of universities, research institutes and consortia of those bodies to public tendering procedures may infringe the principle of free competition in two respects. First, it could potentially remove from the open market a number of public contracts, to which ease of access would in practice be hampered for a not inconsiderable proportion of ordinary undertakings. Second, it would place the

[4] "Le prestazioni relative alla progettazione preliminare, definitiva ed esecutiva nonché alla direzione dei lavori ed agli incarichi di supporto tecnico-amministrativo alle attività del responsabile unico del procedimento e del dirigente competente alla formazione del programma triennale di cui all'articolo 14, sono espletate: a) dagli uffici tecnici delle stazioni appaltanti; b) dagli uffici consortili di progettazione e di direzione dei lavori che i comuni, i rispettivi consorzi e unioni, le comunità montane, le unità sanitarie locali, i consorzi, gli enti di industrializzazione e gli enti di bonifica possono costituire […]; c) dagli organismi di altre pubbliche amministrazioni di cui le singole amministrazioni aggiudicatrici possono avvalersi per legge" (L 109/1994: art.17).

[5] The same article is also reiterated in Article 90 of D.Lgs. 163/2006 'Codice dei contratti pubblici relativi a lavori, servizi e forniture in attuazione delle direttive 2004/17/CE e 2004/18/CE' (Code of public contracts for works, services and supplies in implementation of Directives 2004/17/EC and 2004/18/EC).

> contractor in a position of unfair advantage, guaranteeing it economic security provided by the constant and predictable flow of public finance, which is not available to other economic operators. However, the Consiglio di Stato takes the view that a restrictive interpretation of the concept of 'economic operator', which is dependent on the stable presence of such an operator 'on the market', thus precluding universities, research institutes and consortia of such bodies from taking part in public tendering procedures, would seriously undermine cooperation between public and private entities and between researchers and commercial operators and ultimately constitute a restriction on free competition"[6] (Sent. C-305/08).

If universities are considered as 'economic operators' they also have the ability to participate in design, service, and supply tenders either individually or in collaboration with others. The recognition of the 'economic operator' status extends, according to L 109/1994, not only to individuals and legal entities but also explicitly including public entities that offer services in the market. This clarification prevented any potential obstacles of collaborations between research and business activities, which were instead positively seen for competitiveness. It hence allowed entities such as universities, research institutes, and university-public administration partnerships, which do not primarily seek profit, do not possess the organizational structure of a typical enterprise, and do not maintain a regular presence in the market, to participate in public service contracts.

Nevertheless, such interpretation remains rather tenuous over the years, to the point that a few years later, a judgment of the State Council in June 2011 overturned it. Indeed various Veneto Region's Chamber of Architects (Belluno, Padua, Rovigo, Treviso, Verona, Vicenza) successfully appealed against the company ISP - IUAV Studi & Progetti of illegitimate competition. ISP presented

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[6] "Un'interpretazione restrittiva della nozione di 'operatore economico' che fosse legata alla collocazione stabile di quest'ultimo 'sul mercato' e che impedisse quindi alle università, agli istituti di ricerca e ai loro raggruppamenti di partecipare a gare d'appalto sarebbe gravemente pregiudizievole per la collaborazione tra entità pubbliche e private, nonché tra attività di ricerca e attività d'impresa, e, in definitiva, rappresenterebbe una restrizione della concorrenza" (Sent. C-305/08).

itself as an *in-house* entity affiliated with Istituto Universitario di Architettura di Venezia (IUAV), with its corporate purpose focused on carrying out activities such as study, research, design, and the provision of engineering services (it eventually consisted of architectural and urban planning, land use planning, construction). The State Council stated that the free market was in this case been distorted, by moreover denouncing the fact that public funds were used to pay for the resources, personnel, and facilities of the agency.

> "Universities, which have both teaching and research objectives, are allowed to establish companies within the scope of their organizational and financial autonomy solely if dedicated to fulfilling the institution's own institutional purposes, and yet not competing in the market. […] The establishment of such companies is generally permissible if they meet the requirements for being considered *in-house* entities (having full public ownership, excluding private capital, maintaining analogous control, and engaging exclusively or predominantly in activities for the public shareholder) […] It is hence crucial to differentiate on one side establishing an *in-house* company by a non-profit public entity, which is considered a neutral organizational form under the entity's autonomy, with the caveat that any organizational form is always instrumental to achieving the entity's institutional goals and subject to specific legislative restrictions. On the other hand, establishing a commercial company by a public entity that involves operating in the market and competing with private operators, accepting orders from both public and private entities.[…] In this case, a for-profit private company would be created, that enjoys public funding, which would lead to obvious

market distortions"[7] (CdS a.p. sent. 3/06/2011 n. 10: 57-59).

These precedents have caused significant unrest within universities of architecture and among the faculty themselves. Also, among the various controversies is a document released a few years after the L 109/1994, that is the **MIUR's DM of August 5, 1997**, which created an imbalance in the university-market relationship among university institutions. Specifically, the regulation outlined guidelines for establishing memorandums of understanding between universities and regions to promote medical training and research. It also addressed the role of university hospitals, treating them as equivalent entities to other hospital enterprises without any limitations. The aim of this regulation was to ensure the efficient operation of university hospitals and their ability to provide high-quality services, aligning them with the established principles for hospital companies. As stated in Article 3, university hospitals "operate based on organizational and management methods […] similar to the principles established for hospital companies"[8] (DM 1997: art.3). Additionally, the regulation granted university medical professors the opportunity to engage in professional activities on an *intra-moenia* basis, a rule that is still in effect and exclusively applicable to this specific group of professionals and institutions. This soon became a topic of

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[7] "le Università, aventi finalità di insegnamento e di ricerca, possano dare vita a società, nell'ambito della propria autonomia organizzativa e finanziaria, solo per il perseguimento dei propri fini istituzionali, e non per erogare servizi contendibili sul mercato. […] La costituzione di società per li perseguimento dei fini istituzionali propri dell'ente pubblico è generalmente ammissibile se ricorrono i presupposti dell'*in house* (partecipazione totalitaria pubblica, esclusione dell'apertura al capitale privato, controllo analogo, attività esclusivamente o prevalentemente dedicata al socio pubblico), e salvi specifici limiti legislativi […] Un conto è, dunque, la costituzione di una società *in house*, da parte di un ente pubblico senza fine di lucro, che è in sé un modulo organizzativo neutrale, che rientra nell'autonomia organizzativa dell'ente, con il limite intrinseco che ogni forma organizzativa è sempre e necessariamente strumentale al perseguimento dei fini istituzionali dell'ente medesimo, e salvi specifici limiti legislativi. Un altro conto è al costituzione, da parte di un ente pubblico, di una società commerciale che non operi con l'ente socio, ma operi sul mercato, in concorrenza con operatori privati, e accettando commesse sia da enti pubblici che da privati. […] Si sarebbe creata una società privata a fine di lucro, che opera sul mercato in concorrenza con operatori privati, fruendo di finanziamento pubblico, così creandosi una evidente distorsione di mercato"

[8] "Operano secondo modalità organizzative e gestionali […] in analogia ai princìpi fissati per aziende ospedaliere" (DM 1997: art. 3).

lively debate in the field of architecture, necessitating an intra-moenia profile even for themselves. It highlights the fact that faculties in other university disciplines have not received equal opportunities, which is highly declassifying for architecture which is in this middle ground between technical and creative disciplines.

During the same period, however, the educational field of universities underwent significant changes too, especially in response to European directives. These directives sought to establish a university model that could be compared to and aligned with both national and European standards. In this field as well, there were significant references emphasizing the importance of practical involvement in the profession for teaching and education.

In this regard, **EEC Council Directive 1985/384**, played a significant role in standardizing diplomas and academic qualifications in the field of architecture. This regulation marked the initial step towards aligning various European diplomas as well as harmonizing different national schools. The primary concern was that, regardless of whether the university program was pursued within a comprehensive university, a polytechnic, or a higher institute in any EU country, the same degree was recognized (art. 11). To achieve this, it has been necessary to establish a set of common criteria for education in architecture(art. 3), it consisted of 11 points, aimed at ensuring a balance between the theoretical and practical aspects of architectural training.

> "1. an ability to create architectural designs that satisfy both aesthetic and technical requirements;
> 2. an adequate knowledge of the history and theories of architecture and the related arts, technologies and human sciences;
> 3. a knowledge of the fine arts as an influence on the quality of architectural design;
> 4. an adequate knowledge of urban design, planning and the skills involved in the planning process;
> 5. an understanding of the relationship between people and buildings, and between buildings and their environment, and of the need to relate buildings and the spaces between them to human needs and scale;

> 6. an understanding of the profession of architecture and the role of the architect in society, in particular in preparing briefs that take account of social factors;
> 7. an understanding of the methods of investigation and preparation of the brief for a design project;
> 8. an understanding of the structural design, constructional and engineering problems associated with building design;
> 9. an adequate knowledge of physical problems and technologies and of the function of buildings so as to provide them with internal conditions of comfort and protection against the climate;
> 10. the necessary design skills to meet building users' requirements within the constraints imposed by cost factors and building regulations;
> 11. adequate knowledge of the industries, organizations, regulations and procedures involved in translating design concepts into buildings and integrating plans into overall planning" (Dir. 85/384/EEC: art. 3)[9].

In this document, while there are multiple attempts of achieving a balance between practical and theoretical training, there is a notable absence of explicit reference to practical training acquired through professional practice. This implied that useful training in the acquisition of practical tools relevant to the field of architecture, has been interpreted as the deployment of simulated experiences that approximate professional reality without fully aligning with it.

Five years later, a new document, the **EEC Advisory Committee Amendment 1990/3**, addresses the topic of *Correlation between the teaching of Architecture and the practice of the profession*. This amendment specifically addresses the concept of practical training and outlines the steps to achieve it. In particular, it emphasizes the importance of a comprehensive five-year curriculum that effectively covers all the 11 points outlined for architectural training courses. But, of particular interest considering the current situation in Italy, is the explicit recommendation emphasizing the importance of a close relationship between the teaching of architecture and the practice of the profession. In essence, this aspect

[9] On the basis of these criteria, has been realized the Italian Plan of Studies in Architecture dated 1993; later formalized by DM on July 31st,1997.

specifically refers in emphasizing that the knowledge in architectural design is closely linked to the skills teachers acquire throughout their careers through direct involvement in professional practice. As a result, the project becomes not only a tool but also a prerequisite for effective teaching.

> "The resources of Architecture Schools should be open to architects so that they can make valuable contributions. Similarly, architecture teachers and researchers should have the opportunity to test their knowledge and apply it to the challenges of real-world situations. The city serves as the laboratory for Architecture, where its transformation becomes the ultimate testing ground. Given the complexity of these conditions, which cannot be replicated within any educational institution, it is more beneficial to utilize the existing resources in our environment. […] It is essential to recognize that in Architecture, intellectual and practical skills naturally develop, especially when combined in the context of realistic projects. Without this realistic orientation, individuals that study, teach, or practice Architecture are deprived of the opportunity to understand real problems and provide possible solutions that meet the needs and aspirations of society. Evaluation and critique of Architecture lack adequate references if they are solely based on theoretical concepts and visual representations. Recommendations: 1. A high level of education in Architecture should emphasize meaningful interaction between teaching and practical application within the field. 2. Professors who teach subjects directly related to architectural design and construction should, ideally, be graduate architects with practical experience and the ability to practice. 3. Professors teaching other subjects in the Architecture program should also be qualified in their respective branches and provided with opportunities to develop their practical skills and engage in research activities. Graduate architects should be encouraged to acquire and teach specialized knowledge in their

field"[10] (Am. 90/3/EEC).

The amendment therefore recommends the development of meaningful interaction between teaching and practical application in the field. This stands in stark contrast to the previously mentioned regulations, which were expected to greatly influence the responsibilities of professors, particularly in Italy, and necessitate a significant restructuring of the institutional framework. However, both the Parliament and the Commission chose to maintain the minimum requirement of four years as stated in 85/384/EEC, while subsequently introducing a new provision mandating two years of certified professional practice and a final university examination for students enrolled in four-year degree programs (Dir.05/36/EC, Article 46).

However, a few years later, this aspect regained prominence in European policies, which, in 2013, once again expressed concerns about the need for teaching to maintain a balance between theoretical and practical aspects and emphasized the increased importance and recognition of professionalizing internships.

> "Theprofessionaltraineeshipreferredtoinpoint(b) of paragraph 1 shall take place only after completion of the first three years of the study. At least one year of the professional traineeship shall build upon knowledge, skills and competences acquired during the study referred to in paragraph 2. To that end, the professional traineeship shall be

[10] "Le risorse delle Scuole di Architettura debbono essere aperte agli architetti perché questi possano dare il loro contributo. Gli insegnanti di Architettura e i ricercatori dovrebbero a loro volta poter verificare le loro conoscenze e misurarle sulle difficoltà della realtà concreta. Il laboratorio di Architettura è la città e la sua trasformazione è il banco di prova. Poiché tutte queste condizioni nella loro complessità non possono essere riprodotte in nessun istituto d'insegnamento, è meglio far uso di quelle che esistono nel nostro ambiente e chiedere a coloro cui la società ha dato il privilegio di imparare in questo contesto, di trasmettere ad altri, attraverso l'insegnamento, le conoscenze da essi acquisite. È importante riconoscere che in Architettura, le capacità intellettuali e pratiche — in quanto l'Architettura è arte creativa — si sviluppano naturalmente e, soprattutto, quando sono combinate in un lavoro su progetti realistici. Senza questo orientamento realistico, coloro che studiano, insegnano o praticano l'Architettura sono privati dell'accesso alla comprensione dei reali problemi e delle loro possibili soluzioni da dare in risposta alle necessità e alle aspirazioni della società. La valutazione e la critica dell'Architettura sono prive di adeguati riferimenti se basate unicamente su soluzioni applicate di parola ed immagine" (Am. 90/3/EEC).

> carried out under the supervision of a person or body that has been authorised by the competent authority in the home Member State. Such supervised traineeship may take place in any country. The professional traineeship shall be evaluated by the competent authority in the home Member State'' (Dir. 13/55/UE: art. 46).

However, this advice has not been fully integrated into Italian universities, and when direct reference is made to this standard in curricula, it is often translated into educational approaches that incorporate both humanistic and technical-scientific contents[11].

Building upon the EEC 1990/3 proposal, the **Sorbonne Declaration** of 1998 marked a significant milestone by being the first official agreement among France, Germany, Italy, and the United Kingdom to harmonize architectural degree programs across Europe. This achievement was further extended in the subsequent year with the renowned **Bologna Declaration** of June 19, 1999, which garnered support from 29 European countries. The primary objective of this declaration was to establish a unified framework that would enhance the recognition of qualifications, facilitate student mobility, and promote employability. It emphasized the crucial role of a 'Europe of knowledge' in fostering societal and personal growth and strengthening European identity and citizenship. The declaration outlined several key principles, including the adoption of a two-cycle degree system (bachelor's and master's degrees) that could be easily compared, the implementation of the standardized European Credit Transfer and Accumulation System (ECTS), and the encouragement of student and scholars mobility through initiatives like the Erasmus programs. This initiative also invited other European countries, both within and outside the EU, to join in this collaborative effort, urging all European universities to contribute to the continuous enhancement and modernization of education for European citizens,

[11] Only in recent years have internships started to be included in the educational (but not professional) program. It is worth noting that the writer did not include internships in either bachelor's or master's degrees. Furthermore, the suggestion of replacing a portion of the mandatory national professional examination with a professionalizing internship to enter the profession is currently implemented in only a few locations across the country, and it appears to be far from becoming a widely adopted and commonplace practice.

thereby solidifying Europe's global standing[12].

In this context, the Bologna Reform has brought about a comprehensive transformation of higher education and university structures in many European countries. This reform has also steered standardized administrative practices like research and teaching evaluation giving a stronger emphasis on research in applied disciplines and the use of quantifiable metrics such as external funding and peer-reviewed publications, as well as influencing academic attitudes through the concept of 'higher education governance'. These changes, collectively referred to as *academisation*, have had significant effects on academic knowledge production. On one hand, they have increased flexibility in funding and resource allocation, but on the other hand, they have posed challenges in maintaining long-term research projects and prioritizing mainstream research. The academisation process, driven by the Bologna Reform, has turned education and research into globally marketable commodities and has elevated the influence of interdisciplinary administrative bodies in universities. While the impact of scholarly standardization and economization has been primarily discussed in relation to the humanities and cultural studies, it has also significantly affected knowledge production in fields like architecture and the arts, which rely on applied and practice-based approaches that do not easily align with traditional research criteria (See Chapter 1).

Just over a month after the signing of the Bologna Declaration, the focus on enhancing and promoting student employability was translated in Italy into **L 264/1999** *Norme in materia di accesso ai corsi universitari* (Regulations on access to university courses), still in charged. This legislation restricts access to degree programs in specific faculties, namely medicine and surgery, veterinary medicine, dentistry and dental prosthetics, architecture, and primary education

[12] Building upon the Bologna Declaration, the Canberra Accord on Architectural Education was signed in April 2008, extending its reach beyond Europe to include nations such as Canada, China, the Commonwealth, Hong Kong, Taipei, Japan, Korea, Mexico, South Africa, and the United States. This accord aims to establish substantial equivalence among architectural education programs, acknowledging that a program can be considered comparable in all significant aspects despite variations in its form or delivery method. Substantial equivalence recognizes a program's comparability in terms of educational outcomes, indicating that it offers an educational experience that meets acceptable standards, even if it diverges in format or delivery method.

science. The criteria for determining the number of available positions at each university are based on the professional needs of the social and productive system, considering the potential supply reported by each university. L 264/1999 attempt to ensure a balance between the number of graduates and the demands of the labor market, while also considering the specific requirements set forth by EU regulations and recommendations. As a result the number of available spots in architecture faculties is gradually decreasing. In the 2021-2022 academic year, there were a total of 6,349 spots for architecture and building engineering-architecture courses, combining both L-17 bachelor's degrees and LM-04 single-cycle degrees. This number reflects a 6% decline compared to the previous academic year of 2019-2020 when there were 6,802 spots. Specifically, the master's degree in architecture alone experienced a decrease of approximately 128 places (equivalent to a 6% decline), and the three-year degree in architectural science witnessed a reduction of 171 places (11.45 decrease) (CNAPCC, 2022: 7). However, Italy continues to hold its position as the country with the highest number of architects in Europe. Out of the total 619,700 architects across Europe, nearly a quarter of them are Italian (24%)[13]. This statistic highlights the need for additional policies to be implemented in order to find a solution for the shrinking architectural market.

1.2 2000s-10s: Formalization of the professional binomial

The policies related to higher education and the academic profession in the 2000s keep in implementing significant impacts on the architectural field.

Firstly, the so-called 'Moratti Reform', which began in 1999, leeding to the enactment of **L 230/2005** *Nuove disposizioni concernenti i professori e i ricercatori universitari e delega al Governo per il riordino del reclutamento dei professori universitari* (New provisions concerning university professors and researchers and delegation to the government for the reorganization of the

[13] The proportion mentioned is calculated based on the data provided by the ACE/Architects' Council of Europe online platform. Accessible online at: www.aceobservatory.com (Accessed on March 13th, 2023).

recruitment of university professors); soon after, the **DLgs 164/2006**. These legislative measures played a crucial role in initiating the reconfiguration of the academic structure in order to align with emerging global trends.

The two norms introduced straight rules based on productivity for the recruitment process of the professoriate. These measures were based on a system for the periodic evaluation of university professors and researchers, assessing their scientific merit and productivity for national scientific eligibility (art. 2). According to DLgs 164/2006 eligibility is determined through procedures announced by the MIUR and varies depending on the qualification (full or associate professor) and the SSD **[1_01]**. This system later evolved into the ASN (National Scientific Qualification), which will be further discussed in the following pages. It can hence be defined as the beginning of a thrust in scientific evaluation that incorporates quantitative criteria and (in some sectors) bibliometric indicators[14] through evaluating curricular qualifications, scientific production, and introducing a new element: international mobility. Indeed, these reforms aimed to promote the mobility of researchers and academics, both within the country and internationally, facilitating the exchange of knowledge and experiences among different academic institutions. Simultaneously, they aimed to expand the international network, which is crucial for global rankings.

Furthermore, the reforms aimed to strengthen the independence of universities in determining the management and structure of their study programs. Consequently, within the boundaries set by European agreements, each university has been entrusted with the authority to shape its own educational pathways. Over the years, these curricula have been periodically revised, reorganized, and subdivided to align with ever-evolving subject areas.

However, the final and most debated rupture came with the **L 240/2010** known as the 'Gelimini Reform', *Norme in materia di organizzazione delle università, di personale accademico e reclutamento, nonché delega al Governo per incentivare la qualità e l'efficienza del sistema universitario* (Regulations on the organization of universities, academic personnel and recruitment, as well as delegation to the

[14] As mentioned in the first chapter discussing VQR, Area 08a Architecture is considered a non-bibliometric area.

government to boost the quality and efficiency of the university system).

In architecture this regulation effectively solidified the inability of academics to engage in certain practices, further exacerbating a dual form of discrimination. On one hand, full-time professors lack the authority to deploy design even for research purposes (art.2, par. 5; art. 6 par. 10), while on the other hand, professors with part-time status possess the capability to design but are restricted from assuming most of the managerial roles in the university. Additionally, the 240 also removes the provision introduced by the DPR 382/80 that previously exempted activities conducted on behalf of state administrations, public institutions, and entities with significant state involvement from the realm of incompatibility. As a result, this change strongly complexified adds complexity and makes collaborations with other government departments that hence became challenging even from a merely bureaucratic perspective[15].

Within this backdrop, though, new possibilities were delineated:

> "The position of a professor and researcher is incompatible with engaging in commercial and industrial activities, with the exception of establishing companies that qualify as spin-offs or university start-ups as defined by regulations set forth in the decree of the Minister […] professors and researchers may assume formal responsibilities in this area within the specified time limits and in accordance with the regulations of their respective universities"[16] (L 240/2010: art. 6, par.

[15] On June 21st, 2023, significant amendments were made to these articles (L74/2023). Specifically, full-time professors and researchers have been granted the opportunity to hold positions within for-profit organizations, subject to authorization by the rector, as long as their responsibilities in teaching, scientific research, and university management are not compromised (art. 6, para. 10-bis). Moreover, it is worth noting that consultancy activities have been specified as external engagements conducted on behalf of private individuals or public entities, be carried out without subordination, and without the existence of any prearranged organization of resources and personnel for their execution (art. 6, para. 10).

[16] "La posizione di professore e ricercatore è incompatibile con l'esercizio del commercio e dell'industria fatta salva la possibilità di costituire società con caratteristiche di spin off o di start up universitari […], anche assumendo in tale ambito responsabilità formali, nei limiti temporali e secondo la disciplina in materia dell'ateneo di appartenenza, nel rispetto dei criteri definiti con regolamento adottato con decreto del Ministro" (L 240/2010: art. 6, comma 9).

9).

In line with international dynamics of knowledge production and commercialization, the law mentions start-ups and spin-offs indirectly suggesting to faculty members the potential opportunities in these areas. Although, as Chapter 4 will delve into, it should be noted that examining exclusively project activities, these entities do not fully correspond to the approach of faculty or research groups who solely utilize projects as tools for generating additional knowledge. Rather, their primary focus lies in the economic exploitation and commercialization of innovative products and services that stem from the expertise, products, and know-how cultivated within the academic sphere. As a result, they operate within distinct dynamics that differ significantly from the academic research agenda, despite being influenced by its outcomes.

Among the main introductions of the L 240/2010 is theANVUR body (which will not be discussed in this chapter as it has already been addressed in the previous one) and also the National Scientific Qualification, also known as ASN (*Abilitazione Scientifica Nazionale*). The ASN is an evaluation and accreditation system, still in charge, that confirmed the standardized approach set by DLgs 164/2006. It assesses the scientific competence and merit of university professors and researchers to ensure excellence and quality in research and teaching within Italian universities. Specifically, the ASN process is overseen by ANVUR in collaboration with a series of national bodies[17] as well as the respective scientific committees. It occurs periodically, typically every three years, and consists of several stages as follow:

> "Preliminary evaluation according to a reasoned analytical judgment on qualifications, curriculum, and scientific production, including the doctoral thesis, according to criteria and parameters recognized internationally, as identified by a decree of the Minister, in consultation with ANVUR and CUN; following the preliminary

[17] Such as the already mentioned CUN, CRUI the association of the rectors of all recognized Italian state and non-state universities, the former CPA the conference of the deans of architecture schools, CEPR the committee of experts on research policy in charge of providing opinions and producing studies on the state of research, national and international for MIUR.

> assessment, admission of the most deserving candidates on a comparative basis […] to a public discussion with the commission on qualifications and scientific production. […] Assigning a score to the qualifications and each of the publications submitted by candidates admitted to the discussion following it; the possibility of specifying a maximum number, not less than twelve, of publications that each candidate can present. [...] An oral examination aimed at assessing the adequate knowledge of a foreign language [...] concurrently with the discussion of qualifications and publications"[18] (240/2010: art. 24).

Briefly, in the first stage, candidates are assessed quantitatively to determine whether they meet the minimum requirements **[2_01, col. 2-4]**. In the second stage, the appointed scientific committee, consisting of experts in the relevant field, evaluates the submitted works **[2_01, col. 5]** and other qualifications based on specific predetermined criteria for each disciplinary field. The evaluation takes into account various factors. Successful candidates in the ASN process receive tenure (*II fascia* for potential associate professors and *I fascia* for potential full professors), which confirms their scientific aptitude in their respective areas of expertise[19]. The criteria employed are largely similar to those used in other international academic contexts. For the SC 08/D1 qualification (non-bibliometric area), the criteria are as follows:

> "1. Evaluation of the impact of scientific production […] for

[18]"Valutazione preliminare dei candidati, con motivato giudizio analitico sui titoli, sul curriculum e sulla produzione scientifica […] secondo criteri e parametri, riconosciuti anche in ambito internazionale, individuati con decreto del Ministro, sentiti l'ANVUR e il CUN; a seguito della valutazione preliminare, ammissione dei candidati comparativamente più meritevoli […] alla discussione pubblica con la commissione dei titoli e della produzione scientifica. […] Attribuzione di un punteggio ai titoli e a ciascuna delle pubblicazioni presentate dai candidati ammessi alla discussione, a seguito della stessa; possibilità di prevedere un numero massimo, comunque non inferiore a dodici, delle pubblicazioni che ciascun candidato può presentare [2_01; column 4]. […] Una prova orale volta ad accertare l'adeguata conoscenza di una lingua straniera […] contestualmente alla discussione dei titoli e delle pubblicazioni" (240/2010: art. 24).

[19] The ASN plays a crucial role within the Italian academic system as it significantly impacts the career and professional growth prospects of faculty members and researchers. Scientific qualification is frequently a prerequisite for attaining senior academic positions, such as associate or full professors, as well as for participating in research fund competitions.

2_01 ASN scientific products required according to the qualification (240/2010: all. D, all. E)

SC 08/D1	No. articles and papers to submit	No. class A articles to submit	No. Books to submit	No. products evaluated
I fascia	min. 32/10th years	min. 2/15th years	min. 1/15th years	max 15
II fascia	min. 15/5th years	min. 1/10th years	min. 1/10th years	max 10

candidates in non-bibliometric fields as specified in Annex D;

2. Organization or participation as a speaker in scientific conferences in Italy or abroad;

3. Leadership or participation in the activities of a research group collaborating at the national or international level;

4. Responsibility for scientific studies and research assigned by reputable public or private institutions;

5. Scientific leadership in international and national research projects, secured through competitive calls with peer review;

6. Involvement in editorial boards or prestigious journals, publishing series, encyclopedias, and treatises;

7. Participation in doctoral program faculty boards, including the assignment of teaching positions accredited by the Ministry;

8. Formal recognition of teaching or research assignments (fellowships) at recognized foreign or supranational universities and research institutes;

9. Receipt of prizes and awards for scientific achievements, including membership in esteemed academies within the field;

10. Contributions to technology transfer, such as involvement in the creation of new companies (spin-offs), patent development, utilization, and commercialization;

11. Relevant professional experience that aligns with the candidate's research activities and relates to the specific competition area for

> which the qualification application is submitted"[20] (DM 120/2016: attachment A).

In the realm of architectural design, the final aspect involves candidates outlining their design experience, encompassing both professional and research endeavors. However, the primary emphasis remains on the published works, which form the foundation of the initial qualification stage and the first criterion of the second stage. Due to this and other factors, the ASN process has been a topic of discussion and critique over the years, with many advocating for a more transparent evaluation process and a reform that aligns it better with the specific disciplinary fields. In the case of architecture, this reform is particularly relevant, as it pertains to the evaluation of design projects. These include the already mentioned *Analisi e Proposte (Sessione 84) - Criteri, parametri e indicatori per l'abilitazione scientifica nazionale* by CUN (see Chapter 1) in which it is mentioned about "innovative projects of works and artifacts characterized by a high scientific and technological content"[21].

In a nutshell the requirement is to recognize the specific disciplinary nature of ICAR 14, not as a professional activity, but as the essence of the disciplinary

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[20] "1. Impatto della produzione scientifica, valutata:[…] per i candidati nei settori non bibliometrici secondo quanto indicato nell'Allegato D; 2. organizzazione o partecipazione come relatore a convegni di carattere scientifico in Italia o all'estero; 3. direzione o partecipazione alle attività di un gruppo di ricerca caratterizzato da collaborazioni a livello nazionale o internazionale; 4. responsabilità di studi e ricerche scientifiche affidati da qualificate istituzioni pubbliche o private; 5. responsabilità scientifica per progetti di ricerca internazionali e nazionali, ammessi al finanziamento sulla base di bandi competitivi che prevedano la revisione tra pari; 6. direzione o partecipazione a comitati editoriali di riviste, collane editoriali, enciclopedie e trattati di riconosciuto prestigio; 7. partecipazione al collegio dei docenti, ovvero attribuzione di incarichi di insegnamento, nell'ambito di dottorati di ricerca accreditati dal Ministero; 8. formale attribuzione di incarichi di insegnamento o di ricerca (fellowship) presso qualificati atenei e istituti di ricerca esteri o sovranazionali; 9. conseguimento di premi e riconoscimenti per l'attività scientifica,inclusa l'affiliazione ad accademie di riconosciuto prestigio nel settore; 10. risultati ottenuti nel trasferimento tecnologico in termini di partecipazione alla creazione di nuove imprese (spin off), sviluppo, impiego e commercializzazione di brevetti; 11. specifiche esperienze professionali caratterizzate da attività di ricerca del candidato e attinenti al settore concorsuale per cui è presentata la domanda per l'abilitazione" (DM 120/2016: attachment A).

[21] "Progetti innovativi di opere ed artefatti caratterizzati da un elevato contenuto scientifico-tecnologico" (CUN, 2011).

scientific sector, clarifying that "certain parts of the design process are, for designers/composers, categories of research and design experimentation rather than mere professional exercises. This could allow design professors, within the new departmental configuration or through other studied modalities, to contribute operationally to the phase of design research that receives recognition from the community and culminates in the final construction outcome"[22] (Borrelli, 2011: 57).

As discussed in the first chapter regarding the VQR, these demands are still relevant today, and little has changed in terms of regulations on the matter. However, it is important to integrate these issues with the dynamics in knowledge production that prioritize initiatives characterized by strong industrial interest and involvement of companies, emphasizing that less and less value is given to the quality of results achieved in an academic setting detached from the real operational context.

In this sense, it is worth mentioning the consultation initiated by Minister Profumo on April 24, 2012, wherein a proposal was put forth to eliminate the legal significance of the degree stemming from the belief that not all universities were adequately fulfilling their educative role. However, the CNAPPC strongly opposed this prospect and expressed its strong opposition through Circular 479/2012, stating that:

> "The purported lack of excellence in university education needs to be addressed in a different manner today, requiring the collaboration of an efficient and decisive Anvur (National Agency for the Evaluation of the University and Research Systems) and a comprehensive project from the Ministry. This project should aim to reduce the presence of unreliable university campuses and enhance the recognition of universities, striving towards aligning the quality of university education with the standards observed in other European

[22] "Alcune parti del procedimento progettuale sono per i progettisti/compositivi categorie della ricerca e della sperimentazione progettuale e non certo un mero esercizio professionale. Ciò potrebbe consentire ai docenti di progettazione, o all'interno della nuova configurazione Dipartimentale o in altre modalità da studiare, di poter ritornare a offrire un contributo operativo a quella fase della ricerca progettuale che abbia il riconoscimento della collettività e l'esito finale della costruzione" (Borrelli, 2011: 57).

countries”[23] (Circ. 479/2012).

Or the increasingly frequent policies aimed at promoting and strengthening research directions and doctoral training paths in line with the needs of the national productive system, characterized by strong industrial interest and the involvement of companies engaged in direct industrial activities for the production of goods or services (DD 1377/2017; Consiglio dei Ministri, 2023).

Recognizing the importance of design in Architecture as a creative and explorative act, it becomes evident that the development of intellectual and practical skills thrives when combined in the context of realistic projects. Without this practical orientation, individuals studying, teaching, or practicing Architecture are unable to fully grasp the complexities of real-world problems and devise appropriate solutions that meet society’s needs and aspirations. In light of this, high-level education in Architecture should foster meaningful interaction between teaching and practical application, that means that professors instructing subjects directly related to architectural design and construction should ideally possess professional qualifications as architects, gained through practical experience, and be actively engaged in the field.

[23] “La presunta non eccellente qualità della formazione universitaria, va oggi affrontata in maniera diversa con un Anvur efficiente e risolutivo ed un progetto organico da parte del Ministero, di riduzione delle malferme sedi universitarie e migliorativo premiale degli atenei tendendo alla armonizzazione della qualità formativa universitaria verso i livelli dei vari paesi d’Europa” (CNAPPC, Circ. 479/2012).

Chapter 3

The Chinese hint: unpacking Design Institutes *praxis*

Stated the positioning of the Italian scenario, the work proceeds by deepening the 'eastern side' of the *agora* (Nowotny et al, 2001) in which the events took place: *University-led Design Institutes* (UDIs). UDIs are extensive multidisciplinary agencies that hire researchers, students and practitioners and have been developed since the 1950s in response to the nationalization and bureaucratization of architectural practice[1]. Due to their strong political embedding and the great influence on trade journals can be considered the main actors in the radical process of industrialization and urbanization of contemporary China as well as responsible of the leading scientific and professional debates of the discipline. Their form of knowledge production alludes to the aforementioned *triple helix* based on a marked interaction among research, industry and government.

The Chapter will hence frame the institutionalization and development of *design institutes* (DIs) from Maoist China towards contemporary panorama, thus retracing the framework of architectural practice and education in PRC using

[1] The framework of this chapter was discussed on March 10th, 2021 with Prof. Zhuang Weimin, the President of the Architectural Design and Research Institute of Tsinghua University (THAD); and on March 8th, 2022 with Qiu Dongqing, the assistant of Tang Shuoning, the President of the Tongji Architectural Design Group (TJAD).

UDIs as the main lens and thus placing them as conjunction and exception in a general strict process. UDIs are indeed the most beneficial margin of innovation for the thesis topic itself, as well as direct reference of the PS project. In particular, speaking about UDIs the main reference is related to the phenomenon of university-based architects that are at the same time professors in the university and designers in its DI. In this backdrop, as stated by Zhuang Weimin — dean of the Architectural Design and Research Institute of Tsinghua University and professor in architecture — in the publication for the THAD 60th anniversary, professors-designers envision their firms within the UDI as "a place for accumulating knowledge, elaborating research and fostering students […] in close relationship between education and research" in which "architects and engineers, professors and students are members of its personnel; therefore, its design projects and daily practices are very much research oriented" (THAD, 2018: 3).

2.1 Brief chronicle of a radical makeover

At the beginning of the 20th century, architecture was largely practiced in China, although still missing a legitimate institution appointed to its education or professional bodies. This habit was reflected in the self-organization of the understanding and training of the architectural profession, which, according to the circumstances, thrived deeply on foreign testimonies (Hu, 2009; Wang, 2011). The architectural panorama was indeed characterized by many foreign architects, mainly from Europe and the USA, that worked within the national borders or overseas. In those years, such conditions led many aspirant architects to study abroad, mainly in Europe, Japan, or North America[2] (Yang, 1993), thereby initiating such a category of abroad-trained architects still recognizable, since the 80s, in the more contemporary context.

[2] The tendency behind the significant amount of Chinese students moving to USA universities is related to the launch in 1908 of a policy called Boxer Indemnity Scholarship Program (庚子赔款獎學金 Gengzi Indemnity Scholarship), stating scholarships addressed exclusively to Chinese youth to study in the country as compensation for the boxer riot damages (1899-1901). After the Open Door Policy this practice resumed and more than 500,000 students moved abroad to study, especially to the United States (Xue, 2005).

Nevertheless, since the witness of a considerable incrementation in the architectural market, a number of institutions designated to both training and tutelage the profession appeared in the 1920s. More precisely, five are the main events attesting to a new approach in the interpretation of the architectural profession: the establishment of the first architectural firm in 1921 by the Cornell University graduate Lu Yanzhi, namely the *Yianji Design Firm* founded in Shanghai (Li, 2010); in 1924 were founded by the Japan-trained architects Liu Shiying, Liu Dunzhen, Zhu Shigui, and Huang Zumiao the department of Architecture in the Suzhou Industrial Tech Institution *(Suzhou Gongye Zhuanmen Xuexiao)*; in 1927 the architect Liu Futai, after his return by the Oregon University, established the Faculty of Architecture and Construction in Zhongyang University in Nanjing; the launch of the Northeast University happened in 1928 in Shenyang by the eminently renowned architects Liang Sicheng and Lin Huiyin, both trained at the University of Pennsylvania (Zhu, 2009); last but not least the publication of Journal of *The Chinese Architecture*, the first architectural journal, in 1932. At the same time, some tutelary institutions were established on the basis of Western and mainly English experiences. For instance, the Shanghai Society of Architects (上海建筑师学会 *Shanghai Jianzhushi Xuenhui*) was founded in 1927 and changed in 1930 to the Chinese Society of Architects (中国建筑师学会 *Zhongguo Jianzhushi Xuenhui*), and in 1930 the Society for Research in Chinese Architecture (中国营造学社 *Zhongguo Yngzao Xueshe*). Such institutions were yet in an experimental phase, testing which structure to adopt and what goals to set. Indeed, while the former association dealt with "communication, academic research, mutual business, developing architecture profession, and facilitating infrastructure improvement" (Kvan et al., 2008: 206), the second one was founded by the architect Zhu Qiqian to establish an intellectual foundation for Chinese practitioners. In its charter, there was no direct reference to architecture since its aim consisted of influencing the intellectual dimension to establish the conception of modern architecture in China, allowing the involvement of various fields of study.

In March 1928, the first government ordinance framing the profession of architecture was approved in Shanghai: "Architectural Designer and Engineer Registration Ordinance." Its contents, clearly derived from British regulations,

divided professionals into two categories: full-time[3] or temporary (Xue, 2008). The registration was worthwhile to further apply for the city government architectural license. In the following seven years, and before its dismantling, the full license was granted to 173 practitioners, 60 of whom were architecture graduates. Moreover, other important cities, such as Beijing, looked in the following years at the Shanghai experience and started the promulgation of other ordinances, in a somewhat fragmented attitude, in which the definition of a specific regulation is the sole concern of large cities. At the same time, the countryside still relied upon traditional techniques and craftsmanship.

However, all these entities were disbanded after Chairman Mao's rise to power, and the architectural panorama was entirely rearranged. Foreign practitioners were dismissed and estranged, while the national ones were radically reorganized from the perspective of conducting design too toward a collective action (Liang, 1959). Commence hence the years of the planned economy, embedded in architecture through the nationalization of the professional practice and the first assessment of a professional and didactic model 'with Chinese characteristic': the Design Institutes (DIs).

The establishment of State-owned Design Institutes (SoDIs) has therefore to be traced back to the first Five-Year Plan (1953–1957). In 1949 indeed, private design studios were grouped into public corporations (Campanella, 2008; Wu, 2015), and in April 1952, through the decree *Decisions of Establishing Official Architectural Department and State-owned Architectural Firms,* SoDIs were

[3] While for the temporary license, the criteria were smoother, for the full-time one it was necessary to have a degree in architecture or civil engineering plus three years of work or teaching experience, or a technical vocational diploma plus six years of work experience and three years of significant projects supervision. Even today, the national licensing system slightly relies on this first scheme, requiring extensive years of work and multiple examinations.

formalized as *danwei-related*[4] typology under the label *design units*, *production units* or *design institutes* (Xue & Ding, 2018; Ding & Xue, 2019b). The most influential architects on the national scene were called by the State to pursue a new national identity also through architectural forms and styles, and this transition thus marked a disruptive phase for the organization of the architectural practice by completely alienating it from market logic.

In these years, DIs functioning was ensured by a deep legal and political framework that prevented individual dimensions in the approach to design; the structure, therefore, did not resemble one of the previous private practices while crowding thousands of employees — a size still maintained in today's State and para-state ones. On the one hand, such a collective ideology induced a more horizontal allocation of both work and earnings, assuring all employees a fixed and uniform salary. On the other hand, it gradually resulted in an annihilation of individual creativity and a struggle for innovations (Zhang & Sivertsen, 2020) — which is the foundation of the design process. Despite it, some particularly inspired/enthusiastic/talented designers continued to pursue this impulse; however for their work to be individually recognized it has been necessary to wait until the Open Door policy (Kvan et al., 2008).

In the following decades, SoDIs allocation and codification across the country grew with their increasing duties and powers. Their level of dependence indeed varied from the central, ministerial, administrative, provincial or municipal government, while at the same time also emerged the ones connected to the *Old*

[4] Danweis or work units were a sort of autonomous state-owned communes, symbolically and physically detached from the surrounding, that completely parcelled Maoist China. Each unit had a different vocation and extension. Citizens were allocated to one unit and charged with specific employment as well as an accommodation; moreover, each of these cities within a city (Croset, 2015) had various collective facilities according to its social and political role: collective canteens, staff quarters, nurseries, welfare services, schools, medical care, but also kindergartens, theatres. These units, therefore, were placed at the base of control over the inhabitants who, in addition to providing work, were guaranteed a range of services according to a centralized and closed system geared toward emphasizing collective life and belonging (Bonino & De Pieri, 2015; Curtis, 2011; He, 1993; Kirkby, 1985; Lu, 2022; Roc Jih, 2016; Szelenyi, 1993).

Eight Schools of Architecture[5] (Zou et al., 1991). In a condition of relentless demand for production, faculty members and students started collaborating to serve the State. At the same time, though, the chances for eight institutions to maintain the required pace in training professionals on a national scale and keeping in producing projects was far from being possible. According to the unprecedented demand witnessed towards architectural competencies, SoDIs began to support educational institutions in their mandate fulfilling, in collaboration with the universities, the training of the professionals in the making. In such a perspective, DIs thus gave scholars the first opportunity to work influencing various levels of training through a "redistribution of design talent (that) had a profound and lasting influence on China's architectural landscape, including practice, teaching, and research" (Ding & Xue, 2019a: 73).

Nevertheless, although being among the first examples of collective agencies appointed to steer the industrialization and modernization process of the new China, the Cultural Revolution particularly undermined the legitimacy of UDIs. The shutdown that occurred in those years deeply entangled their operations to the extent that the formal establishment of UDIs among the official and effective partakers in the architecture market required waiting until 1981 (Zhang, 2004; Qi, 2004; Li W.Y., 2004; Xue, 2004). Although, in 1973, Universities gradually resumed their teaching activities within a phase of wide national resumption, the production units regained their centrality exclusively within the broader university environment. UDIs became thus a self-regulated instrument to start afresh towards the new purposes and in 1979 the Ministry of Education (MOE) recognized their role, stating the merit for such institutions in "speed up the construction of university infrastructure and improve teaching and research within the

[5] With the definition of *Old Eight Schools of Architecture*, it is intended the first universities to establish a specific Department of Architecture and were formally charged in 1952 of training graduates in architecture for the entire country until 1977: Chongqing Jianzhu University (merged in 2000 with Chongqing University), the Harbin University of Architecture (merged with Harbin Institute of Technology in 2000), Xi'an University of Architecture and Technology, Nanjing Institute of Technology, South China Institute of Technology, Tianjin University, Tongji University and Tsinghua University. Their legacy is still in force on the national scene, especially at Tsinghua and Tongji Universities which have been the first to introduce a program of study lasting six years, while the others still used to make it 4 or 5. These schools are still among the most outstanding nationally and internationally (Wang, 2004).

departments of architecture and civil engineering'' (Xue & Ding, 2018: 146). University-led production units thus began to emerge in the national pattern, although not yet having an official role outside the academic environment. In the following years, though, with the further implementation of their activities and increasing considerations about the new market economy that was emerging, the steer to officially define the vocation and operation margins of such enterprises became evident and in 1981 MOE issued sixth UDIs — Nanjing Institute of Technology (Southeast University since 1988), South China Institute of Technology (South China University of Technology since 1984), Tianjin University, Tongji University, Tsinghua University, and Zhejiang University[6] — with an official design certificate, namely the business license. This event can therefore be considered the formal and labelled origin of UDIs as an official market players.

In the 1980s indeed, the policies undertaken by Deng Xiaoping loosened the centralization of the market and production, reintroducing autonomous industrial and professional systems in the national environment. In the same years had been witnessed a turnaround in some of the conceptions that characterized the Great Proletarian Cultural Revolution. The *brain work* (脑力劳动 *naoli laodong*), previously stigmatized as subaltern to *manual work* (体力劳动 *tili laodong*) and of scarce if any social utility, started to reacquire a particular significance; such a transition led to the rehabilitation of intellectuals, scholars and talents among which also professionals and academics. As the first effect of such change of course, platforms for private practices emerged, and designers re-obtained an official acknowledgement of their work and individual fees on the project (consisting of the 2% of implementation costs) (Xue, 2005). In 1983 the government selected among the numerous SoDIs the most strategically relevant to the country's development depriving the others of the fund that had hitherto supported their activities, thus forcing them to enter as private stakeholders in the

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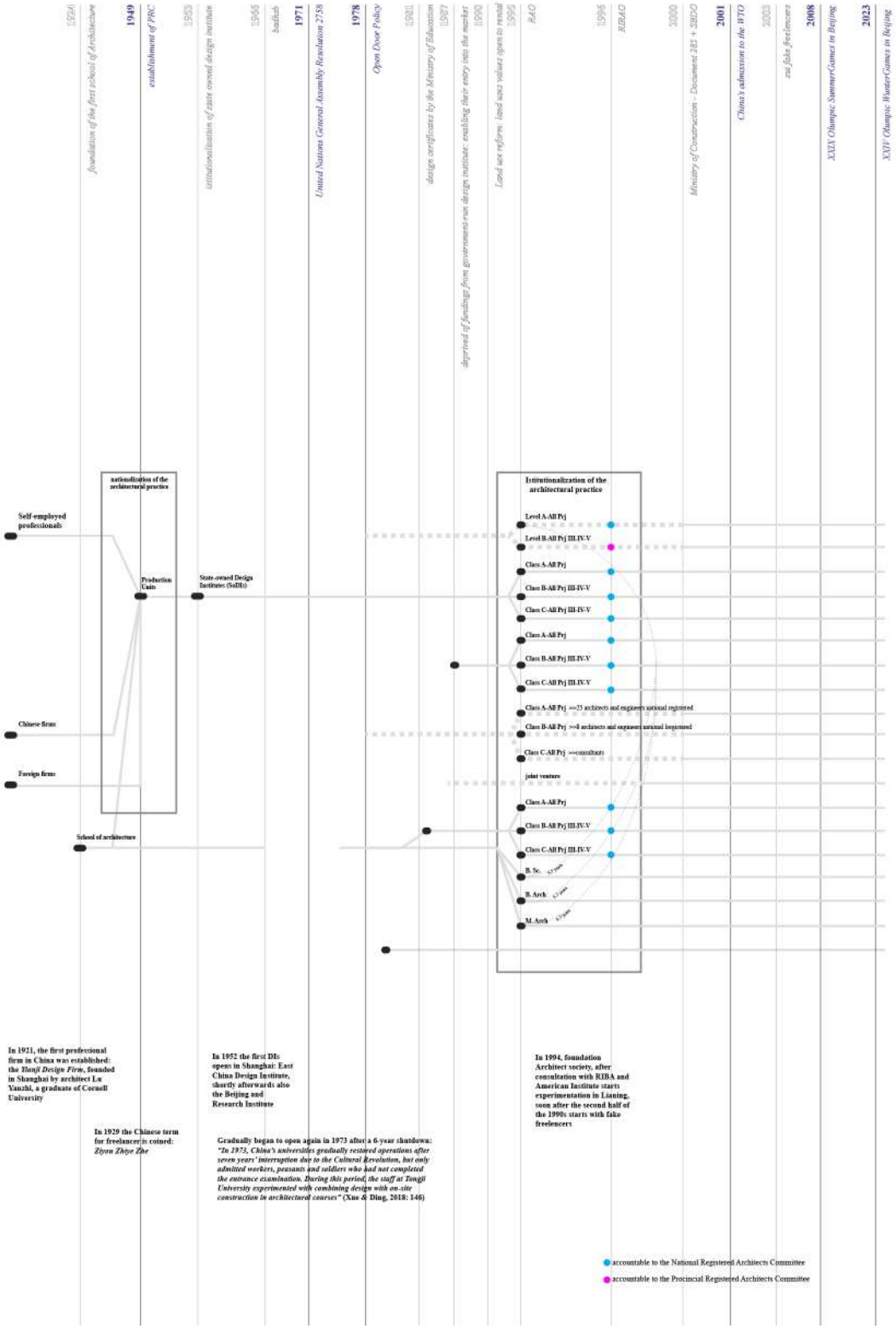
[6] It is interesting to notice that five of these institutions are among the renowned *Old Eight Schools of Architecture* (Nanjing Institute of Technology, South China Institute of Technology, Tianjin University, Tongji University and Tsinghua University) and three in the *C9 League* (Nanjing University, Nanjing, Tsinghua University, Zhejiang University). This issue will further be explored in the next pages.

3_02 Scheme of the organization of architectural practice in China.



socialist market economy alongside an array of the more prestigious ones that were incorporated into even larger design groups still controlled by the State. In the following years, many small design firms started their practice after almost 30 years in abeyance, and foreign architects were allowed to practice in China exclusively in collaboration with local DIs (Han, 2018; Greco & Santoro, 2008). Although for a codification of national policies steering the landscape of private entrepreneurship architectural practice, it was necessary to wait until the 1990s (Kvan et al., 2008). The regulations held in China in those years reset the architectural panorama as it is still known today. First of all, the Land Use Reform (1990), which for the first time introduced the possibility of ceding land use rights in the form of a lease even to nongovernmental entities for a fixed time[7], as well as the national system for registering professional architects that were gradually reintroduced in the architectural market by private firms and foreign professionals (Ding, 2003). Moreover, in 1995 was released the RAO - *Registered Ordinance of the Peoples' Republic of China* (MOC[8], 1995), after a pilot examination held in Shenyang in the previous year, and subsequently expanded by the RIRAO - *Rules for Implementation of the Registered Architects Ordinance of the People People's Republic of China* (MOC, 1996). Both policies regulate the education, registration, duties, and responsibilities of professionals in architecture based on the American (NCARB) and English (RIBA) systems. Over 9100 potential architects attended the first examination of contemporary Chinese history. Nevertheless, as will be further detailed in the next paragraph, although recognizing designers to be framed as individual professionals in private and independent firms, as well as the possibility to change their affiliation within their career, SoDIs are still a fundamental node in organizing the architectural practice. Indeed it is still confirmed, and so is nowadays, their role in the bureaucratization and validation phase of the project, basically preventing the possibilities for any company operating in the market to fulfill their activity without an over-imposition of agencies linked more or less directly to the central government. In this sense, there is no doubt that the international reopening in the building sector

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[7] Namely: 40 years for trade and tourism projects, 70 years for residence, and 50 years in the other cases (Ding, 2003).

[8] Nowadays Ministry of Construction is known as Ministry of Housing and Urban-Rural Development (MOHURD).

led to the radical push for urbanization and experimentation observed in the early years of the 2000s; nonetheless, what externally appeared as a phase of great innovation and openness concealed, and still does, highly hierarchical and centralized model holding from decades.

In conclusion, Jiawen Han, in her book *China's Architecture in a Globalizing World: Between Socialism and the Market* (2018: 18,19), describes in a sharp and clear excerpt such a juxtaposition: "If outsiders believe 'Money is the only language' in China, and the primary goal of modern reform is to access the market, then they fail to understand that the goal of every reform effort undertaken by the party since 1978 is to achieve a balance between the free market and 'inside the system'. […] In addressing the fallacy, 'money is the only language', it should be noted that the Chinese characteristics in architecture have assumed the guise of Western appearance and the mode of architectural corporations, listed companies on the stock exchange and made use of related professions such as architects, civil engineers and cost engineers." In such a perspective, SoDIs can be undeniably recognized as the main ones responsible for the unprecedented pace of contemporary China development (Hua, 2020; 2021), the optimization of the large-scale industrialization and urban development — also for being the only place and institutions allowed to practice architecture for an extended period — as well as the main apparatus for the State to supervise and dominate such equilibrium. As will further be explored in the following paragraphs, such a legacy still influences, organizes and controls the architectural profession and education, placing contemporary DIs in entrenched ties among state demands and common interests.

2.2 Agency and ties in contemporary architectural practice

As mentioned, RAO and RIRAO are still the base of the functioning of architectural practice in China that operates within a specific framework that involves various stakeholders, regulations, and procedures. In order to summarize a very complicated panorama, this paragraph briefly introduced the main actors

intertwining in the Chinese architectural practice, trying to specify roles, interests, and scopes of work.

Before starting to unpacked the varius actors involved, it is crucial to specify that the *Code for Design of Building Construction* (MOHURD, 2012) in China classified the building design projects into different categories based on their scale, complexity, and other factors. The classification system helps in determining the qualifications, expertise, and requirements for design institutes and architects involved in the projects.

3_01 Scheme of the classes of building design projects in china (MOHURD, 2012)

Special	refers to projects with extraordinary complexity, such as large-scale or unique structures, important historical buildings, landmark projects, or projects with special safety requirements. These projects require specialized expertise, advanced engineering, and strict compliance with regulations.
Class I	include major public buildings, high-rise buildings, large commercial complexes, and large-scale infrastructure projects. These projects have a high level of technical complexity and require advanced design capabilities, engineering expertise, and compliance with relevant regulations.
Class II	consist in mid-to-large-sized buildings, such as residential complexes, office buildings, schools, hospitals, or industrial facilities. These projects have a moderate level of complexity and require expertise in architectural design, structural engineering, and compliance with applicable codes and regulations.
Class III	encompass smaller-scale buildings, including individual houses, small retail shops, or community facilities. These projects are relatively simpler in terms of design and construction requirements, but still need to comply with building codes and regulations.
Class IV	refer to minor or renovation projects, such as interior fit-outs, remodeling, or small-scale additions to existing structures. These projects involve modifications to existing buildings and may require expertise in renovation techniques and compliance with relevant regulations.
Class V	consist in the simplest category, typically involving minor repairs, maintenance, or cosmetic improvements to buildings. These projects have minimal design requirements and focus on basic renovations or repairs.

Freelance architects

Architects have a range of responsibilities in building design, technical consultation, building investigation, and construction supervision under the oversight of a building design unit. To practice, architects are mandated to be registered and possess a valid license. The registration and licensing system distinguishes between Level A and Level B architects, each with specific limitations on the projects they are eligible to undertake. Level A architects have fewer restrictions and can participate in a wider range of building design projects.

On the other hand, Level B architects are subject to certain limitations, typically involving projects classified as Class III or below. While in the past, licenses were closely tied to the design unit an architect belonged to — if an architect left the design unit, the unit revoked its license — current regulations allow architects to obtain their own licensing seal and work independently. Nevertheless, their duties are precisely purely as designers, almost consultants, stopping at the concept design level and then leaving the technical implementation and realization phase to the large institutes.

This category also encompasses international studios that, as well as professionals who have opted to work in small-scale professional studios rather than large design institutes, have to rely on the work of DIs for the validation phase, which results in a significant loss of control over the project.

The only exceptions within this category are what are commonly referred to as *fake-freelancers* (Grima, 2008:108). The term *fake-freelancer* is used to describe a specific group of architects who often adopt an experimental approach to their work and may operate independently, often in well-known local firms, or within UDIs, thereby referring to the previously mentioned educator-architects. These individuals differ from traditional freelancers in that they establish a direct relationship with DIs, allowing them to maintain greater control over the design validation phase of a project. As a result, they possess the ability to exert more influence and actively participate in the technicalization and implementation stages of a project.

Design institutes

As already discussed, Design Institutes have a pivotal responsibility in the validation phase of the design process. Their primary task is to thoroughly review and approve design proposals presented by architects, ensuring they align with the necessary standards and regulations. This validation phase encompasses evaluating the feasibility, functionality, and adherence to applicable codes and guidelines of the proposed design. Design Institutes hold a pivotal role in guaranteeing the quality and integrity of architectural designs before they advance to the implementation stage.

Design Institutes can exist in various forms, including state-owned, private, or university-led entities. SoDis are typically government-affiliated organizations that operate under the supervision of regulatory authorities. They often collaborate closely with government agencies and are involved in major infrastructure projects. PDIs, on the other hand, are independent entities that are not directly associated with government organizations. They may serve a wide range of clients, including private developers, corporations, or individuals. PDIs often compete in the market and strive to offer innovative and specialized design services. UDIs are associated with academic institutions and operate within the university's framework. These institutes often have a focus on research and experimentation, and they benefit from the expertise and resources available within the university. They may collaborate with students, faculty, and external partners on architectural projects and contribute to the advancement of architectural knowledge and practice.

DIs may specialize in specific areas of architecture and design, such as residential, commercial, industrial, or landscape design. These specializations allow institutes to develop expertise and knowledge in particular sectors, catering to the specific needs of clients and projects within those domains.

DIs are categorized into different grades based on factors such as the number of professionals employed, their expertise, management practices, and available resources. This classification helps determine the scope and scale of projects the institute can undertake. Typically, design institutes are classified into grades A (all the class), B (class III-V), and C (class III-V).

Construction firms or units

Construction firms in China encompass companies or organizations primarily involved in the construction industry. They play a pivotal role in the sector by executing the physical construction and implementation of architectural designs. Their responsibilities span project management, procurement of materials and equipment, construction site operations, coordination with subcontractors and suppliers, and ensuring compliance with regulations and quality standards. They work closely with design units, architects, engineers, and other professionals involved in the construction process to bring projects from concept to completion.

Construction firms come in various sizes and operational scopes and, similar to Design Institutes (DIs), can be classified into different categories. State-owned construction firms are government-owned or operated by state-owned enterprises. They typically handle large-scale infrastructure projects such as highways, bridges, airports, and public buildings. Private construction firms range from small-scale contractors to medium-sized construction companies. They undertake a wide range of projects, including residential complexes, commercial buildings, and industrial facilities. Specialized construction firms focus on specific areas of construction, such as engineering, architectural design, or particular types of projects like high-rise buildings, stadiums, or transportation infrastructure. Additionally, international construction firms bring their expertise and experience in large-scale infrastructure development to China. These firms often collaborate with local construction companies or engage in joint ventures.

In the design process, construction firms hold the upper hand and have the final authority. For example, while designers can provide descriptions of material sizes and colors in production drawings, they are not authorized to specify the manufacturer of materials or components (Kvan et al., 2008). Such decisions rest with the construction company. Consequently, even DIs experience a reduction in their power to direct and control the design, as further explored in the case of Shougang's project in Chapter 5.

2.3 National Support in higher education

Before unpacking the specific issues of architecture departments and their dual-branch functioning, it is helpful to position the development of the higher education system in Chinese universities in a broader perspective, to briefly introduce the ideological, social and economic patterns that shaped their contemporary history.

As already mentioned, the first architecture schools appeared in China in 1924 in the larger cities. Such schools featured a diverse range of approaches and interpretations towards education in architecture (partially still recognizable in nowadays programs) that resulted from a wider wave of innovation that occurred

in China thanks to Cai Yuanpei MOE's mandate in 1912 (Hayhoe, 2004). Despite the climate of political uncertainty, in these years the universities had greater freedom in independently handling their activities, aims, and purposes, including numerous interactions with Western ones. The Southeast University case, for instance, in 1926 launched its first program in architecture based on the *Beaux-Arts* approach introduced in the USA by the French-born architect Paul Philippe Cret[9] (Hu, 2009).

This thrust, however, came to a sharp halt in the 1950s, when a monopoly of Soviet influences dismembered universities, and much of the professoriate was exiled due to the anti-rightist campaign. HES turned in socialist China during the *Great Leap Forward* into an environment exclusively focused on vocational and specialized studies with leading representative polytechnics or specialized institutions. Such institutions embedded the ideology of the Party, directing the entire educational and training system (Xu et al., 2004). Social and natural sciences faculties were banned, prioritizing applied disciplines such as engineering, medicine, and agriculture. Only in the late 1970s, China's HES was gradually reestablished in Deng Xiaoping's perspective of modernizing the country. In 1977 were reintroduced the entry examinations for higher education and in 1985, tertiary education was increased and normalized according to a structure foreseeing a bachelor's and master's degrees system (MOE, 1985). Moreover, various exchange programs were launched in collaboration with Western institutions (Cai, 2013). Gradually also the research that in the previous years was charged exclusively to state-owned bureaus or the Chinese Academy of Sciences was reintroduced as a central mission and responsibility of the academic environment[10]. Concerning this new dual-role aspect of the academic profession began to spread among professoriate, although not yet formally stated, the habit to arrange two-thirds of working time on teaching and one-third on research for

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[9] Indeed, Southeast University, the elder among the *Old Eight Schools of Architecture*, was founded and for a long time directed by teachers trained in the University of Pennsylvania under Cret's guidance — for instance, the 1950s-1970s chair of the school was Professor Yang Ting-bao that had been firstly his student and later his assistant (Xue, 2005).

[10] In 1984-1985, the first two Ph.D. degrees were conferred in urban planning and architecture (Wang, 2004).

whose were mainly involved in the educational position, while two-thirds on research and one-third on teaching for whose charged mainly within the brand new established research institutes[11].

In the architectural environment, that in 1986 behold a total of 64 universities hosting a course in Architecture, such innovations implied an intense reorganization of the conditions. After the national guidance committee of architectural education held in 1992 indeed, only four institutions were formally accredited to hold the five-year Bachelor's degree in Architecture[12] — Tsinghua, Tongji, Tianjin, and Southeast. Such a step has been central in defining a new mode of approaching training in architecture. Indeed in these years, the widespread model focused mainly on emphasizing a formal design consisting of renderings and schematic projects was revised towards a more professional-oriented training that attempted to include more technical and prescriptive content, as well as historical issues and urban debates, aimed at addressing the actual demands of professional practice. Partnership and exchange programs with Western institutions and professionals increased, involving in the Chinese academic environment internationally renowned architects such as Rem Koolhaas, Steven Holl, and Jean Nouvel for workshops, courses, and conferences (Greco & Santoro, 2008).

At the same time, abiding by the national employment reforms launched in these years that interrupted the government's role in providing occupation for citizens, also the university was called to autonomously manage their income, amplifying an already well-established hierarchical order in evaluating institutions' reputation and performativity. Such an approach was even emphasized in the 1990s according to the introduction of peer-review procedures for distributing funds and subsequent policies aimed at preparing Chinese universities to emerge on the international stage. Although boosting relatively few years of experience, these universities witnessed incredible responsiveness indeed

[11] In this regard, it is interesting to notice that nowadays the policies introduced in defining this split for faculty working within UDIs perfectly replicate such a spontaneous pattern.

[12] The following years witnessed a rapid expansion for higher education in architecture, reaching a quote of 80 acknowledged Bachelor's degrees in Architecture in 2001 and more than 120 in 2004 (Xue, 2005); today there are more than 260 (Zhuang, 2015).

to contemporary Tertiary Education Institutions (TEIs) assessment systems thanks to a series of Elite-Making Policies adopted in China in those years: the *Project 211* launched in 1995, and the subsequent *Project 985* culminated in the statement of C9 League (Li L., 2004; Allen, 2017). The first one was proposed in the Ninth Five-Year Plan (1996-2000) according to the motto ‘‘In preparation for the 21st century, successfully managing 100 universities’’ (面向21世纪，办好100所高校 *miànxiàng 21 shìjì, bàn hǎo 100 suǒ gāoxiào*). Its primary contents expected that Chinese TEIs would have reached the international standards in teaching and research through the performance of about 100 selected cases — specifically, 116 institutions were selected, equivalent to about 6% of the total. Such institutions received massive central government funding injections in the following years, obtaining proficient positions in the international ranking lists (Ngok & Guo, 2008). According to such a success, in 1998 was launched Project 985 implemented by the Chinese Central Government to promote the development and reputation of higher education in China through the allocation of 3-year funding to 39 selected institutions. 42% of such funds (consisting of 27 billion RMB) have been addressed to the nine selected universities appointed in 2009 as C9 League[13], while the rest have been distributed among the others (Zhang et al., 2013). Still, today C9 League, albeit admitting per year only the 0,2% of the more than 3 million students reached after in the *Gaokao*[14] (高考) and accounting for only 3% of the country's researchers keeps receiving 10% of national research expenditures. In June 2016, MOE abolished both the Project 211 and Project 985 by replacing them with the ‘Double First Class University Initiative’ which

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[13] These nine top-ranking universities can be considered the Chinese Ivy League, namely Fudan University, Harbin Institute of Technology, Nanjing University, Nanjing, Peking University, Shanghai Jiao Tong University, Tsinghua University, University of Science and Technology of China, Xi’an Jiaotong University and Zhejiang University. Such institutions produce 20% of the nation’s academic publications and 30% of total citations (Times Higher Education).

[14] The National College Entrance Examination is a compulsory exam whose result is the sole criterion for admission into Chinese universities; each institution has a defined intake for aspiring students, which varies by university reputation and provincial prominence. Differently from the Italian Matura, which is arranged on a national scale, *Gaokai* is a province-based exam. It is usually taken in concluding the high school, but since 2001 there have been no age restrictions, and the exam can be repeated as many times as desired.

comprehend 140 Universities as the most elite institutions in PRC (Song, 2018).

Currently a push towards a reform in TEIs launched by Xi Jinping at the 19th National Education Conference and the 2018 Academician Conference, started a broad debate about the trajectories that Chinese universities should take in the intent of 'improving the quality of patent in Colleges and Universities and promoting the transformation and application' (MOE & MOST, 2020a) thus pushing for an update of the indices for the scientific evaluation (MOE & MOST, 2020b). Such guidelines have the intent of implementing the quality of the research products as well as encouraging local applied projects.

It is evident, then, how the university landscape in China is characterized by a wide disparity among the institutions that dot it (Gallagher et al., 2009); with only a limited number of universities being well-funded by the government, having a well-developed tradition of research and scholarship, a stratified relationship with international counterparts, and a recognized role within the national and international landscape. The policies undertaken in recent years have been designed to further increase the possibilities of this eliteness to the detriment of other minor institutions, thus exacerbating this decade-long pattern. It is therefore appropriate in the following paragraphs to consider that the cases observed (Tsinghua, Tongji, and SCUT) are part of this same category: their arrangement, their functioning, and the projects to which they access, while being representative of a university model 'with Chinese characteristics' also are reflections of a condition of high excellence, unlikely perhaps to be assumed as common examples unless carefully questioned.

2.4 Placing the Schools of Architecture in the market: A triple helix-based approach

Moving the lens towards the education in architecture, although the format has been fully revised and standardized to international standards, it is still assured to the single Universities a deep autonomy in defining the degree courses and managing its professoriate. Moreover, it is generally still claimed an emphasis on the applied branch of the discipline, or instead in 'cultivate high-level

professionals', master 'systematic professional knowledge of the discipline and professional field' and enhance a 'strong ability to solve practical problems[15]. In such a perspective, in a 2015 essay, Tsinghua's professor Zhuang Weimin defined the design pedagogy in PRC as *open-ended teaching* of architectural design steered by an increasing pervasion of practical foundations alongside the theoretical ones. Such an approach consists of an actual attempt to correlate students' education experiences with the factual professional practice, or rather to include remarkable hands-on experiences in both the creative and executive side of the job within the learning process[16] and is accomplished mainly through three actions. Firstly, increasing involvement of external standing practitioners among the professoriate; i.e., outstanding architects engaged in directing a design course for a semester. If in the 2000s had been called as fixed-term teachers mostly international archistars, to date there is a widespread tendency to prefer notable nationally based professionals such as Ma Yansong, founder of MAD Architects or Gong Dong, founder of Vector Architects, both engaged in lecturing at Tsinghua in 2013. Secondly, the intensification of curriculum design studios addressing as course topic international design contests either dedicated exclusively to student or open access participation: such as *Taiwan Residential Architecture Awards*, *Kaira Looro Architecture Competition*, *Inspireli Awards and Competitions*. By doing so, the typical pedagogical structure of *conventional design studios* (Deamer, 2020; Dutton, 1987; Preben Hansen, 2021) — and thus a design experiment conducted within a simulated environment, on one side, fosters

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[15] Excerpts of the descriptions of the Master of Architecture programs at Tsinghua / School of Architecture, Tongji / College of Architecture and Urban Planning, and South China University of Technology / School of Architecture. Accesible online at: http://www.arch.tsinghua.edu.cn/column/Admissions, https://caup.tongji.edu.cn/caupen/c0/ac/c11082a114860/page.htm, https://www.scut.edu.cn/en/wboutwthewwraduatewwchool/list.htm (Accessed on March 13th, 2023).

[16] Such a pragmatic approach is the related not only to the considerable stratification of the Soviet influence and the planned economy but also a broader and long-standing tradition that dates back to the Confucian conception, even emphasized in the practical Confucianism (XVII century), of learning as active inquiry through personal experience. According to such a vision, "the object of knowledge is not ideas but actual and concrete things, and knowledge and action form a unity. […] For example, one who desires to know music. Even if he reads a music score hundreds of times, and discusses, asks, thinks, and sifts scores of times, he cannot know music at all. He simply has to strike and blow musical instruments, sing with his own voice, dance with his own body, and go through all these himself before he knows what music really is. Those who know music this way know it perfectly" (Chan, 1963: 708).

creative learning and social interaction among students and tutors, while on the other side, disguises a binary logic centred on a sole authority (the teacher) that decides according to its interests and expertise — is turned into a situated approach that asks students to act as real designers foreseeing the interactions among concrete professional patterns and a multiplicity of actors rooted outside the academia. A third action flanks these two aspects, or an apprenticeship for post-graduate students carried out in both architectural firms, governmental bodies or affiliated practice institutions (namely the related UDIs). Although is partially expected also within the Italian environment[17], the activities offered in the Chinese environment seem to be more structured, to the point of assuring each student to be engaged at least once in "the whole process of designing and building of a real project with real clients, through which they learn how to develop concepts through dialogue and reflexive thinking". The purpose of this work is to demonstrate several possible declinations of the practice to give a broader understanding of the profession as well as implement the transmission of interdisciplinary *tacit knowledge*, a pragmatic learning attitude, increase practical problem-solving skills and technical response to the design needs, as well as critical thinking and reflective practice. For example, in the case of internships held within UDIs, students are required to spend about 3 or 4 months employed not on the design act but on-site work, to learn rather than the conceptual part while also the more practical one, i.e. construction quality verification and technical problem-solving.

In this framework, though, the edge for wider innovation — at least considering what happens in the Italian panorama hence the main interest of the work — is provided by University-led Design Institutes and their role in tertiary education. As already discussed in the previous paragraph, DIs were initially established as the Party operative wing, their leading entrusted to the most talented practitioner of the time that, in many cases, also became the pioneers of the firsts School of Architecture. It therefore clearly declares the mutual dependence existing with University entities and political power; such a legacy

[17] For instance, the master degree in 'Architecture construction city' held at Politecnico di Torino foresee in the fourth and last semester of the career, various activities to obtain 10 free ECTS credits among which also a Professional Training to be held in an external private firm or within one of the institution's research group.

endures even in the present dynamics — consider in fact that each UDIs has in its organogram a specific position entrusted to maintain the relationship with the Party, and it is not so uncommon for graduates or doctorates from the school of architecture to undertake a political career (Santi, 2016; 2017) — thus assuring UDIs a stable place in the design market despite the increasingly open to a diverse range of players. More than 200 design institutes led by Universities are indeed still running (Xu et al., 2004; Jian, 2020) and boast a prominent role in the professional landscape.

Such establishments operate within the national architectural market on various roles and scales of projects, from urban planning to architectural design, from crafting bamboo pavilions to Olympic facilities, many of them are listed on the stock exchange, a portion of their shares is owned by the Party (Bologna, 2019) while the university itself owned the more significant quantity (about the 70%)[18]. UDIs are massive enterprises collecting hundreds of employees in numerous and heterogeneous branches that vary from a dozen to about a hundred employees: each unit is directed by an educator-architects (Hua, 2020; 2021). Their *praxis* is founded on a practice-theory-practice dialectic dialectic (Gu, 2007; Gallagher et al. 2009; Li, 2003) that encourages active participation in practical design projects and retraces the functioning of university hospitals: students and researchers conduct a practical internship in firm directed by educator-architects in collaboration with external professionals. Their work is therefore encouraged by a normative framework that allows Chinese universities to "transform the research outputs into market products directly through university-owned enterprises rather than going through a long and complicated negotiating process with other enterprises" (Cai & Cui, 2013: 21). In that way, the project's development became at the same time a profit-oriented activity as well as a site for empirical experimentations, *learning by doing* (Dewey, 1916), *experiential learning* (Kolb, 1984) and *double-loop learning* (Argyris, 1976).

Hence, tenured professors are prompt to pursue, along with teaching activities and national standards conformity, professional practice within UDIs, expanding

[18] Information gathered in an interview held by the author on May 5th, 2022, with Qiu Dongqing, assistant of TJAD CEO professor Tang Shuoning.

their curriculum with a large number of high-level projects alongside the more ordinary publications that have a concrete relapse in the evaluation of their performance. For a better understanding of UDIs functioning, it is helpful to distinguish among its number of units (in the case of Tsinghua are 39, in the case of TJAD are 27) two different types: a first intensive type that handles the bulk of the production and a second type that is more authorial and craft-based. In the first case, the units adopt a more standardized and codified approach to the design; a large part of their work is related to the technical and regulatory validation of the project: i.e., are the units required for the executive phase of design that cluster the majority of the staff among which a significant number of structural and technical experts working on several major projects both in notoriety and scale primarily related to the implementation phase. The research conducted by such units is technological and laboratory research aimed at implementing technics, materials, models, and so on. They act as centres of research and high-quality implementation of the design, working for private and public clients or collaborating with major international firms — such as SOM, KPF, ARUP, Foster & Partners, Gensler, EMBT, Kengo Kuma, FOA, and Tadao Ando — while also participating in architecture competitions. In the second case, however, more formal and typological research is conducted: in this case, the firms are smaller in size and more cohesive, developing projects that are smaller in scope but related to their specific field of inquiry. In this case, the role of these firms in the design process can be related to the designer-consultant. However, since collaborating with the more technical branches of UDIs for the implementation phase, they manage to maintain a broader control even in the executive design as well as the later construction stages thanks to the involvement, as already mentioned, of students or others in the building site as ‘quality inspectors’. Within this framework, the involvement of students, Ph.D. candidates, and researchers varies a lot according to both their specific interests as well as the company they are intertwined with: from a collection of data related to a precise issue/phase/ moment in the design process to a more general approach to the creative act, to practical technicalities, and so forth.

UDIs hence managed to maintain their role while moving from the planned to the socialist market economy, and lately, the property economy was enhanced by

the entrance of China into the World Trade Organization in 2001, first of all due to the regulations parsed in the second paragraph of this chapter — thus a normative framework that allowed and promote such sequence — moreover thanks to resourcefulness in producing innovation (Wu, 2015). The possibility to "apply new knowledge and technologies produced in universities through their architectural practices" (Xue & Ding, 2018: 83) indeed ensured such institutions with considerable power in negotiating with governments (Wu, 2015) the status of being reckoned (in some cases) amidst the most influential exponents of contemporary architecture in China. Moreover, their UDIs practice, or at least the one conducted within the smaller firms headed by professors and academicians, can partially be related to the same, or rather even more remarkable, degree of exception experienced by the members of the 'experimental architecture' (实验艺术 shiyan yishu) or what Jiang Jun defined in 2008 as 'fake freelancers' (Grima, 2008:108). It is no coincidence indeed that UDIs played a pivotal role in asserting the rise of such architectural trends. Trade journals such as the Tongji University-based *Time+Architecture* (时代建筑 *Shidai Jianzhu*), the Tsinghua University-based *World Architecture* (世界建筑 *Shijie Jianzhu*), or the *Architectural Journal* (建筑学报 *Jianzhu Xuebao*) published by China Architectural Society (中国建筑学会 *Zhongguo Jianzhu Xuehui*) used indeed their power to promote and exerted in the last decade a strong influence in directing debate in the academic and professional architectural field through scholarly reflections and design critics — emphasizing, in this case, the practice of marginal young architects or, in other cases, providing the Party with an additional propaganda tool (Hsing, 2006; Jian, 2020; Li 2003; Santi, 2016; Xue, 2004).

UDIs functioning thus can be summarized through the trinomial EDUCATION-RESEARCH-PRODUCTION[19], such a statement is easily likeable, albeit in not the same terms, as the ideal model of the *triple helix* stated by Henry Etzkowitz and Loet Leydesdorff (1995, 1997) and founded on the cooperation, or rather a hierarchical mutual influence, among government, industry and

[19] As asserted by the President of Architectural Design and Research Institute of Tsinghua University, professor Zhuang Weimin, in an interview held by the author on March 10th, 2021. An excerpt is available on the OAT site - Polito Studio Observatory.
(https://www.oato.it/2021/05/27/thad-polito-studio/)

university. In the 2008 book *Triple helix in China: Strategic Challenges* edited by Lu and Etzkowitz, the Shenyang University-based professor Chunyan Zhou indeed codified the Chinese approach to entrepreneurial university as starting "with a government-pulled regional innovation and industry-university collaboration, that subsequently contributed to a triple helix interaction as a relationship among independent actors, through developing university-industry collaboration" (Lu & Etzkowitz, 2008a: 125). However, in this triad, it remains evident that the power of government is significantly stronger than universities and industry, which indeed are in turn embedded in the first, then de facto, it is the government that is the leading player in promoting the university engagement in the regional innovation system through strategic manipulation of the market (Johnson & Weiss, 2008; Cai & Cui, 2013; Lu & Etzkowitz, 2008b).

PART II

Towards a case for technology transfer in the field of Architecture

Chapter 4

Positioning the case study

This central part of the work tackles a retrospective *reflection in action* on the third-stream activities experienced by a research group in architecture, which is a set of actions to further enhance the possibility of accessing insights and data in a foreign and opaque scenario through applied research. More specifically this thesis range over the activities carried out by the Politecnico di Torino China Room research group (CR), of which I have been a member since March 2016 — earlier as a master student (2016-2017), then as a research granter (2018-2019) and later as a Ph.D. student (2020-2024). Through unpacking the projects developed before and after September 2020, the section underpins the dovetail of the various design proceedings as an incremental series of episodes that nurtured the structuring (in the running) of the *technology transfer* initiative Polito Studio (PS), that is the case study.

In a nutshell, the project developed in collaboration with Ordine degli Architetti, Pianificatori, Paesaggisti e Conservatori della Provincia di Torino (OAT, that is the Turin Chamber of Architects) aims to support a selected group of professionals in international markets where Polito has consolidated collaborations and networks (China, Latin America, Africa). Professionals are hence accompanied in applied projects such as design competitions or

consultancies by Polito's scholars and experts; in the case of China, the group is supported by the China Room research group.

The observation hence starts from the interpretation of the University as a node of a network of actors producing and sharing knowledge in different ways (Cognetti, 2013: 18), attempting to better understand these modes through a specific case, that is the case of PS. In this sense, as further detailed in the next chapters, the margins of innovation behind the unfolding of PS is the understanding of the very apparatus for the legitimation of a collaboration among public institutions (a university and a professional body) and a group of professional firms through a technology transfer mechanism that approaches concrete design proceedings. From a scientific point of view — therefore affected in a certain experimental production that is more related to the codification of a span of generable knowledge, and not really in the design assets — such collaboration is characterized by a transdisciplinary approach to practical engagement in the professional scenario. The assumption behind such a transdisciplinary approach is that the overimposition of diverse yet related *knowledge-based organizations*[1] can be apt to define "a new 'in-practice model' of research that […] opens for various ways in which the design professions could contribute to knowledge production" (Dunin-Woyseth & Nilsson, 2011: 89). This attitude is already well grounded in contexts such as in the English language literature (van de Weijer et al., 2014; Riso, 2017), and is gaining strength in the European context as well. Just to mention one, the effort of the European

[1] The term *knowledge-based organizations* (KBOs) refers to those forms of worker organizations that commonly combine into voluntary associations of members by staffing other professionals; KBOs then comprehend professional categories such as accountants, lawyers, and architects. These agencies are usually closed companies with a limited number of members, and operate in the open market independently, directly interacting with clients (both agencies and individuals). In particular, one of the most distinctive features of KBOs is the very asset they trade consists exactly of the expertise of the staff member. Unlike the manufacturing industry or other service industries (e.g. commerce, banking, transportation, retail, etc.) they have no fixed plants, property, or liquid capital to manage. Moreover, unlike 'facilitation services' (e.g. real estate agencies) they do not merely accumulate and mediate information yet add substantial value through their professional operations. In this sense, it is not possible to straightly label the asset that KBOs sell; it consists indeed in the competence itself, rather than in a product. In other words, KBOs produce rather intangible products that cannot be framed as commodities, but which standardize their performance sufficiently to differentiate them from services provided by other peer KBOs and are thus widely marketed (Winch & Schneider, 1993).

Association for Architectural Education (EAAE) — a membership-based association that since 2012 organized schools of architecture in Europe with the aim of collectively promoting and discussing the quality of architectural research and teaching — in promoting experimental approaches in the field of architecture through the design. As stated in the EAAE Charter on Architectural Research ([2012]2022) such an effort is led by the conjecture that "in architectural research, design is the fundamental way of thinking and process of knowledge production […] through design projects, artefacts and design processes, as well as research about and for design. Therefore research results may be obtained by, and consistent with experience in practice".

Design projects as interpretative lens

In this direction, PS and all the projects analyzed, are interpreted as assets to inquire about new ways for gathering and enabling the production of knowledge through architectural practice in real-world situations, constituting the core of architectural knowledge. In other words, therefore, the aim of the following chapters is to exert a "hindsight reflection as a form of self-assessment of the researcher-designer [...] to understand whether and when a design project 'increases knowledge'"[2] (Amirante, 2021: 54). An argument that arises from the assumption of considering "design research as a particular, but not distinct, feature of scientific research"[3] (Gabetti, 1997:13). In this sense, looking to the 'modes of the project' — i.e. how to do, choose, address, or negotiate the design — keeping as main focus parameters of methodological relevance for the practice (Losasso, 2011), means to inevitably involve the field of TM mandate to work in accordance with contemporary social (and professional) issues.

As the 'scaffold' of this part II, the work proceeds by systematically recalling the main moves, issues, and strategies embedded in the design actions that, although very heterogeneous, acquire the value of field research. In this sense though, the lens holds in abeyance the specific contents related to the formal result

[2] "Riflessione a posteriori come forma di auto-valutazione del ricercatore progettista […] nel capire se e quando un progetto 'aumenta la conoscenza'" (Amirante, 2021: 54).

[3] "La ricerca progettuale come aspetto particolare, ma non separato, rispetto alla ricerca scientifica" (Gabetti, 1997:13).

of the design, as well as the specific data collected *per se*, while attempting to define precisely the multiple spots of knowledge acquisition that also in different conditions (for the mandate entrusted, or the collective involved, or even the typology of the intervention) could be identified and eventually compared. The analysis, therefore, takes the distance from the lens of a critical theory mainly related to the esthetic aspects of architecture (ideas, theories, visions, interpretations), which are discussed in the projects' observation only as a tool to frame the conditions behind and within the operative scenario.

On this wise, the main vectors for knowledge enhancement in the observed cases are instead of a broader essence and can be summarized into three aspects. First of all, the pivotality of the proceedings in acquiring *situated knowledge* attuned to the contingencies of the operative context (China in general, and the site/typology in particular). Then the generalization of the design process *in medias res* to forecast a consistent procedure or scheme that could be useful in better understanding the tangible, real-world conditions of architectural practice in China. Finally modes and modalities for legitimating the praxis of authentic design projects faced by a research group as a scientific behavior (that should be endorsed by a scientific outcome). For that reason, the analysis is flanked by international literature from various fields — in particular, third-stream academic practice (Doucet & Janssens, 2011; Dunin-Woyseth & Nilsson, 2011; Cognetti, 2013; Cognetti & De Carli, 2013), organizational learning (Argyris & Schön, 1978; Argyris, 1982; Faulconbridge, 2010), practice-oriented research (Biggs & Büchler, 2008; Bjørn, 2003; Malinin, 2018; Milburn & Brown, 2003; Nilsson, 2013; Ramsgaard & Tamke, 2009; Winch & Schneider, 1993), and the disentanglement of the architectural practice into a deducible process (Gabetti, 1997; Till, 2009; Frassoldati et. al., 2018; Yaneva 2010). The final objective is hence to go back to the general debate that problematizes the assessment of scientific products in the field of architecture (Amirante, 2018; Capuano, 2018; Losasso, 2011; Ricci, 2014a; 2014b). Such literature is used to introduce the operational approach embedded in the specific actors (or frames) that are introduced as the narration proceeds to engage them. According to exactly these approaches, the section is therefore organized into three blocks: before, through, and beyond the Polito Studio object.

To start with, chapter 5 grasps the activities of a research group (China Room) engaged in the so-called 'applied research' in the nearly seven years of its existence. This tendency is due to the very contingency of approaching scientific investigation within an institutional entity primarily focused on unfolding trajectories and specificities of a foreign scenario, but even more specifically to the concrete issues of tackling the Chinese context as something to be understood through fieldwork. Interestingly indeed, the different context itself has been both cause and effect, both opportunity and necessity, in (more or less explicitly) steering the dynamics of the research effort of an extended group of individuals. Considering the Chinese environment "as an opportunity to observe, often at an accelerated speed, phenomena that emphasize global behaviors, […] or an expanding laboratory where to question and test scientific positions" (Bruno & Forina, 2021: 4), stating at the same time the difficulty of finding/accessing/ interpreting data without succumbing to a partial and distorted view of the facts (De Giorgi & Samarani, 2005; Jullien, 2008; Bonino & De Pieri, 2015), field investigations have indeed multiplied over the years. In this sense, the direct involvement in design proceedings occurred in providing the researchers with a further tool for understanding the processes investigated thanks to a direct mediation with the same issue studied[4]. As a result, the research has been progressively flanked by projects, interlocutors, and institutions. Therefore, for the research group designing in China meant on one side to further collecting materials, insights, and knowledge for traditional academic outputs and scientific exercise, on the other side, circumventing some of the Italian national regulations to further explore and systematize an evolving mode of approaching research *in the making*. Hence, the adopted approach has been progressively amplified by the condition of working beyond the normative frame of national regulation and moreover in a scenario in which instead the norm allows and yet encourages universities to actively participate in the design market (through UDIs; see Chapter 3).

[4] It has been the case in a series of Ph.D. dissertations and other publications developed in these years by the group fellows (Bonino & Mancini, 2021; Bonino et al., 2022; Bonino et al., 2020; Bottero et. al., 2019; Bruno, 2019; Bruno et al., 2020; Carota et al., 2017; Cestaro, 2022; Cestaro & Bonino, 2020; Deng et al., 2020; Federighi et al., 2021; Forina, 2019; Lanteri, 2020; Naso, 2021; Naso et al., 2019; Safina, 2020) as represented in the map **[5_02]**.

Within this backdrop, the possibility of adopting the same research group as a case study (albeit indirectly) allows to observe the different approaches of these institutions towards practical tasks but also to expand the observations to two different ways of approaching the same exercise (Italian research groups vs. UDIs). On one hand, there is the exclusive academic interest in furthering scientific awareness, which necessitates translating performance into outputs with scientific impact, primarily through the production of articles and books. On one side the exclusively academic interest in the further enhancement of scientific awareness, and so the mandatory transposition of the performance in outputs with scientific impact mainly through the production of articles and books. On the other, the mixed academic-professional effort related to the final objectual product which is yet commonly considered among the institutional tasks of those professors in architecture that are also chief of practices comprehended in the UDIs. These two positions are complemented by a third one, that of architectural firms. Detached from academic influences, these firms prioritize design as the primary means to advance formal research within architectural practice and approach project implementation as their main assignment. They must also consider (directly or indirectly) the financial return on their projects.

Operative legitimation

It would still remain to consider the position of those university-related agencies that even in Italy have the ability to directly act within the borders of free-market. Those agencies behave according to commercial logic and business-to-business competition, while combining their actions with research objectives, i.e. spin-offs and start-ups (Chiesa & Piccaluga, 2000; Rolfo & Finardi, 2014). Although from a very general perspective, these agencies seem the perfect sum of the pros and cons described so far — being able to steer the research agenda, while at the same time overriding the need to then translate the results into editorial products — it is crucial to briefly introduce the conspicuous differences that distanced them from the scenario observed in this work.

Spin-offs and start-ups are entrepreneurial (thus capital) ventures or rather agencies affiliated with universities, that according to Italian regulation should comprehend at least one academic member (whether professor, researcher,

doctoral student, or research grant holder). These companies are aimed at the economic exploitation and commercialization of innovative products/services that are the results of skills, and know-how matured in the academic sphere. Namely, they are in charge of the commercialization of those academic research results that have an industrial application (DM 168/2011). They can be economically independent or with direct participation of the university institution — which generally participates with an economic income of 5 to 15 percent (Giofrè, 2014; Valentinuz & Piani, 2019). Therefore, their agency is not a matter of initiating research projects, nor is it a matter of activating new channels of funding for academic laboratories, yet the capitalization and further development of those insights that are more adapted for private activities.

On the opposite side, research groups are entirely involved within institutional borders, the margins of operation for the actors are then to be comprehended in the normative framework described in the second chapter of the work. In this sense, all the activities that comprehend the interaction with dynamics and/or stakeholders in the professional, free-trade scenario, have to be reducible to the academic research agenda (yet its outcomes), specifically respecting all its bureaucratic items.

Indeed, a research group (at least in Italy) is supposed to appear as a public entity, which is part of a tertiary education institution (TEI), whose ultimate goal is precisely scientific advancement. In engaging in activities other than the core mandates (first and second missions, aka education and research), it is necessary to demonstrate their social utility, otherwise, it runs the risk of transcending the institutional boundaries and incurring into the occupational field (especially concerning design activities). This, therefore, requires the institutional entity to officially frame since the very first hint of action — and even prior to the clarification of the consistency of the development possibilities — the substance of the project it is about to tackle, by bringing it into those categories prescribed by the national regulations and the university statute. In this direction though, the gradient for identifying scientific motives behind TM activities is gradually evolving, and the GEV-TM final report of VQR3 is helpful in defining the motive for a research group to be directly interested in setting up third mission activities, or technology transfer programs. Indeed, “through the knowledge transfer from

the researcher to society, Third Mission activities serve as the intersection between institutions and the external world, engendering a constructive bi-directional evolution in which, through interaction with society, institutions define new directions for research and education"[5] (ANVUR, 2022: 88).

Nevertheless, there is a further consideration of the role of the single academic members involved. On the one hand, the very organizational structure (and power) of the academic institution enables its members to participate even in those projects whose actual implementation is not yet guaranteed — thereby being exposed to the possibility of failure and yet the impossibility of deploying such activities for further reasonings. On the other hand, the role of researchers inevitably requires a shift to the codification of 'officially-assessed' scientific products (especially in third-stream processes as design transformations are). What this means is that although the institution gains prestige already from the involvement in relevant projects in itself, in the case of single members this is not sufficient, especially among the 'lower ranks' of the academic hierarchy (such as Ph.D. and researchers). That is to say, for both institution and individual members the ultimate goal does not consist in the professional (and formal) action itself, nor exclusively in the financial return — which would instead be the main interests of a professional firm — but rather in the institutional expendability of the action (prominence, network, visibility, etc.). Narrowing the perspective though, even this aspect is not sufficient for those single members who are instead expected (and concerned) to relate the project to the particular context of action akin to their scholars' status, i.e., to a recognizable field of scientific inquiry that, alongside the more formal research (proper even to professional practice), combines broader social/methodological/theoretical interests.

In this sense, and particularly referring to the architectural academic discipline in Italy, it means that in the aspiration of developing a *science in-action* framework to overcome the mere observation with direct interplay, the attempt is to explicit the direct interrelation between research and practice to legitimize the

[5] "Attraverso il trasferimento di conoscenze dal ricercatore alla società, le attività di Terza Missione diventano il punto d'incontro tra le Istituzioni e il mondo esterno, generando una evoluzione costruttiva bi-direzionale in cui, attraverso l'interazione con la società, le Istituzioni delineano nuovi indirizzi di ricerca e di istruzione" (ANVUR, 2022: 88).

involvement first of all from a scientific point of view (research scope, expected outcome, potential impact, etc.) and then from an institutional perspective, which involved professionals and professional organizations as well.

Self-observation

It is, therefore, crucial to specify, although being already depicted, that the design actions, as well as the technology transfer experiment, are retraced from the perspective of an *indigenous ethnographer.* This means an observer pertaining to the same group involved in the action, that takes an active role in the operation itself. Therefore, it is essential to "reflect on my own positioning as a researcher with active roles as both an observer and active participant" (Cardoso Llach, 2019) in the object of inquiry. In this sense, the prologue already gives a comprehensive panorama of how the researcher is in the entire thesis, and especially in this central section, a primary source of data collection, investigating direct experiences from fieldwork. In the observation period of this work, hence I played a dual role as a researcher and as a member of the design team for the projects unpacked (as well as for additional ones that do not fit within the scope of the investigation). Such particular conditions within the group observed implied direct access to sources and materials first-handly gathered by me, or by persons closely associated; as well as free access to the entire database and archive of the research group. This entails incomparable access to the agency of the design described, which is essential in unpacking the recursiveness of everyday practice. To grasp the modes of reciprocal action among the various actors involved, the restitution of the case study revolves around the concept of *bottega*, "the place of direct experimentation [..] for the production of tools and experiments […] in which the project of architecture is developed" (Frassoldati et al., 2018: 5-6)[6]. And thus the literature branch introduced in the first chapter investigating the daily routines, mechanisms, and organizations that progressively interact in the design arena until the configuration of the final assemblage. By looking to architecture as "not a static object, but a moving project" (Latour & Yaneva 2008: 80), the attempt is to retrace the trajectories that led to the definition of an incremental operative scenario that has been externally recognized of being able

[6] It is important to note that this interpretation aligns with the concept introduced by Latour (Latour & Woolgar, 1986; Bruno, 2010).

to produce, or yet layering, transmittable *knowledge in practice* (that is the PS mechanism). Quoting again the oft-cited anthropologist Albena Yaneva, the aim is to endorse the consistency of the actions, considering that "what looks like chaos at the beginning is more of a rhythm, or many distinctive rhythms" (Yaneva 2009b: 51) if consistently systematized.

At the same time, the internal perspective allowed to disentangle with further awareness groups' concerns and dynamics, thus the relations between decisions and actions. These concerns are declared in the introduction of the work and will be stressed in the sixth chapter since the main topic of the research itself revolves around the generalization of the issue that steered the constitution of the object of the observation: if the design action is considered as part of the scientific mandate of a research group, how to approach its *praxis* and then its assessment? As previously mentioned, the 'scientific approach' adopted by the group (CR) in the design activities has been in most cases one of the strongest factors influencing the course of the projects, likewise one of the main reasons for the involvement of the research team by the foreign partners (UDIs) — the same foreign partners that do not face such a topic as a concern while as a recurrence. In the meantime, still the 'scientific approach' has been one of the issues endorsing, *mutatis mutandis*, the academic institution's effort (Polito) to undersign the agreement with the professional body (OAT).

In other words, PS relapses in the institutional endeavor of investigating in which conditions the public concern can improve the scientific debate and which instruments to develop in solving social controversies and academic-professional disputes. Starting from the exposition of the context complexity (part I), this second section of the work better positions the number of actions required in creating a scheme of action able to associate a wide range of actors (professional, academic, institutional) and objectives (formal and scientific).

The one described is in fact an experience that arose from the effort of a university to open to a new direction of 'social utility' of TEIs, seeking ways for an engagement with social issues through the establishment of a virtuous circle between research, teaching, and interplay with occupational trends. It involves experimenting with a form of interaction that on the one hand enhances the

development of academic 'field investigations', and on the other ensures that each actor involved deploys the opportunity and tools to perform within their respective vocational interests/competencies (design inquiry for researchers, design activity for professionals). In other words, the initiative is situated in this part of the university's third mission aimed at a broad re-engagement of dialogue and exchanges with society, based on pressing issues and a direct link with local stakeholders, in this case constituted by the professional community.

These specifications are necessary to clarify that the perspective adopted in the work is a partial viewpoint relative not just to the position of the observer, but also to the academic structure it represents, the nature of the activities conducted, and the disciplinary background of the operations.

Boundary conditions

The scenario that this thesis depicts is indeed a specific crossroads in which a series of events sketched the plausible circumstances for a research group in architecture to pursue in identifying edges for actively doing design assignments and coping with their dissolution. To start with, the consistency of a group (CR) whose members were sufficiently (though not absolutely) aligned in interpreting their role as researchers in architecture as the embodiment of both the practical-professional and theoretical-interpretive attitudes. Such attitudes have been deployed in the majority of the activities carried out since the formal institution of the research group in 2017, and even prior in the first collaborations with Chinese institutions. At the same time, the efforts and the achievements (among which publications, awards, international collaborations, and also projects) gradually attested in the years to come, an enhancement in the positioning of the new-born research group in the department environment. This resulted in flanking the disclosure of a booster to codify this research branch and further gather inward investments, emphasis, and awareness even from the university. In particular, such a trend is evident in the upgrading of the research agenda (among which the design mandates) to the progressive structuring of a specific institutional group and a dedicated institutional figure in the Polito governance.

Indeed, Polito's intensified the efforts to establish a series of heterogeneous collaborations and networks through the founding of an office exclusively

dedicated to the support in advancing partnerships with Chinese bodies: the China Center. Such a structure has been established in 2017 (CdA 27 November 2017) mainly with a strategic/administrative/promotional/supportive/management role, working as a hinge in nurturing and facilitating the efforts of both the architectural and engineering branch of the university[7]. At the same time, has been institutionalized a role with the aim of enhancing Polito's network with PRC: the Rector's Delegate for China Affairs (then Vice-Rector for China Affairs in 2020, and later Rector's Delegate for International Relations with China and Asian Countries in 2021). Hence, the framework of the actions here investigated has to be observed side-by-side with the gradual enhancement of a series of roles and programs that are going on for a considerable time because of specific expertise on internationalization and market-related knowledge of the Asian academic research landscape. These expertises are mainly concentrated in the architectural field in the CR yet not reduced to it; rather, they are an institutional endeavor to engage in what is perceived by the institution as an area of intensive development.

Flanking the atheneum interests in Asian countries, are as well the increasing efforts accomplished in the TM, which can be easily related to a broader international steer (Chapter 1). This direction is made explicit in 2018 by the designation of the Vice-Rector for Technology Transfer[8] and even more in the 2018/2024 Strategic Plan that acknowledges that "Politecnico di Torino has always recognized the fundamental importance of its role in the activities related

[7] Although being related to both the branch though, it is crucial to mention that among the main hints behind such a steer in further exploring collaboration possibilities with China, was in particular the CR research group. Although not yet institutionalized, CR was then collaborating both on the education and research level with Tsinghua University, for the exchange of expertise between Turin and Beijing concerning the Winter Olympic Games (Turin hosted the Olympics in 2006, and Beijing was facing the organizations of the 2022 edition). Thus, a synergy between the two cities (embedded by the TEIs) was launched, and on January 26th, 2016, the academic year was jointly inaugurated in Turin by both institutions. The aim of the event was "to establish a bridge […] through the work and creativity of students and universities in the territories hosting the Olympic event, with the aim of strengthening international exchanges and collaborations" (Politecnico di Torino, 2016)(translated by the author). Moreover, since 2009 the two institutions were collaborating in the Joint Studio Polito-Tsinghua: an international workshop involving students from both institutions to work together on major urban transformation issues.

[8] In previous tenures, the appointments for research and technology transfer were assigned to the same person (Vice-Rector for Research and Technology Transfer).

to the 'third mission' of universities". The plan continues assessing that "the 'third mission', originally intended and limited to Technology Transfer activities, has expanded and developed its sphere of action. 'Sharing' and 'co-generating' knowledge have become an ever more relevant topic of debate. […] Nowadays, the role of academia towards society in disseminating research results and promoting open debate on the social, economic and political impact of technologies is gaining momentum. The result of this process is a new model […] which promotes continuous dialogue with society and the local community and is able not only to develop new technologies, but also to foster positive applications inspired by sustainable development. According to this Strategic Plan, […] Politecnico di Torino intends to confirm and advance its 'third mission' activities. […] It will provide solid support to policy-makers in defining policies and norms that may foster the virtuous development of a society that is going through significant technological and societal changes. In the pursuit of these strategic objectives, our efforts will be oriented towards two main directions. The first is the strengthening of the 'innovation value chain', which starts from the development of competence and research results and stretches into their industrial application. This will require coping with current gaps in skills and funding and developing new models suitable for the fields of architecture, design and planning" (Polito, 2019: 47). The emphasis on these issues has resulted in Polito's remarkable performance in the research quality assessment of Third Mission area (VQR3-TM, i.e., VQR-TM 2015-2019)[9] in which it excelled as 'best University in Italy' (Polito, 2022c), with 83% of the six conferred case studies judged in the A-class of merit, and the remaining 17% in the B-class of merit (ANVUR, 2022: table 6.33)[10].

Although this work will not further detail the type of collaborations and interactions that the *Ateneum* is taking forward with Chinese institutions or other third-mission activities, it is necessary to specify that the projects described in the

[9] It has been the first VQR exercise in which the impact of Third Mission initiatives has been assessed by the GEV. Moreover, it will also be the first time for institutions to receive a percentage of the VQR reward fee according to the VQR-TM results (ANVUR, 2022: 13).

[10] The statistic is even more relevant considering that only 11.69% of the 676 cases submitted in the various TM fields of action for VQR3-TM were judged in the same A-class (ANVUR, 2022: 26).

next chapters, as well as this work in general, are the result of a series of circumstances that cannot be overlooked. Namely, the institutional impulse behind the observed initiative resulted in the convergence of the two concerns described so far (*towards* China, and *towards* TT in architecture, design, and planning). Such a tangle is evident by looking at the public event for the signature of the framework agreement between Polito and OAT — held in Polito's School of Architecture in Castello del Valentino (Turin) on September 21st, 2020 — which involved, together with Polito Rector Guido Saracco and OAT President Massimo Giuntoli, Polito Rector's delegate for relations with China. It is moreover evident in the PS board that involved 6 figures among which two Polito members belong to the CR research group, that are as well the tutor and co-tutor of this work.

Besides, although it is yet very diffused the perception that "the research model […] has an ability to approach the 'truth' of the world" (Sequeira, 2011: 136) in objective terms, scholars in the sociology of science and technology have been pointing out for many years now that to fully understand scientific production and research dynamics, the structure and organization in which those are embedded cannot be omitted (just to cite a few Gieryn, 1983; Gobo & Marcheselli, 2021; Jasanoff, 2004; Kurath, 2015; Latour, 1988). Research trends, just as the third mission endeavors, cannot in fact be considered in a unitary and homogeneous outlook, since each academic field contains different orientations, positions, and interests, according to which it acts (and reacts) on the basis of demands and occurrences closely associated with the very own socio-cultural context. In this sense, to acknowledge that science boundaries are not fixed in a heteronymous truth while steered and negotiated by the impermanence of demands, expectations, self-narrative, and concerns of the social actors in which it is inscribed, is by no means an attempt to limit the validity of a certain type of asset nor, on the contrary, to heighten its possibilities. It is yet the struggle to acknowledge a partial perspective that, while being extremely evident and declared in this work, can be even broadened to the patterns of contemporary research in general.

Researcher in action

In this sense, the position of the author within the university, as a member of the same research group, and as an actor within the action itself, has to be

considered not as an a priori perspective, but as the effect of specific circumstances and interest. In particular, these consist of the concerns accrued by the two academic institutions (Polito and CR) to develop a reflection on that strand of applied research that has been developed as an appropriate/effective way of collecting data — as addressed in the opening of the chapter. That need has, moreover, been exacerbated since Polito's structuring and recognition of the PS initiative as a technology transfer mechanism, therefore able to trigger an exchange of knowledge and competencies between different groups of actors. Grounded on this backdrop, this thesis is precisely a self-narrative, in which the author investigates whether and how this access to data/acquisition of knowledge mediated by coevolution in design projects can actually be detectable and auditable from the external arena. This observation is focused on the activities carried out in the last five years of collaboration with CR.

Hence, fieldwork has been the main source of data collection on a practically daily basis (2018-2023). Sources for first-hand data collection include: meetings notes (e.g. China Room design teams (Chapter 5), Polito Studio board (Chapter 6), Polito Studio board extended to China Room members, TDH design teams (Chapter 7)); design work (drawings, models, drafts, presentations, reports); e-mail, we-chat and informal exchanges)[11]. Then these data have been overlapped with official and informal documents realized by Polito in the various steps of this process (brochures, institutional reports, articles, and other documents related both to the PS initiative and to TM enhancement), and a comparison with the main contents and requirements of national assessment systems to deepening the adherence of the actions with their expendability.

In this direction, the inner position in the actions, although being the one of an observer of the process, has also been the one of a facilitator among the other involved partakers: negotiating, suggesting, and problematizing the various positions in the running — both in the projects developed before the codification of PS, or in the discussion for its codification, and even in the projects developed

[11] Over time, the type of data storage has been gradually updated. A written record of the meetings concerning both the PS initiative and the single projects can be found in the final appendixes of the work, graphical materials are in part inserted within the pages and in part uploaded in a digital archive, as well as registrations from meetings, events, and promotional materials.

after it. The review of these stages is then conducive to understanding what a research group can/cannot do in Italy while facing applied research in architecture, how instead foreign patterns can affect and suggest new approaches, and either how to outdo the limits imposed by current regulation by broadening the boarder of scientific agenda with social actors.

This issue then prompts another consideration, namely that of the replicability and generalization of the prototype proposed in this work. The potential weakness related to the peculiarity of the case study comes to a halt with the possibility of identifying similar conditions for recognizing the very same K2, as called in the first chapter of this work, produced in different cases. I.e., starting from the specific investigation, the ultimate goal of the work is precisely to eventually define criteria that can then be expanded either by replicating the model itself or by replicating the methodology that has resulted in defining it (Chapter 8).

In this sense, the selection of the case study was not (or at least not entirely) the trigger for the research, but rather the exploitation of specific conditions that could be particularly useful in investigating the more general question: if architectural design is considered a research activity, how to identify the knowledge it generates? Therefore, the object of this research has evolved into the content of the Polito Studio initiative because (by its very specificity) it has already been recognized as a technology transfer mechanism capable of moving practical knowledge, which is hence implied among the competencies of the group. From this argument, the circumstance that this initiative as TT involves both university and professional environments is particularly relevant, precisely because exactly this collaboration with a mixed-professional environment (the Chinese environment) is what *a priori* allowed the research group to accumulate the knowledge to be then transferred to the Italian professionals. Then, potentially, the broader mixed-professional environment plunged by the TT initiative (flanking the Chinese *and* the Italian situation) can provide further knowledge.

In this scenario, the position of *indigenous ethnographer* has been crucial in connecting the various phases; as has been pivotal the positioning within Polito's Department of Architecture and Design in motivating the endorsement of that literature branch (and research approach) that looks at the architectural project not

as the action aimed at finalizing the object, rather as an incremental process of interrelated actions, interactions, and continuous exchanges among actors.

Practice-steered research

At this point, further exploiting the role that the design practice and its observation play in this research work, I recall here what was already mentioned in the first chapter concerning the objectification of research outputs and methods. Extremising the approaches to practice-oriented academic research connected to design practice into two extremes, on the one hand, there is the deployment of practice as an exploratory activity embedded within the traditional model of academic research (practice-led), on the other hand, the implementation of the practice as itself a generative of relevant questions explored within the professional research model (practice-based) (Biggs & Büchler, 2008).

In the first scenario, the researcher (not necessarily a designer) conducts a systematic observation with the purpose of establishing inferences and insights about a specific object of study: the practice is used to test hypotheses, and the result is a thick description of it. In the second scenario, the researcher can only be an architect, whose laboratory is constituted by the design *praxis* itself. In this case, the practice takes the value of research activity by identifying questions akin to the context of application and producing as a result a creative artifact — which as seen in Chapter 1 can also correspond to a theoretical model. In addition to these positions, there are though all the possible combinations and intermediations between the two, including the extreme that considers the design practice *as* academic research — which is (under certain conditions, and particularly if inscribed in a technology transfer scheme) exactly the position of this thesis.

According to such a perspective, the two lenses (practice-based and practice-led) are both implicitly contained and assessed in this work. *De facto*, this thesis describes in one sense a certain practice that in itself could already be a subject of investigation (PS as a prototype for TT in architecture); in another sense, the form in which this practice is described is itself a tool for demonstrating/exposing the edges for a new mode of knowledge production and either new mode of knowledge disclosure. Similarly, these edges of knowledge production can be ascribed in the first case (the so-defined K1, see page 40) to the theoretical knowledge of describing something that although already existing is yet not fully

understood (the professional practice in China in all its possible fringe); in the second case (K2) an active and strategic knowledge generated by the prototype (PS) as interaction mechanism whose is then materialized in a creative artifact (the design proposal). From this perspective then, this thesis becomes both a prototype of theoretical-descriptive and practical-strategic nature, as a consequence the design practice is either a tool, a source, *and* a method for analysis at the same time.

Analysis structure

Concluding, considering the wider panorama of projects developed by the group since 2016, the selection of design examined in this work is strictly related to the observation of those that involved figures pertaining to institutions located outside the belonging university, thus including a more 'objective evaluation procedure' by external structures (client, adjudication commission, etc.).

In this sense the observation is organized into three blocks, in Chapter 5 the projects developed by the research group before the definition of the PS initiative, in Chapter 6 the effective structure of the initiative, in Chapter 7 the designs approached within the PS initiative. Prior to the unpacking of the specific projects are presented the main actors involved, which are hence organized into two blocks: in the first case the research group and the UDIs, then the professionals selected through the PS open call. The remain actors that took part in the design 'in the running' (as consultants) are then presented directly in the specific node in which they were involved. For each actor, it is filled out a brief form detailing the location in which they commonly operate, the typology of the institution, its structure with a specification of the number of members it gathers, and the constituting year so as to highlight the expertise layered in the time, a brief paragraph summarizing the mission of the agency and a list of the main projects developed.

Each project is opened by an introduction of the main scope and agenda, detailing all the figures that were involved in the various phases according to the colophon. From this perspective, therefore, in the observed projects it is possible to recognize a certain incremental sequentiality at the level of operating modes and network engaged; the first three projects were developed involving

exclusively academic figures, while in the last two, the network expanded to include professional firms and external experts.

The projects then proceed with a coherent structure that outlines first of all the particular circumstances in which the action was initiated — this includes the relationships with stakeholders and the prior knowledge of the site or competition content. Then the final outcome of the design, whether it is a realized architecture or a proposal, is specified in its main characteristic. Subsequently, the implementation phases and modes of the design process are summarized. In the final paragraph of the project unpacking then, the modes to disseminate the knowledge generated through the efforts are identified. In conclusion, a graphical supplement provides a summary of the developed proposal, the workflow, and any related scientific publications.

In between is the main object of observation, namely the technology transfer project initiated by Polito and OAT. All the projects are listed in chronological order, and reconstructed according to a classification that, starting from the models identified in the VQR-TM, is progressively exploring, problematizing, and implementing the modes of transmission and evaluation of the knowledge detected.

To do this, the current form of assessment is gradually modified to fit the main issue of this work, consisting then in demonstrating that a TM activity can lead to scientific products, thus bridging the modes of VQR and VQR-TM in accordance with the innovation potentials behind the deployment of TT in architectural design research. VQR-TM supplies the margins for identifying the knowledge enhancement in a vocational mixed scenario; it is yet tailored to fit different kinds of institutions (technology transfer offices, spin-offs, start-ups, incubators, museum hubs, etc.)[12] and even more crucially with slightly different purposes (social, economic, and cultural impact; relevance to the context of reference; added value for beneficiaries; contribution of the proposing structure, enhancement of the scientific aspect where relevant) (D.M. 1110/2019, art. 9). On the other hand, VQR acknowledge among the scientific products even ‘other than

[12] See the Table 1.2: Fields of Action of the Interdisciplinary Impact/Third Mission Area, in Anvur, 2022: 14-15.

publications', considering also projects still considering exclusively the ones that have been awarded or editorially disseminated, and even as evident outcome of a research and experimentation process yet not clearly defining the type of scientific impact that these can have. Therefore, this work attempt in defining a new instrument for recognizing indicators for the measurement of the scientific impact reached by the deployment of design as scientific tools, expanding the existing models to include all the edge for enhancement identified in the case analysis (Chapter 5,6,7).

Chapter 5

Heading for a prototype

This chapter provides a brief introduction to the structure and interests of the research group, along with the main Chinese partners, that consist of the very same kind of UDIs presented in the third chapter of this work. These UDIs, namely THAD and SCAD, are presented here as both partners in the design projects developed by CR and as key contributors to the applied approach developed by the research group from Turin.

In the second part of the chapter, the first block of projects is examined. The projects, two of which are discussed in this block and two in the second block in chapter 7, serve as observational trials to gain a deeper understanding of the 'design activity as a scientific behavior' that is the focus of this work. In particular, it looks at how it was developed during the four cases, and especially how these were later capitalized as scientific (and mainly editorial) outputs able to be assessed for the academic career. These sections have been reconstructed by drawing upon the research group's active participation in all aspects of project organization, operations, and decision-making. The reconstruction process involved analyzing specific competition and project documents, examining delivered materials, and, most significantly, relying on my firsthand notes, recordings, and conversations accumulated over the past five years.

The designs are presented in a cohesive structure that begins with a summary

of the key project data, such as the site, mandate typology, timeline, scale, and main contents. This is followed by a narrative introduction that outlines the specific circumstances in which the action was initiated, including the relationships with the involved actors and the prior knowledge of the site or competition contents. The 'design object' is then presented as the final tangible outcome, either in the form of a developed design proposal or, in some cases, an executed architectural object. Subsequently, the design process is summarized according to the phases it underwent (i.e. Phase I: schematic design, Phase II: artistic direction). Such paragraphs highlight issues such as the main events, encompassing the network of actors involved, the negotiation process with clients and collaborators, methods of exchange and communication, task division. Finally, a paragraph aims to generalize the observations by investigating the kind of knowledge generated through such specific endeavors, how it was presented and evaluated, and how it was subsequently recalled and applied more broadly.

In conclusion, a graphic insert provides a summary of the main contents of the bidding process, the developed proposal, the workflow, and any related scientific publications. This is followed by a brief table that summarizes the structure, location, mission, and project typology of the actors discussed in the preceding pages. These tables will also be included in Chapter 7 of the work, offering a comprehensive overview of the actors involved, their competencies, and the significance of their contributions.

5.1 Placing the partakers

China Room Research Group as an in-between actor

As briefly mentioned, the China Room Research Group has been officially constituted on October 17th, 2016 (China Room, 2022), its institutionalization can be seen as the effect of the stratification of cooperation with Chinese Universities that occurred since 2013 mainly on the educational level.

CR groupes affiliates from two departments: DAD/Department of Architecture and Design, and DIST/Interuniversity Department of Regional and Urban Studies

and Planning. DAD is a quite recent department established in 2012, as part of the reorganization and rearrangement of Polito's former Faculty of Architecture due to the L 240/2010. It comprehends members from 10 different SSD: ICAR/06, ICAR/09, ICAR/12, ICAR/13, ICAR/14, ICAR/16, ICAR/17, ICAR/18, ICAR/19, ICAR/22. DAD is Polito's reference branch in the field of study concerning architectural and product design, focusing on "architectural and urban design including its sustainability, economics and financial aspects, as well as restoration, enhancement and management of architectural, urban and landscape heritage, and industrial, graphic and virtual design"[1]. The educational program consists of two bachelor's degree programs (one of which is entirely in English), four master's degree programs (which include courses in English), and two doctoral programs (DASP/Ph.D. in Architecture History and Project — that is the framework of this work — and DPA/Ph.D. in Architectural Heritage); plus first- and second-level master's degree programs (DAD, 2020). DIST is an inter-university department that affiliates faculty from Politecnico di Torino and the University of Turin (Unito). It was established in 1984. It comprehends members from 20 different SSD in 9 academic recruitment fields. DIST interests and competencies are focused on "the transformation and the governance processes within a territory, as considered in its physical, economic, social, political, cultural aspects and their interrelationships, in an integrated sustainability perspective"[2]. The educational program consists of one bachelor's degree program, five master's degree programs (one of which is in English), and one doctoral program (URD/Ph.D. in Urban and Regional Development); plus first- and second-level master's degree programs (DIST, 2020).

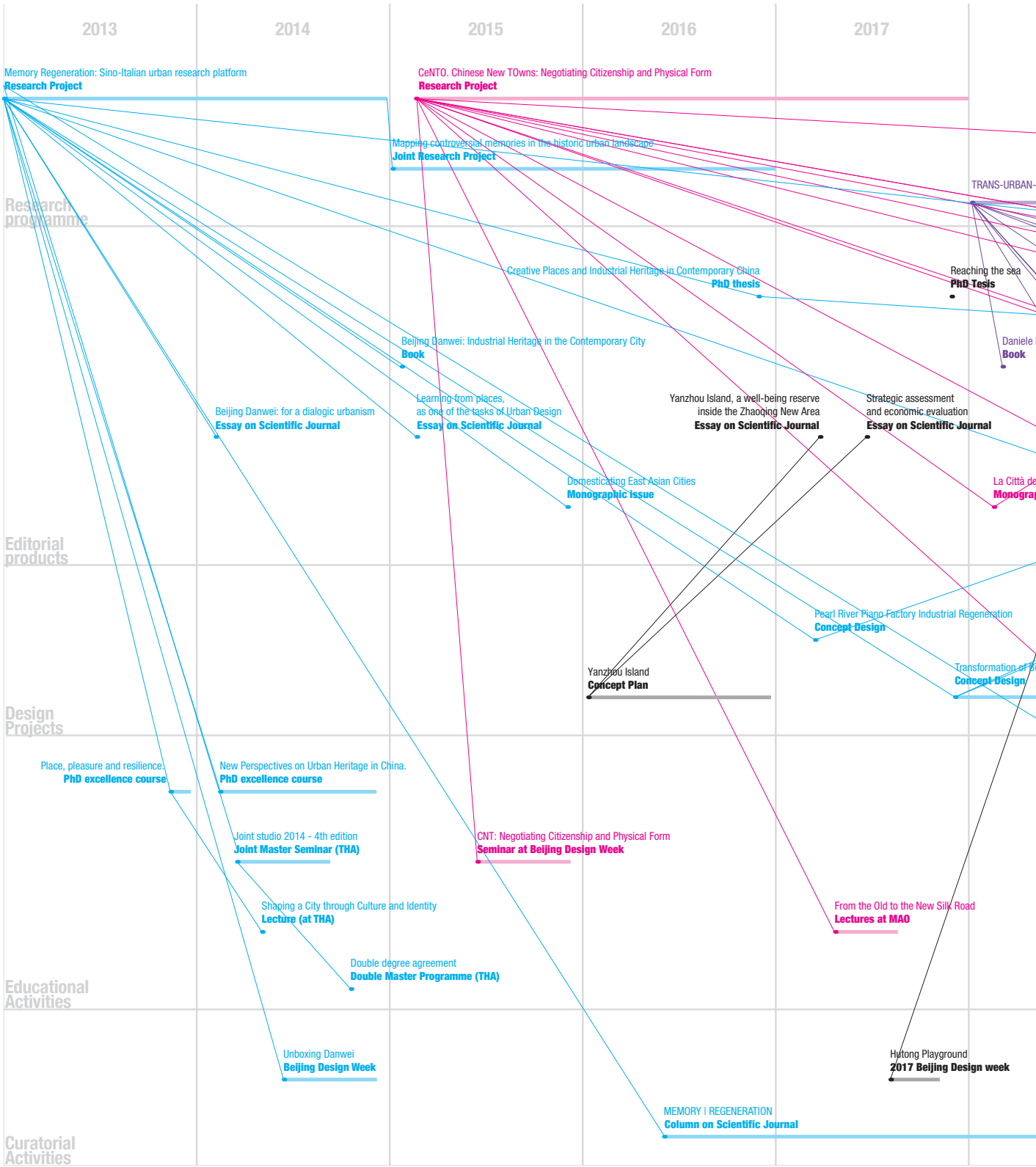
To date (May 2023), CR counts 31 members, of which 15 are Ph.D. students and 16 are senior researchers at various academic career stages. The center is organized through four main bodies (director, deputy director, committee, and assembly) in which the research and teaching activities are collectively discussed by soliciting scientific debate and exchange among members.

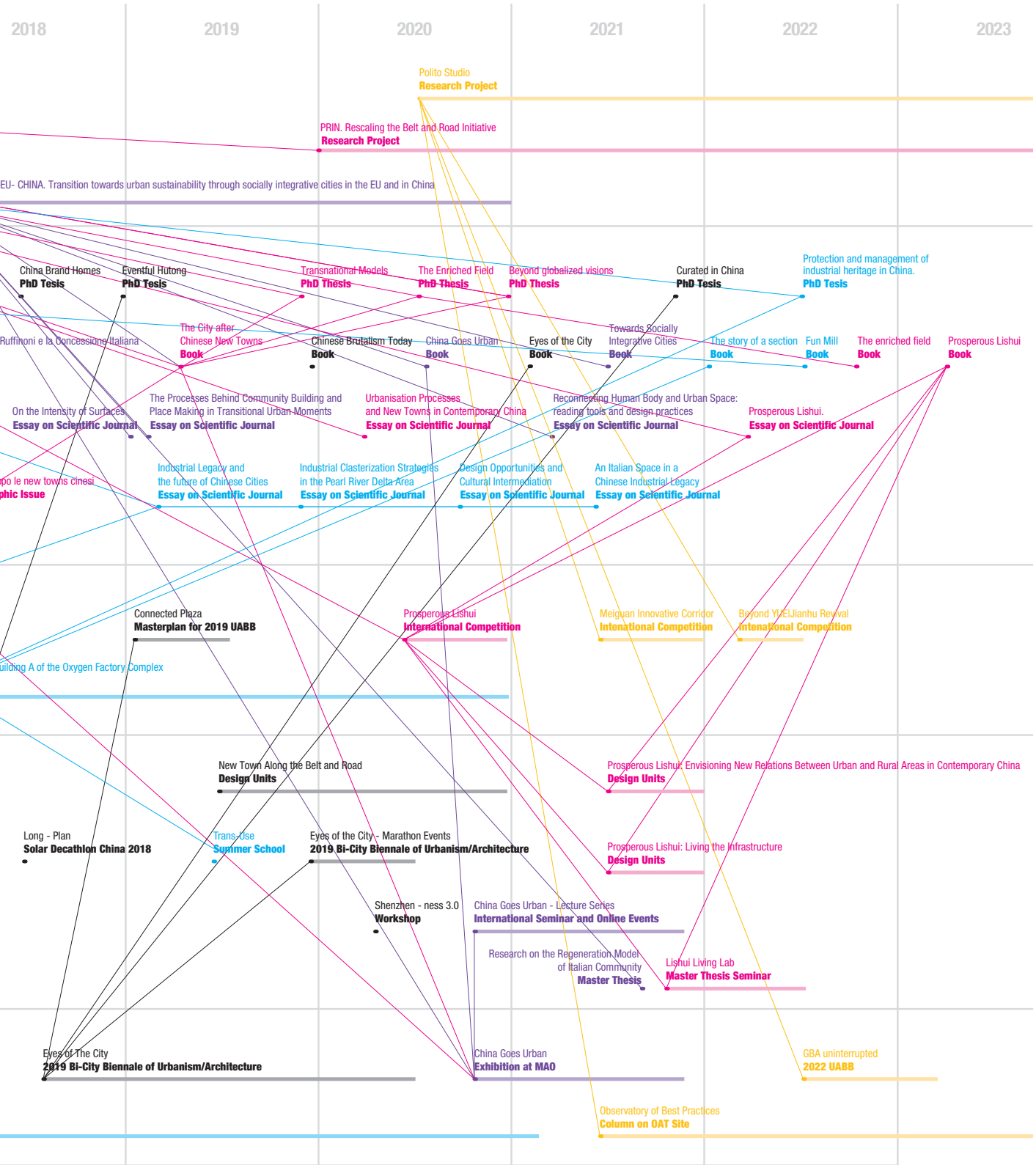
According to the research group agenda, the members share a scientific interest

[1] Excerpt from the department website: www.dad.polito.it/en/ (Accessed on March 13th, 2023).

[2] Excerpt from the department website: www.dist.polito.it/en (Accessed on March 13th, 2023).

5_01 Map of the main research activities developed within the China Room research group, 2013-2022




2018
2019
2020
2021
2022
2023
Polito Studio
Research Project
PRIN. Rescaling the Belt and Road Initiative
Research Project
EU- CHINA. Transition towards urban sustainability through socially integrative cities in the EU and in China
China Brand Homes
PhD Tesis
Eventful Hutong
PhD Tesis
Transnational Models
PhD Thesis
The Enriched Field
PhD Thesis
Beyond globalized visions
PhD Thesis
Curated in China
PhD Tesis
Protection and management of industrial heritage in China.
PhD Tesis
Ruffinoni e la Concessione Italiana
The City after
Chinese New Towns
Book
Chinese Brutalism Today
Book
China Goes Urban
Book
Eyes of the City
Book
Towards Socially Integrative Cities
Book
The story of a section
Book
Fun Mill
Book
The enriched field
Book
Prosperous Lishui
Book
On the Intensity of Surfaces
Essay on Scientific Journal
The Processes Behind Community Building and Place Making in Transitional Urban Moments
Essay on Scientific Journal
Urbanisation Processes and New Towns in Contemporary China
Essay on Scientific Journal
Reconnecting Human Body and Urban Space: reading tools and design practices
Essay on Scientific Journal
Prosperous Lishui.
Essay on Scientific Journal
po le new towns cinesi
phic Issue
Industrial Legacy and the future of Chinese Cities
Essay on Scientific Journal
Industrial Clasterization Strategies in the Pearl River Delta Area
Essay on Scientific Journal
Design Opportunities and Cultural Intermediation
Essay on Scientific Journal
An Italian Space in a Chinese Industrial Legacy
Essay on Scientific Journal
Connected Plaza
Masterplan for 2019 UABB
Prosperous Lishui
International Competition
Meiguan Innovative Corridor
Intenational Competition
Beyond YUEIJianhu Revival
Intenational Competition
uilding A of the Oxygen Factory Complex
New Town Along the Belt and Road
Design Units
Prosperous Lishui: Envisioning New Relations Between Urban and Rural Areas in Contemporary China
Design Units
Long - Plan
Solar Decathlon China 2018
Trans-Use
Summer School
Eyes of the City - Marathon Events
2019 Bi-City Biennale of Urbanism/Architecture
Prosperous Lishui: Living the Infrastructure
Design Units
Shenzhen - ness 3.0
Workshop
China Goes Urban - Lecture Series
International Seminar and Online Events
Research on the Regeneration Model of Italian Community
Master Thesis
Lishui Living Lab
Master Thesis Seminar
Eyes of The City
2019 Bi-City Biennale of Urbanism/Architecture
China Goes Urban
Exhibition at MAO
GBA uninterrupted
2022 UABB
Observatory of Best Practices
Column on OAT Site

in urban phenomena and approaches to urban and architectural design related to Chinese urbanization's global influence and impacts. The geographical context in athis sense is interpreted as a privileged point of observation to rethink established theories and explore the combination of heterogeneous disciplinary skills and professionalism. In about a decade of intense exchanges with China, the research group gathered a number of research activities, doctoral theses, and educational programs with Chinese partner institutions. Among the main partnership are Tsinghua University (or TSH, located in Beijing) and the South China University of Technology (or SCUT, located in Guangzhou) which resulted in two platforms for cooperation in research and education — the 'South China/Torino Collaboration Lab' (founded in 2015) and the 'Urban Ergonomics Lab' (founded in 2021) — and three programs of double degree — the Joint Ph.D. Program with Tsinghua (that is the framework of this work), the Double M.Sc. Degree in Architecture with TSH, and the Double M.Sc. Degree in Urban Design with SCUT.

In general, as part of a Polytechnic University which (more than a generalist university) naturally converges its agenda in exploring applied issues and implications of research in science, CR flanks the scientific investigations with design explorations. It is clearly detected either in the research center regulation which mentions the recognition of the group activities in whether "theoretical and applied research on architectural and urban transformations in contemporary China […] the promotion and realization of theoretical and applied research, having architectural, urban and territorial transformations as the focus of its attention […] the implementation of outreach and third-mission activities, pertaining to the topics of the Research Center's interest, vis-à-vis the professional sphere of architecture and spatial planning and design and, more generally, the society"[3] (China Room, 2022; art.2). Hence, it is clearly stated among the "China Room core activities: basic research, development, and technology transfer,

[3] "Ricerca teorica e applicata sulle trasformazioni architettoniche e urbane […] la PROMOZIONE E LA REALIZZAZIONE DI RICERCHE teoriche e applicate, aventi al centro della propria attenzione le trasformazioni architettoniche, urbane e territoriali […] l'attivazione di ATTIVITÀ DI OUTREACH E DI TERZA MISSIONE, riguardanti i temi di interesse del Centro di Ricerca, nei confronti del mondo professionale dell'architettura e della progettazione e pianificazione territoriale e, più in generale, nei confronti della società" (China Room, 2022; art.2).

institutional collaboration, teaching, and internationalization"[4] (art. 2).

The map **[5_01]** briefly retraced all the activities carried out in the last decade by CR, by organizing them into five categories (research programs, editorial products, design explorations, educative initiatives, and curatorships) highlighting at the same time the relations occurring among them.

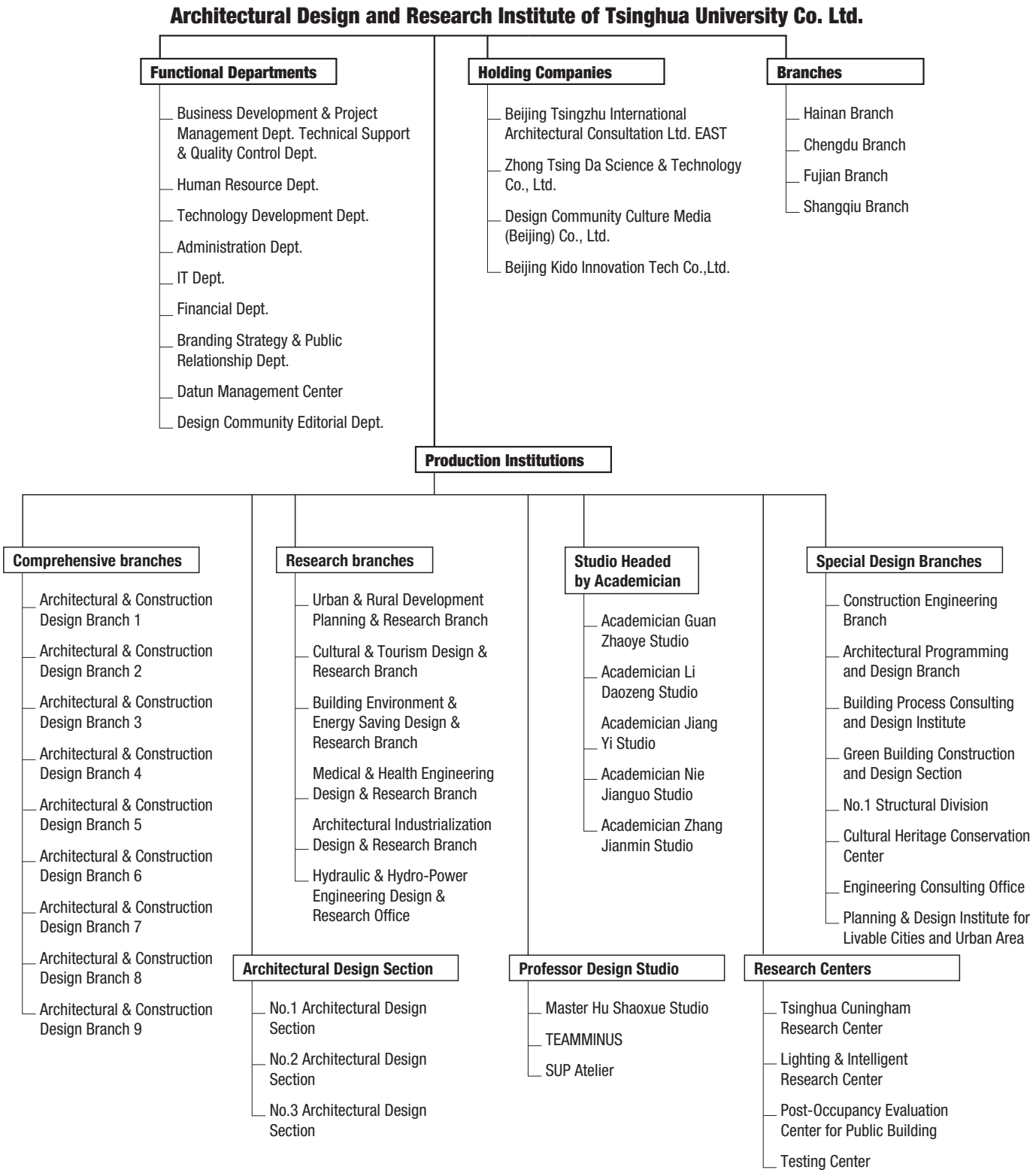
Thad and Scutad as twin prompters

As aforementioned, the wider amount of activities carried out in China by the research group has been developed in collaboration with the two main partners, namely Tsinghua University (TSH) and the South China University of Technology (SCUT). The three institutions collaborate for many years prior to the formal launch of CR, and it is in these earlier collaborations that the initial insights for the subsequent development of the research group's scenario can be glimpsed.

It is crucial to acknowledge that the first relations with TSH and SCUT happened in a period in which China and the West were strongly attempting in advancing exchanges and institutional conjunctions. It is likewise pivotal to highlight that TSH and SCUT are among the most influential universities in PRC. Both TSH and SCUT are indeed among the *Old Eight Schools of Architecture.* Therefore, on one side these institutions had and still have a decisive role in steering the direction of architectural education in China — are both comprehended within the 'double first-class' initiative, 'C9-League', '985 Project' and '211 Project'; as well as being in the top 100 global universities according to the 2023 QS Global Ranking of Architecture Schools, with Tshingua located in the 8th position. On the other side, their 'operative arms' are among the most influential and productive in China. As a matter of fact, THAD (Architectural Design and Research Institute of Tsinghua University) and SCAD (Architectural Design Research Institute of the South China University of Technology) are among the sixth UDIs issued in 1981 with the MOE's design certificates. realizing significant projects throughout the country, collaborating with renowned international firms, and collecting national and international awards in the

[4] "Attività di missione della China Room - ricerca di base, sviluppo e trasferimento tecnologico, collaborazione istituzionale, didattica e internazionalizzazione" (China Room, 2022; art.2).

5_02 Structure of THAD

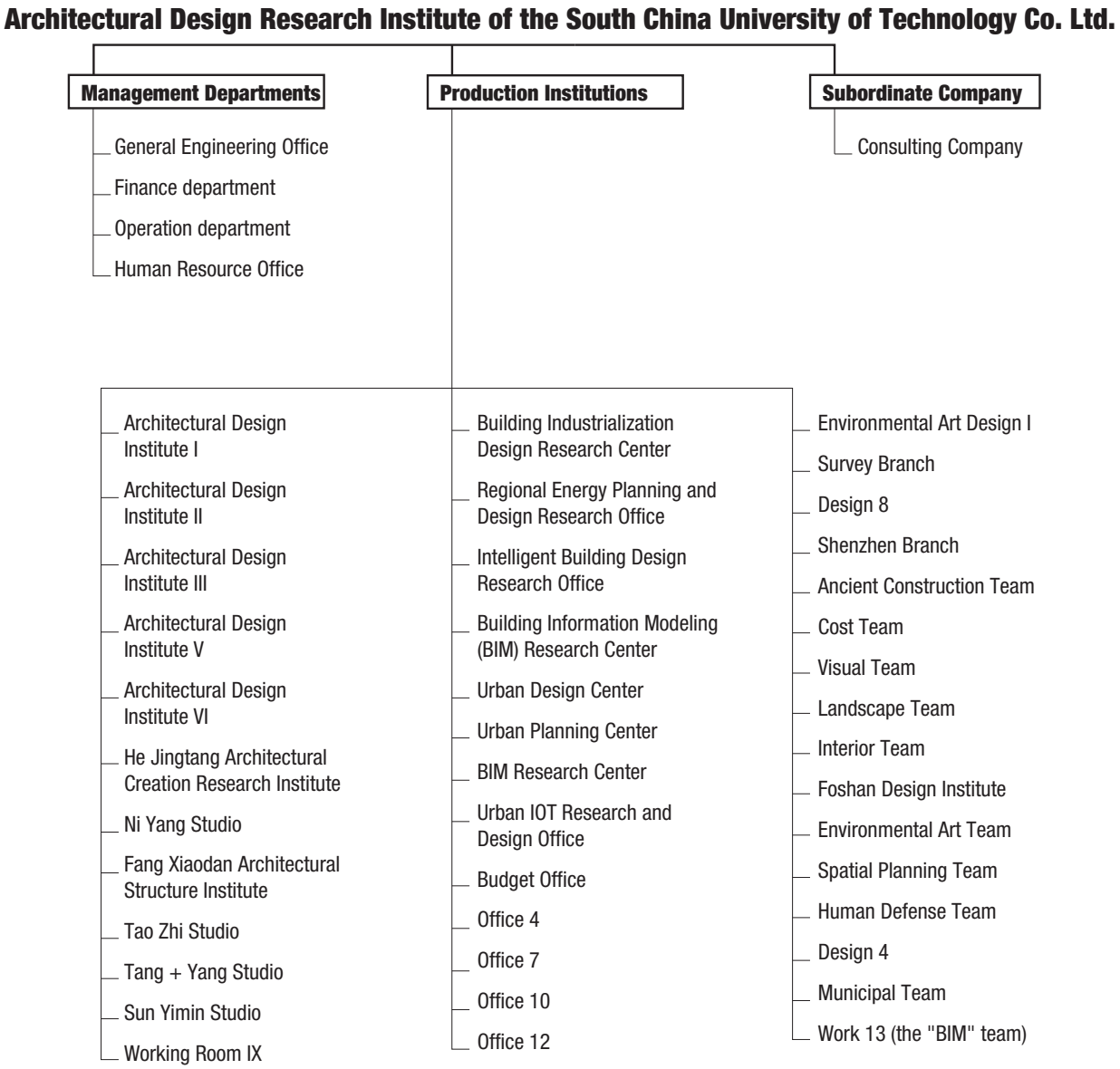


professional and research fields. Better deepening the organizations and production of these institutions though, some differences occurred.

Relying on Tsinghua University's academic knowledge and reputation, as well as the comprehensive strength of cross-disciplinary expertise, THAD is a comprehensive design and consulting organization engaged in a wide range of design and consulting services (THAD, 2018; 2018; 2020; 2022). It hence combines industry, academia, and research by integrating (especially in the faculties of architecture and civil engineering) knowledge, culture, and creativity. Through its practice, THAD broadens domestic architectural design with consultancies and cooperations with architectural institutions in a number of countries in the world, including France, the United States, the UK, Japan, Germany, and Australia. Specifically for this approach, THAD has been recognized by the Ministry of Education as a joint training base for full-time professional degree master's students since 2011. Its design level is acknowledged as among the highest in China, awarding many prizes and titles — in October 2012, it was awarded as 'Top 100 Contemporary Chinese Architectural Design Institutes' by the China Architecture Society, and won more than 500 national and provincial design awards in recent years.

THAD holds both Grade-A qualifications (Construction Industry, Urban and Rural Planning, Survey and Design of Cultural Relics Protection Engineering, Engineering Consultancy) and Grade-B qualifications (Water Conservancy Industry, Landscape Engineering Design) licensed design institute (THAD, 2022). In past years, it collaborated with more than 70 international firms, such as Gensler, HOK, SWA, gmp, AECOM, Blue Sky Group, UNstudio, MVRDV, etc. To date, it has more than 1,300 employees, including 5 academicians of the Chinese Academy of Sciences and the Chinese Academy of Engineering, 4 national design masters, 242 national first-class registered architects, 79 first-class registered structural engineers, 45 registered utilities (mechanical and plumbing) engineers, 13 registered electrical engineers, 39 registered city planner, and 18 consulting engineers. The teams are organized into nine comprehensive branches, three architectural design sections, eight academicians and masters' studios, six

5_03 Structure of SCAD



research branches, eight special research branches, and four research centers **[5_02]**.

Relevant projects include cultural, education, sports venue, research facilities, healthcare, exhibition center, tourism and commercial, office, residential, heritage conservation, urban design, and super high-rise buildings. More specifically, public and civil construction projects; urban design; territorial, residential, and town planning; restoration and conservation of cultural, historic, and industrial heritage; smart landscape and building design; lighting engineering; mechanical and electrical design consulting; architectural planning research and post-evaluation; feasibility study. To mention a few: National Botanical Museum in Kunming (Yunnan Province, 2019), the New Campus of Yan'an University in Yan'an (Shaanxi Province, 2018), 2022 Winter Olympics and Paralympic Games - Beijing Cluster – Shougang Big Air (Beijing, 2018), Beijing Nutrichem Research Center (Beijing, 2017), Xincheng Hospital of Chengde Medical University in Changchun (Jilin Province, 2019), Shijiazhuang International Convention and Exhibition Center in Shijiazhuang (Hebei Province, 2018), Yan'an Pagoda Hill Visitor Center in Yan'an (Shaanxi Province, 2019).

The South China University of Technology Architectural Design and Research Institute (SCAD) is a nationally renowned Class A design and research institute, with a number of qualifications and international awards. It was first founded in 1953; in 1980, after the cultural revolution and the slowdowns of those years, was relaunched under the direction of the architect educator Lin Keming according to the name change of the school. Among the founders, however, considerable emphasis is directed toward He Jingtang (elected academician of the Chinese Academy of Engineering in 1999, and dean of SCAD since …), who worked in this design institute since the 1980s with a particular interest, as other colleagues of the time, in exploring theoretical and practical research in the field of architecture in tandem (Xue & Ding, 2018). Nowadays, SCAD counts more than 1,000 employees — including 1 academician of the Chinese Academy of Engineering, 3 masters of Guangdong engineering, 4 architects listed among the 'contemporary Chinese Top 100 architects', 21 young architects of the China

Architecture Society, 12 doctoral supervisors, 59 master's supervisors, 164 first-class registered architects, 58 first-class registered structural engineers, and 107 other registered engineers and planners — organized in 41 production departments, 4 technical and functional management departments, and a subordinate consulting company **[5_03]**. It is as well acknowledged among the leading agencies in China and awarded a number of prizes and titles — in 2007, it was listed in the 'Top Ten Architectural Design Companies in China' by BCI ASIA Group, and, together with THAD, in 2012 was listed in the 'Top 100 Contemporary Chinese Architectural Design Institutes' by the China Architecture Society.

SCAD is a Grade-A (Construction Industry, Urban Planning, Building Intelligent System Engineering Design, and Construction Major Consultancy) and Grade-B (Major in municipal industry, special project for landscape engineering design and environmental engineering) licensed design institute. SCAD operates in the fields of architecture, urban planning, structural, electrical, and mechanical engineering; relevant projects include cultural, exhibition, educational, sports, and super high-rise buildings, but its affiliation with SCUT makes it one of the leading facilities in medical and health care design. The main representative works include: the Chinese Pavillion for the 2010 Shanghai World Expo (Shanghai, 2010), the expansion of the Nanjing Massacre Memorial Hall (Jiangsu province, 2015), Three Ancestors Cultural Museum in Zhuolu (Hebei Province, 2015), Da Chang Muslim Cultural Center in Dachang (Hebei Province, 2015), Jiangxi College of Construction Complex in Nanchang (Jiangxi Province, 2020), Little Phoenix Kindergarten in Pu'er (Yunnan Province, 2022), Heyuan Museum of Popular Science Education for K-12s in Heyuan (Guangdong Province, 2022).

5_04 Comparative overview of the three institutions

China Room

A. Turin, Italy

B. University Research Group

C. 7 Professors, 9 Fellows, 15 Junior Fellows

D. 2016

E. chinaroom.polito.it

F. “China Room is a research hub that focuses on Chinese architecture and urbanism. Its activities span between Research, Education, and Practice. It aims at strengthening the collaboration with Chinese universities, scholars, and public institutions, thus contributing to redefining the global academic debate. The goal is to be an active hub of competencies as well as a repository of information, prompting scholars’ exchanges and mutual understanding”.

G. Masterplan for the redevelopment of a fishing village in China, industrial regeneration into a visitor center for the Olympics in China, industrial regeneration into a mixed-use cultural space in China, 1st place into an international competition on net-zero energy micro-housing, curatorship of an international Biennale.

清华大学建筑设计研究院有限公司

Architectural Design and Research Institute of Tsinghua University Co., Ltd.

A. Beijing, PRC

B. Design Institute affiliated to a University

C. More than 1,300 members organized in 13 design and research branches; 7 design sections; and 4 studios

D. 1958 (1981)

E. thad.com.cn/

F. “Relying on the profound academic, scientific research and teaching resources of Tsinghua University and as the base for teaching, scientific research and practice of School of Architecture and School of Civil Engineering, we have been attaching great importance to academic research and the commercialization of technological achievements with our planning and design level coming out top in China. Since its establishment, our Institute has always been laying emphasis on quality, following the struggle goal of “designing elaborately, creating fine works, transcending ourselves and striving to be first-rate”, and cordially providing high-grade designs and services for all walks of life at home and abroad”.

G. Exhibition centers, memorial halls, learning and university facilities, cultural facilities, Olympic venues, research facilities, healthcare facilities, touristic facilities, headquarters, residential complexes, heritage conservation projects, urban design, and super high-rise towers.

华南理工大学建筑设计研究院

Architectural Design & Research Institute of SCUT Co., Ltd.

A. Guangzhou, Guangdong, PRC

B. University-led Design Institute

C. Around 1,000 members organized in 25 production departments, 4 technical and functional management departments and 2 subsidiary companies

D: 1953 (1981)

E.scutad.com.cn

F. “After more than 60 years of accumulation and development, our institute has become an architectural design institute with strong technical force, reasonable talent structure, complete professional supporting facilities and advanced design methods. At present, it has many qualifications such as construction engineering, architectural intelligence, urban planning, municipal, landscape, environmental engineering, engineering consulting (architecture and urban planning), cultural relics protection, survey and design, etc., and has passed the ISO9001 quality system certification”.

G. cultural architecture, education architecture, mega-high-rise architecture, sports architecture, exhibition architecture, new science and technology industrial parks, transportation hubs.

(A. location, B. type, C. structure, D. constitution year, E. site, G. mission, H. main projects typology)

5.2 Unpacking the designs: Block 1

Main Oxygen Factory Workshop in Shougang, Big Air Venue

The Project at a glance[5]

Location: Shougang Steel Factory, Beijing, People's Republic of China

Scope: Architectural schematic design

Program: visitor center for Olympics and offices for post-game use

Type of assignment: Direct mandate

Timeline:
Schematic Design: January - July 2018
Artistic Direction: August 2018 - December 2021

Design framework: Shougang, a former steel factory located in the westernmost part of Beijing, ceased operations in 2007 as a measure to reduce the city's pollution during the XXIX Olympic Games. Spanning approximately 8.5 square kilometers, it was the largest steelworks in China. With the approach of the XXIV Olympic Winter Games of Beijing in 2022, a comprehensive masterplan was initiated for the central section of the site to transform it into the Big Air venue. In 2018, during the design phase, the area was included in the First Batch of the Chinese Industrial Heritage Protection List. The project primarily focused on an industrial pavilion situated adjacent to the Olympic slope. The objective was to repurpose the original building as the visitor center for the Olympics, thereby granting public access and enabling visitors to explore the competition site. This transformation aimed to showcase the structural legacy of the industrial artifact while providing an immersive experience for the visitors.

Project scale: 10'000 sqm

Typology: industrial heritage regeneration

Client: Shougang Group

A project by Politecnico di Torino/China Room
In collaboration with Architectural Design and Research Institute of

[5] For the extensive credits see Appendix 2.1a.

Tsinghua University and Atelier TeamMinus

Narrative introduction

Even prior to the initiation of the oxygen factory recovery project (also known as the Main Workshop), the area of Shougang had already become a common ground for collaboration between Politecnico di Torino/DAD and Tsinghua University. This collaboration was highlighted in the second joint studio between TSH/Polito, which took place from February to June 2012. The studio involved nine Italian (Cerrato et al., 2012) and nine Chinese students, as well as six faculty members and researchers from DAD (Ambrosini G., Bonino M., Corgnati S.P., Croset P.A., Mazzotta A., Venuti F.), and an equal number from Tsinghua's School of Architecture. The collaboration included on-site visits and live analyses, followed by remote interaction through video conferences and reviews. Simultaneously, one of the architecture master's ateliers focused on the same site, utilizing the quantitative and qualitative data gathered during the field visits for educational purposes. In September of that year, the resulting projects were exhibited at the TSH School of Architecture in Beijing. At that time, the industry had recently been decommissioned, with a portion still operational in the northern region. No specific indications regarding the direction of a potential renovation emerged, hence the initial discussions surrounding its potential transformation remained at a relatively broad level.

A few years later, in 2015, the book *Beijing Danwei* (Bonino & De Pieri, 2015) contributed valuable insights and expanded upon the knowledge gained from the Joint Studio and subsequent discussions, collaborations, and research conducted with TSH. This publication specifically highlighted a section of Shougang known as Er-Tong (158-177) among the observed cases, thereby enhancing our understanding of the Danwei typology. Additionally, two additional master's theses (Piscazzi, 2015; Forina & La Civita, 2017) centered around the Shougang area. These works further attest to the ongoing interest and exploration of the subject, fostering valuable discussions regarding the Shougang area and its related themes.

Moreover, by 2017, significant developments occurred. The official announcement that Beijing would host both the Summer and Winter Olympics had already been made, generating considerable attention. Meanwhile, the construction of the Olympic Committee headquarters was successfully finished, and its inauguration occurred at the northern entrance of Shougang. As a result, initial discussions emerged regarding the potentiality of hosting one of the Olympic competitions at this very site.

These contingencies triggered a renewed interest in the area, accompanied by a complex process of transformation and rehabilitation that, starting from the Olympic venue, expanded into neighboring directions. Within this framework, the consultancy for the transformation of the Main Workshop of the Oxygen Factory Complex carried out by the Politecnico di Torino/Department of Architecture and Design/China Room comes into play. The intention to seize this opportunity and embrace a comprehensive experimental approach, encompassing various conceptualizations and knowledge related to the global discourse on industrial revitalization, is evident. Furthermore, there is a clear aim to explicitly incorporate the European perspective on industrial transformation, capitalizing on the expertise demonstrated by the city of Turin in effectively managing its rich heritage.

The design object

The primary challenge of the Shougang project revolved around determining how to optimize the utilization of a former industrial pavilion's space while simultaneously highlighting the historical significance of the industrial relict. In this direction, the design proposal can be simplified into three main components: a spacious covered public area on the ground floor; an elevated volume housing offices and research centers; and an outer shell that consists of the original concrete framework incorporating a few glazed clubhouses on the top.

After the construction, the ground floor of the Main Workshop features a vast covered space, punctuated by gray-plastered volumes with limited openings and fully glazed sections serving as entrances. The ceilings consist of concrete panels with recessed spotlights, and the flooring is also concrete. Notably, the original pillars of the mezzanine and exterior structure play a significant role, running

continuously along the longitudinal sides and symbolically delineating the playground area. Adjacent to the east facade, a strip of red pavement encompasses the ventilation tower, and smokestacks, guiding visitors towards the lake, where the competition slope and spectator seating are located.

The ground floor features an expansive open space that is divided into 16 bays, each defined by the presence of exposed original concrete pillars, creating a visually rhythmic pattern. Above the ground floor, a four-story glass volume provides uninterrupted floors, specifically designed to accommodate offices and research centers. Structurally, this glass section is supported by wide truss beams, which are visibly showcased on the facade. These beams play a crucial role in transferring the weight of the upper floors to the staircase blocks that organize the ground level.

The east and west facades of the offices' volume are composed of vertical bands alternating between rectangular precast concrete panels and rectangular mirrored windows. In contrast, the north and south facades facing the Olympic venue and its entrance are entirely glazed. Connecting all four elevations is a continuous band of the same concrete panels located at the base of the overhang.

Phase I: Schematic Design

The schematic design phase encompassed seven months of intensive work. To gain a comprehensive understanding of the work's progression, it is valuable to delineate four distinct areas: CR involvement, DAD contributions, Teamminus collaboration, and the engagement with the Shougang Group.

The work in CR proceeded on a daily basis, involving both in-person collaboration and exchanges facilitated through WeChat. During the initial month, different CR members took turns contributing to the project. Starting from January 2018, the team solidified its structure, with MB taking charge of the design aspect and EB assuming the role of project manager — overseeing team coordination, and interactions with principals and consultants. Were as well launched two Research Grants, with one assigned to me and the other to AT. Our primary focus was to generate all the technical drawings for the design proposal, create 3D models, and produce renderings, based on the insights gleaned from

regular meetings with MB and EB, which occurred on a daily or bi-daily basis. In these meetings, we identified specific challenges encountered during the design process and presented feasible solutions, while ensuring alignment with the expectations and requirements of the clients.

Moreover, in order to capitalize on the experience the entire department (DAD) was involved in the design through four collective workshops. The first two workshops exclusively included ICAR/14 lecturers (February 20th-22nd and March 27th, 2018), while the other two expanded the discussion to include lecturers from ICAR specializing in technology, estimation, and outfitting (May 15th and June 13th, 2018) **[5_17-5_24]**. A total of 17 faculty members from four different SSD participated in these meetings. The initial two meetings primarily focused on discussing topics related to the formal approach, whereas the latter two meetings concentrated on identifying more suitable technical and technological solutions. These events marked the beginning of a series of collective workshops held within the department, aiming to tackle projects of this nature with a broader and more diverse approach.

Simultaneously, a continuous exchange with Teamminus in Beijing occurred, ensuring a seamless collaboration process. Design deliverables, including dwg documents and pdf presentations containing floor plans, elevations, sections, schematics, and renderings, were exchanged approximately every three weeks. Additionally, there were three specific meetings with the Shougang Group on March 3rd, April 13th, and July 6th, 2018.

Within this process, the initial proposal aimed to concentrate the design efforts on the eastern portion of the pavilion. The objective was to enhance the appearance of the original volume by introducing an additional element that would partially integrate with the existing structure and partially envelop it on one side, while creating an empty space on the western side, effectively showcasing the original volumetry and its distinct characteristics. This involved incorporating a glassed box within the pavilion and an opaque shell blending the outer surface of the structure **[5_18, 5_21]**. However, several challenges were encountered in this direction, primarily related to the excavation of underground spaces. As a precautionary measure, Teamminus requested for an alternative design version

(defined backup project).

During the meeting with both Teamminus and Shougang Group on April 13th, both proposals were presented, and the client opted for the second option. As a result, the subsequent months were solely dedicated to refining and advancing the 'brand new' design. Finally, on July 5th, a comprehensive final booklet comprising 48 boards was delivered. This booklet encompassed various elements such as the site survey of the area and pavilion, design concept, renderings, floor plans for each level, transverse and longitudinal sections, thematic design references, the four elevations, structural and plant engineering schemes, as well as overall and detailed visualizations.

Phase II: Artistic direction

Upon the delivery of the final presentation, the project proceeded to the subsequent phase, aka verification and engineering, thereby moving beyond the direct control of the project team. While occasional meetings were held to address specific matters — such as the structural feasibility of the intervention, the south extension of the building, the clubhouse roofs, the cladding for the ground-floor volumes, the flooring for the playground, and the reduction of the glazing facades —, the verification process for the oxygen factory largely relied on THAD and, subsequently, to the construction company responsible for the project (affiliated with the Shougang group, the owner of the site). Over time, visits from the Turin project team gradually declined, and eventually, the only individuals to visit the site were doctoral students from Polito who were conducting research at TSH. Meanwhile, a reverse engineering process was initiated to ensure that the site achieved a three-star certification according to China's green building assessment standards. This requirement was not initially requested or considered during the pre-design stage, but it played a role in modifying the project.

The site opening, originally planned for December 2020, has been (obviously) delayed and re-scheduled for December 2021. Once the project was finalized, the designers were not able to travel to Beijing to visit the site, just receiving pictures and videos from their Chinese colleagues. A preliminary assessment of the comparison between the Turinese proposal and the Beijingese construction suggests a favorable outcome, however, upon closer examination, certain

discrepancies emerge.

The addition of a new span, completely oriented towards the lake, has significantly disrupted the structural coherence of the original proposal developed during the schematic design phase. Notably, the decision to make this change was made without any discussion or consultation with the Turin team, leading to the (discretionary) conclusion that this alteration stems from a desire to enhance the visual impact of the intervention. Furthermore, the east and west facades of the originally glazed four-story suspended volume, now feature alternating heterogeneous opaque and transparent components (for dimensions, and orientations).

In conclusion, only a few scattered remnants remain of the originally envisioned well-equipped playground of the schematic design. These remnants include a vast covered space and a meager strip of red paving parallel to the eastern facade. This can be interpreted as a promising symbol of the project's aspirations to eventually implement the sports area as intended.

From February 8th to 15th, 2022, the Shougang venue hosted the thrilling snowboard and freestyle Big Air competitions as part of the XXIV Olympic Winter Games; during these events, the Oxygen Factory, as envisioned during the design phase, provided the backdrop for the athletes' stunts filming.

Knowledge production

Throughout the entire project's duration, a detailed record of all communication and interactions among team members, both within and outside CR, was documented. The objective was to preserve a sufficient amount of data to facilitate the creation of a comprehensive scientific account of the work carried out, during the design process — it remained uncertain what form this account would ultimately take until the initial discussions on the concrete publication began. In line with this objective, as one of the two research grant holders associated with the project, my role entailed meticulous documenting of all materials produced by the project team or directly related to it. This encompassed

a wide range of items such as sketches, technical drawings, photographs, videos, informal messages, official communications, agreements, digital files, articles, pamphlets, brochures, and flyers; as well as the working hours of team members (EB, CF, TA), the schedule of meetings (design meetings, workshops, and presentations), and the duration of each team member's stay in China.

Based on the collected and organized materials, in 2020 a dedicated group within the comprised project team (EB, MB) and the extended design team (AA, GD) embarked on a year-long endeavor to write a book. The aim was to make this experience an effective resource for further research, by extracting valuable insights drawing from the project archive and direct testimonies of those involved. In other words, the effort developed a robust conceptual framework delineating the key trajectories of the design process, enabling a better understanding of contextual dynamics and identification of strategic approaches. Although my involvement in writing the book was only partial, I had the opportunity to closely observe the entire development process. It commenced with preliminary meetings, focused on meticulous re-examination of the project documents, followed by storytelling exercises and discussions based on the documented materials. Subsequent meetings were dedicated to determining the publication's content and approach, structuring the book, defining the content for each chapter, and establishing an intensive graphic layout apparatus.

The reorganization of the archive hence enabled the development of insights into the practice of architectural design as observed through its production. The initial selection, consisting of documents related to the negotiations and formalization of the design proposal — 367 technical drawings, with 277 of them discussed during the plenary meeting, as well as 130 sketches, 295 presentation panels, 628 WeChat messages, and 115 photographs —, was narrowed to focus specifically on tracing the evolution of a particular technical elaboration: the cross-section. This approach goes beyond a mere narrative device, as the cross-section emerges as an operational method within the project itself, serving as a design tool and a predominant mode of communication.

Although this book can be regarded as the primary outcome associated with the Oxygen Factory project, additional two doctoral theses were developed, partially

addressing related topics — one thesis explored the design approach, specifically the topic of *urban ergonomics* (Mancini, 2022), while the other utilized Shougang as a case study to investigate the dynamics of industrial recovery in contemporary China (Cestaro, 2022a; 2022b; Cestaro & Roux, 2022) —, as well as another master thesis (Meici, 2019) and other scientific outputs deepening different aspect of the very same process (Deng et al., 2020; Forina et al., *ongoing*).

Publications and dissertations referred to the case study:

Bonino M., Bruno E., Armando A., and Durbiano G.(2022). *The Story of a Section Designing the Shougang Oxygen Factory.* San Francisco: ORO Editions.

Cestaro G. (2022a). *Protection and management of industrial heritage in China. History, practice and meaning*. Ph.D. Dissertation. Politecnico di Torino, Turin, and Tsinghua University, Beijing.

Cestaro G. (2022b). Olimpiadi di Pechino. Shougang Steel Factory. In *Artribune*, February 16th, 2022. Acccesible online at: https://www.artribune.com/dal-mondo/2022/02/olimpiadi-pechino-riqualificazione/ (Accessed on March 13th, 2023).

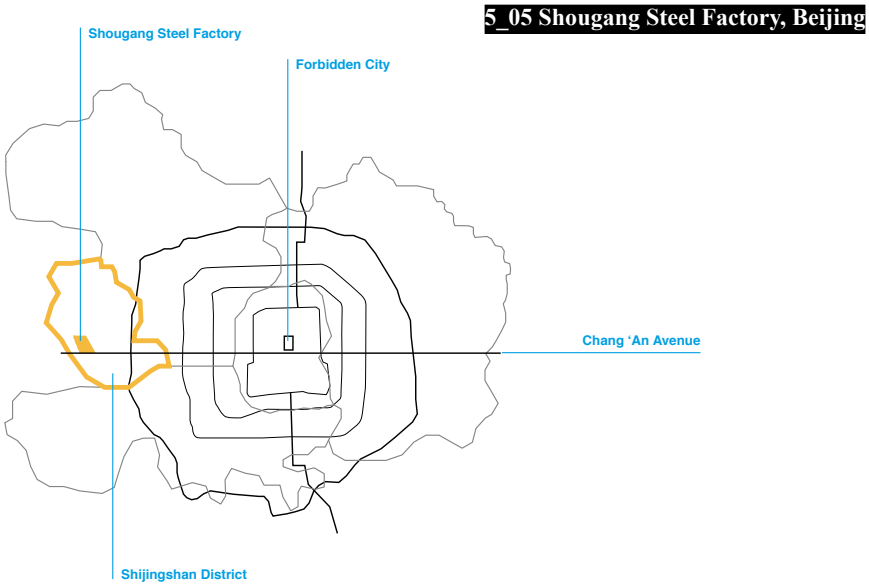
Cestaro G., and Roux H. (2022). Shougang: Promoting Industrial Heritage at the 2022 Winter Olympic Games. In Eschbach A.V. (Ed.) *Speculative Grounds: Positions on Beijings Transformation*, 120-125. Beijing: Tria publishing platform.

Deng H., Mancini M., Zhang L., and Bonino M. (2020). Beijing 2022 between urban renovation and Olympic sporting legacy: the case of Shougang - From space for event to space for health and leisure. In *Movement & Sport Sciences - Science & Motricité*, 1-13.

Forina C., Bruno E., and Bonino M. (ongoing). Digging cultures of production using design practice: Transforming the Main Oxygen Factory Workshop in Shougang, Beijing.

Mancini M. (2022). *Human body's movement: a lens to read space. Enquiry on a reading tool to rethink the design of urban space.* Ph.D. Dissertation. Politecnico di Torino, Turin, and Tsinghua University, Beijing.

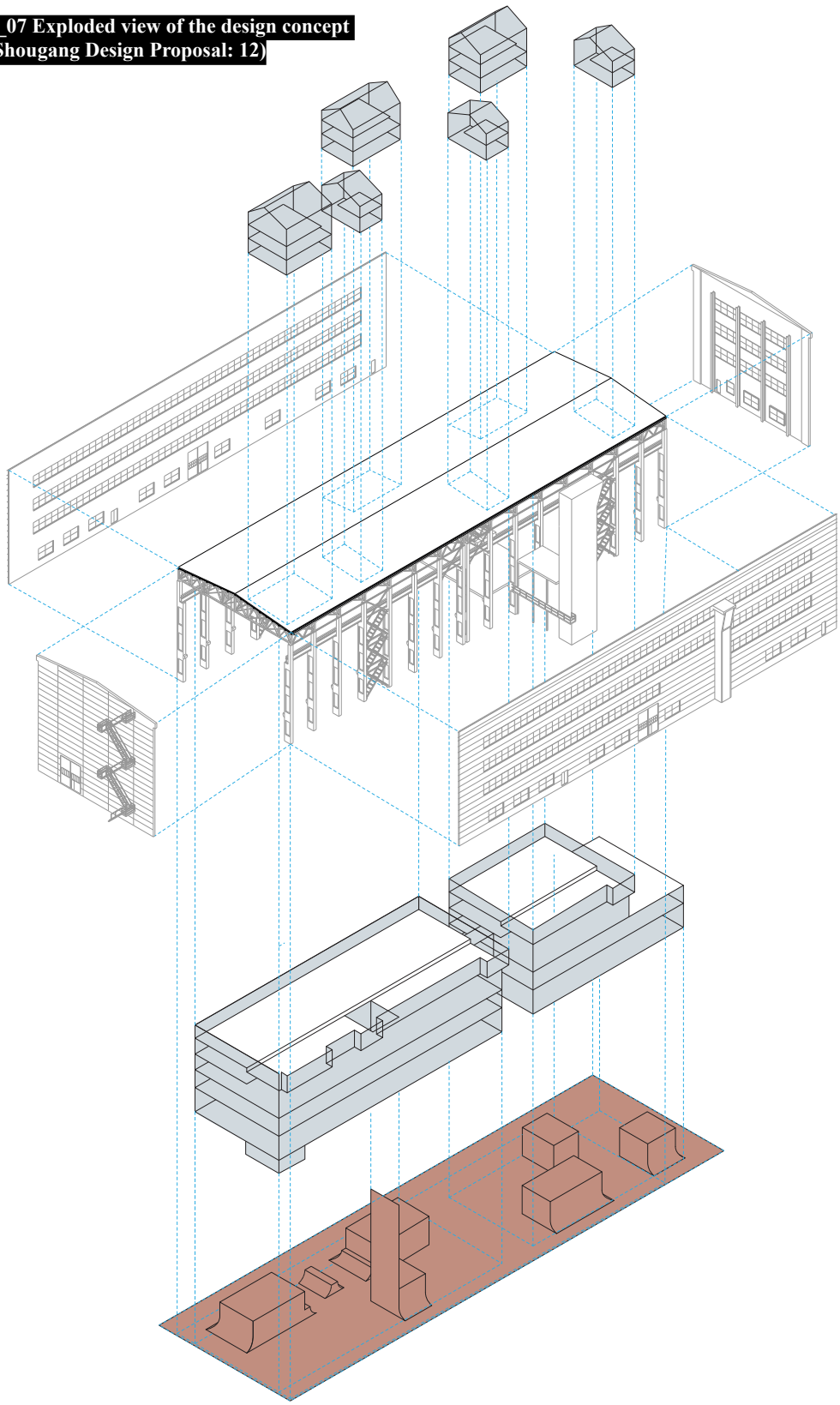
Meici Q. (2019). *Industrial heritage study based on urban morphology. The case of Shougang*. Master Dissertation. Politecnico di Torino, Turin.

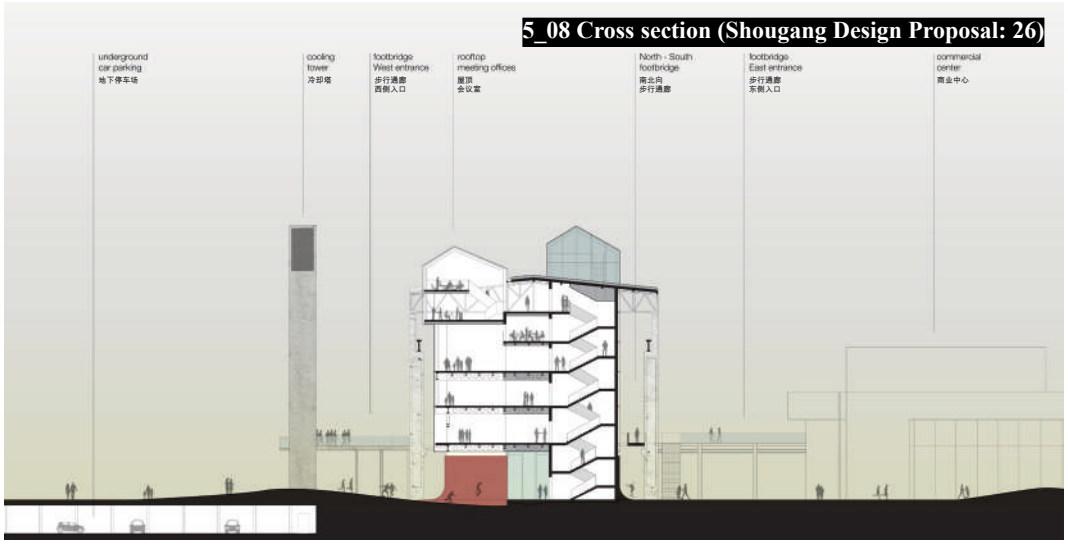


5_05 Shougang Steel Factory, Beijing

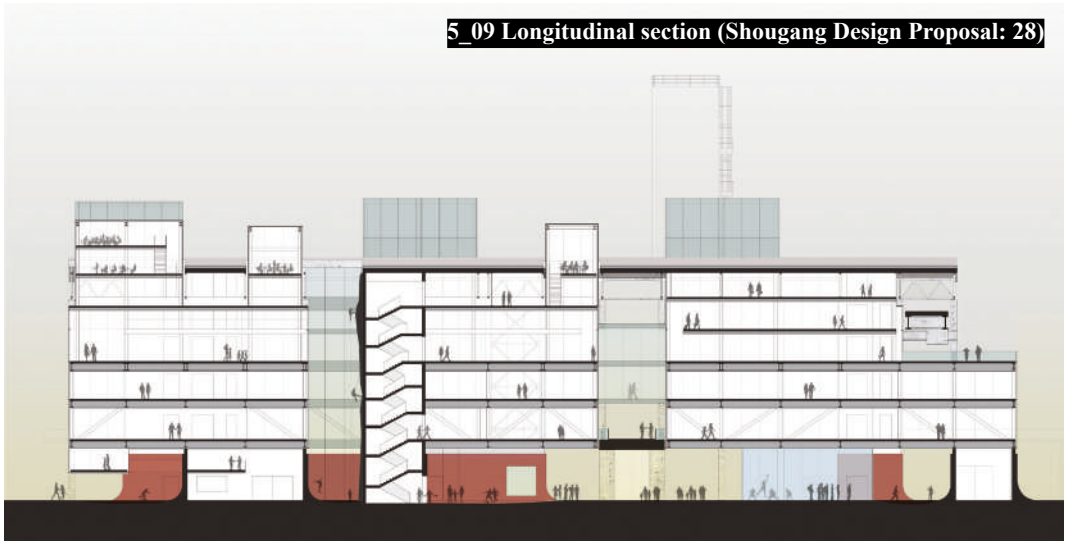
5_06 Shougang Steel Factory in 2016 (Baidu Maps)

5_07 Exploded view of the design concept (Shougang Design Proposal: 12)

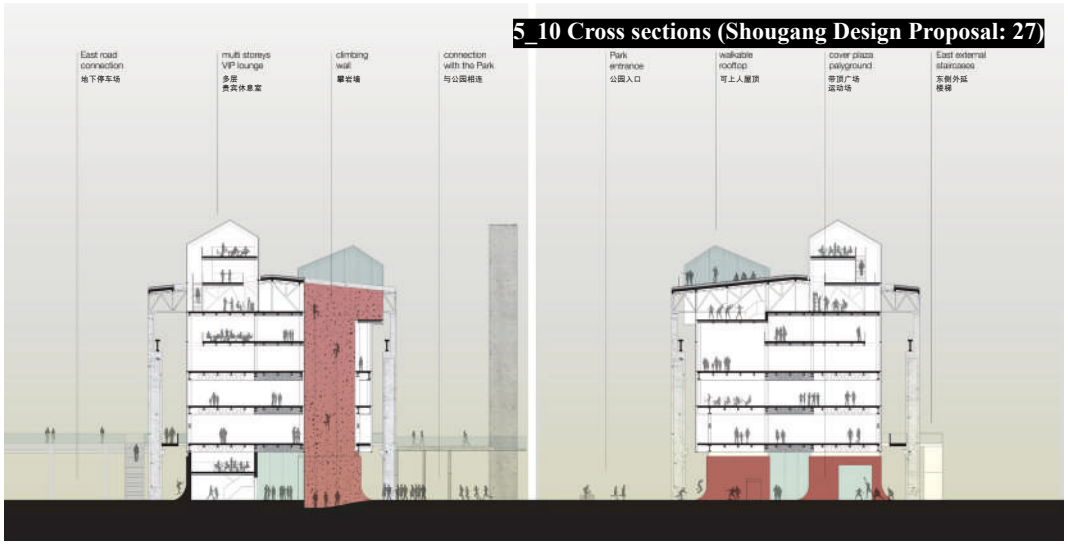




5_08 Cross section (Shougang Design Proposal: 26)



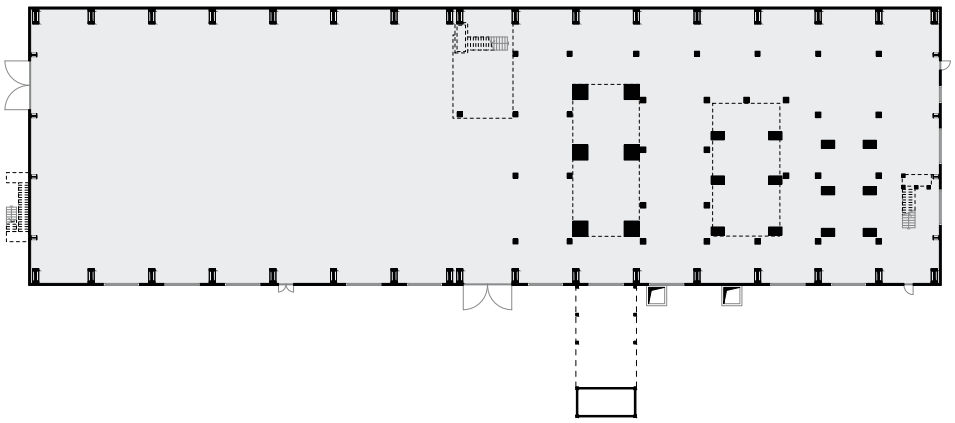
5_09 Longitudinal section (Shougang Design Proposal: 28)

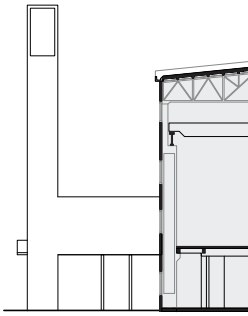


5_10 Cross sections (Shougang Design Proposal: 27)

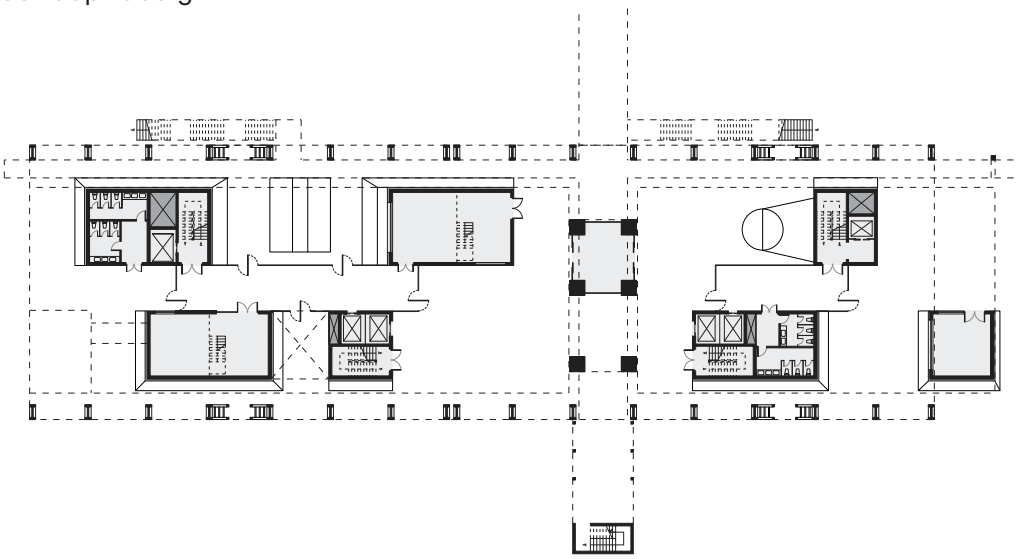
5_11 Oxygen Factory pre/post the design (Shougang Design Proposal: 39)

existing conditions

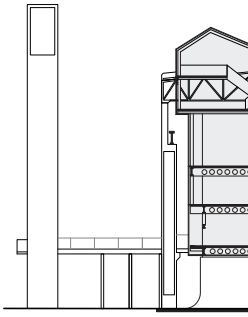




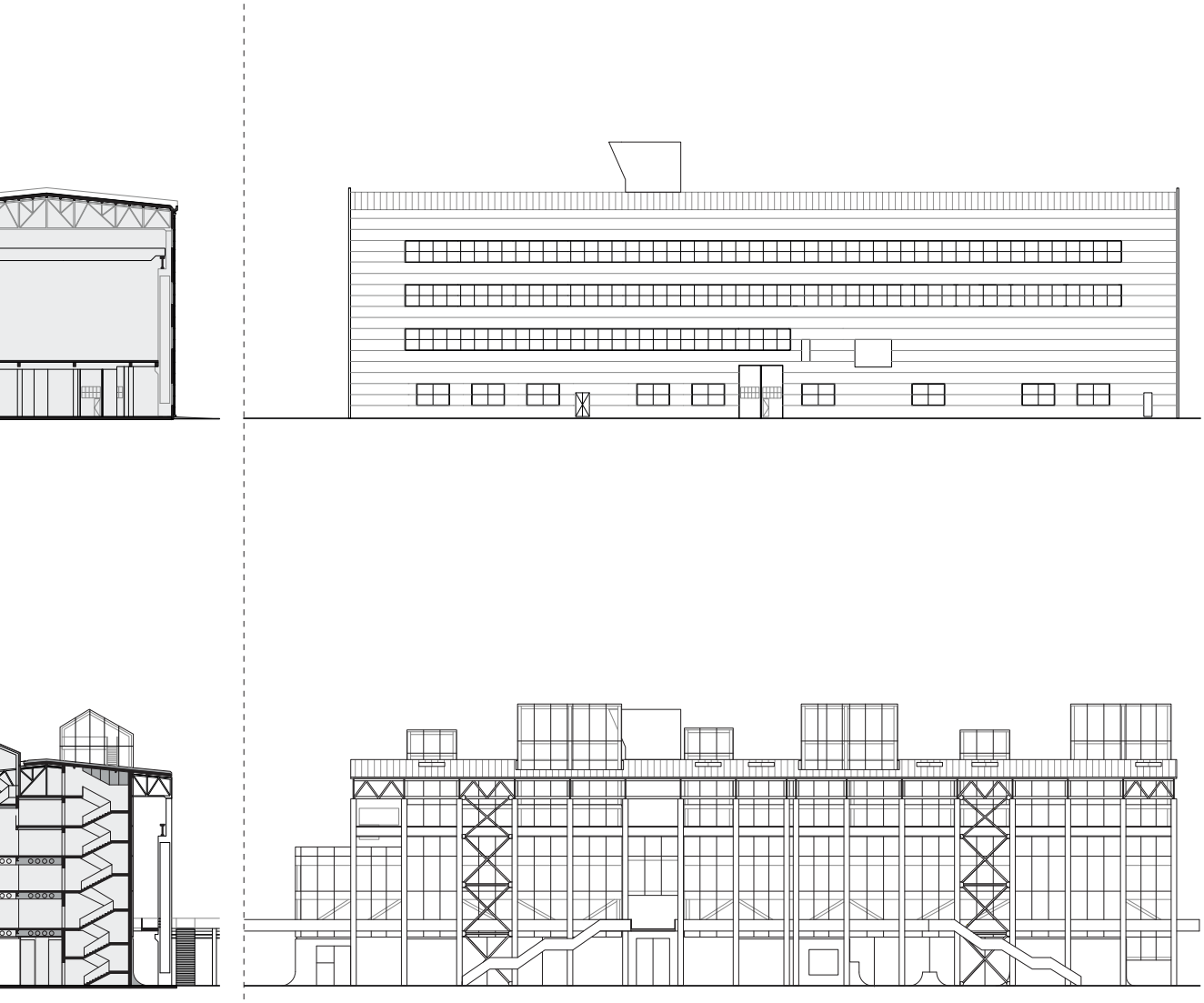
concept design



groundfloor plan
底层平面图

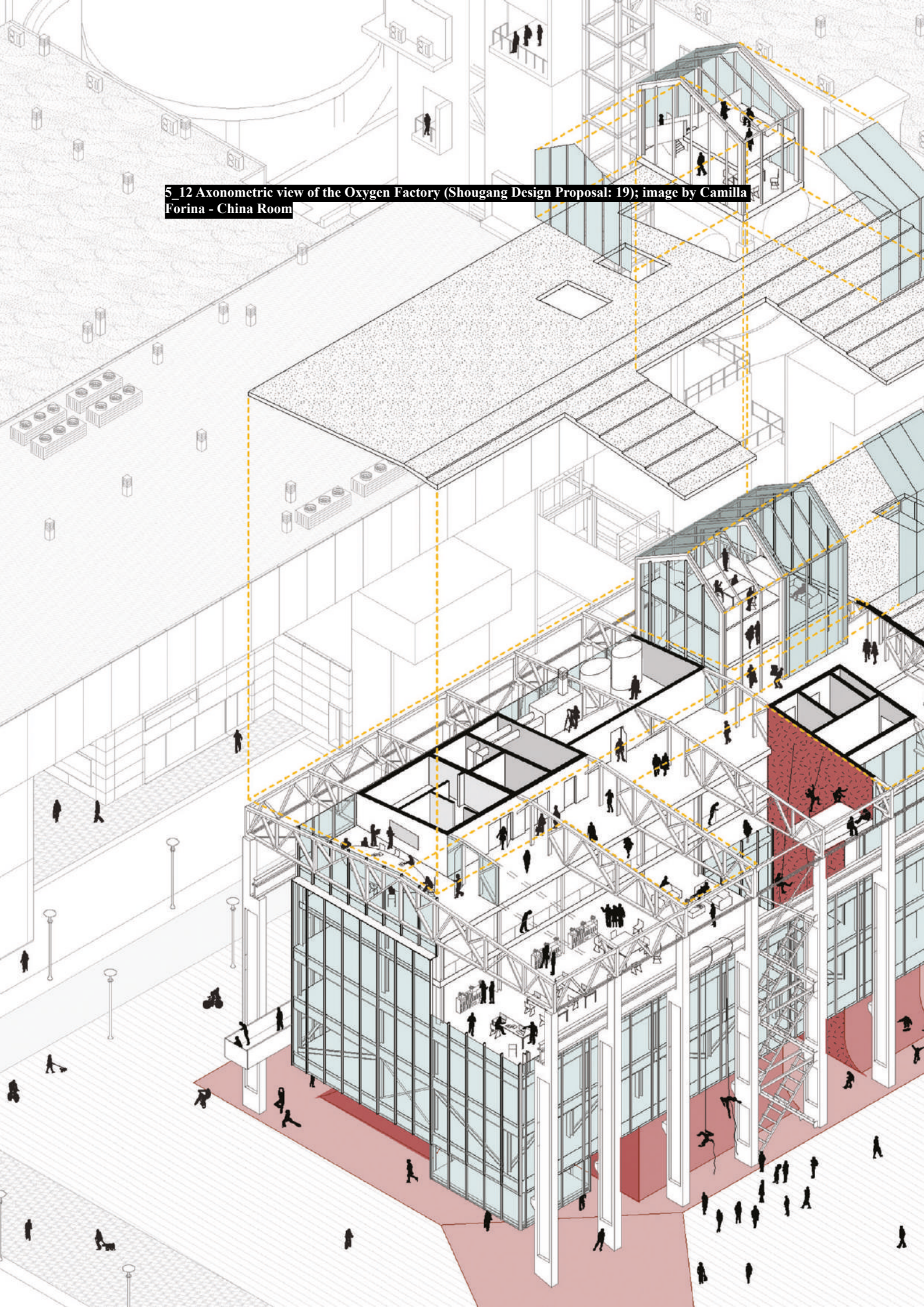


sec
剖面

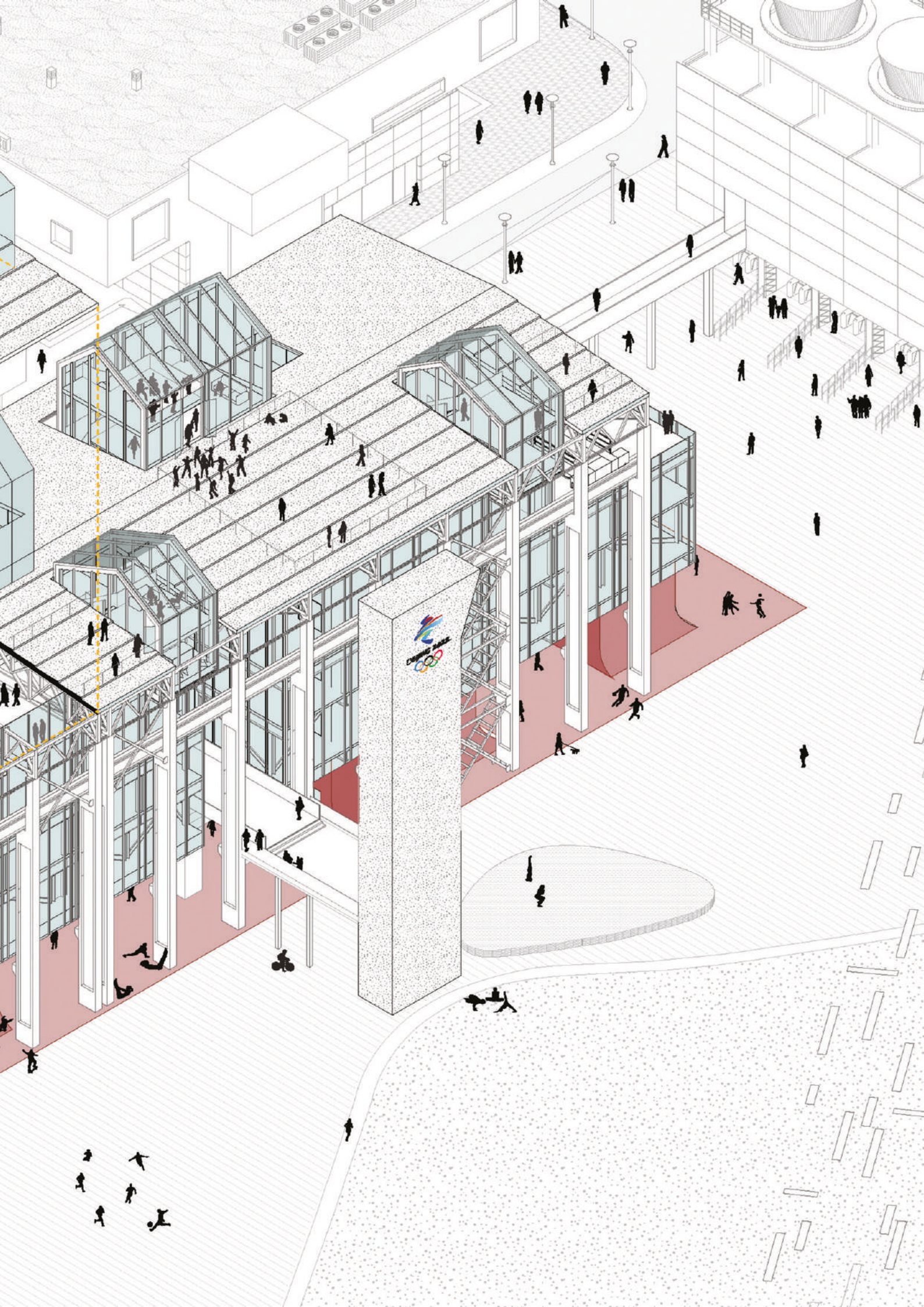


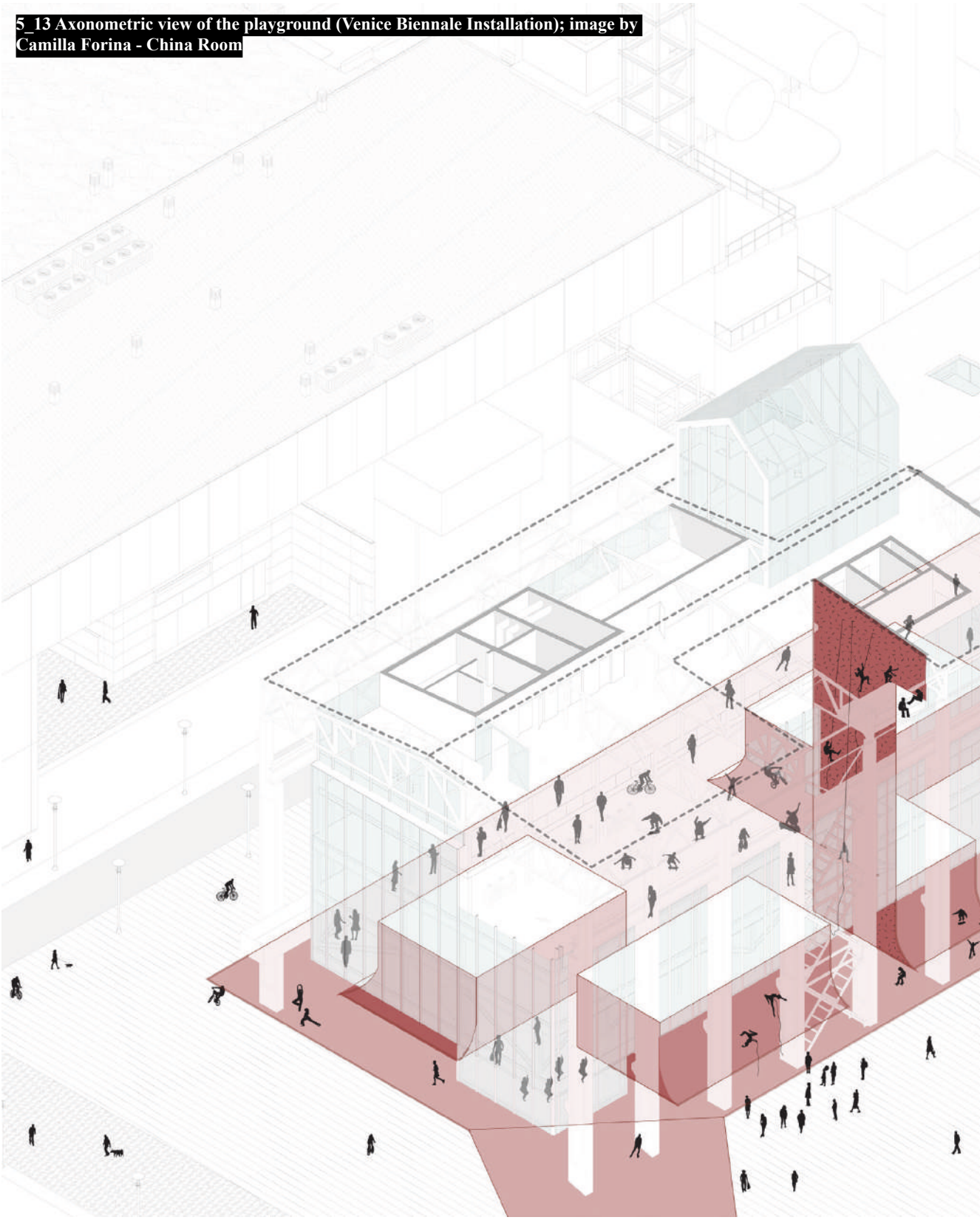
tion
面图

elevation
立面图

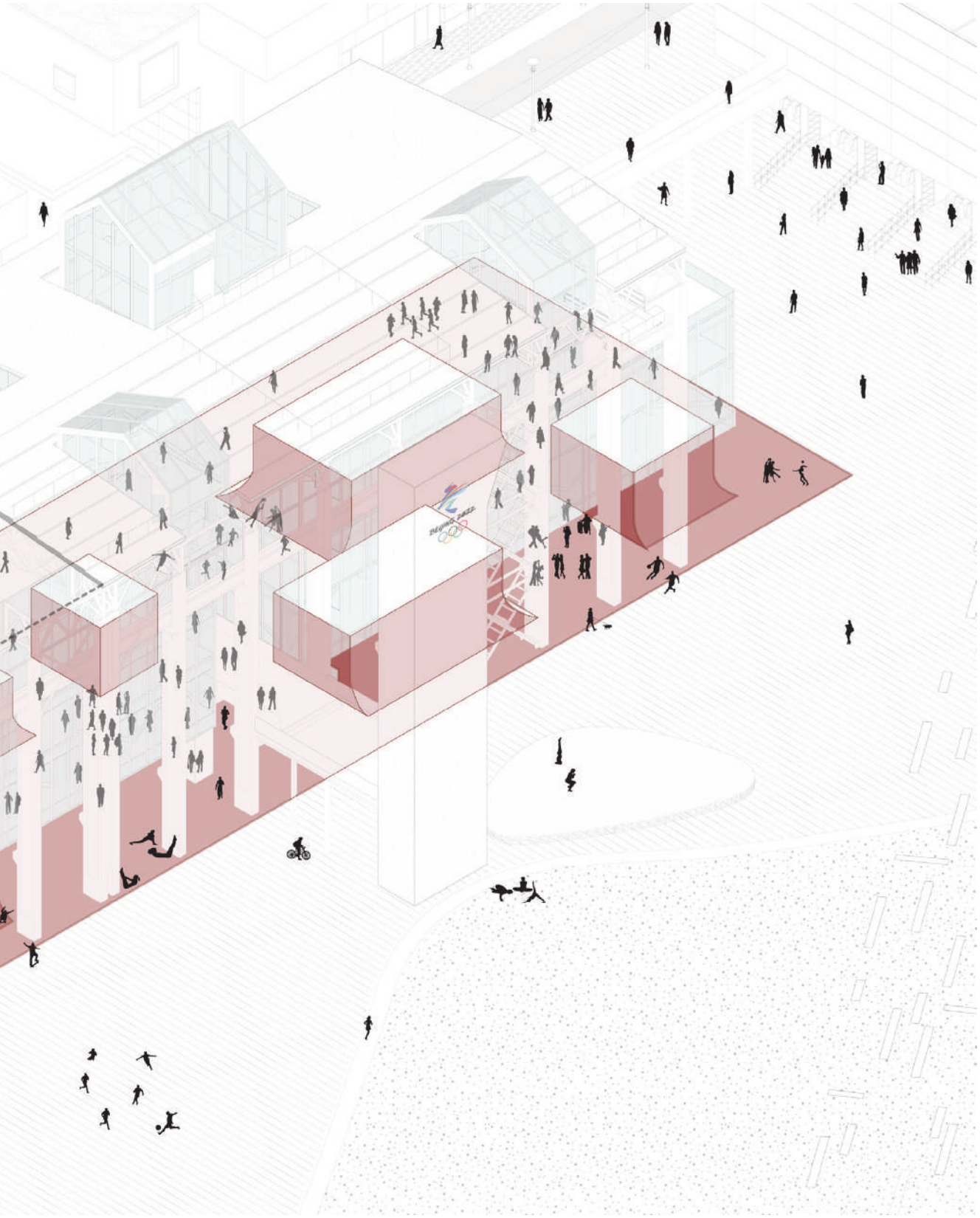


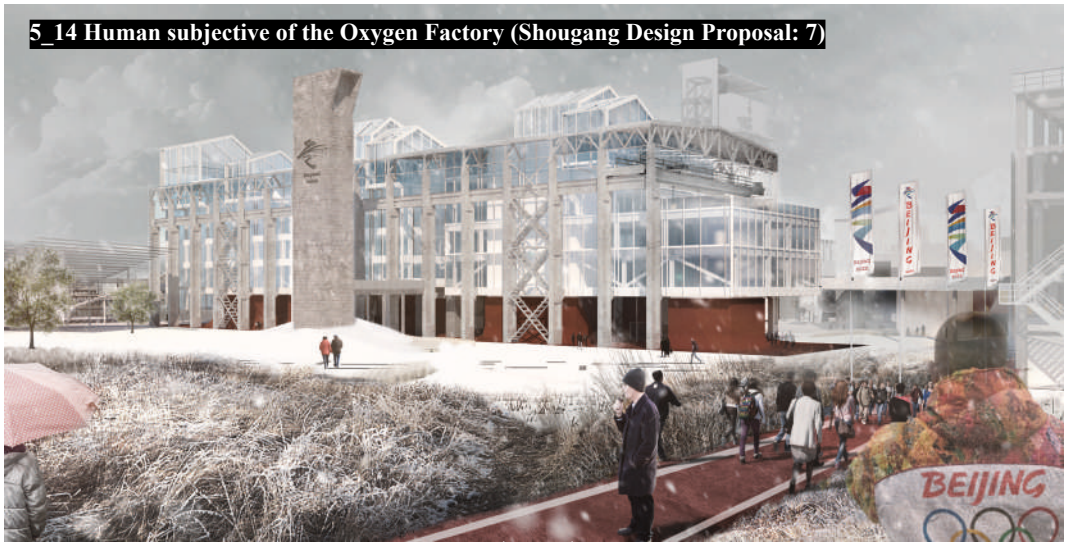
5_12 Axonometric view of the Oxygen Factory (Shougang Design Proposal: 19); image by Camilla Forina - China Room





5_13 Axonometric view of the playground (Venice Biennale Installation); image by Camilla Forina - China Room



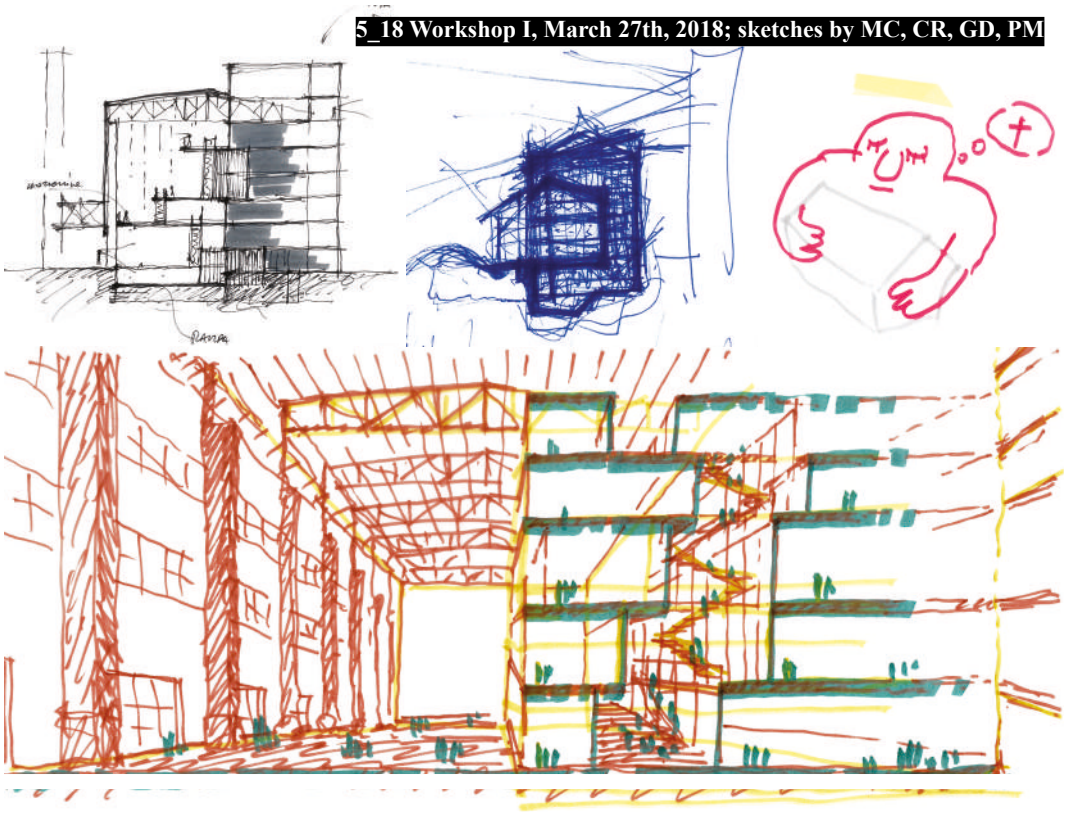


5_14 Human subjective of the Oxygen Factory (Shougang Design Proposal: 7)

5_15 Birdview of the Oxygen Factory (Shougang Design Proposal: 8)

5_16 Night view of the Oxygen Factory from the lake (Shougang Design Proposal: 8)

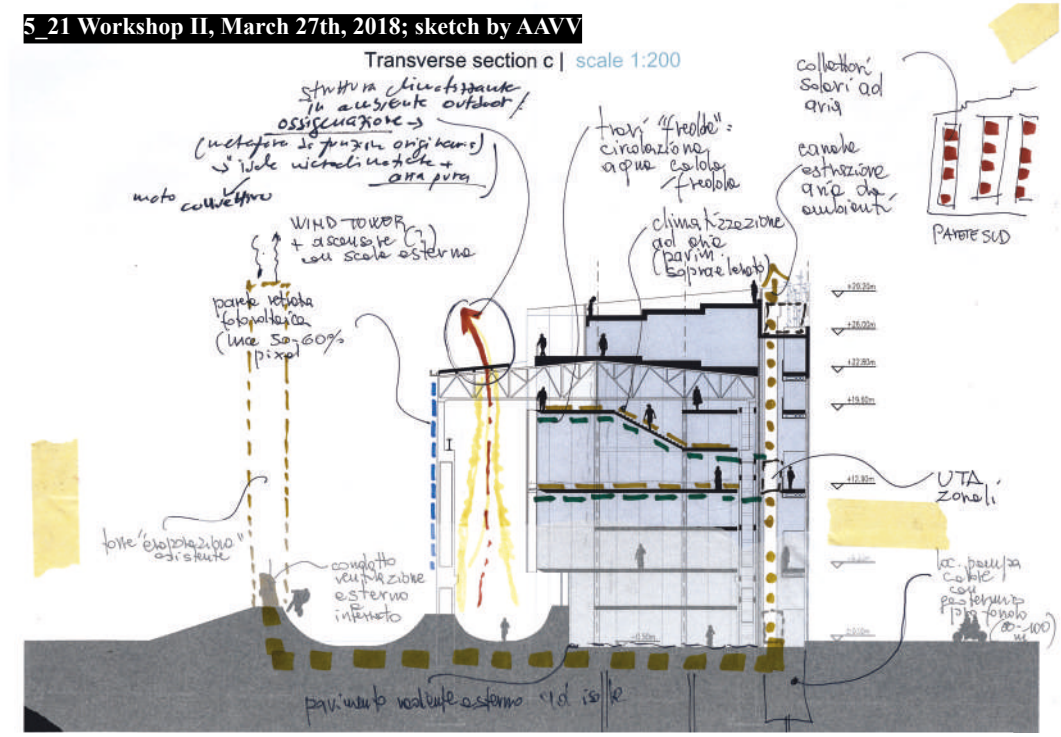
5_17 Workshop I, February 20th-22nd, 2018



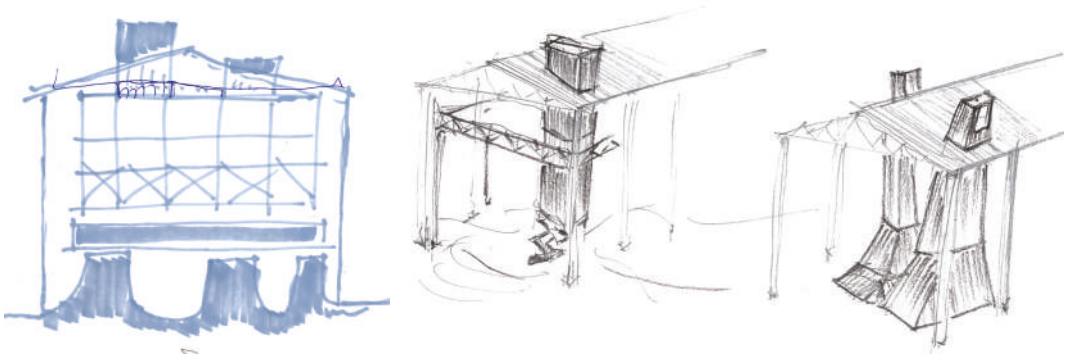
5_18 Workshop I, March 27th, 2018; sketches by MC, CR, GD, PM

5_19 Workshop II, March 27th, 2018

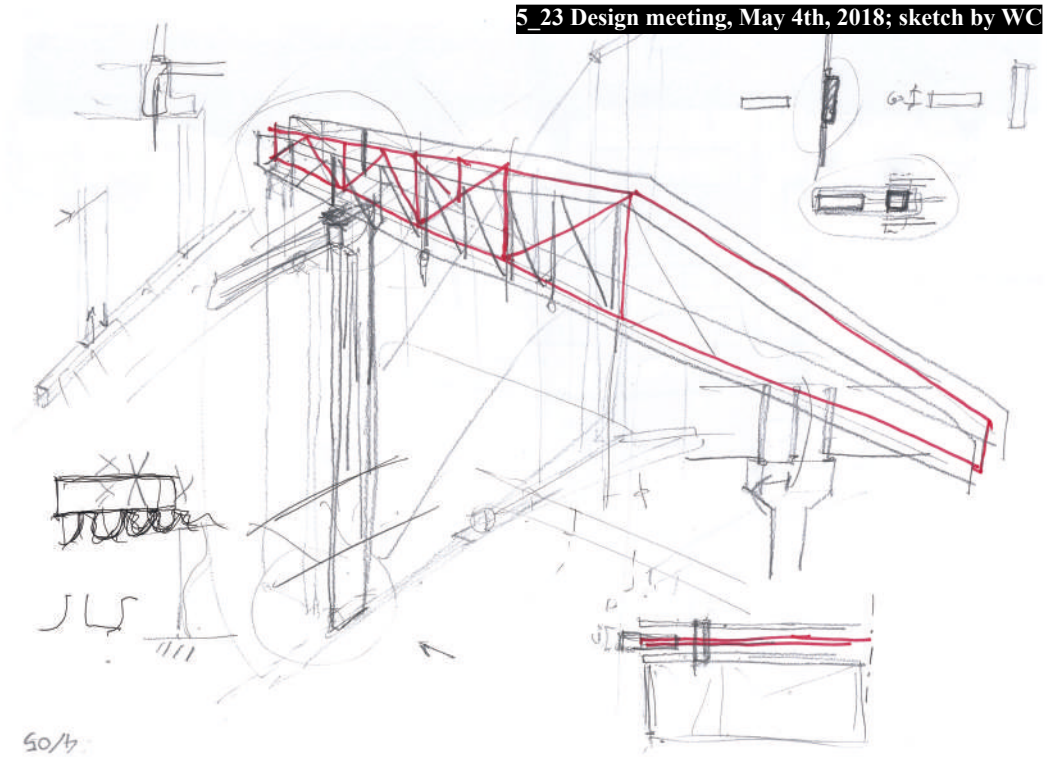
5_20 Workshop II, March 27th, 2018



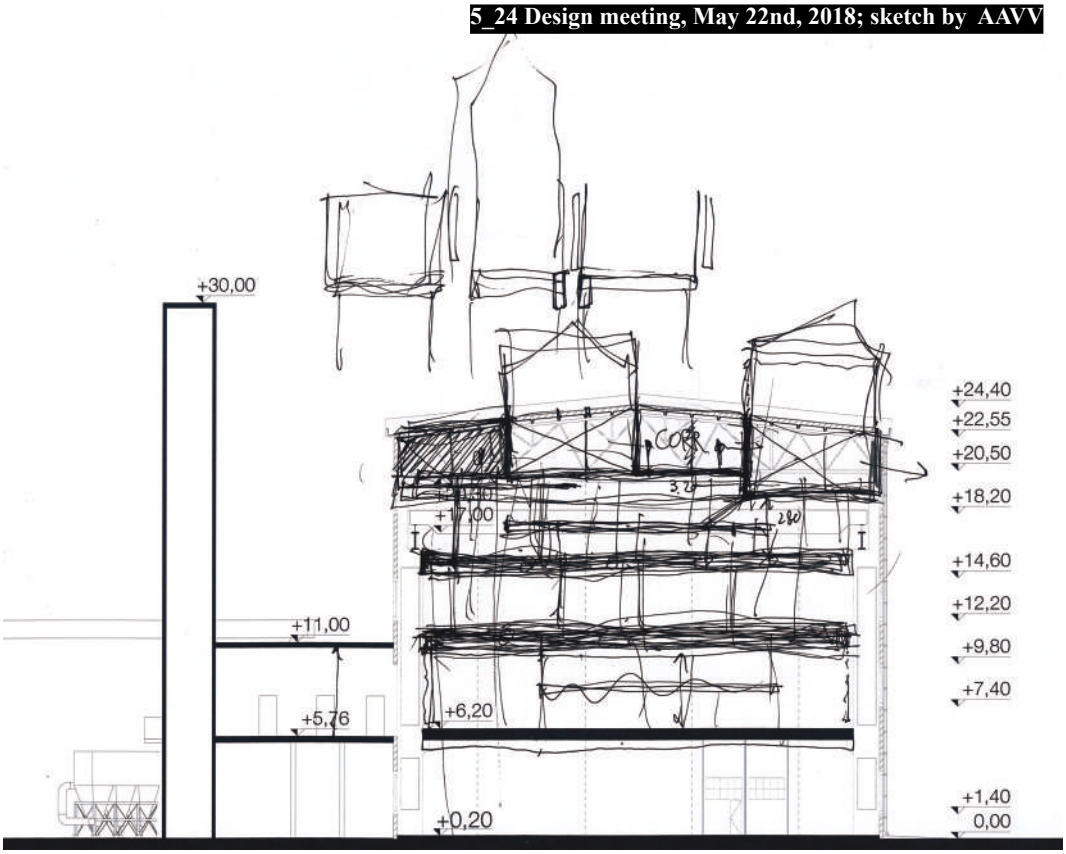
5_21 Workshop II, March 27th, 2018; sketch by AAVV



5_22 Workshop III, May 21st, 2018; sketches by MBe, DR



5_23 Design meeting, May 4th, 2018; sketch by WC

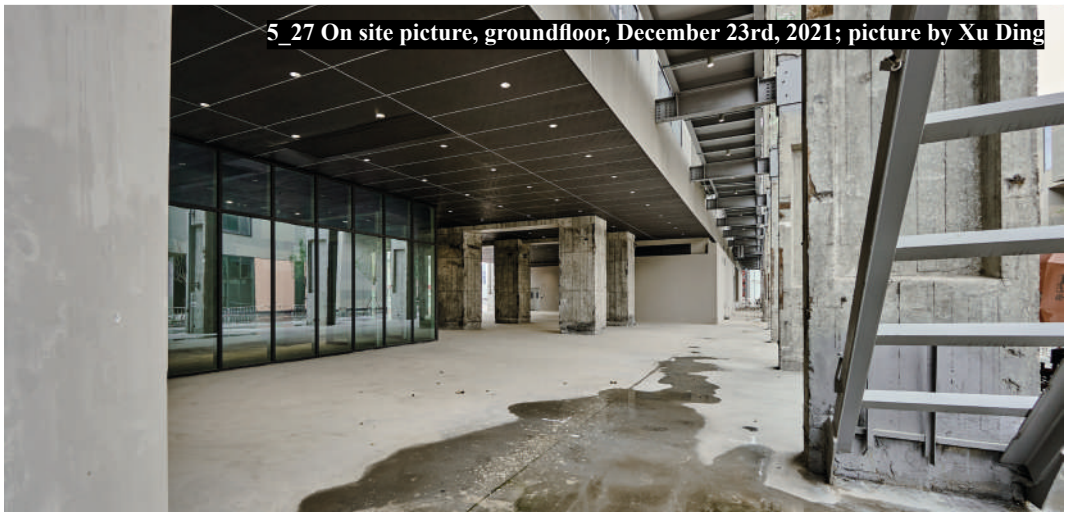


5_24 Design meeting, May 22nd, 2018; sketch by AAVV

5_24 On site picture, December 15th, 2018; picture by Samuele Pellecchia - Prospekt photographer

5_25 On site picture, November 17th, 2020; picture by Zhang Li - Teamminus

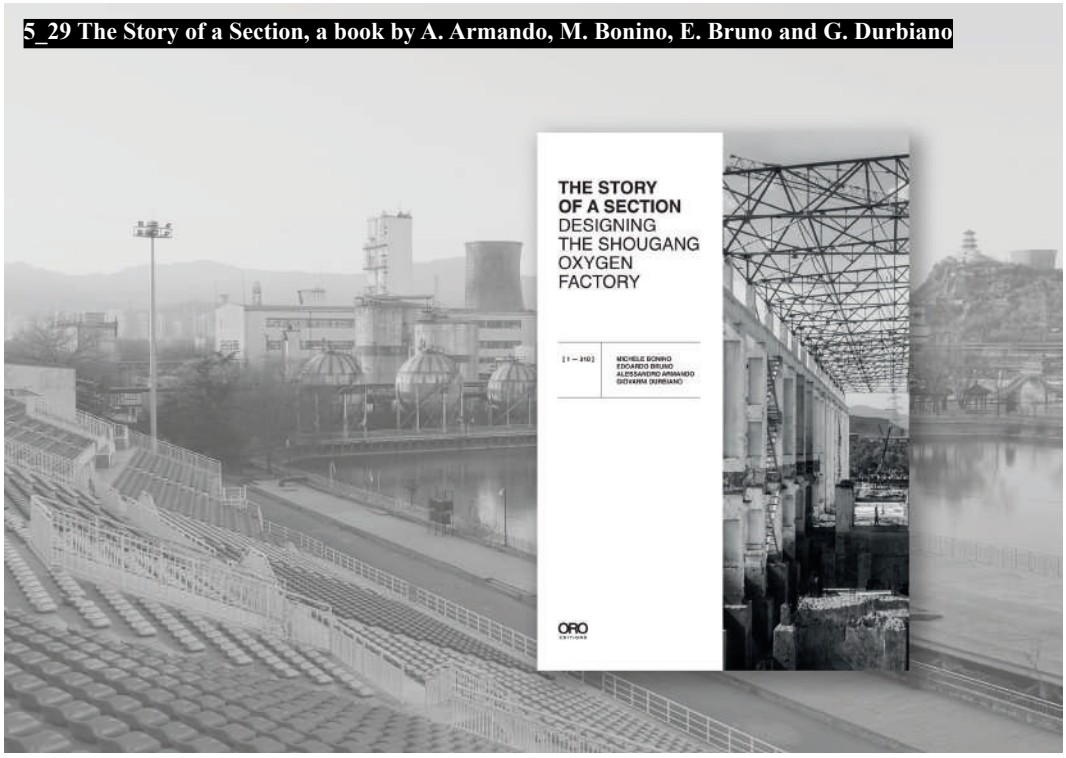
5_26 On site picture, southern elevation, December 23rd, 2021; picture by Xu Ding

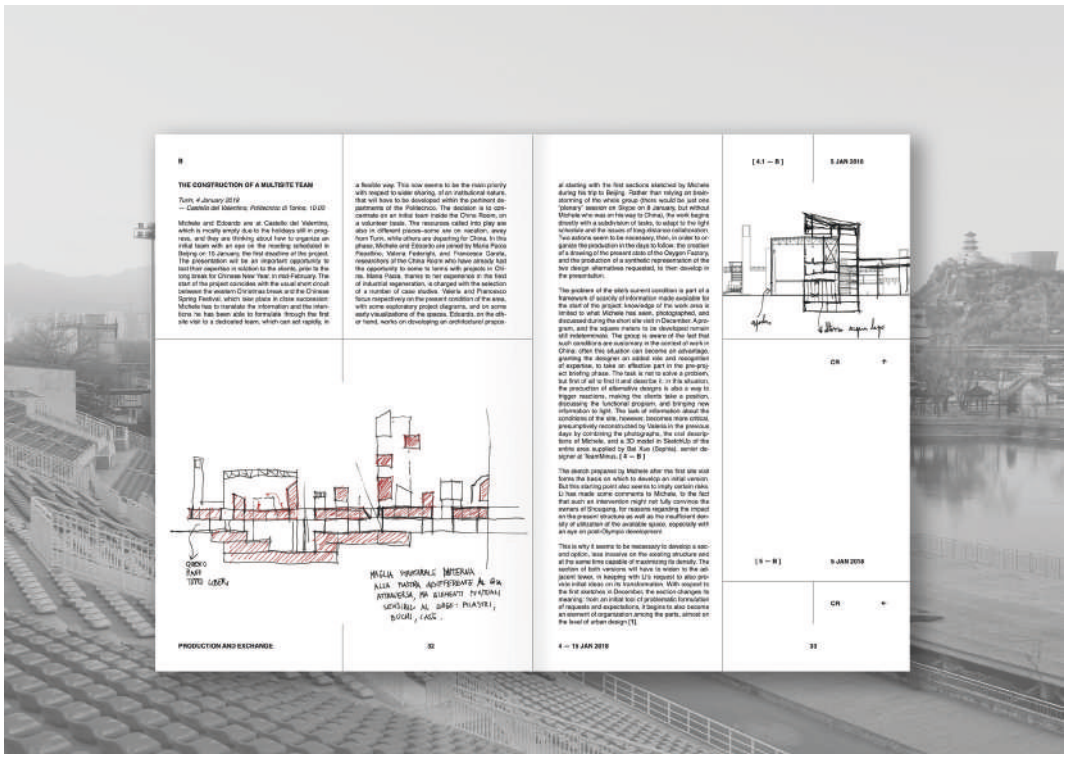


5_27 On site picture, groundfloor, December 23rd, 2021; picture by Xu Ding

5_28 On site picture, western elevation, December 23rd, 2021; picture by Xu Ding

5_29 The Story of a Section, a book by A. Armando, M. Bonino, E. Bruno and G. Durbiano





5_31 Comparative overview of the three institutions

China Room

A. Turin, Italy

B. University Research Group

C. 7 Professors, 9 Fellows, 15 Junior Fellows

D. 2016

E. chinaroom.polito.it

F. “China Room is a research hub that focuses on Chinese architecture and urbanism. Its activities span between Research, Education, and Practice. It aims at strengthening the collaboration with Chinese universities, scholars, and public institutions, thus contributing to redefining the global academic debate. The goal is to be an active hub of competencies as well as a repository of information, prompting scholars’ exchanges and mutual understanding”.

G. Masterplan for the redevelopment of a fishing village in China, industrial regeneration into a visitor center for the Olympics in China, industrial regeneration into a mixed-use cultural space in China, 1st place into an international competition on net-zero energy micro-housing, curatorship of an international Biennale.

清华大学建筑设计研究院有限公司

Architectural Design and Research Institute of Tsinghua University Co., Ltd.

A. Beijing, PRC

B. Design Institute affiliated to a University

C. More than 1,300 members organized in 13 design and research branches; 7 design sections; and 4 studios

D. 1958 (1981)

E. thad.com.cn/

F. “Relying on the profound academic, scientific research and teaching resources of Tsinghua University and as the base for teaching, scientific research and practice of School of Architecture and School of Civil Engineering, we have been attaching great importance to academic research and the commercialization of technological achievements with our planning and design level coming out top in China. Since its establishment, our Institute has always been laying emphasis on quality, following the struggle goal of “designing elaborately, creating fine works, transcending ourselves and striving to be first-rate”, and cordially providing high-grade designs and services for all walks of life at home and abroad”.

G. Exhibition centers, memorial halls, learning and university facilities, cultural facilities, Olympic venues, research facilities, healthcare facilities, touristic facilities, headquarters, residential complexes, heritage conservation projects, urban design, and super high-rise towers.

简盟

Teamminus

A. Beijing, PRC

B. Architectural firm

C. 45 members

D: 2005

E. teamminus.com

F. “TeamMinus started as a design research laboratory in 2001. In 2005, TeamMinus became a full-fledge architecture office. Today, there are around 50 people working in the office. From 2005 up to now, TeamMinus has been involved in a series of challenging projects. Many of which have gained attention from China and from overseas. […] Throughout TeamMinus' works, there is an underlying inquiry for an alternative modernity in China”.

G. cultural architecture, education architecture, sports architecture, exhibition architecture, visitor center.

(A. location, B. type, C. structure, D. constitution year, E. site, G. mission, H. main projects typology)

Future Shan Shui City International Urban Design Competition

The Project at a glance[6]

Location: Lishui, Zhejiang, People's Republic of China

Scope: Urban and Architectural schematic design

Programme: residential, agricultural, high-tech industry

Type of assignment: international competition in two stages[7]
1. Prequalification: company profiles, qualification supporting documents, portfolio in urban planning and architecture, and the conceptual design proposal, resulting in the selection of 10 shortlisted;
2. Design Competition: conceptual planning, urban design, and key parcels with architectural schematic design, resulting in the awarding of the first, second, and third prizes.
Placed 3rd prize in the Design Competition phase

Timeline: 2020
1. Prequalification: July 1st/July 24th, 2020
2. Design Competition: August 5th/October 11th, then postponed to November 3rd, 2020

Design framework: The competition is in line with recent Chinese urban policies and builds upon the initiatives undertaken by the Lishui municipality. It expands the objectives initially set for the Bihu and Dagangtou Towns to encompass the entire valley plain, located 20 kilometers southwest of the city of Lishui. The main goal is to explore the creation of contemporary ShanShui cities, as described in the competition brief as "lucid waters and lush mountains are invaluable assets". The objective is to systematically establish a spatial framework for a ShanShui city, serving as a model for this urban typology, promoting a new ShanShui city lifestyle, and exploring sustainable urban planning strategies. The design process operates at two levels: the conceptual overall urban design level, which connects Liandu, Bihu Town, and Dagangtou Town along the Ou River, covering a total area of 152 square

[6] For the extensive credits see Appendix 2.2a.

[7] The requirements and design stages information has been extracted from the competition brief and relevant reference materials (Lishui Municipal People's Government, 2019a; 2019b). For further informations see: https://www.archdaily.com/940181/future-shanshui-city-dwellings-in-lishui-mountains and https://www.archdaily.com/951429/champion-announced-for-future-shanshui-city-international-urban-design-competition (Accessed on March 13th, 2023).

kilometers, and the detailed urban design level, which focuses on the urban central core areas and key parcels. The competition specifically concentrates on five different sites, with four sites common to all participants and one site uniquely assigned to each group. These sites are carefully examined based on comprehensive urban planning guidelines and the development of an architectural prototype for each location.

Project scale: 152’000’000 sqm

Typology: urban planning and architectural schematic design

Organizer: Lishui Municipal People’s Government
Co-Organizer: Lishui Municipal Development and Reform Commission, Dwellings in Lishui Mountains Project Planning and Construction Leading Group Office

A project by Architectural Design & Research Institute of SCUT Co., Ltd. and Politecnico di Torino/China Room and IAM - Institute of Mountain Architecture

Narrative introduction

The competition’s official announcement was made on May 20, 2020. However, the group took considerable time for reflection and discussion before reaching a final decision to participate. The competition was launched during the midst of the pandemic crisis and lockdown in Italy. Despite the group's prior experience with remote collaboration, the scale of the design project posed a significant challenge, especially with the added complexities of working with delays in China and team members located in various parts of the city and country. Nevertheless, as restrictions began to ease in early June, the group revisited the question of whether to pursue the competition. Eventually, a decision was made to proceed.

Given the uncertainty surrounding the results at this stage, it has proven to be quite challenging to seek external assistance in opening a research grant. Moreover, there has been a notable interest among students to pursue an academic path that incorporates practical experience akin to a professional setting. In the same months indeed a discussions at the departmental level prompted the necessity of introducing mandatory internships as part of the curriculum for all

students. Taking these factors into account, the faculty members launch a call for volunteers within their ateliers with master's students. In response, six students—SB/Simona Belluscio, AD/Alessandro Delforno, AM/Ahmed Mansouri, RM/Riccardo Masala, PER/Piera Elisa Ragusa, OVG/Ottavia Valz Gris, and AZ/Andrea Zegna—answered the call and became part of the project team from its inception.

Concurrently, efforts were made to establish collaboration with another research group within the department known as IAM - Institute of Mountain Architecture. IAM, which was established in DAD in 2009, focuses on conducting research, building networks, supporting local communities, promoting architectural and technical cultures, and facilitating educational activities related to mountain regions. Their work encompasses both basic and applied research across various disciplines, including planning, architecture, history, restoration, recovery, design, technology, and material culture, with a specific emphasis on alpine and mountain spaces. Due to the relevance of the bidding topics, a collaboration with IAM was highly recommended for this project. Recognizing their keen interest in tackling the context, they were also welcomed as valuable additions to the team.

It is noteworthy to mention that, given the extensive amount of work involved in the competition and the scale of the intervention, the second phase has seen a rather different and more diverse design team compared to the first phase. This expansion has included the participation of members from the CR department affiliated with ICAR/20 and ICAR/21 as well as some departmental workshops, similar to the ones conducted in the Shougang case.

This decision was also related to the fact that precious research activities were conduced in investigating the dynamics of suburban urbanization in rural China, specifically leading to the publication of the book *The City after Chinese New Towns* (Bonino et al., 2019) and the thesis *Transnational Models. A Study on Tongzhou* (Fiandanese, 2019), *The Enriched Field. Urbanising the Central Plains of China* (Ramondetti, 2020; 2022) and *Beyond globalized visions: problematizing urban theory through spatial explorations of the Pearl River Delta* (Safina, 2020).

The design object

The Lishui proposal is organized around three conceptual spaces: the valley, residential settlements, and the ecological system, with the aim of establishing a vibrant metropolitan area that shifts its focus from the old city to a sprawling central agricultural park.

At the heart of this plan, the agricultural valley serves as a vast and technologically advanced platform, specializing in various agricultural practices. It seamlessly integrates existing villages with specialized centers dedicated to agricultural research and production. Utilizing both open-air and controlled environment methods, such as greenhouses and vertical farms, the valley ensures intense productivity. To preserve the integrity of the soil, a network of overhead infrastructure enables the transportation of goods, connecting them to logistics hubs. These hubs, organized within large circular structures, are integrated into the cable system. These buildings operate vertically, with crops transported to upper floors via cable cars and gradually descending during different processing stages. Finally, they reach the ground floor docking bays, where they are loaded onto trucks. Key vehicular roads span the valley in an east-west direction, suspended above the ground. To facilitate mobility within the valley, a dense network of navigable canals provides an efficient means of transportation for people.

The newly developed high-density residential areas are situated on the slopes of the surrounding mountains, creating an inward-facing ring formation that embraces the agricultural valley. These settlements are located at the foot of the mountains, adjacent to the key transportation infrastructure of the metropolitan area, including highways and subways. The layout of each block is designed with specific features to maximize space utilization. the roof seamlessly integrates with the natural surroundings, creating a harmonious connection to the terrain; the urban block is excavated, allowing for ample natural light and a well-organized arrangement of residences and services; rather than encroaching on additional land, the road and railway infrastructure is integrated into the ground floor, minimizing the need for additional land usage. By aligning with the natural contours of the mountains, the housing units are distributed along the slopes, allowing for a seamless coexistence between the mountain landscape, new

infrastructure, and residential structures. This approach adapts to the unique topography, resulting in minimal land consumption.

The ecological reserve encompasses parks and natural areas that stretch along rivers and mountains. Instead of being artificially controlled, the riverbanks are designed as wildlife and nature reserves, regulating the flow of the river solely to protect the wetlands. Within this continuous corridor, flanked by residential settlements and the agricultural valley, the city's main structures are situated. In addition, other platforms at the base of the valley house the existing villages and prominent landmarks, serving the dual purpose of offering appealing provincial-level facilities to Lishui and visually marking the city's extensive north-south route for both maritime and rail transportation. Amidst these zones, a scattered forest creates an immersive and ecologically conscious experience for visitors and residents connecting the facilities and the park with the wider roads designed for slower speeds.

Phase I: Prequalification

The first phase was completed within a period of slightly over 20 days, which naturally required simultaneous and rapid work on deepening various practical and strategic aspects of the proposal. According to the guidelines, the conceptual design proposal was expected to demonstrate a comprehensive understanding of the project, as well as its main goals and fundamental ideas, effectively catering to diverse spatial patterns, urban forms, and living environments. All should be comprised within a concise limit of 30 pages.

The initial 10 days were dedicated to defining the project approach through discussions held mainly in Turin. During this phase, indeed, the polytechnic team had more independence in developing the proposal, which was later shared with SCAD. Simultaneously, the project team created preliminary documents as a foundation for the subsequent booklet. After completing this strategic coordination phase, the organization of the project booklet was established, and more intensive production work began. The team consisted of the following members: MB and MBe, as chief architects, oversewing the typological and formal choices of the project proposal; EB as the project manager, coordinating both the Turin team and the relationship with the Chinese partner; XL maintaining

direct communication with SCAD in this capacity; CF focusing on the finalization of the portfolio and assisting EB in student and production management; LP and MM joining during the production phase to conduct in-depth studies on specific aspects.

The 'operative design team', consisting of EB, CF, XL, and students, carried out daily tasks and held weekly meetings with the broadened Turin team, including MB, MBe, LP, and MM. Additionally, bi-weekly meetings were organized with SCAD to discuss the proposed developments. To enhance and facilitate the collaboration among team members situated in different locations, specific boards with similar drawings were assigned to individual students or pairs — PER focused on gathering background information (pp 1-2), AD conducted the background study (pp 4-6); OVG and AZ were responsible for handling the concept, strategy, and references (pp 7-13, 19-20); LP and MM contributed to the references and provided a quantitative outline of the proposal (pp 14-17, 25); SB and RM took charge of the spatial sections and visual perspectives (pp 21-24); AM created a conceptual perspective section of the entire valley entitled 'Prosperous Lishui'[8], drawing inspiration from the *Allegory of Good and Bad Government* painted on Siena's Town Hall and the renowned Chinese painting *Prosperous Suzhou* (pp 26-29).

In this initial phase, the proposal differs slightly from the one mentioned in the previous paragraph, although there are some commonalities between them. The primary objective of the first phase design is to address Lishui's development by leveraging the existing resources, particularly through supporting agricultural and productive specialization and conservation efforts. Inspired by the concept of the 'Fifteen-minutes City', the plan establishes a new grid on the territory to facilitate proximity between the urban areas, the agricultural valley, and the natural spaces of the region. This grid aims to create a trans-sectoral metropolitan city, where the central urban belt acts as a connection between the two most original aspects of the site: agriculture and wilderness. Each neighborhood within this grid can specialize based on its specific characteristics, fostering a series of synergistic and specialized urban-rural clusters. To elaborate further, on the right bank,

[8] The expression 'Prosperous Lishui' became the title of the design proposal, both in the first and second phases, summarizing the main contents of the delivered proposals.

urbanization, and infrastructure are consolidated, while on the left bank, the focus is on enhancing rural resources within a mutually beneficial system where mobility and amenities are exchanged. The rural network, along with scattered villages, forms the path along which local communities and future residents navigate, taking into account the speed of infrastructure.

On July 22nd, the materials realized in Turin, including the portfolio, booklet, and application documents, were sent to SCAD. In the following days, SCAD handled the implementation of the portfolio with its projects, conducting a final verification to ensure compliance with all requirements and proceeding with the printing. On July 24th, 2020, the materials were physically delivered to the qualifying competition offices in Lishui. Then, on August 5th, the announcement regarding the selection of the 10 finalists out of the 93 submissions received were published: the team was selected for phase II[9].

Phase II: Design

The news of being selected for the second phase arrived in the midst of summer, which led to weekly calls throughout the entire month of August. The second stage indeed encompassed slightly over a month of work to create all the materials mandated by the call for proposals[10]. The requirements included a comprehensive dossier comprising a minimum of 250 drawings, a condensed brochure, eight A1-sized exhibition panels, a 10-minute video presentation, and a 1:500 scale model of the area. These materials were considerably more detailed compared to those of the first phase, demanding a deeper understanding of the site. Moreover, the designated areas, including those allocated to all participating

[9] The other nine proposals shortlisted were: China Academy of Urban Planning & Design; OLIVIER GREDER; BOERI Architecture Design Consulting (Shanghai) CO., LTD. + TONGJI Architectural Design (Group) CO., LTD. + WWSZ (Beijing) Culture & Tourism Development CO., LTD.; China Architecture Design & Research Group; Eco Systems Design Studio (ESD) Ltd + Cai Yongjie; Canada GA City Planning and Landscape Design Co., Ltd. Hangzhou Representative Office + Zhejiang Province Institute of Architectural Design and Research, ZIAD; DE-SO Asia Design Consultant Joint Stock Company + DDON Planning & Design Inc.; UNStudio + Gross Max + Systematica; Architectural Design and Research Institute of Tsinghua University.

[10] The deadline was subsequently extended to November 3rd, 2020; however, we did not receive the official communication regarding the extension until a later date.

teams and the one specifically assigned to SCAD+Polito (referred to as the Smart Valley), highlighted the inherent diversity of the location. Consequently, they offered ample opportunity for a multifaceted interpretation and analysis of the competition's themes. It was therefore crucial to identify and condense the specific challenges posed by each site in order to devise customized solutions while upholding a cohesive perspective of the comprehensive transformation strategy.

To tackle this issue, the activities proceeded into two progressive phases. In the initial phase, extensive efforts were made to gather as much information as possible and expand the collective responsible for project discussions. Accordingly, on the first hand, SCAD conducted multiple trips to Lishui, visiting various project sites and documenting their significant aspects through photography and interviews with local individuals. On the other hand, drawing from the lessons learned from the Shougang project, two daily workshops were organized, involving all faculty members and doctoral students from the DAD. These workshops took place on September 9th and 13th and featured presentations on the competition guidelines and the proposal submitted in the first phase; twenty-two figures attended the events — Alessandro Armando, Michela Barosio, Giulia Bertola, Daniela Bosia, Simona Canepa, Martina Crapolicchio, Massimo Crotti, Eleonora Gabbarini, Rossella Gugliotta, Roberta Ingaramo, Lin Yang, Paolo Mellano, Maicol Negrello, Francesco Novelli, Maria Paola Repellino, Ana Ricchiardi, Davide Rolfo, Francesca Ronco, Marco Trisciuoglio, Zeynep Tulumen, Elena Vigliocco, Zhang Ting. Following the presentations, six working groups were formed, one dedicated to the overarching masterplan, and the other to each one of the five key parcels. Each group consisted of a member from the CR team, along with faculty researchers and Ph.D. students from different research groups. The outcome was an atlas encompassing various approaches, proposals, and raised issues that played a central role in shaping the subsequent structure of the project proposal.

Following the initial phase, a period of intense work ensued, with continuous interaction between the working groups from Politecnico and SCAD. During this stage, the discussions within the CR team expanded, involving AS, ASf, FG, and LR (DIST), who assumed responsibility for closely monitoring the urban and

territorial aspects of the intervention. Subsequently, they were joined by MF, who had been awarded a research grant specifically for the competition.

At this juncture, the Polito 'core team' divided into two groups, concurrently working on different scales. One group focused on the overall design, while the other concentrated on two key parcels, namely the Rhyme of Sidu and Smart Valley, in addition to the video presentation. Weekly exchanges of information between the two teams ensured alignment in the chosen design strategies. Furthermore, SCAD also participated in these alignment meetings every two weeks, as they simultaneously worked on the other key parcels, such as Kuocang Mountain, Relics of the Ancient City, Guyan Pictorial Village, and the maquette.

On October 31st, SCAD collected the materials and assumed responsibility for their printing and delivery. Two days later, on November 2nd, 2020, the 10 shortlisted teams presented their designs to a jury composed of 9 experts. Immediately after, the winners of the competition were announced, with SCAD and Politecnico di Torino securing third place.

Knowledge production

In this case, just like in the previous one, meticulous archival was realized for all the materials generated during the entire design process, including documentation of meetings and exchanges among the stakeholders involved. Similarly to the previous instance, there was indeed the ambition right from the start of the collaboration to delve deeper into the issues addressed in the competition and publish the findings in an editorial output. However, the approach adopted in this case differed significantly from the one adopted in Shougang.

In Lishui, indeed, the participants aimed to utilize the related publication as a platform to explore the core themes of the design, with a specific focus on the processes of suburbanization in rural China. Their objective, indeed, did not revolve around exploring the recursivity of the design practice while extending the scope of the Prosperous Lishui proposal, seeking to uncover new possibilities for a development model that prioritizes "the traditional aporia between conservation and innovation and to explore new possibilities for a new development model, more attentive to the quality of life, the heritage of the past

and the local environmental values" (Lishui Design Proposal: 9).

In pursuit of these objectives, two primary approaches were adopted. Firstly, an article was published in *Territorio* (Ramondetti et al., 2021), delving into the central issues and topics of the Lishui project a few months after the conclusion of the competition.

Secondly, an extensive update process was initiated, sustaining ongoing discussions on the transformation of Lishui Valley through educational activities conducted throughout the academic years of 2020/2021 and 2021/2022. These activities were conducted within the Master's program in Architecture Construction City (ACC) at Politecnico di Torino, as well as the Co-Run Master's program of South China University of Technology (SCUT) and Politecnico di Torino held at SCUT by AS, MB, MBe, and EB, with the collaboration of LR, AS, LP, and OVG. The master courses encompassed concurrent content and involved shared lectures, as well as opportunities for exchange and discussion. These activities addressed the design for the entire area and delved deeper into additional testing sites not previously examined in the competition, specifically the key architectural parcels. To begin, the students explored the design strategy proposed in the competition. They then embarked on experimenting with various possibilities to enhance the spatial organization, functions, and architectural choices for individual areas — the groups concentrated their efforts on specific 2x2 kilometer regions located within the agricultural plain, along the foothills, and along the Ou River axis.

Additionally, a comparable initiative was carried out as part of the Lishui Living Lab workshop, engaging ten master's students in their final year (Di Presa & Merico, 2022; Dong & Yang, 2021; Trotta, 2021; Valz Gris, 2021; Wang & Feng, 2021; Weicheng & Huailei, 2022). These students directed their thesis projects toward the Lishui case, with the objective of encouraging dialogue on the various themes outlined in the Prosperous Lishui project. This collaborative endeavor as well sought to offer diverse interpretations and bring forth fresh design perspectives.

The outcomes of this experimentation were ultimately documented in a book that captures the various design and teaching phases (Berta et al., 2023). In this

subsequent publication, the focus is on a 'research through design' perspective, which acknowledges the significance of formal experimentation as a way to both engage in and educate about applied research methodologies. This methodology entails reorganizing gathered data and information, fostering critical interpretations of the locations, and envisioning future scenarios.

Publications and dissertations referred to the case study:

Berta M., Bruno E., and Ramondetti L. (2023). *Prosperous Lishui. A Project for Suburban China.* San Francisco: ORO Editions.

Di Presa C., and Merico F. (2022). *Future Shan Shui City: water-based solutions for rural and urban prototypes in Lishui, Zhejiang.* Master Dissertation. Politecnico di Torino, Torino.

Dong J., and Yang C. (2021). *Farming in an online world*. Master Dissertation. Politecnico di Torino, Torino.

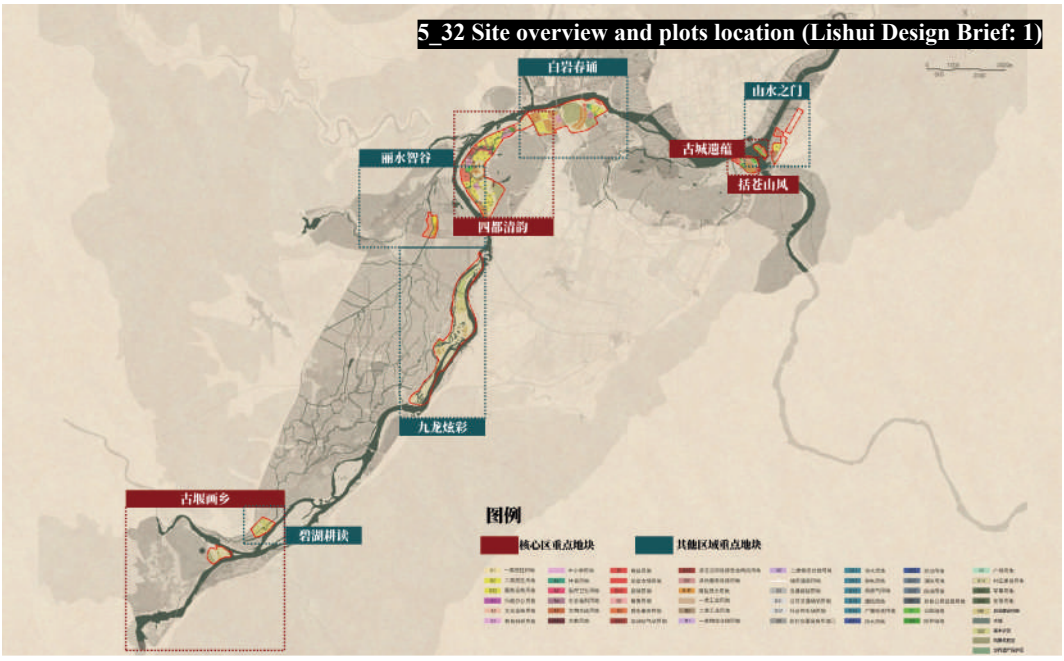
Ramondetti L., Safina A., and Bruno E. (2021). Prosperous Lishui. Ripensare il rapporto tra urbano e rurale nella Cina contemporanea. In *Territorio*, 98: 110-122.

Trotta A.G. (2021). Dwellings in Lishui Mountains, Zhejiang, China: A Housing Prototype. Master Dissertation. Politecnico di Torino, Torino.

Valz Gris O. (2021). *Inhabiting the Infrastructure: an alternative urban model for ShanShui cities*. Master Dissertation. Politecnico di Torino, Torino.

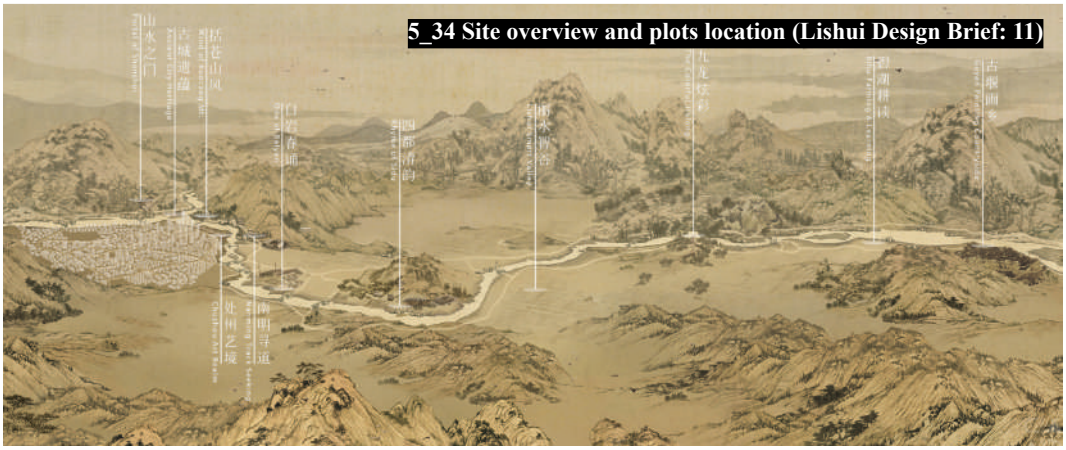
Wang C., and Feng Z. (2021). *Fresh wind blowing into Lishui village:A sustainable village design based on villages research in Lishui*. Master Dissertation. Politecnico di Torino, Torino.

Weicheng L., and Huailei Y. (2022). *Rethinking the Boundary of Industrial Zones. Taking Bihu Industrial Zone as an Example*. Master Dissertation. Politecnico di Torino, Torino.



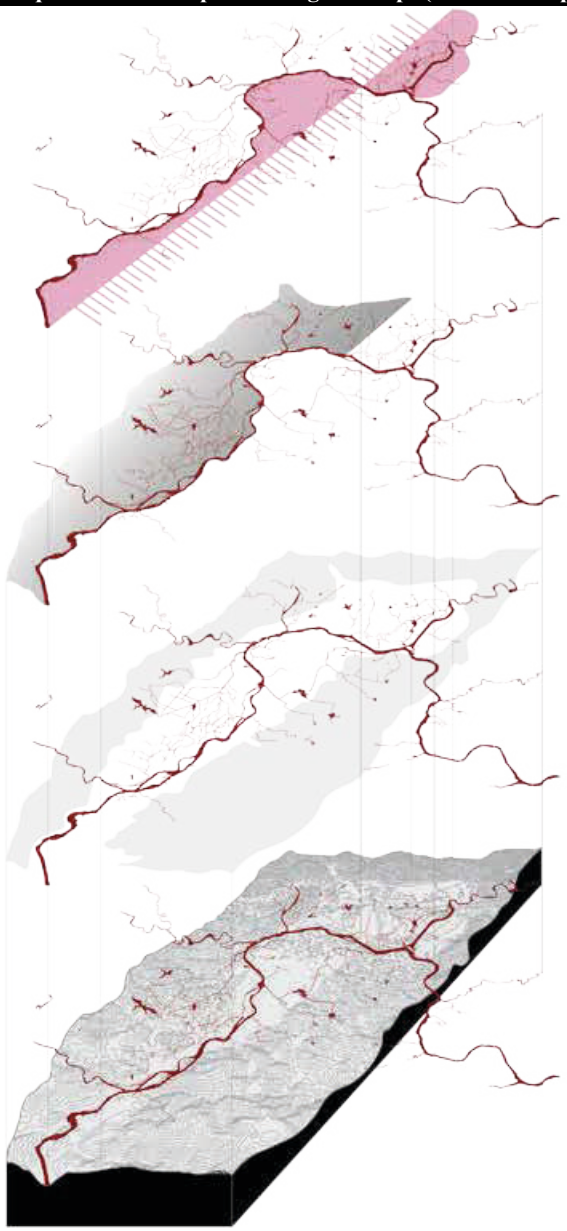
5_32 Site overview and plots location (Lishui Design Brief: 1)

5_33 Site overview and plots location (Lishui Design Brief: 9)



5_34 Site overview and plots location (Lishui Design Brief: 11)

5_35 Prequalification Proposal: design concept (Lishui conceptual design proposal: 9)



线性城市体系是发展的高效方式
Linear urban system as efficient line of development

乡村系统作为发散的虚拟网格
Rural system as diffused intangible grid

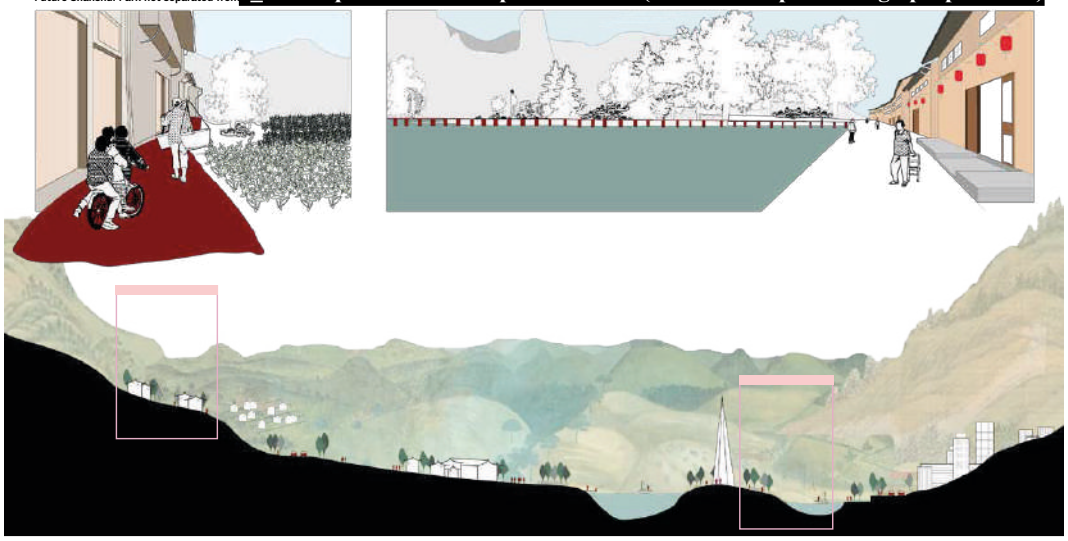
山区作为可进入的实体边界
Mountain as accessible solid boundary

景观作为平台
Landscape as a platform

5_36 Prequalification Proposal: Prosperous Lishui (Lishui conceptual design proposal: 26-29)

未来山水公园不脱离农村日常实践.
Future Shanshui Park not separated from

5_37 Prequalification Proposal: visions (Lishui conceptual design proposal: 18)



5_38 Prequalification Proposal: masterplan (Lishui conceptual design proposal: 23)

第三章 / 总 Chapter 3 / Masterplan

“伴瓯江而生”

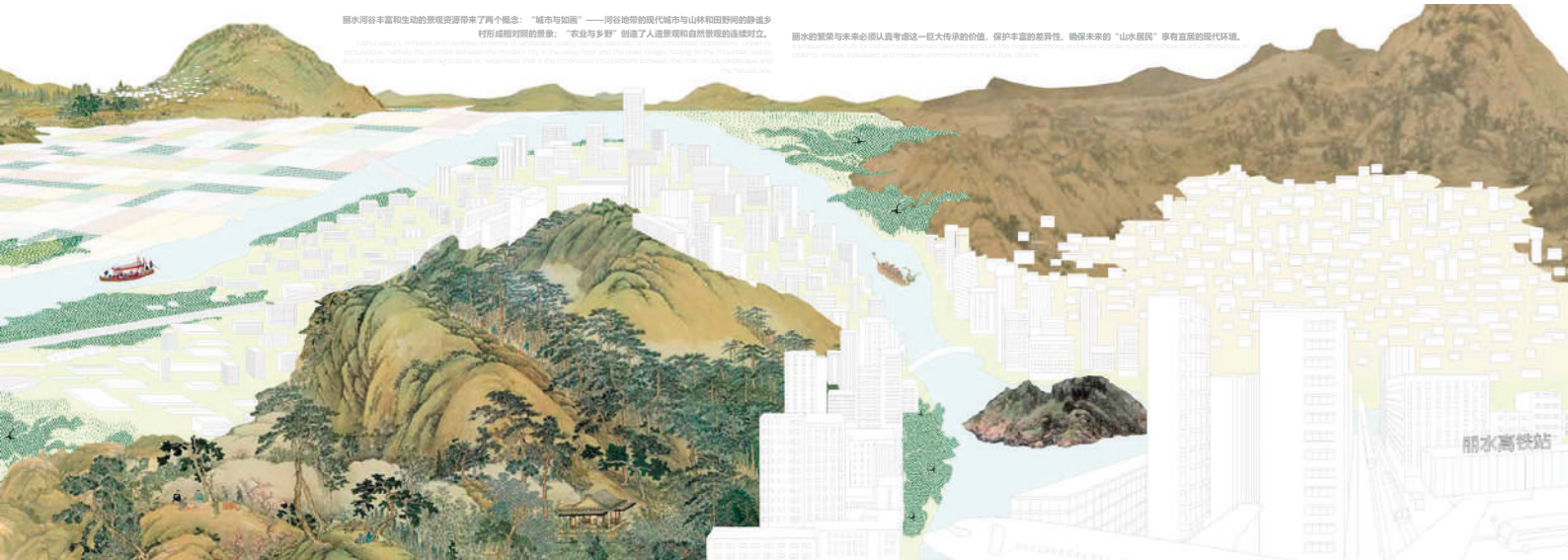
该计划提出了一个结构化的景观，用自然资源定义了未来的发展和保护战略，确定可以进行局部改造的路径和网格。
右岸的城市化发展以巩固基础设施为主，为未来的“山水居民”实现山地的交通可达，和散布的江岸景观。
左岸将在城乡协同系统中保存、巩固乡村资源，实现流动、便利的城乡交互机会。

“Growing along Ou river”

The plan proppses a structured landscape where natural resources primarly definine the future strategies of development and preservation, already defining paths and grids where local transformation can happen.
The right bank where urbanization can consolidate infrastructure, easy mountain accessability and a distributed riverfront for a future «landscape citizenzhip»
The left bank will preserve and consolidate rural resources in a synergic system, where mobility and amenity exchange opportunities.

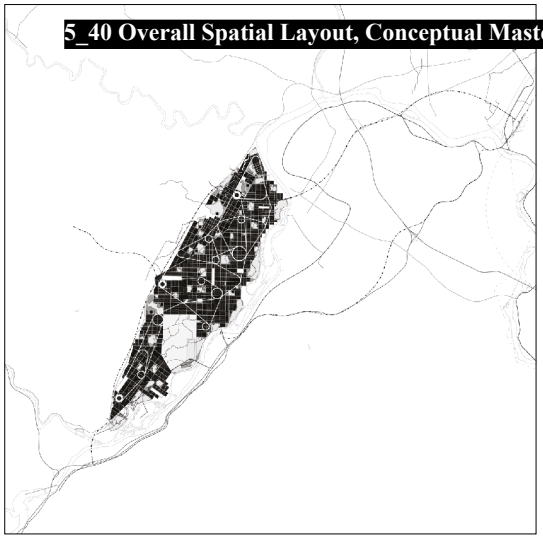
丽水河谷丰富和生动的景观资源带来了两个概念：“城市与如画”——河谷地带的现代城市与山林和田野间的静谧乡村形成相对照的景象；“农业与乡野”创造了人造景观和自然景观的连续对立。

丽水的繁荣与未来必须认真考虑这一巨大传承的价值，保护丰富的差异性，确保未来的“山水居民”享有宜居的现代环境。



5_39 Overall Spatial Layout, general plan (Lishui Design Proposal: 24)

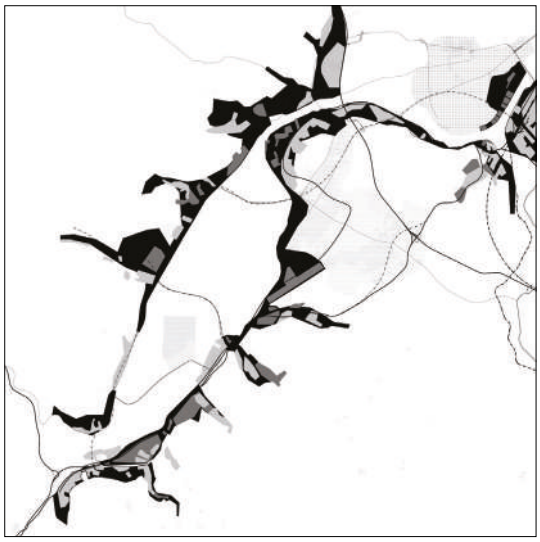
5_40 Overall Spatial Layout, Conceptual Masterplan:Three spaces (Lishui Design Proposal: 25)



农业山谷
AGRICULTURAL VALLEY

第一种空间要素是农业山谷。得到保护和加强的农业谷地将成为整个城市的新中心：一个巨大的农业公园，它完全开放，其中漫布着各种生产、研究和休闲的场所。

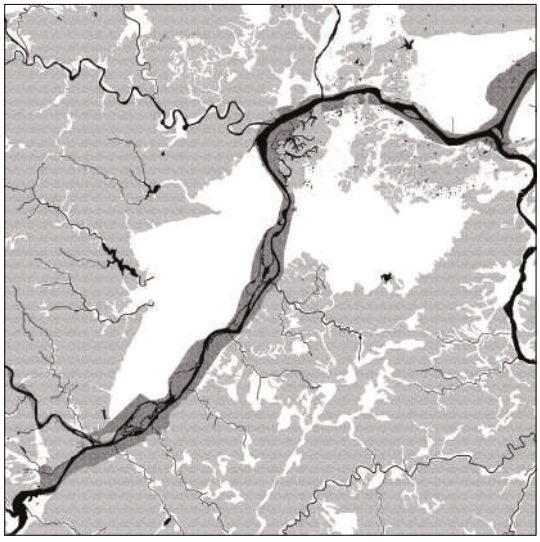
The first consists of the agricultural valley. It is preserved and enhanced. The valley is intended as the new heart of the whole city: an immense agricultural park, completely permeable, full of places for production, research and leisure.



依山而居
DWELLING IN THE MOUNTAINS

第二种空间要素是沿山谷边缘布局的城市人居区域。它们临近主要的交通道路，环抱山谷，既可以欣赏到山谷的美景，又可以轻松接近身旁山坡的自然景观。

The second consists of the residential settlements along the edges of the valley. Placed along the main mobility infrastructures and facilities, they form a sort of ring at the foot of the surrounding mountains. From their height it is possible to enjoy the view of the valley and easily reach the natural landscape of the nearby slopes.

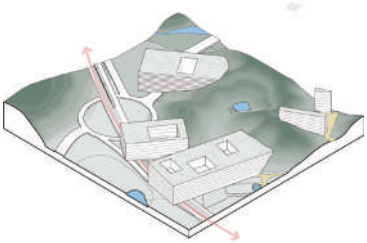


生态保护区
ECOLOGICAL RESERVE

第三种空间要素是贯穿整个城市的自然生态系统。它包括灌溉山谷的河流以及山上的森林，都将得到保护而保持不受污染的状态。

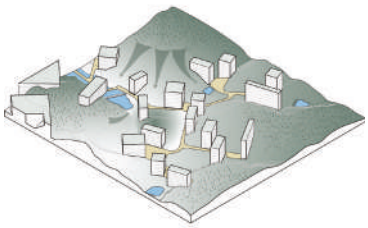
The third space is given by the rich environmental system that permeates the entire city. It consists of the waters that irrigate the valley and the forests on the mountains. Both elements are preserved and remain uncontaminated.

5_41 Rhyme of Sidu, Spatial Form Scheme: Key urban design element analysis diagram (Lishui Design Proposal: 155, 168, 173)



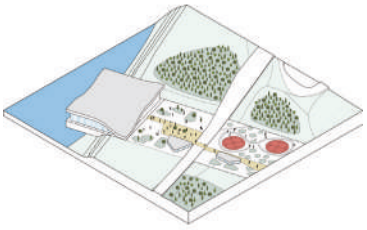
“丽水山居”的城市设计原型范式诠释了传统的带有中庭的城市街区建筑型态，但设置在基础设施上部，以得到最佳的山谷视野，以及与山体自然而轻松愉快的联系。

The Urban Design prototype of “Dwelling in the Mountains” interprets the traditional urban block with a central courtyard by lifting it above the infrastructures, and creating the best view towards the valley, and an easy and pleasant connection with the nature of the mountains.



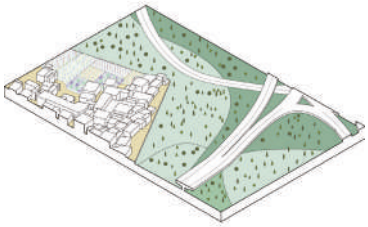
城市设计原型 “山谷中的高密度 “通过一个平缓然而密集的人居建造体系，将城市化引入山谷的内部，适应山谷的地形，起到交通和连接的作用。

The Urban Design prototype “Density in the Valley” brings urbanity in the inner parts of the mountains, through a system of gentle yet dense housing blocks that adapt to the orography of the valley and use it for circulation and connection.



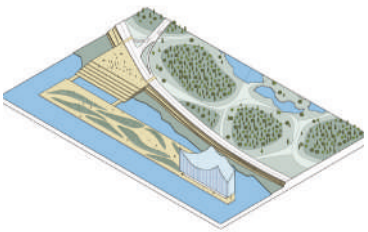
公共设施平台上沿河岸布置了服务于该地区以及整个河东岸的大型公共设施。它们服务整个大都市区，是吸引公众的重要原素。

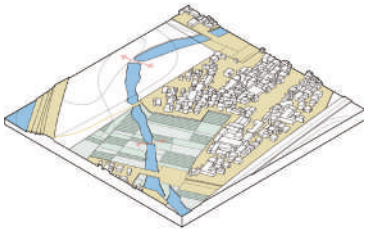
The Public facilities platforms organize the large service structures located on the riverside, in this area as well as on the entire east bank. They are facilities of metropolitan interest and great public attractors.



类似的策略也应用于现有的村庄，这些村庄在新的平台上进行重组，有利于统一整合并为它们提供新的小型服务设施。

A similar strategy applies to existing villages, which are reorganized on new platforms useful for unifying them and providing with new small service facilities.



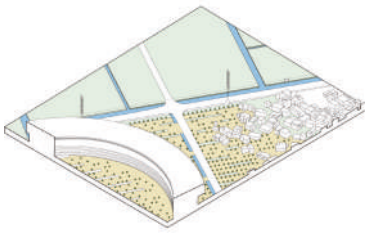


地块包含两种类型的滨水区，创造当地居民和游客与水的亲密关系。一种是河滨的主要水岸，其中一个平台成为人工岛和码头。另一种是穿越村庄的小型水道，在这里，它们原有的生产功能与休闲功能相伴共存。

The site includes two types of waterfronts, inviting local inhabitants and visitors to a close relationship with water. One type is the main waterfront on the river, where one of the platforms becomes an artificial island and marina. The other type are the small waterways that cross the villages, where their original productive function is accompanied by that of leisure.

5_42 Prosperous Lishui (Lishui Design Proposal: 1)

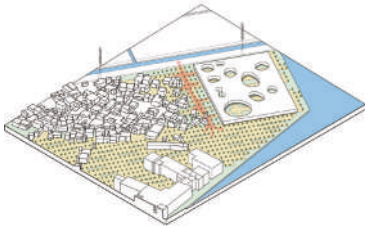
5_43 Smart Valley, Spatial Form Scheme: Key urban design element analysis diagram (Lishui Design Proposal: 199, 213, 218)



这一枢纽是空中运输系统的主要节点之一。它与周围的村庄和高速基础设施紧密连结。

-

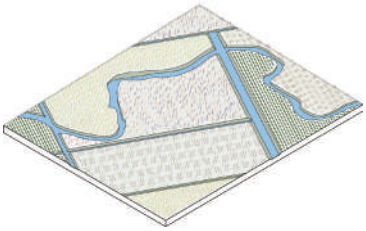
The Hub is one of the main junction of the Air Transportation System. It is strictly connected to the surrounding villages and the high-speed infrastructure.



通过建造新的标志性建筑，将现有的村庄改造成与生产性平原关联的研发组团。

-

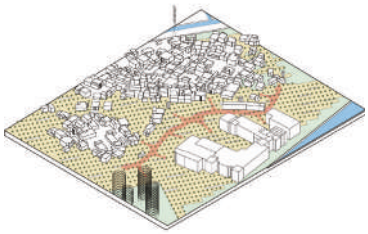
Existing villages are implemented through the construction of new iconic buildings and transformed into research clusters connected to the productive plain.



耕地和运河网络重叠的几何形状构成了平原的基本轮廓。

-

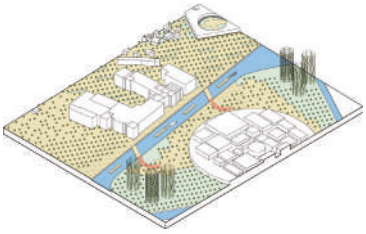
The overlapped geometries of the arable parcels and of the network of canals constitute the fundamental palimpsest of the plain.



新的研究群落靠近村庄，但设公共空间缓冲区以加强和改善现有村庄的设施和服务，而不是用新的城市结构来吸收和隔离村庄。

-

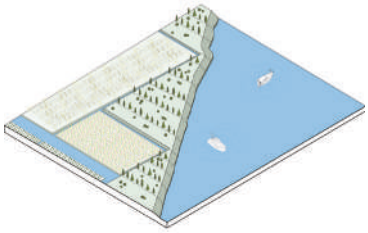
The new research clusters are located close to the villages, but separated by a buffer zone of public space. The purse is to enhance and improve the facilities and services of the existing villages, not to absorb and destroy them with a new urban fabric.



水路系统的改善将为公共空间的设计创造新的机会。跨越不同类型的建设（物流中心、研究区、人居区等），运河将创造一系列新的水岸，有助于设计这个新型农业城的形象。

-

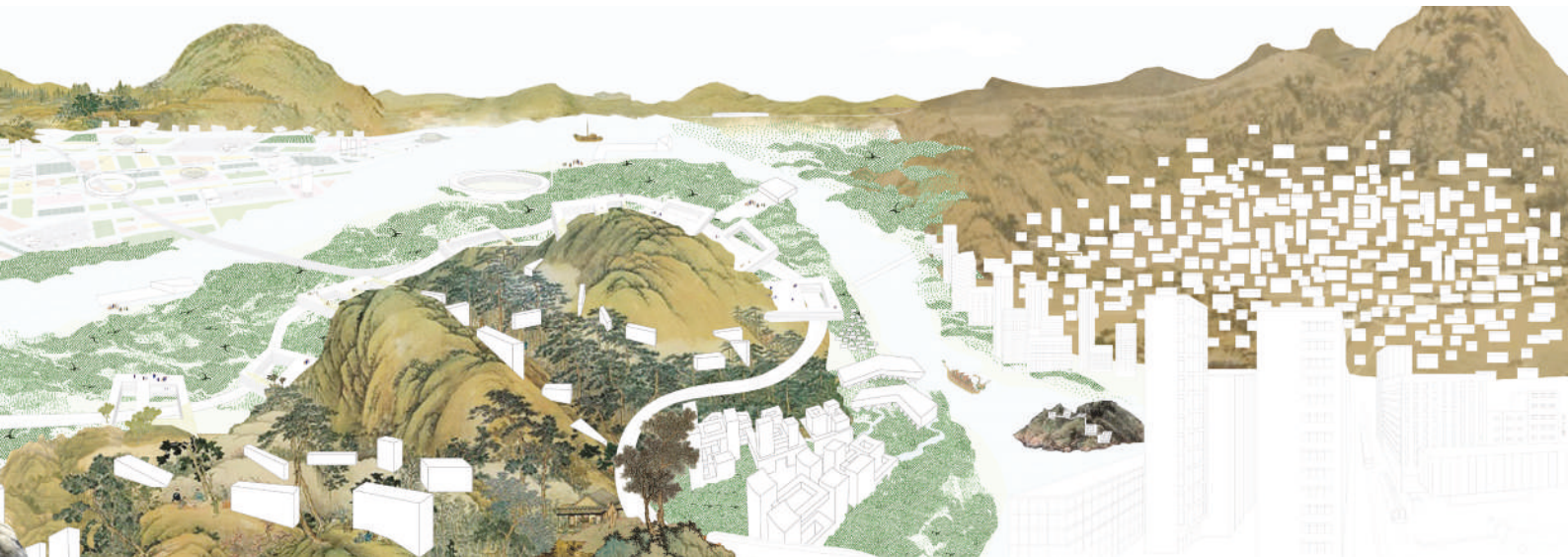
The improvement of the water transportation system will create new opportunities for desining the public space. Cross different types of location (logistic hubs, research districts, residential neighborhoods etc.) the canals will create a number of new waterfronts, that will contribute to define the image of this new agro-city.



左侧河岸的主要滨水线将完全重新改造，以创造一个新的洪泛区，旨在保护居住区免受洪水风险。这一缓冲区将成为湿地环境，有助于保护和加强河流的生态走廊。

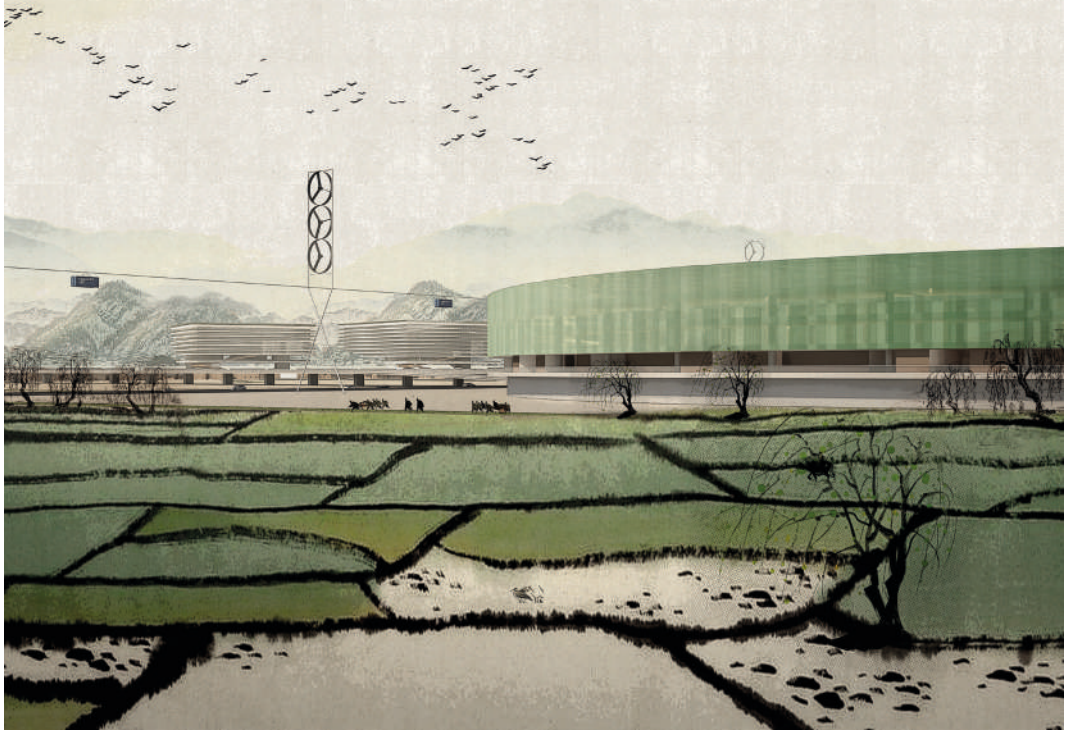
-

The main waterfront of the left riverbank will be completely rearranged in order to create a new floodplain, aimed at protecting the settlement from flooding risks. This buffer zone will become a wetland habitat, helping to protect and enhance the ecological corridor of the river.

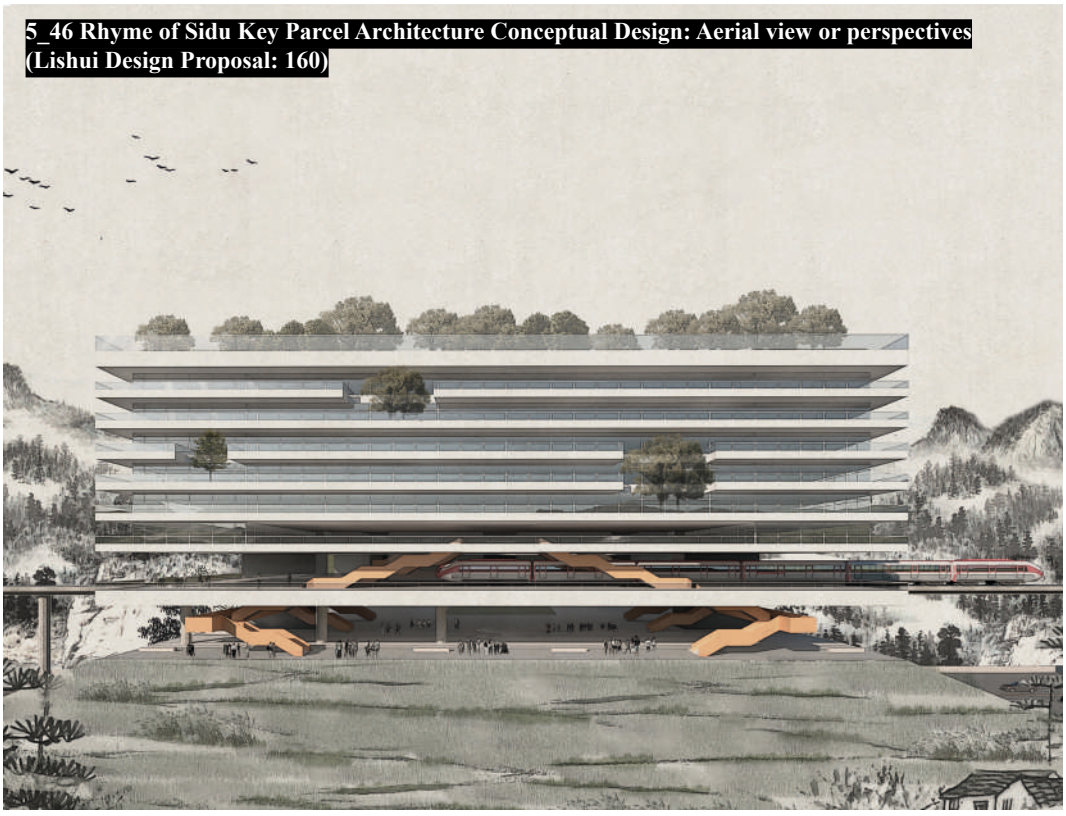


5_44 Southwest birdview (Lishui Design Proposal: 2)

5_45 Agricultural valley, Key Parcel Architecture Conceptual Design: Aerial view or perspectives (Lishui Design Proposal: 205)



5_46 Rhyme of Sidu Key Parcel Architecture Conceptual Design: Aerial view or perspectives (Lishui Design Proposal: 160)



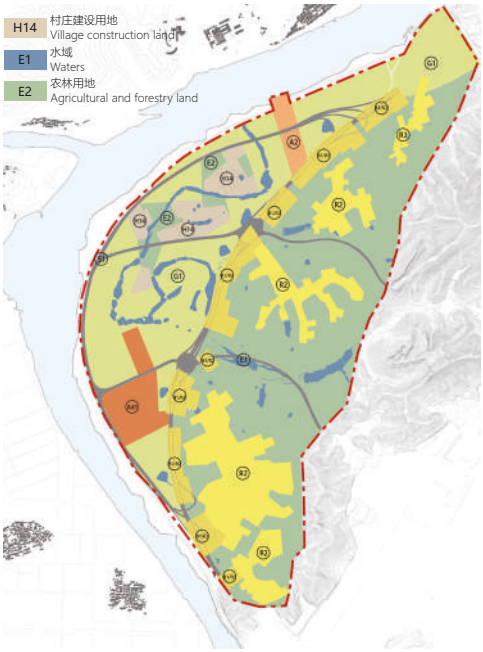
5_47 Rhyme of Sidu, Spatial Form Scheme: Zoning, land use, and area requirements (Lishui Design Proposal: 157)

四都清韵 空间形态方案：用地规划及经济技术指标

Rhyme of Sidu Spatial Form Scheme: Zoning, land use, and area requirements

用地名称 Land name					面积（hm²）	占建设用地比例（%）
H	建设用地 Construction land				334.84	100%
H11	城市建设用地 Urban construction land				314.93	93.1%
	A	公共管理与公共服务设施用地 Land for public management and public service facilities			22.08	
		其中	A2	文化设施用地 Cultural facility land	7.43	2.2%
			A41	体育场馆用地 Stadium land	14.65	4.4%
	R	居住用地 Residential land			84.87	
		其中	R2	二类居住用地 Second-class residential land	84.87	25.4%
	G	绿地与广场用地 Green space and square land			14.87	
		其中	G1	公园绿地 Park green space	14.87	44.4%
	S	道路与交通设施用地 Land for roads and transportation facilities			15.41	
		其中	S1	城市道路用地 Urban road land	15.41	4.6%
	X	混合用地 Mixed land			43.88	
		其中	B1/R2	商住混合用地 Commercial and residential mixed land	43.88	13.1%
H14	村庄建设用地 Village construction land				19.92	5.9%
E	非建设用地 Non-construction land				232.35	
	E1	水域 Waters			21.46	
	E2	农林用地 Agricultural and forestry land			210.89	

A2 文化设施用地 Cultural facility land
A41 体育场馆用地 Stadium land
R2 居住用地 Residential land
B1/R2 商业居住混合用地 Mixed land
G1 公园绿地用地 Park green land
H14 村庄建设用地 Village construction land
E1 水域 Waters
E2 农林用地 Agricultural and forestry land



5_48 Rhyme of Sidu, Spatial Form Scheme: Zoning, land use, and area requirements (Lishui Design Proposal: 157)

四都清韵 空间形态方案：用地规划及经济技术指标

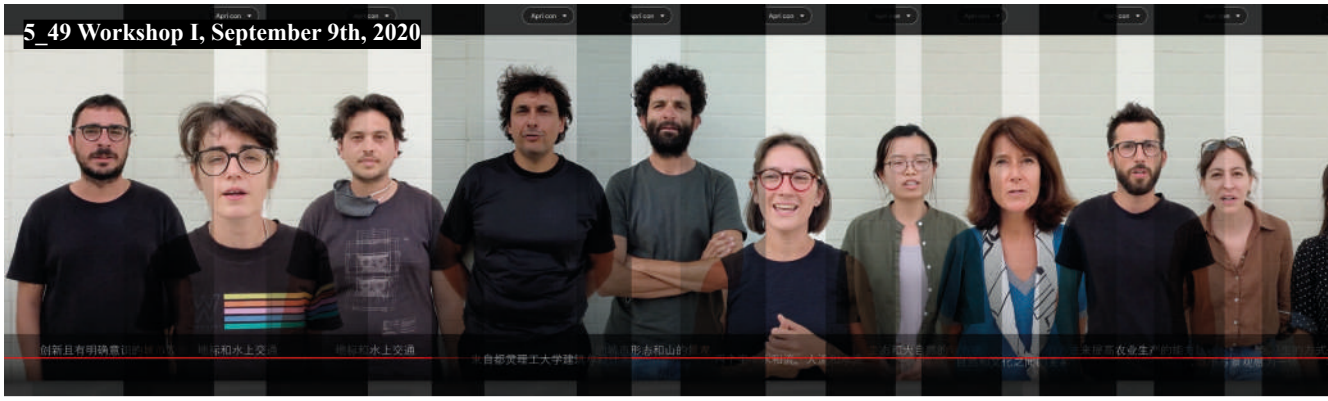
Rhyme of Sidu Spatial Form Scheme: Zoning, land use, and area requirements

	01	02	03	04	05
主要功能 The main function	居住用地 Residential land	居住用地 Residential land	居住用地 Residential land	居住用地 Residential land	居住用地 Residential land
用地面积/㎡ Land area	60552.3	113520.9	161835.1	410773.1	101992.7
建筑面积/㎡ construction area	161191.4	309724.4	591506.4	757159.4	155174.3
容积率 volume ratio	2.66	2.73	3.65	1.84	1.52

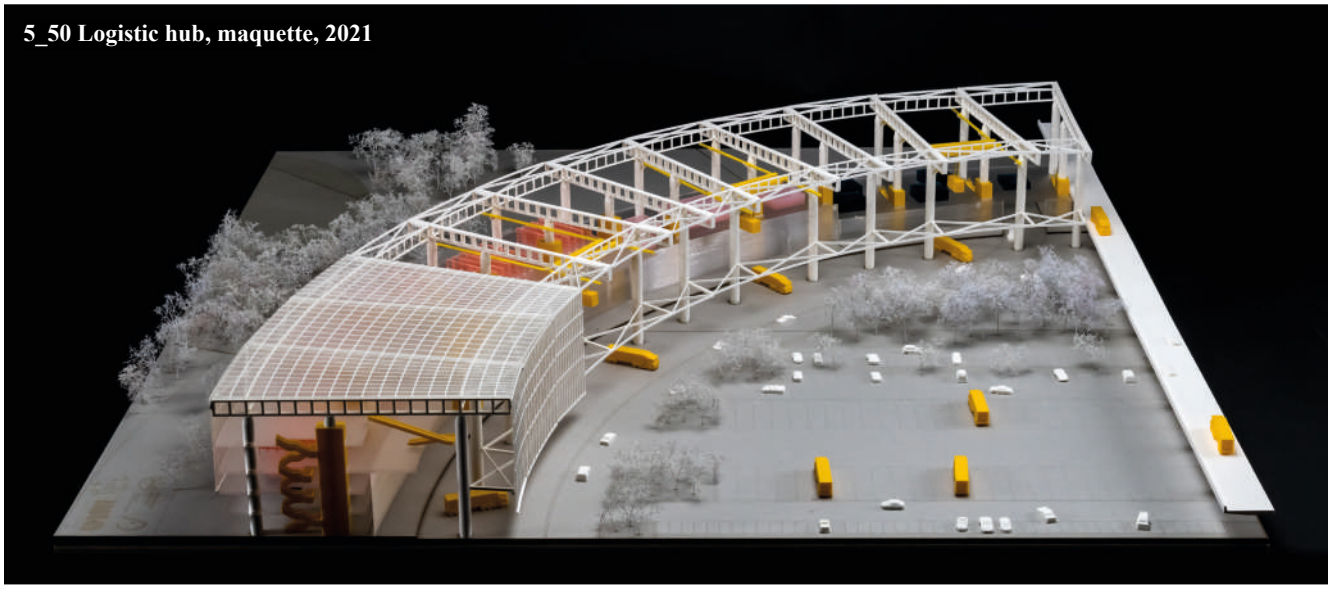
	06	07	08	09	10
主要功能 The main function	混合用地 Mixed land	混合用地 Mixed land	混合用地 Mixed land	混合用地 Mixed land	混合用地 Mixed land
用地面积/㎡ Land area	48842.6	77706.5	37596.9	99943.9	11274.0
建筑面积/㎡ construction area	228542.9	384762.7	177296.7	486634.3	72128.82
容积率 volume ratio	4.68	4.95	4.72	4.87	6.40

	11	12	13	14	15	16
主要功能 The main function	混合用地 Mixed land	混合用地 Mixed land	混合用地 Mixed land	混合用地 Mixed land	文化设施 Cultural facilities	体育场馆用地 Stadium land
用地面积/㎡ Land area	50542.6	51415.6	45986.7	1552.1	74308.0	146503.6
建筑面积/㎡ construction area	242432.6	275533.1	240998.1	75750.7	54692.8	72813.5
容积率 volume ratio	4.80	5.36	5.24	4.88	0.74	0.50

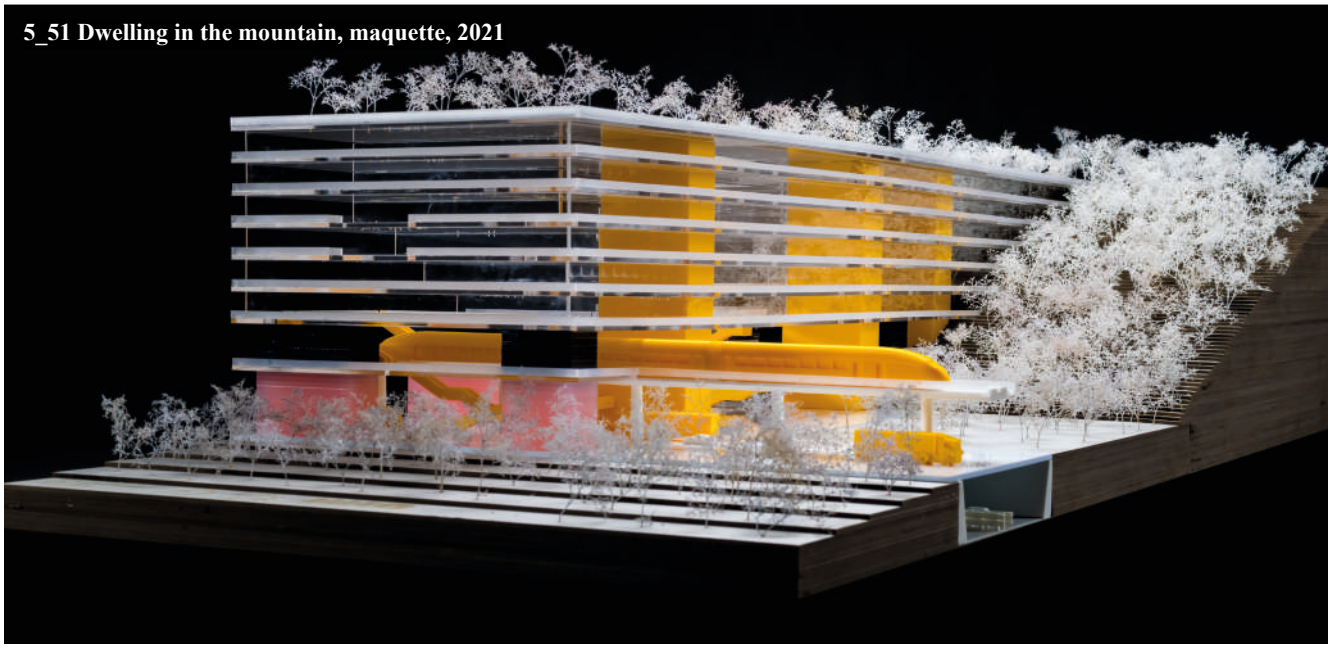
四都清韵	
总用地面积/㎡ Land area	5671945.7
总建筑面积/㎡ construction area	4286342.1
容积率 volume ratio	0.76



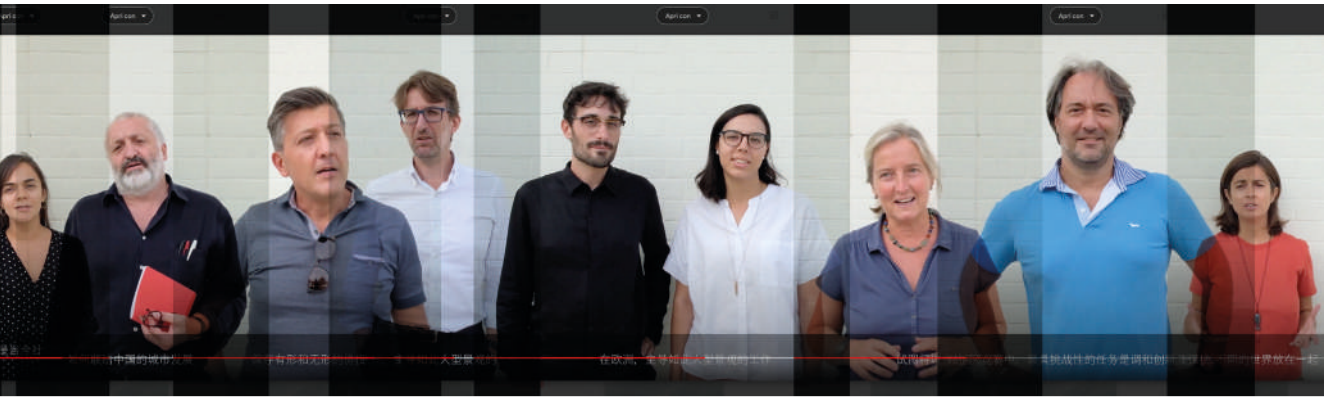
5_49 Workshop I, September 9th, 2020

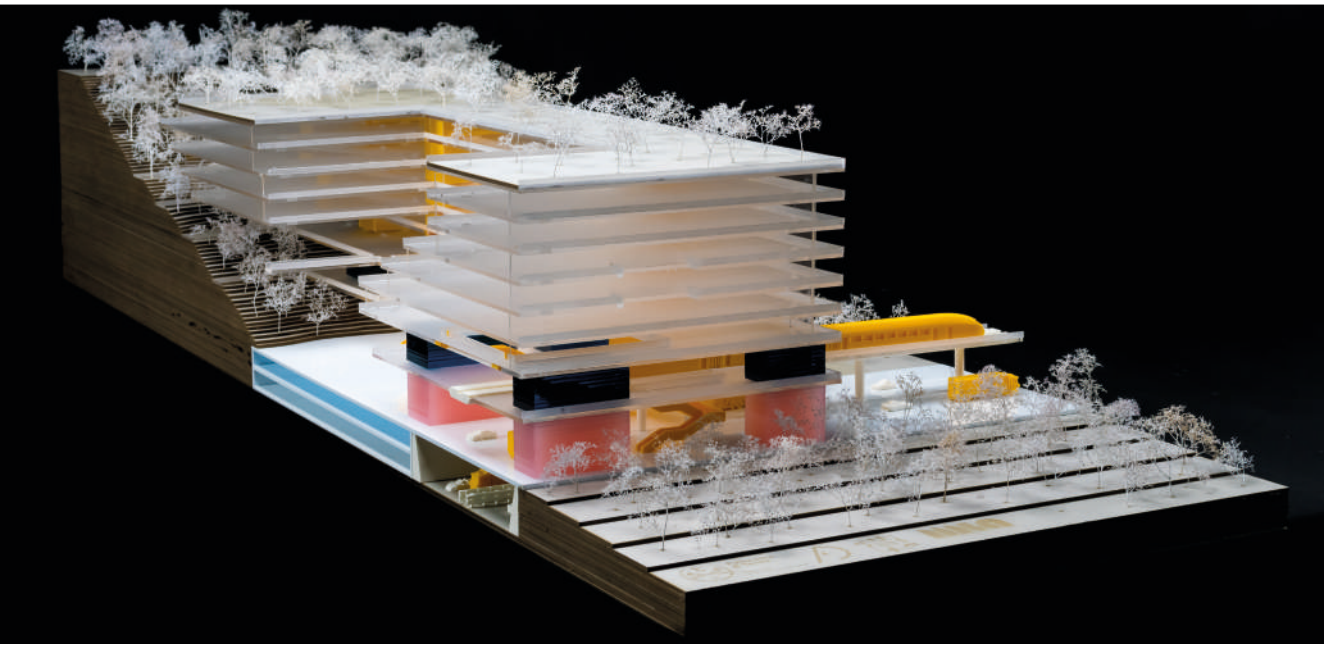


5_50 Logistic hub, maquette, 2021

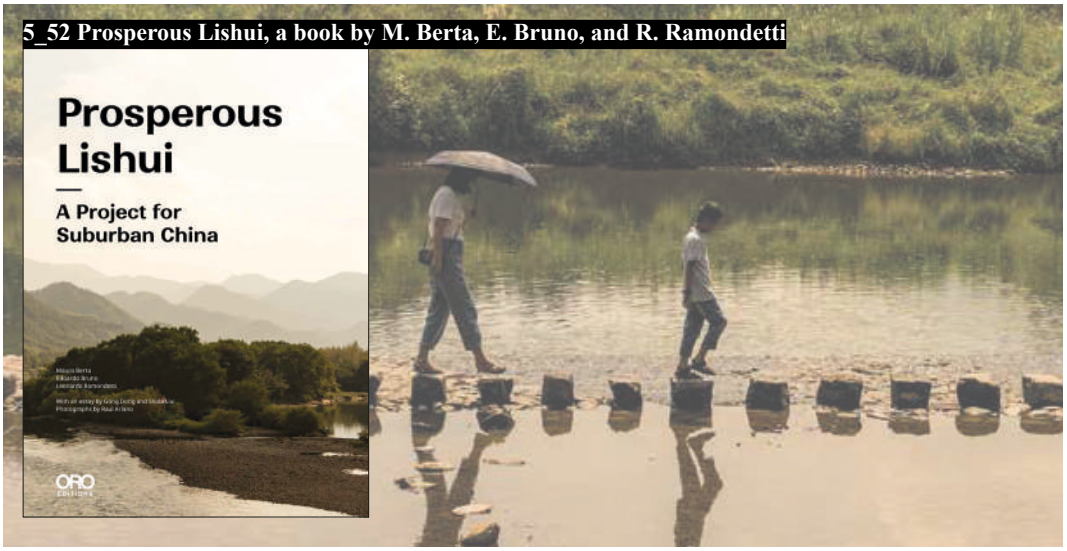


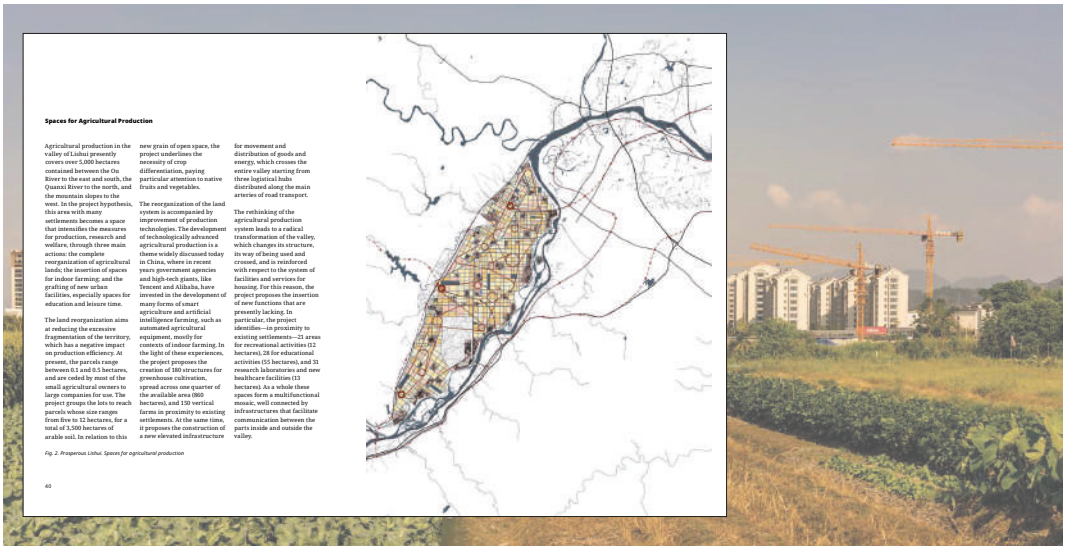
5_51 Dwelling in the mountain, maquette, 2021





5_52 Prosperous Lishui, a book by M. Berta, E. Bruno, and R. Ramondetti





Spaces for Agricultural Production

Agricultural production in the valley of Lishui presently covers over 5,000 hectares contained between the Ou River to the east and south, the Quanxi River to the north, and the mountain slopes to the west. In the project hypothesis, this area with many settlements becomes a space that intensifies the measures for production, research and welfare, through three main actions: the complete reorganization of agricultural lands; the insertion of spaces for indoor farming; and the grafting of new urban facilities, especially spaces for education and leisure time.

The land reorganization aims at reducing the excessive fragmentation of the territory, which has a negative impact on production efficiency. At present, the parcels range between 0.1 and 0.5 hectares, and are ceded by most of the small agricultural owners to large companies for use. The project groups the lots to reach parcels whose size ranges from five to 12 hectares, for a total of 3,500 hectares of arable soil. In relation to this new grain of open space, the project underlines the necessity of crop differentiation, paying particular attention to native fruits and vegetables.

The reorganization of the land system is accompanied by improvement of production technologies. The development of technologically advanced agricultural production is a theme widely discussed today in China, where in recent years government agencies and high-tech giants, like Tencent and Alibaba, have invested in the development of many forms of smart agriculture and artificial intelligence farming, such as automated agricultural equipment, mostly for contexts of indoor farming. In the light of these experiences, the project proposes the creation of 180 structures for greenhouse cultivation, spread across one quarter of the available area (900 hectares), and 150 vertical farms in proximity to existing settlements. At the same time, it proposes the construction of a new elevated infrastructure for movement and distribution of goods and energy, which crosses the entire valley starting from three logistical hubs distributed along the main arteries of road transport.

The rethinking of the agricultural production system leads to a radical transformation of the valley, which changes its structure, its way of being used and crossed, and is reinforced with respect to the system of facilities and services for housing. For this reason, the project proposes the insertion of new functions that are presently lacking. In particular, the project identifies—in proximity to existing settlements—21 areas for recreational activities (12 hectares), 28 for educational activities (55 hectares), and 31 research laboratories and new healthcare facilities (13 hectares). As a whole these spaces form a multifunctional mosaic, well connected by infrastructures that facilitate communication between the parts inside and outside the valley.

Fig. 2. Prosperous Lishui. Spaces for agricultural production

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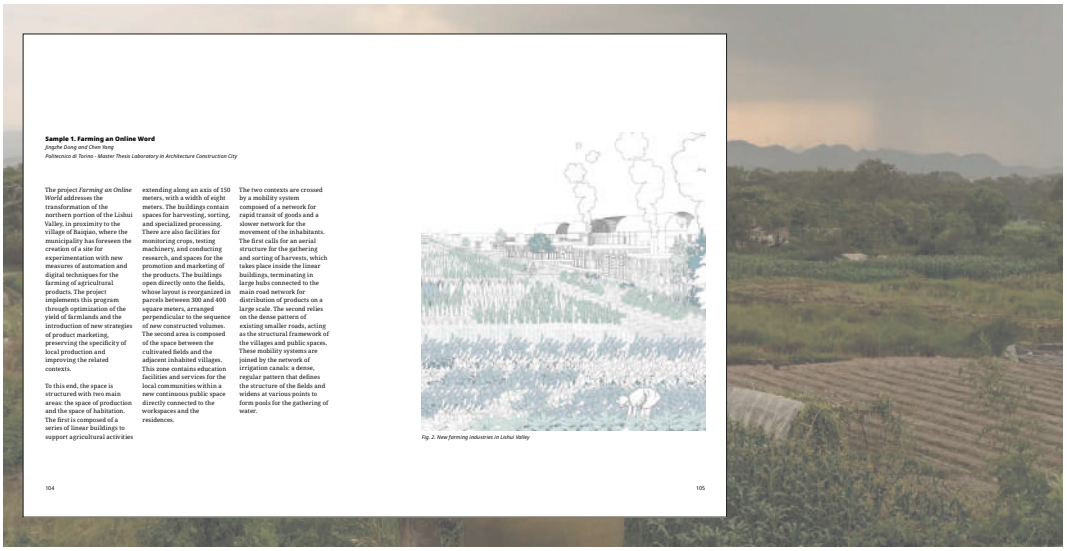

Sample 1. Farming an Online Word

Jingzhe Dong and Chen Yang

Politecnico di Torino - Master Thesis Laboratory in Architecture Construction City

The project *Farming an Online World* addresses the transformation of the northern portion of the Lishui Valley, in proximity to the village of Baiqiao, where the municipality has foreseen the creation of a site for experimentation with new measures of automation and digital techniques for the farming of agricultural products. The project implements this program through optimization of the yield of farmlands and the introduction of new strategies of product marketing, preserving the specificity of local production and improving the related contexts.

To this end, the space is structured with two main areas: the space of production and the space of habitation. The first is composed of a series of linear buildings to support agricultural activities extending along an axis of 150 meters, with a width of eight meters. The buildings contain spaces for harvesting, sorting, and specialized processing. There are also facilities for monitoring crops, testing machinery, and conducting research, and spaces for the promotion and marketing of the products. The buildings open directly onto the fields, whose layout is reorganized in parcels between 300 and 400 square meters, arranged perpendicular to the sequence of new constructed volumes. The second area is composed of the space between the cultivated fields and the adjacent inhabited villages. This zone contains education facilities and services for the local communities within a new continuous public space directly connected to the workspaces and the residences.

The two contexts are crossed by a mobility system composed of a network for rapid transit of goods and a slower network for the movement of the inhabitants. The first calls for an aerial structure for the gathering and sorting of harvests, which takes place inside the linear buildings, terminating in large hubs connected to the main road network for distribution of products on a large scale. The second relies on the dense pattern of existing smaller roads, acting as the structural framework of the villages and public spaces. These mobility systems are joined by the network of irrigation canals: a dense, regular pattern that defines the structure of the fields and widens at various points to form pools for the gathering of water.

Fig. 2. New farming industries in Lishui Valley

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5_53 Comparative overview of the three institutions

SCAD A. Beijing, PRC B. Design Institute affiliated to a University C. More than 1,300 members organized in 13 design and research branches; 7 design sections; and 4 studios D. 1958 (1981) E. thad.com.cn/	F. “Relying on the profound academic, scientific research and teaching resources of Tsinghua University and as the base for teaching, scientific research and practice of School of Architecture and School of Civil Engineering, we have been attaching great importance to academic research and the commercialization of technological achievements with our planning and design level coming out top in China. Since its establishment, our Institute has always been laying emphasis on quality, following the struggle goal of “designing elaborately, creating fine works, transcending ourselves and striving to be first-rate”, and cordially providing high-grade designs and services for all walks of life at home and abroad”.	G. Exhibition centers, memorial halls, learning and university facilities, cultural facilities, Olympic venues, research facilities, healthcare facilities, touristic facilities, headquarters, residential complexes, heritage conservation projects, urban design, and super high-rise towers.
China Room A. Turin, Italy B. University Research Group C. 7 Professors, 9 Fellows, 15 Junior Fellows D. 2016 E. chinaroom.polito.it	F. “China Room is a research hub that focuses on Chinese architecture and urbanism. Its activities span between Research, Education, and Practice. It aims at strengthening the collaboration with Chinese universities, scholars, and public institutions, thus contributing to redefining the global academic debate. The goal is to be an active hub of competencies as well as a repository of information, prompting scholars’ exchanges and mutual understanding”.	G. Masterplan for the redevelopment of a fishing village in China, industrial regeneration into a visitor center for the Olympics in China, industrial regeneration into a mixed-use cultural space in China, 1st place into an international competition on net-zero energy micro-housing, curatorship of an international Biennale.
IAM A. Turin, Italy B. University Research Group C. 25 Professors, 2 Fellows D. 2019 E. areeweb.polito.it/ricerca/IAM/	F. “IAM is a research group that specializes in conducting research, establishing networks, supporting local communities, promoting architectural and technical cultures, and facilitating educational activities in mountain regions. Their primary objective is to advance knowledge through both fundamental and applied research on alpine and mountain spaces. IAM actively promotes and shares architectural and technical cultures that contribute to the development and improvement of mountain areas, closely integrating educational activities with their research, with a particular emphasis on mountain places, landscapes, and environments”.	G. Feasibility study for the redevelopment of a high altitude bivouacs, design of experimental bivouacs, a cultural center and a sports center in an Alps village, the arrangement of open spaces and equipped areas in Alpine areas.

(A. location, B. type, C. structure, D. constitution year, E. site, G. mission, H. main projects typology)

Chapter 6

Prototype setup

To proceed with the verification of the knowledge outputs (K1 and K2) generated by the projects developed within the *technology transfer* domain, it is necessary to first ensure that there are grounds to associate the observed initiative with TT activities, regardless of the definitions used by the initiative itself. It is pivotal to dedicate attention to this aspect because, given the recent establishment of PS, this activity has not yet been subjected to external validation systems.

Hence, this Chapter frames the Polito STUDIO (PS) initiative[1], its development, assumptions, and functioning. It marks the first agreement between Politecnico di Torino and Ordine degli Architetti, Pianificatori, Paesaggisti e Conservatori della Provincia di Torino (OAT, the Turin Chamber of Architects) in approximately a century of shared history (Politecnico di Torino, 2021). Additionally, it is also Polito's first technology transfer initiative in the field of architecture (Politecnico di Torino, 2020a). To delve deeper into and position PS, the chapter proceeds by fulfilling the 12,000-character descriptive report defined by ANVUR (2021b; 2021c) **[6_02]** for evaluating the case study in the VQR3-

[1] The initiative is here intended in its general functioning, not hence directly referring to the design projects tackled in the biennium with the selected practitioners.

TM[2], specifically within the *C scope of action* — which encompasses "intermediation and technology transfer structures (e.g., technology transfer offices, incubators, science and technology parks, consortia, and associations for the Third Mission)"[3] (ANVUR, 2021b: 24) **[6_04]**. In doing so, it addresses the main indicators for third mission activities: the social, economic, and cultural impact; the relevance in relation to the reference context; the added value for the beneficiaries; the contribution of the proposing structure **[6_03]**. Considering that the term 'impact' refers to "the transformation or improvement that has occurred, possibly in relation to the scientific research outcomes generated by the institution, in terms of the economy, society, culture, health, environment, or more generally, addressing economic, social, and territorial inequalities to enhance the quality of life within a local, regional, national, European, or international context"[4] (14) and even the reduction or prevention of negative externalities.

As requested, the description will encompass not only the activities but also the conditions in which they took place, with particular attention to the reference context, the role played by the proposing institution, the temporal development, the involved stakeholders, and the resources employed. Additionally, the descriptive report is supplemented with comments that analytically unpack the specific bureaucratic nodes/issues/instances addressed during the conception of the initiative. For example, it explores the reasons behind the initiative, the progressively involved figures **[6_01]**, the proposed objectives, and so on. Furthermore, the narrative connects these issues to the international literature to gradually unravel the meanings, opportunities, and potentialities associated with

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[2] The approach and the contents of the chapter were discussed on April 26th and June 8th, 2023, with Dr. Antonina Maria Marino, the Head of Strategy, Evaluation, and Quality Service at the Politecnico di Torino. Dr. Marino is also a member of the Centrostudi4impact@PoliTo and the Steering Board for the ANVUR visit.

[3] "Strutture di intermediazione e trasferimento tecnologico (es. uffici di trasferimento tecnologico, incubatori, parchi scientifici e tecnologici, consorzi e associazioni per la Terza Missione)" (ANVUR, 2021b: 24).

[4] "La trasformazione o il miglioramento che, eventualmente in relazione con i risultati della ricerca scientifica prodotti dall'Istituzione, si sono generati per l'economia, la società, la cultura, la salute, l'ambiente o, più in generale, il contrasto alle disuguaglianze economiche, sociali e territoriali per incrementare la qualità della vita in un ambito territoriale locale, regionale, nazionale, europeo o internazionale" (ANVUR, 2021b: 14).

addressing technology transfer within a faculty of Architecture. In conclusion, the report provides a detailed description of the impact generated by the case study, proposing relevant and significant impact indicators based on the guidelines provided by ANVUR.

6.1 Tackling the Polito Studio Initiative

As mentioned, this section of the chapter deploys the datasheet required by the VQR-TM for the evaluation of case studies as the backbone through which positioning and further emphasized some of the issues of the observed initiative. In doing so, the chapter proceeds by interrupting the formalized sheet with paragraphs that highlight some of the tackled issues.

VQR-TM Datasheet (ANVUR 2020b, Attachment 2)

Title: Polito STUDIO China (PS)

Action scope (up to 3 fields indicating the main one) [6_03]:
c. Intermediation and technology transfer structures
f. Lifelong learning and open education (e.g., continuing education courses, Continuing Medical Education, MOOCs)
h. Production of public goods of a social, educational, and policy nature for inclusion (e.g. formulation of programs of public interest, participation in urban development projects or territorial enhancement, and initiatives of participatory democracy, consensus conferences, and citizen panels)

Spheres of application

In the PS case, as is common in TM activities, it is not possible to restrict the scope of action exclusively to one field. Such a circumstance is even more evident in PS than in other cases, given the exceptional nature (at least for Polito) of developing the first technology transfer facility in architecture. In this regard, while drawing inspiration from longstanding engineering-side structures, PS significantly diverges from the large infrastructures typically associated with technology transfer offices. It combines various types of activities and, more than

others, encompasses multiple action scopes within the ANVUR taxonomy.

In the main official documents, PS is typically classified as a technology transfer activity, with the goal of enhancing the value of Polito's research efforts by promoting collaborative projects that support the growth of local businesses in foreign countries and contribute to the professional development of students. ANVUR guidelines specify that "the scope of action for intermediary and TT structures should be broad and consider the territory in a logic of 'concentric circles' that expands, including the involvement of students and graduates, from the local level to the national, and potentially European and international levels"[5] (ANVUR, 2021d: 25). As further elaborated in the following paragraphs, the initial three phases (referred to as actions a, b, and c) are specifically designed with this objective in mind. They aim to support Turinese companies in expanding their presence in the international market by introducing them to the main mechanisms and operations of foreign scenarios, as well as identifying and disseminating business opportunities. Additionally, the agreement includes provisions for involving master's or postgraduate students in vocational internships, thereby facilitating their entry into an already competitive professional environment.

The final and more experimental phase (referred to as action d) expands this same scope, being also associated to the field of *lifelong learning* (Polito, 2015: art. 5). In essence, it involves bridging the practices of Turinese firms with international designs, gradually accumulating collective workshop experiences, expertise, and knowledge to enable autonomous progression after the two-year course. Referring to ANVUR criteria once again, this action is also aligned with the objective of "enabling local businesses to generate significant incremental innovations that they often fail to achieve due to resource constraints and facilitating access to global production networks"[6] (ANVUR, 2021d: 26). It

[5] "Il campo di azione delle strutture di intermediazione e di TT deve essere ampio e guardare al territorio in una logica di 'cerchi concentrici' che si allarga, anche mediante il coinvolgimento degli studenti e dei laureati, dal livello locale a quello nazionale ed eventualmente europeo e internazionale" (ANVUR, 2021d: 25).

[6] "Consentire alle imprese del territorio di produrre significative innovazioni incrementali che spesso non realizzano per mancanza di risorse e accedere alle reti mondiali di produzione" (ANVUR, 2021d: 26).

involves "collaborations with local associations and industry sectors to develop innovation projects, technology transfer, and foster an entrepreneurial culture […] able to enhance productive specialization processes or provide services enabling companies to increase competitiveness in the market […] and the development of tools for accessing information related to expertise and research outcomes"[7] (26). These objectives are still part of the 'c scope of action' according to ANVUR criteria. Besides it though, these workshops can be linked to "the activities carried out by institutions (individually or in a network) and/or in collaboration and agreement with external entities/organizations, targeting non-traditional users (e.g., […] professionals), that have resulted in a change, including professional qualification or requalification (e.g., acquisition of knowledge and skills)"[8] (37), hence broadening to the 'f category'.

Moreover, the structure of the training activity itself, which is a dedicated course[9] for a group of selected Turinese professionals in architecture who possess demonstrated skills and a keen interest in expanding into international markets, also encompasses the development of social and educational inclusion policies. These policies can be seen as the formulation of programs aiming in serving the public interest and foster social and educational inclusivity. In particular, the kind of policies that "can testify to the institution's contribution to society and the economy through community services […] the utilization by the community of

[7] "Collaborazioni con le associazioni espressione del territorio e delle categorie per lo sviluppo di progetti di innovazione, trasferimento tecnologico e generazione della cultura di impresa […] in grado di favorire i processi di specializzazione produttiva o di erogare servizi che consentono alle imprese di aumentare la competitività sul mercato […] e lo sviluppo di strumenti per la fruizione delle informazioni relative a competenze, risultati della ricerca" (ANVUR, 2021d: 26).

[8] "Attività realizzate dalle Istituzioni (da sole o in rete) e/o in collaborazione e convenzione con enti/organizzazioni esterne rivolte ad utenti non tradizionali (ad esempio […] professionisti), che abbiano prodotto un cambiamento anche in relazione alla qualificazione o alla riqualificazione professionale (ad esempio, l'acquisizione di conoscenze e di competenze)" (ANVUR, 2021d: 37)

[9] The course is regulated by a specific agreement between the relevant department (DAD) and the external organization (OAT), and it does not confer academic qualifications but rather professional Continuing Professional Development (CPD) credits (Appendix 3: 2022.04.01, 2022.02.17, 2021.01.27). In Italy, professionals who are registered in the professional order are required to engage in continuing professional development, which is certified through the acquisition of 60 CPD credits every three years (CNAPPC, 2017: art. 6). This ensures that professionals update and document their professional skills.

research infrastructures and the know-how derived from research activities for socio-cultural development initiatives and to enhance understanding of processes that have a direct impact on the community"[10] (78-79). Concluding, it also reflects "the institution's willingness to invest in creating an impact beyond academia" (79) through the definition of a new model of socially distributed knowledge production (Gibbons et al., 1994; Nowotny et al., 2001).

A. Institution: Politecnico di Torino (Polito)

B. Relative department: DAD - Department of Architecture and Design

C. Eventual Scientific Areas of the Case Study: Area 08a

D. Academic Staff involved:

MB Michele Bonino - Full Professor ICAR/14
AC Antonio Cinotto - Architect, Advisor Fondazione per l'architettura (OAT)
LR Laura Rizzi - OAT Director
PJ Peter Jaeger - Architect, OAT Advisor
PM Paolo Mellano - Full Professor ICAR/14
VF Valeria Federighi - Research Associate with time contract (RTDa) ICAR/14
RZ Roberto Zanino - Advisor, Vice Rector European Relations
FDF Francesca De Filippi - Advisor, Associate Professr ICAR/12

CF Camilla Forina - Ph.D. Student ICAR/14
LP Lidia Predi - Ph.D. Student ICAR/14

Exclusively for action d:
EB Edoardo Bruno - Research Associate with time contract (RTDa) ICAR/14
XL Xian Lu - Ph.D. Student ICAR/14

E. Keywords (up to 10): trasferimento tecnologico; internazionalizzazione; trasferimento della conoscenza; valorizzazione della ricerca; rapporti con imprese; scambio di competenze

[10] "Che possono testimoniare il contributo reso dall'Istituzione alla società e all'economia attraverso i servizi alla comunità […] l'uso da parte della comunità di infrastrutture di ricerca e know-how derivante dalle attività di ricerca per iniziative di sviluppo socio-culturale e per migliorare la comprensione di processi che hanno un impatto diretto sulla comunità […] la disponibilità a investire per avere un impatto al di là dell'accademia" (ANVUR, 2021d:78-79).

F. Detailed description of the case study (up to 10.000 characters):

Polito STUDIO (PS) is an ongoing experiment launched in 2021 that leverages the extensive international research activities conducted by a prominent academic institution and the International network of close partners and contacts it has cultivated. It is part of the institutional objective to "develop new models for technology transfer in the field of architecture, planning and design" (Polito, 2019: 70). The project is promoted in collaboration with TOChina Center of the University of Turin (Unito) and Italy-China Foundation.

PS consists in a two-year program that offers support for professional practice in foreign contexts. Every year, a new scenario is approached, expanding upon all the actions undertaken in the two-year program. This form specifically applies to the first cohort, which focused on China (April 2021-April 2023) — the second cohort, which began its activities in 2022, is currently dedicated to collaborating with partners in Colombia and other Latin American countries.

Considering the stagnant and contracting nature of the architectural market in Italy, Polito STUDIO China is a TT initiative aimed at strengthening the competitiveness of the regional professional architecture sector, and by extension, the national and European sectors. The goal is to address the challenges posed in Italy by the largest number of professionals in Europe, consisting of approximately 150,000 architects in the last decade (CNAPPC, 2022: 40), by connecting it to a growing architectural market with a smaller number of professionals, in 2018 China had only 27,252 licensed professionals (Rizzardi, Zhang 2018). This is achieved through the qualified training of Italian professionals, focusing on the practical application of research results and fostering collaborations with stakeholders in China.

PS is an open model, which can be replicated, and evolves through progressive implementation, allowing for the continuous definition of objectives, tools, and actions. The project aims to maximize the potential for innovation in both professional and academic practices by creating cohesive practice cohorts and providing them with international opportunities. In this sense, it has been developed with the aim of encouraging interdisciplinary dialogue and knowledge sharing, nursing innovative solutions between the university, and professional practice.

In this model hence, the flanking of professionals and academics consists in the scaffold that supports the venture and is retrieved in the cohort as much in the core management team consisting of six members (three from Polito and three from OAT), complemented by a couple of dedicated Ph.D. students who

observe and study the initiative, and a researcher and a third Ph.D. student furthering the most applied branch of PS. Additionally, the team may be expanded when necessary to include other individuals, as indicated in the subsequent descriptions.

It consists in four key actions:

(a) monthly dissemination of best practices. Polito curates an observatory that collects innovative and relevant international cases of collaboration between academic and professional institutions. This ongoing collection of cases serves as both a guide for research and a reference point for the development of PS, enabling comparisons and highlighting recurring themes and differences based on geography, methodology, and regulations

(b) selection and public dissemination of competitions and calls for proposals. Polito identifies and shares information about architecture, urban, and landscape design bidding in China. These announcements are made accessible to all national professionals, through the initiative web bape on the OAT site as well as a dedicated newsletter.

(c) organization of at least one annual capacity-building event that offers a comprehensive overview of different international markets and the opportunities they offer to architectural designers. Co-organized by OAT and Polito, this event is open to the wide public and aimed at registered professionals, as well as Polito faculty and researchers. During the event, the call for participation in ‘activity d’ is launched.

(d) an advanced training course for 12 professionals, whether they are independent or affiliated, conducted to support entry into Chinese markets through the development of concrete design projects. The course consists of workshops in collaboration with Chinese institutions and Italian scholars, with the aim to facilitate knowledge exchange, foster collaboration, and enhance the skills of Italian professionals in the context of Chinese architectural practice. The 12 selected firms have to be affiliated with OAT or graduated from Polito, with a particular emphasis on encouraging the participation of younger architects (extra points were given in the selection to those who have been enrolled in OAT for less than 10 years or are Polito alumni). Additionally, a research group from the university, that is specialized in the architecture and networks of the targeted region, in this case Polito China Room research group, joins the cohort. This program includes as well the involvement of international guests and scholars, aimed at framing specific competitions, calls for proposals, or direct mandates. Hence these activities promote the establishment of collaborative networks between Italian and Chinese professionals, institutions, and organizations. These

networks serve as platforms for exchanging ideas, sharing experiences, and developing joint projects that contribute to the growth and competitiveness of the architecture sector at both national and international levels.

(e) during the training course, the 12 selected professional firms are encouraged to offer internships to Polito students. These internships are specifically targeted toward Chinese students pursuing MASt/Master's degree in Architecture for Sustainability (Polito) and MACC/Master's degree in Architecture Construction City (Polito). The internships are designed to offer practical assistance to the participating professional firms through students who are nearing completion of their degrees and possess knowledge of the Chinese context and language. Furthermore, they provide students with the chance to engage in architectural or urban projects within an internationally-focused professional setting.

Through these actions, PS aims to bridge the gap between the Italian and Chinese architectural markets, fostering mutual understanding, professional growth, and the development of innovative solutions for the benefit of both countries. In a broader sense, the project also aims to transcend traditional vocational boundaries by leveraging the specific knowledge of the participants (scholars and professionals), and experimenting with an iterative model of collaboration between different spheres for knowledge exchange and production.

The reasons behind

The landscape of professional architectural practice in Italy is currently facing significant economic challenges. As of December 31st, 2020, there was an average of 2.58 architects per 1,000 inhabitants, with a peak of 5 per 1,000 in the province of Reggio Calabria (CNAPPC, 2022: 40, 46). Additionally, the construction market has experienced a significant decline, with the value decreasing from €253,848 million in 2010 to €135,795 million in 2020 (ACE, 2021: 24). Moreover, the professional landscape is characterized by a fragmentation — as 50% of the 25,874 Italian firms consist of only one person (CNAPPC, 2022: 36) — that presents a particular challenge when competing in rapidly-growing international markets, where competitiveness and reliability are crucial. In fact, only 11% of Italian professionals participate in competitions, while other European countries, such as Austria, Denmark, and Norway lead the

ranking with participation rates of 45%, 44%, and 47%, respectively (ACE, 2023: 44). Furthermore, only 2% of the total practice turnover in Italy comes from other countries, with 1% from other EU countries and a merely 1% from Asia (ACE, 2023: 41).

Given this context, larger institutions such as universities have demonstrated greater adaptability and integration into evolving global dynamics, affording a wealth of internationalization opportunities (Cognetti, 2013). Universities are increasingly engaged in networks of relationships, often deeply rooted in specific territories, and involving a diverse range of public and private entities. These networks, often emerge organically, without direct support from public policies, and with a significant emphasis on international networks, which underscores the importance of global connections. Consequently, universities have undergone internal reorganization processes, including the establishment of new organizational units and the initiation of interinstitutional activities that strengthen and expand these networks even further. For instance, in December 2020, Italian universities and research centers had established 941 agreements with Chinese universities, marking a 69% increase over the course of four years compared to the 556 agreements in 2016. Polito stands as a prime example of this, with its well-established outreach facilitated by the China Center and two research group collaborating with China within the DAD: China Room research group and the Transitional Morphologies Joint Research Unit[11]. Within this operative context, on June 8th, 2020 Polito and OAT signed the agreement for the Polito Studio initiative aiming to plunge a synergy between the two institutions to promote the internationalization of Turinese architects while boosting access to the profession for Polito's graduates (Politecnico di Torino, 2020b: 1).

However, the possibility of developing the very first Technology Transfer (TT) initiative in the field of architecture at Polito has been accompanied by the challenges posed by the Italian system, particularly since the implementation of

[11] It is a Joint Research Unit, established in 2008 between the Southeast University of Nanjing and Politecnico di Torino. The primary objective of the Joint Research Unit is to establish a foundation for adaptive urban regeneration design processes. This involves examining the characteristics of urban morphologies and investigating their historical origins, considering factors such as economic and social perspectives, as well as their symbolic significance. The research encompasses regions in Asia, Europe, and the Southern parts of the world (Trisciuoglio et al., 2021).

Law 240/2010. This law has imposed difficulties in formalizing structured collaborations between universities and external institutions such as public administrations, professional bodies, and architectural firms[12] (Pasqui, 2018: 60). Despite the announcement of the project emphasizing "the conviction that it is crucial today to update the interactions between institutions dedicated to university education and research, and institutions dedicated to regulating professional interests"[13] (Polito, 2020b: 1), the first chapter of this work demonstrates that in Italy the relationship between scholars and practitioners is often in a precarious balance and leads to frequent formal and informal disputes. This issue is perceived as problematic both in academia, where it hampers empirical research in design, and in the professional sector, especially due to the lack of structures that facilitate entry into the international design market with reliability and appropriate risk management. Consequently, the initial context of the PS initiative was characterized by challenges and uncertainty, as the experimental nature of the project became apparent only after the first agreement was signed. Hence, during the initial structuring phase of PS, the pivotal role of internationalization and the intention to leverage the experience and expertise of academia for the betterment of society were the only clearly defined elements.

According to this reading, PS is explicitly mentioned as the main of three internationalization projects launched in the 2017/2021 OAT mandate (OAT, 2021: 26) as a two-year advanced training program and business incubator. Conversely, although there is not a clear reference to the Polito Studio initiative in the Polito 2018/2024 Strategic Plan, it is possible to interpret some of the contents as an implicit cross-reference to the project. In particular, the purpose of

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[12] As an example, it is here considered the Polito University Regulation (Regolamento di Ateneo). Although it is recognized among the most permissive in the national arena regarding in-house and third-party activities for design in the fields of architectural design, territory, and landscape (Manzo, 2011: 41), the regulation still prevents consultancy agreements with firms, professional associations or companies, individuals, political organizations and property administrations (Polito, 2015: art. 4 comma 6) thus slowing down and complexifying the structuring of agreements between the parties helpful in overcoming existing tensions between architectural departments and professional bodies or agencies.

[13] "La convinzione che oggi sia fondamentale aggiornare le interazioni tra le istituzioni dedicate all'educazione universitaria e alla ricerca e le istituzioni dedicate a disciplinare gli interessi professionali" (Polito, 2020b: 1).

enhancing and reinvigorating ties with professional bodies "especially in relation to *lifelong learning*" (Polito, 2019: 49) through the development of "new models for *technology transfer* in the field of Architecture, Planning and Design" (70). However, the explicit reference occurred in the subsequent release of the 2022-2024 PIAO (Piano Integrato Attività e Organizzazione) (Polito, 2022a) that mentioned "technology transfer models in the field of Architecture, Planning and Design with special reference to the areas of China, Latin America and Africa" (16), and even more specifically in the mid-term evaluation and Actualization of Polito Strategic Directions (Polito, 2022b) and during the Academic Senate (AS) and Administrative Council (CDA) meeting held on December 12th, 2021 in which for the first time in an official record the PS initiative is classified as a "third mission activity oriented to develop technology transfer" at the maximum priority level (Polito, 2021b).

Hence, Polito Studio can be clearly detected not just as the attempt to enhance the research activity, but also as the embodiment of a dual effort by the institutions to overcome the legacy of a restrictive and frictional system to intensify the dialogue between institutions and society (ANVUR, 2022: 12) by overtaking the shift between academic and professional sphere.

Taking this into consideration, the initial efforts have been focused on examining different existing collaboration models between academia and practice while engaging in negotiations with the professional order to establish the primary channels of exchange. The insights gained from these explorations have played a crucial role in shaping the ongoing initiative, leading to the selection of China as the primary operational context, and constitutes the main contents of the aforementioned 'action a'. This decision aims to leverage Polito's accumulated experiences, which have been partially discussed in the preceding chapter, as well as the potential offered by the scarcity of licensed professional architects in the region and the intricate network of design market actors, specifically the University-led Design Institutes detailed in Chapter 3. These UDIs frequently seek international collaborations to undertake large-scale transformative projects. Consequently, the China Room has assumed the central role of advising and structuring the mechanism of the initiative.

> Hence, PS primary objective is to identify, organize, promote, and implement a new collaborative model of knowledge production that enhances the professional capabilities and competitiveness of both Polito students and OAT members, while also providing valuable data, case studies, and practices for research purposes. In pursuit of this objective, PS capitalizes on Polito's vast experience in international settings, as well as on OAT's competencies in identifying actions that align with and address the interests and needs of professionals. In this regard, prior to the initiation of the training and capacity-building activities aimed at promoting the role of international architects and advancing design skills in the field of Architecture, the core management team has been engaged in a series of meetings involving the two institutions and other trade associations, including OAT focus groups and Polito's Alumni association (January 21st, 2021) to foresee the main issues and functioning of the initiative.
>
> Based on this context, PS operates as an administrative collaboration between public institutions in accordance with Article 15 of Law 241/1990. While actions a, b, and c happen online and are yet open to the general public, action d is limited to a carefully selected group of 12 professionals it takes place alternately at OAT's venue or Polito's, until the opening of OAT's new headquarters, which will feature a dedicated room for the activity. Each cohort functions for a duration of two years, with the first Chinese cohort working from April 2021 to May 2023.

Functioning of the mechanism

Behind the incubator

Being PS Agreement framed in the L 241/1990 art. 5, the activities it encompasses should be referred exclusively to the research or didactic, in a nutshell, this article states the absolute impossibility of collaboration among public institutions resulting in a commercial activity. For this reason, the first among the bureaucratic issues approached in the definition of PS functioning has been the definition of the operative margins in which the initiative would have moved. Accordingly, in various roundtables even involving attorneys from both parties (Appendix 3) has been carefully defined a specific margin of actions separating the activities approached within the PS framework, and thus the 'incubator', and the actions behind it. In this sense, the activities developed within

the incubator concern exclusively the briefing of the competitions, and are rewarded exclusively with CPDs (one for each hour). While participants are mandatorily required to take part in at least four workshops during the biennium, further finalization of work is solely on a voluntary basis.

Within the incubator

The team comprises twelve practitioners from Turin, carefully selected from young professionals and private firms to bring a diverse range of approaches, backgrounds, and expertise. They approach the contents of international design competitions with researchers from Polito and eventually involved international guests. The competitions presented are carefully chosen to align with the main research topics that have been developed by Polito's researchers in recent years, ensuring maximum scientific insights in exploring design topics, contents, and context-related issues.

The formative process consists of at least two weekly collective workshops, where the core team, composed of approximately 10 researchers (including Ph.D. candidates, Post-Docs, and professors), facilitates the briefing for the competition. These workshops serve as a platform for Polito's researchers to share data, and insights, and engage in discussions pertaining to the competition with professionals. Additionally, external and local experts are invited to contribute their expertise, providing valuable insights into the competition's topic, site knowledge, and important discussions on various aspects such as history, geography, ecology, economy, and social issues. They also shed light on ongoing processes in the area or similar conditions elsewhere.

Beyond the incubator

In the next phase, the dialogue expands to include design content, involving voluntary participants from the group and at least one Chinese partner (UDI),

which is usually a requirement to participate in the competition[14]. During the competitions, the action progresses through active interaction among all the participants, promoting exchange among individuals from different backgrounds who are not competing against each other but collaborating towards a common goal. While scholars take on a more involved role in managing relationships with team members, collecting quantitative information from the project site, and coordinating the design approach, firms enhance architectural solutions by negotiating proposals with all the other teams involved (UDI and other potential partners).

In this context, the researchers translate the test outcomes into *situated knowledge* (Haraway, 1988), which specifically relates to the site, topic, and process of the competition itself. This process also provides insights into the practice itself and the collaborative process. These experiences inform the development and updates of the initiative, as well as the potential introduction of new research topics.

The objective is to leverage the diversity among participants and foster a highly interactive approach that facilitates the production of knowledge in a socially distributed manner. The final results obtained in the test are applied by the various participants in different applications of the discipline: practitioners, on one hand,

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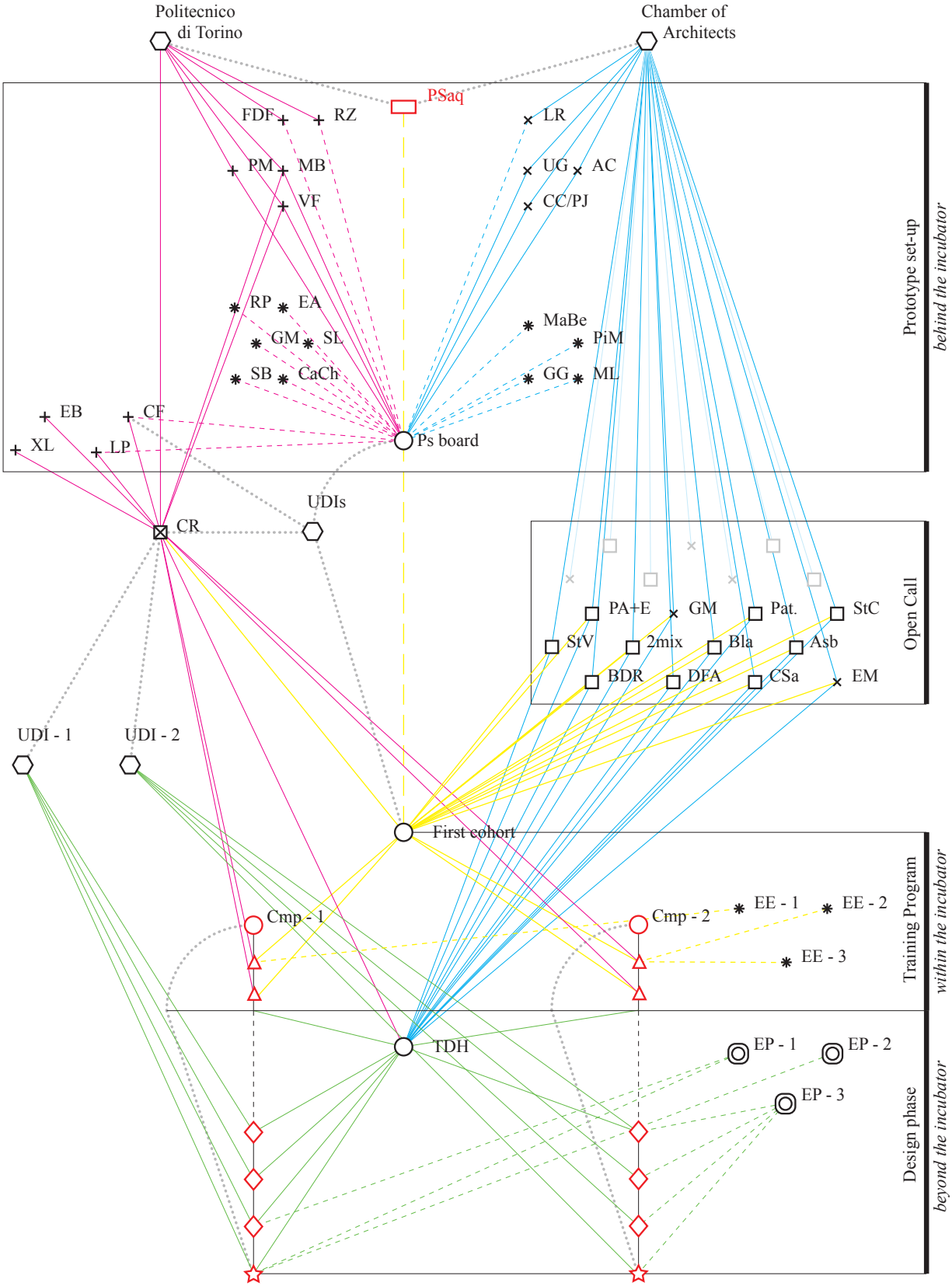
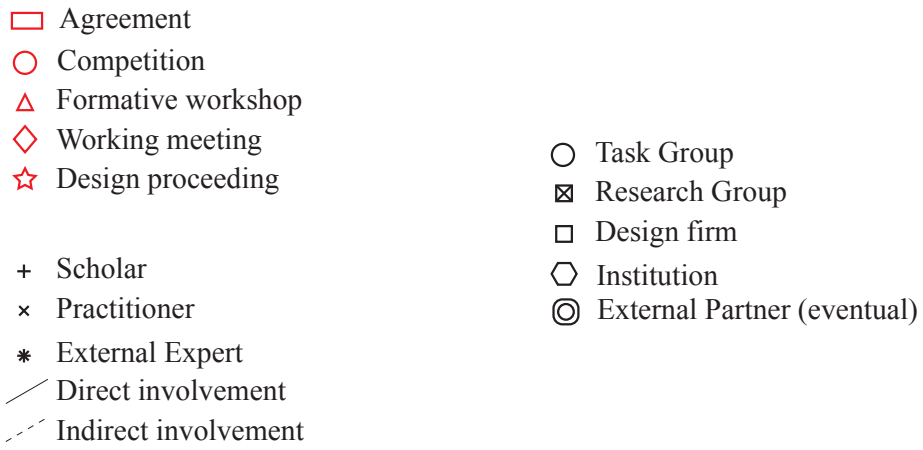
[14] As discussed in Chapter 3, cooperation with a Design Institute is a requirement for architectural design development in China. Furthermore, when participating in design competitions, it is common for applicants to be required to be registered companies with Chinese qualifications. This implies that Italian firms must collaborate with Chinese partners. Additionally, while the formation of a consortium is permitted, there is often a limit on the number of participants. In such cases, the firm with the most relevant design experience to the competition typically assumes the role of representative for the group. For instance, the following is an excerpt from the *Tendering for Architectural Scheme and Design Development of the Fucheng Guanlan Industrial Land Development Overall Interest Coordination Project within the Meiguan Innovative Industry Corridor (Plots 01-03)*, which will be further discussed in the next chapter: "Applicants must be legally registered companies or organizations, with Class A qualification for construction industry or engineering design in China […] Consortium is accepted in this project, and the members of the consortium need to meet the following requirements: there shall be no more than 2 consortium members; each member of the consortium shall not further apply alone or join another consortium with other applicants to apply; the consortium members need to sign legal and valid Consortium Agreement, specifying the work distribution and share of rights and interests during project implementation stage if awarded with Contract. Application of individuals and teams of individuals is not accepted" (Prequalification Document: 15).


Politecnico di Torino
Chamber of Architects
PSaq
FDF
RZ
PM
MB
VF
LR
UG
AC
CC/PJ
RP
EA
GM
SL
SB
CaCh
MaBe
PiM
GG
ML
EB
CF
XL
LP
Ps board
Prototype set-up behind the incubator
UDIs
CR
PA+E
GM
Pat.
StC
StV
2mix
Bla
Asb
BDR
DFA
CSa
EM
Open Call
UDI - 1
UDI - 2
First cohort
Cmp - 1
Cmp - 2
EE - 1
EE - 2
EE - 3
Training Program within the incubator
TDH
EP - 1
EP - 2
EP - 3
Design phase beyond the incubator

6_01 Diagram of the main structure and functioning of PS-China initiative



2mix 2MIX Architetti/Architectural firm
AC Antonio Cinotto/Advisor OAT Foundation for Architecture
Asb Archisbang/Architectural firm
BDR BDR Bureau/Architectural firm
Bla Balance Architettura/Architectural firm
CaCh
CC Cristina Coscia/OAT Vice-President (until 2022)
CF Camilla Forina/Ph.D. student; CR fellow
CSa Corbellaro SA/Architectural firm
DFA De Ferrari Architetti/Architectural firm
EA
EB Edoardo Bruno/Research Associate with time contract; CR fellow
EM Eudes Margaria/Architect
FDF Francesca De Filippi/Rector's Advisor for Development Cooperation
GG Giulia Gasverde/OAT Communication Office
GM
GM Giampiero Moretti/Architect
LP Lidia Preti/Ph.D. student; CR fellow
LR Laura Rizzi/OAT Director
MaBe Maddalena Bertone/OAT Foundation for Architecture
MB Michele Bonino/Rector's delegate for relations with China; CR fellow
ML Milena Lasaponara/OAT Legal Advisor
PA+E Pennazio Architects + Engineers/Architectural and Engineering firm
Pat. Pat./Architectural firm
PiM Pietro Martinetti/OAT Communication Office
PJ Peter Jaeger/Consigliere Ordine Architetti Torino (since 2022)
PM Paolo Mellano/DAD Director
RP Roberta Pavarino/Polito Legal Advisor
RZ Roberto Zanino/Vice-Rector for European Relations
SB Silvia Brannetti/Polito Communication and Media Relations Service
SL Shiva Loccisano/Polito Legal Advisor
StC Studio Cavaglion/Architectural firm and Design Office
StV Studio Vaj/ Architectural and Engineering firm
UG Urszula Grodzicka/Referent OAT Focus Group for Nationaland International Network (until May 2022)
VF Valeria Federighi/Research Associate with time contract; CR fellow
XL Xian Lu/Ph.D. student; CR fellow

are more interested in expanding their network and enhancing their expertise, with the design object being their main focus of interest. It is worth noting that participants involved so far do not expect financial returns but are more interested in the experience itself. On the other hand, researchers are interested in exploring new ways of collaboration and mutual learning facilitated through the sharing of knowledge and skills during the workshops, as well as the collection of additional situated knowledge.

G. Detailed description of the reached impact (up to 6.000 characters):

Polito Studio has been conceived as an open scheme that draws inspiration from innovative examples worldwide to maximize the innovation potential of a multifaceted collective. It experiments with various practical approaches, defining objectives, tools, and actions based on the involvement of its members. The collective strives to establish diverse configurations that adapt to specific circumstances, fostering collaborative efforts. In this sense, it aims to broaden the social impact of research by complementing the capacity of academic institutions to mobilize knowledge and technologies through their researchers with the skills of the professional environment.

Hence PS is an opportunity for experimenting a collaboration and knowledge transfer, able to enabling local businesses to access into otherwise unaffordable markets, while at the same time incrementing the professionalization of students.

On one hand, it operates on a national multi-scalar vector, by facilitating connections between local firms of heterogeneous sizes and backgrounds — this is evident in the first cohort, which consists of 12 selected firms ranging from newly established ones to those with a history of ten, twenty, or even seventy years, as well as teams ranging in size from 17 members to a sole individual **[7_01]**.

On the other hand, it expands the collective to include a novel multi-polar group for exchange, which, in some aspects, is unexpected. This group brings together firms and academics, forming a cohesive practice cohort. As a result, it constitutes a diverse team in terms of experiences, acquired competencies, level of involvement, positioning, and concerns. This diversity becomes particularly evident during workshops and subsequent design phases when all participants possess equal negotiation power. At this point, the absence of competition among the participants and their collaboration for a shared

purpose fosters active interaction among them, resulting in interactive learning. It greatly enhances the exchange, especially among participants from different backgrounds, allowing them to fully leverage the skills of one another. Therefore, this adaptable framework empowers every participant to contribute their distinct expertise, interests, and availability. Simultaneously, it reinforces the trust among participants and facilitates the transmission of knowledge to foster the creation of new resources and the revitalization of obsolete structures. As a result, this exceptional collective endeavors to disrupt the current hegemony of large global corporations in the international market. By integrating professional expertise with scientific research and embodying the work ethics and attention to detail commonly associated with smaller-scale enterprises, it nurtures a fresh and innovative organizational approach to entrepreneurship.

Concluding, the main expected impact is a novel energy in steering practitioners with limited or no prior experience working together on an international scale. This initiative grants them an initial entry point into global networks, which, after the completion of this experience, they can continue to navigate independently. Hence, this assembly challenges the prevailing dominance of large global firms in the international market, as it combines professional expertise with scientific research and embodies modes of labor and care typically associated with smaller-scale practices opening doors to international opportunities. The ‘final results’ obtained in the single experience are deployed from the various partakers in different applications of the discipline, related to their own different knowledge and language frameworks: on one side practitioners are more interested in expanding their network and enhancing their expertise, the main object of their interests would therefore be directly connected to the design object — in this sense, it is moreover interesting to stress that the participants involved till now do not assume to have a financial return while being more interested in the experience itself — on the other side, the researchers are interested in the new ways of collaboration and mutual learning launched through the sharing of knowledge and competencies during the workshops.

In a nutshell, the expected impact of PS is the implementation of an innovative model for knowledge generation through close collaboration with the professional sector. By integrating local knowledge, scientific expertise, and industry experience, PS aims to foster the development of new skills and enhance cross-sector collaborations with companies and universities, thereby promoting growth and strengthening the overall professional and scientific knowledge ecosystem.

Theoretical assumptions

The attempt of defining a TT mechanism in the field of architecture can be corroborated by that strand of the university's TM aimed at a broad re-engagement and dialogue with society, starting with emerging issues that are in direct relationship with local institutions and professional communities. It is therefore a behavior that is deeply embedded in the reflection related to the meaning of 'social utility' in universities' mandate by the attempted implementation of a virtuous circle between research, teaching, and practice. In this sense, such an endeavor is the result of an awareness that the involvement of non-academic actors could significantly enhance knowledge production in Academia broadening to a trans-disciplinary design-oriented approach in scientific investigations (Gibbons et al, 1994). Accordingly, transdisciplinarity is intended as a new form of learning and problem-solving in which academia approaches tangible, real-world challenges by cooperating with real-world society.

With this in mind, PS assumption is that "through mutual learning, the knowledge of all participants is enhanced, including local knowledge, scientific knowledge and the knowledges of concerned industries […] in the process, the bias of each perspective will also be minimized" (Thompson Klein et al., 2001: 7).

This trend can be attributed to the increasing recognition that universities, through their third mission, have a broader societal responsibility. This responsibility extends not only externally, by reconnecting with civil society and responding to social demands, but also internally, by reevaluating teaching and research approaches (Cognetti & De Carli, 2013). By viewing the third mission as the economic valorization of knowledge, aimed at fostering economic growth by converting research-generated knowledge into 'productive knowledge,' it challenges, or at the very least questions, the existing paradigms of teaching and research within contemporary universities. In essence, it calls for innovation in the realm of education and research, by developing programs that address real-world situations and cultivate practical skills, thereby transforming the very essence of university education. This entails a paradigm shift in terms of who produces knowledge and how it is done, the practical utility and applicability of the knowledge generated, the outcomes of projects, and the nature of partnership and

support among various stakeholders. It necessitates a reexamination of the purpose of universities in light of the profound changes occurring in the economic, social, and cultural dimensions of knowledge production and reproduction (Pasqui, 2017). In the field of architecture, this also involves considering the contextual conditions and intellectual frameworks of knowledge production, as well as the organization of professional activities related to urban and territorial design.

Grounded on these theories, the TT mechanism observed in this work (aka Polito Studio or PS) is intended as a 'platform' for mobilizing both theoretical perspectives and practical methodologies for problem-solving. Herein, PS aims for a more social distribution of practices in the international scenario. Although, as specifically grasped in the previous pages, PS consists of various actions, the main perspective in this work is focused on unfolding the procedure by which scholars and professionals jointly collaborate on concrete design activities. From this point of view then, PS pursues establishing a wider *community of practice* for learning and knowledge generation *in action* (Wenger, 2000; Amin & Roberts, 2008). Put differently, considering the already stated uncertain and immanent condition of the design knowledge — that means that the 'solution' grasped by the design project is entrenched in the very essence of the context contingency — as well as the predominance of tacit mechanisms in learning advancement — that is the not codifiable knowledge implicitly embedded in the doer — the first steer for the development of TT in the field of architectural design consist in the forecast of a mixed community to enhance *situated learning* (Lave & Wenger, 1991). Such *situated learning* is in the PS case characterized by a mutual engagement through in-person interactions among members of different vocations (academy and profession) concretely working in closeness in the substance of reality. Therefore, the solicitation is to embark upon the characterization of a mixed professional-academic community "in which identity formation through participation and the negotiation of meaning are central to learning and knowledge generation" (Amin & Roberts, 2008: 355). In other words, the effort is to exploit a shared practice (through collective activities) by members of a particular affiliation group (with a compatible if not homogeneous background) to advance mutual learning in action, so as to first enhance effective social relations absorbing, generating, and

distributing knowledge.

On that account, the PS experiment is conducted through an incremental *put into practice* (Barbera & Parisi, 2019) that set goals, tools, and functioning in the making. The innovation potential of academic and professional knowledge and expertise is capitalized through a mixed epistemic/professional cohort — in which the first is related to innovative knowledge explicitly gathered by experts to experiment with new insights from uncertain conditions; the second is related to the practice-based knowledge gained, generated, and disseminated by professionals through *tacit* and *codified* knowledge (Amin & Wilkinson, 1999). PS relies thus on the enhancement of the concept of *mutual learning* conceived as the transfer of information between the actors involved to "establishing transdisciplinary platforms for knowledge production" (Polk & Knutsson, 2008: 644), as well as the *double-loop organizational learning* in a circular process of testing, reviewing, re-calibrating "that involve the modification of an organization's underlying norms, policies and objectives" (Argyris & Schön, 1978: 3).

At the same time, for contingent reasons, as well as purpose, such a cohort operates in international scenarios leveraging the research efforts of a major academic institution and its network of close partners. In a nutshell, the particular affiliation group deals with external entities (by contexts, interests, tasks, etc.) that do not share identical principles and mechanisms of the aforementioned background. Hence, from the perspective of competencies and knowledge exchange, it plunges into a double translation in order to transmit, problematize, and modify the information (Amin & Wilkinson, 1999): first of all for externally derived towards the inner group (so as to lend a shared validity within the group through the molding of the content), and conversely for internal information toward external agencies (so as to be effectively perceived and valued). In essence, this implies the development of effective interpretive mechanisms for both the transmission and reception of information, and herein lies the key role of the research group involved.

In this model hence, the flanking of professionals and academics consists in the scaffold that supports the venture and is retrieved in the cohort as much in the

main initiative board, or rather the group managing the activities, which is made of three researchers and three practitioners: the former belonging to the academic institution, the latter belonging to the council of the local institute of architects.

H. Eventual indicators for the measurement of the reached impact (up to 10.000 characters):

The reached impact will be measured by linking the indicators according to the specific action it recalled:

The expansion of social sharing:

(a) Publication of best practices in the field of synergies between professional organizations and academic institutions. Specifically, has been published six cases spanning the USA, the Netherlands, China, and Colombia: Pennpraxis, Het Nieuwe Instituut, Thad, Techne, Arcprep, and Agrar.

(b) Publication and summary of international design competition calls at various scales in China, allowing architects registered with the Order to monitor information on bidding processes and international design competitions — this information is transmitted online and through OAT's weekly newsletter. Specifically, 30 calls for submissions were published between April 2021 and May 2023.

(c) Organization of open training events focused on foreign markets. Specifically, an online event titled *LAVORARE CON LA CINA. OPPORTUNITÀ E SCAMBI NELLA PRATICA ARCHITETTONICA.* was held on February 2nd, 2021. The event was co-curated by Politecnico and the Ordine, in collaboration with the Unito TOChina Center, the Italy-China Foundation, and the Consulate of Italy in Shanghai. It provided a comprehensive overview of the Chinese market and job opportunities for designers. The event featured 11 guest speakers from China and Italy, including economists, architects, and experts from the Chinese industry, who shared insights into the economic landscape and employment prospects in China. Case studies were presented, highlighting real-life experiences in design work through analysis and comparisons. The event attracted an audience of over 300 participants. Additionally, a second public event took place on March 2nd, 2023, at SETA/Sala da the Culturale in Turin. This event marked the conclusion of the first two-year track focused on China, where the 12 participants showcased and reflected on their experiences throughout this period.

The contribution to the development of skills:

(d) Organization of formative workshops that delve into specific contents of certain competitions, providing detailed information about project sites, ongoing processes, communication strategies, regulations, and policies. Specifically, there have been six workshops related to two international design competitions — Meiguan Innovative Corridor (Shenzhen, Guangdong province) at the architectural scale, and Beyond Yue/Janhu Revival Planning and Design (Shaoxing, Zhejiang province) — and the 9th edition of the Bi-city Biennale of Urbanism/Architecture in Shenzhen titled 'Urban Cosmologies' (December 2022 - March 2023).

(d) Involvement of external guests in the formative workshops. So far, three guests have been invited to the workshops: Angelo Sampieri (ICAR/21 professor at Politecnico di Torino - Dist, March 18th, 2023), Xu Haohao (professor of Architectural Design at South China University of Technology and architect in Urban Elephant Architects, a design firm founded in Guangzhou, March 8th, 2021), and Michele Armando (from Quarta & Armando Architecture Design Research, a professional firm located in Beijing, November 25th, 2022).

(d) Mid-term sharing and discussion session. The event took place at the OAT headquarters on November 30th, 2021 with the participation of all the twelve firms and various representatives from the organization. It served as an opportunity to present and discuss the methods and results achieved during the first year of activities and to mark the completion of the first competition.

The enhancement of the entrepreneurial culture and/or new forms of entrepreneurship:

(d) Finalization of an informal consortium with a shared portfolio and a distinctive acronym for market representation: TDH. All participants reached an agreement to showcase their projects in a joint portfolio, along with the creation of a promotional video featuring the collaboration of all firms, aimed at promoting their presence in the Chinese market.

(d) Finalization of temporary collaboration agreements between some of the participating firms and the interested research group to proceed with the work related to the competition/mandate even behind the incubator in all three cases approached in the workshops. Achieving fourth place out of a total of 21 competitors in the *Meiguan Innovative Corridor competition*, being among the top 20 selected projects in the *Beyond Yue/Janhu Revival Planning and Design competition*, and realizing the GBA Uninterrupted installation exhibited since December 2022 in the 2022 Shenzhen Biennale.

(d) Ongoing internal negotiation process for formalizing the TDH/Turin Design Hub group among some of the participating studios to present themselves as a united front in the Chinese market even after the completion of the two-year program.

National, European, and international collaborations:

(d) Initiating a contract with a Legal Entity in Shanghai to act as an economic intermediary between China and Italy and facilitate the business development of the platform in China[15], attracting additional projects for the PS platform. The goal is also to create a channel that professionals in Turin can rely on.

(d) Establishing collaborations with foreign companies: WOWA, SCUT.

(d) Organizing an event within the UIA WORLD CONGRESS OF ARCHITECTS. COPENHAGEN 2023 to disseminate the functioning of PS and initiate potential collaboration networks in Europe.

The increase and strengthening of collaboration with companies, including the activation of research contracts or services:

(e) Launching 16 curricular internships for the professionalization of Polito students by working in the 12+1 participating entities during their involvement in competitions/assignments.

I. Eventual publications referred to the case study (up to 5 references):

Bonino M., Federighi V., Forina C., and Preti L. (2021). Polito Studio. Progettare l'internazionalizzazione della pratica di architettura fra università e ordine professionale. In Marco Ferrari M., Guidetti E., Tessari A., and

[15] As the group is not officially recognized as a market entity, the Piedmontese firms operate through an informal alliance. Furthermore, due to the difficulties in establishing economic exchanges between Chinese and Italian agencies, especially regarding potential monetary winnings, a Legal Entity based in Shanghai and contracted with Polito serves as an intermediary.
For instance, the following are excerpts from the *Tendering for Architectural Scheme and Design Development of the Fucheng Guanlan Industrial Land Development Overall Interest Coordination Project within the Meiguan Innovative Industry Corridor (Plots 01-03)* (which will be further discussed in the next chapter): "All the compensation fees are settled in RMB, and any taxes incurred from the fees shall be borne by the competitor, who shall provide domestic tax-paid invoices in China that meet the requirements of the Tenderee. If a foreign design agency cannot collect RMB via its account, the Tenderee shall withhold and pay on its behalf the relevant taxes and fees that shall be paid within the territory of China. As for relevant expenses, the payment procedures shall be handled after the announcement of the tender awarding results" (Prequalification Document: 18).

Verzella E. (Eds). *DESIGN | RESEARCH | LANGUAGES. Architectural design as a research product and possible communication tools.* Associazione scientifica ProArch, Ferrara (online webinar), 4-11-18-25 Novembre 2020, 264-269.

Bonino M., Federighi V., Forina C., Preti L., Rizzi L., Jager P. (ongoing). Polito Studio, a collaborative experiment between academia and practice. In *UIA World Congress of Architects 2023 CPH Science Track.*

Eventual attachments:

www.oato.it/servizi/polito-studio

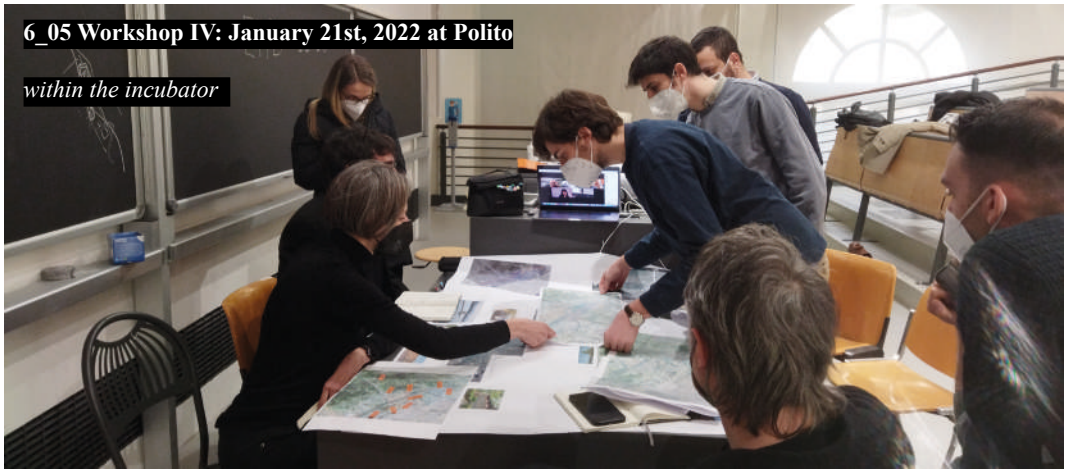
6_02 Workshop I: July 6th, 2021 at OAT

within the incubator

6_03 Design sketches

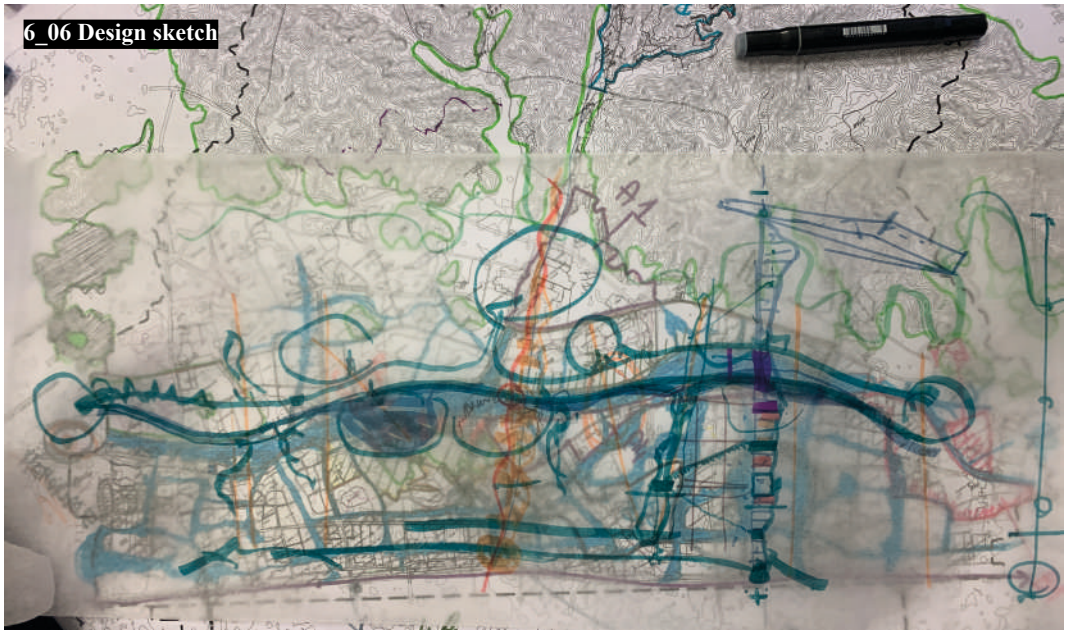
6_04 Design meeting: October 20th, 2021 at PAT.

beyond the incubator



6_05 Workshop IV: January 21st, 2022 at Polito

within the incubator



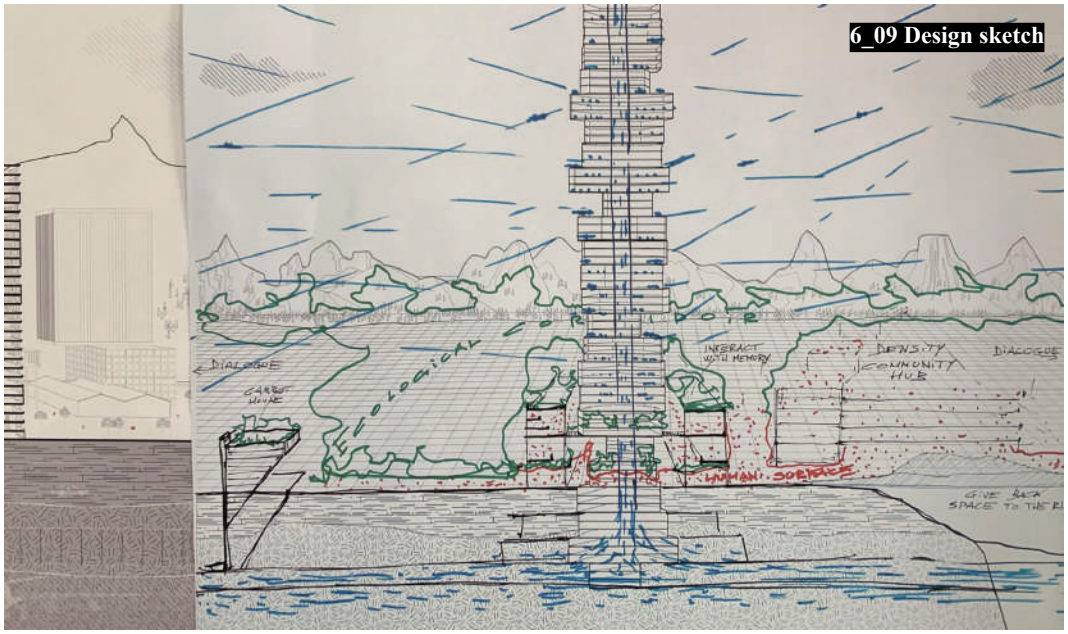
6_06 Design sketch

6_07 Design meeting with guests: March 18th, 2022 at Polito

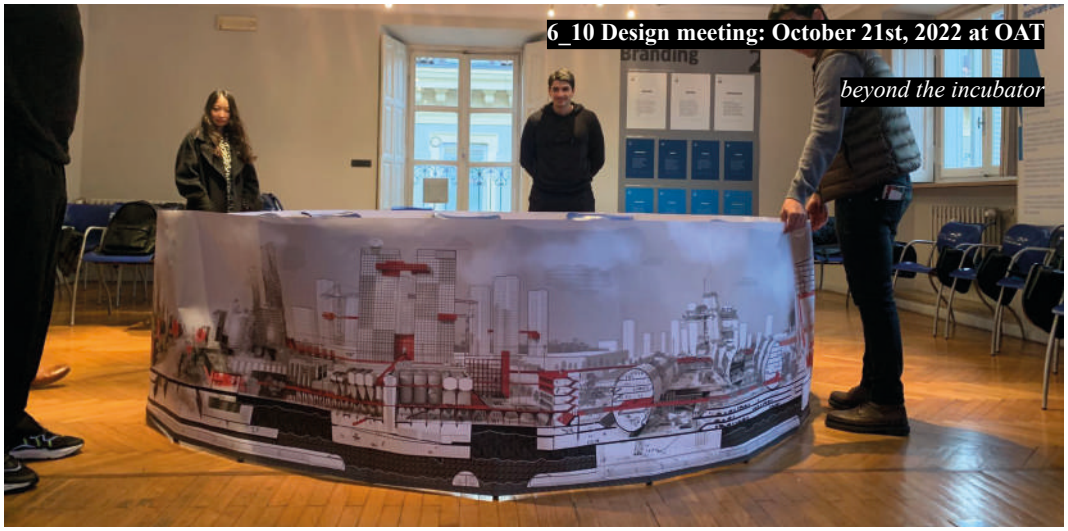
beyond the incubator

6_08 Workshop V: September 10th, 2022 at OAT

within the incubator



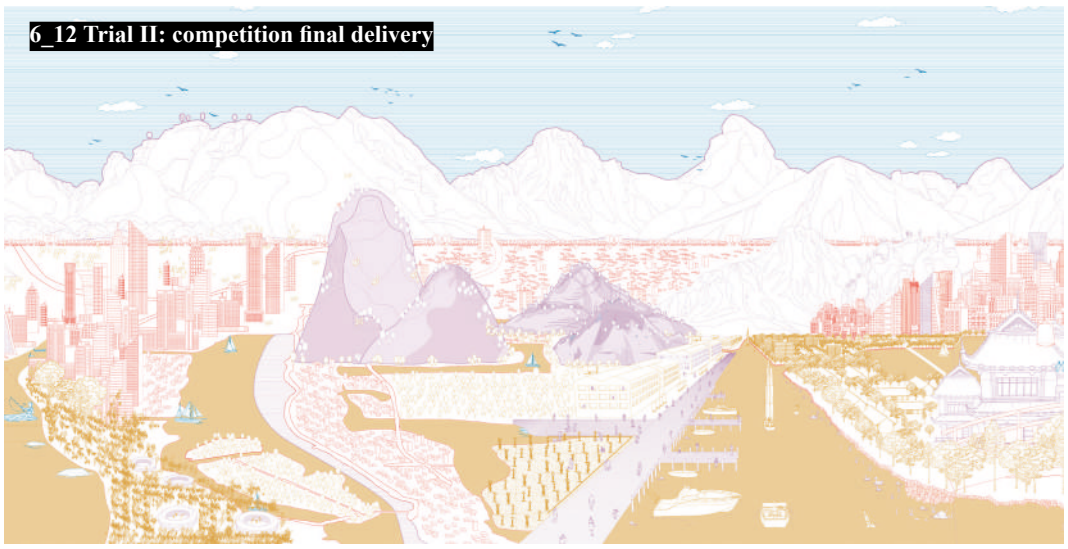
6_09 Design sketch



6_10 Design meeting: October 21st, 2022 at OAT

beyond the incubator

6_11 Trial I: competition final delivery



6_12 Trial II: competition final delivery

6_13 Trial III: biennale installation

6_14 VQR3-TM: overview and definition of the action fields (ANVUR, 2021d).

Title
Action scope (up to 3 fields indicating the main one)
A. Institution **B. Relative department(s)** **C. Eventual Scientific Areas of the Case Study** (among the 14 Areas of the academic recruitment fields) **D. Academic Staff involved** (max 10 subjects accredited) **E. Keywords** (up to 10)
F. Detailed description of the case study (up to 10.000 characters)* **G. Detailed description of the reached impact** (up to 6.000 characters)*
H. Eventual indicators for the measurement of the reached impact** (up to 10.000 characters)
I. Eventual publications referred to the case study (up to 5 references)
Eventual attachments

* The sum of the characters entered in fields F and G cannot exceed 12,000 characters

** "The term 'impact' refers to the transformation or improvement that, potentially in relation to the scientific research outcomes produced by the institution, has been generated for the economy, society, culture, health, environment, or more generally, the reduction of economic, social, and territorial inequalities to enhance the quality of life within a local, regional, national, European, or international context. Impact also encompasses the reduction or prevention of damages, risks, or other negative externalities. The evaluation will prioritize the impact generated externally, taking into consideration any potential internal repercussions within the evaluated institutions" (ANVUR, 2021d: 14).

"Per impatto si intende la trasformazione o il miglioramento che, eventualmente in relazione con i risultati della ricerca scientifica prodotti dall'Istituzione, si sono generati per l'economia, la società, la cultura, la salute, l'ambiente o, più in generale, il contrasto alle disuguaglianze economiche, sociali e territoriali per incrementare la qualità della vita in un ambito territoriale locale, regionale, nazionale, europeo o internazionale. Per impatto deve, altresì, intendersi la riduzione o la prevenzione di danni, rischi, o altre esternalità negative. Si valuterà prioritariamente l'impatto generato all'esterno, considerando anche le eventuali ricadute all'interno delle Istituzioni valutate" (ANVUR, 2021d: 14).

6_15 VQR3-TM: evaluation criteria (ANVUR, 2021b: 15-16).

a) the social, economic, and cultural impact

The contribution of the case study lies in its ability to bring about changes in attitudes, increase awareness, develop skills and good practices, and refine the processes of understanding in the economic, scientific-cultural, social, and institutional domains.

L'apporto del caso di studio al cambio di atteggiamenti, accrescimento di consapevolezza, sviluppo di capacità e di buone pratiche, affinamento dei processi di comprensione in campo economico, scientifico-culturale, sociale, istituzionale, ove tutto ciò conduca ad un risultato sostanzialmente migliorativo.

b) the relevance in relation to the reference context

The significance of the case study is evaluated in relation to its impact at the local, regional, national, European, or international level within the reference context. […] The 'reference context' refers to both the external ecosystem, which can be local, national, European, or international, as well as the internal context related to institutional specificities and mission (strategies, organization, investments), and the activities carried out by the organization.

L'importanza assunta dal caso studio in rapporto alla dimensione locale, regionale, nazionale, europea o internazionale […] sul contesto di riferimento. Per "contesto di riferimento" si intende quello esterno relativo all'ecosistema (che può essere locale, nazionale, europeo o internazionale), ma anche quello interno, legato alle specificità istituzionali e di mission (strategie, organizzazione, investimenti...) e delle attività svolte dall'organizzazione.

c) the added value for the beneficiaries

The value concerns the innovations and improvements in technological, economic, social, and cultural conditions resulting from the case study to benefit society in its various components, reaching a broad and diverse range of beneficiaries. These beneficiaries may include public and private entities, public institutions including government bodies, local authorities, businesses, industry associations, citizens, students, future generations, the environment, and living species. The degree of innovation is not limited to technological advancements but also encompasses social innovation. Additionally, the case study's adherence to principles of equity, equality, equal opportunities, and the elimination of inequality and vulnerability are crucial for achieving effective social justice.

Le innovazioni e i miglioramenti delle condizioni tecnologiche, economiche, sociali e culturali indotti dal caso studio a beneficio della società nelle sue varie componenti, ossia su una platea ampia e diversificata di beneficiari (quali enti pubblici/privati, istituzioni pubbliche, comprese quelle governative, enti locali, imprese, associazioni rappresentative di categoria, cittadini, studenti, generazioni future, ambiente e specie viventi). In particolare, […] il grado di innovazione non solo tecnologica, ma anche sociale, nonché il rispetto di principi di equità, eguaglianza, pari opportunità, rimozione di condizioni di diseguaglianza e vulnerabilità, quali presupposti per la realizzazione anche di una effettiva giustizia sociale.

d) the contribution of the proposing structure

The qualitative and quantitative contribution and commitment of the evaluated institution are assessed in terms of human resources, organizational structures and processes, infrastructure, and/or the development of new professional skills. When relevant, the connection with the scientific research produced by the institution should be highlighted and characterized. The relationship with research can be indirect, non-linear, or may not yet have materialized into a final product, but it should be clear and demonstrable. This can be achieved through the valorization of the relevant field within the reference publications of the case study.

Il contributo qualitativo e quantitativo e l'impegno da parte dell'Istituzione valutata anche in termini di risorse umane, assetti e processi organizzativi, infrastrutture e/o sviluppo di nuove professionalità. Laddove rilevante, va evidenziato e qualificato il legame con la ricerca scientifica prodotta dall'Istituzione. La relazione con la ricerca può anche essere indiretta, non lineare o non essersi ancora concretizzata in un prodotto finale, ma deve essere chiara e dimostrabile, eventualmente anche mediante la valorizzazione del campo inerente le pubblicazioni di riferimento del caso studio.

6_16 VQR3-TM: overview and definition of the action fields (ANVUR, 2021d).

Action field a)	
A. Valorization of intellectual or industrial property (patents, plant variety rights). *Valorizzazione della proprietà intellettuale o industriale (brevetti, privative vegetali).*	B. "The valorization of intellectual or industrial property includes both industrial property rights and any other form of intellectual property, copyright in particular" (16). *"Per valorizzazione della proprietà intellettuale o industriale sono considerati rilevanti sia i diritti di proprietà industriale, sia ogni altra forma di proprietà intellettuale, in particolare il diritto di autore" (16).*
Action field b)	
A. Academic entrepreneurship (e.g., spin-offs/start-ups). *Imprenditorialità accademica (es. spin-off/ start up).*	B. "Academic entrepreneurship refers to the entrepreneurial utilization of research outcomes to develop innovative products and/ or services, particularly spin-offs and start-ups. […] It is required that the status of spin-off/start-up be formally recognized through a resolution by CdA (accreditation)" (20). *"Per imprenditorialità accademica si intendono gli impieghi in chiave imprenditoriale dei risultati della ricerca al fine di sviluppare prodotti e/o servizi innovativi, in particolare spin- off e start-up […] Si richiede che lo stato di spin-off/start-up sia riconosciuto formalmente attraverso una delibera del CdA (accreditamento)" (20).*
Action field c)	
A. Intermediation and technology transfer structures (e.g., technology transfer offices, incubators, science and technology parks, consortia, and associations for the Third Mission). *Strutture di intermediazione e trasferimento tecnologico (es. uffici di trasferimento tecnologico, incubatori, parchi scientifici e tecnologici, consorzi e associazioni per la Terza Missione).*	B. "Intermediation and TT refer to the institution's intermediation actions with the territory aimed at carrying out research valorization activities (e.g., technology transfer, industrial *liaison*, and business engagement), promoting joint projects, and supporting the establishment and development of new enterprises" (24). *"Per intermediazione e TT si intendono le azioni di intermediazione dell'Istituzione con il territorio dedicate allo svolgimento di attività di valorizzazione della ricerca (es. TT, liaison industriale e rapporti con imprese), di promozione di progetti congiunti, supporto alla nascita e sviluppo di nuove imprese" (24).*
Action field d)	
A. Production and management of artistic and cultural assets (e.g., museum complexes, archaeological excavations, musical activities, historical properties and archives, historical libraries and newspaper libraries, theaters, and sports facilities). *Produzione e gestione di beni artistici e culturali (es. poli museali, scavi archeologici, attività musicali, immobili e archivi storici, biblioteche e emeroteche storiche, teatri e impianti sportivi).*	B. "The production and management of artistic and cultural assets refer to the protection, management, enjoyment, and valorization of archaeological excavations, museum complexes, historical properties, libraries, newspaper libraries, and historical archives, theaters, sports facilities, as well as other musical and performing activities" (29). *"Per produzione e gestione di beni artistici e culturali si intendono la tutela, la gestione, la fruizione e la valorizzazione di scavi archeologici, poli museali, immobili storici, biblioteche, emeroteche ed archivi storici, teatri e impianti sportivi, oltre ad altre attività musicali e performative" (29).*

(A. Action field definition, B. Action field declaration)

Action field e)

A. Clinical trials and health protection initiatives (e.g., clinical trials, studies on medical devices, non-interventional studies, biobanks, patient empowerment, veterinary clinics, informative and preventive days, screening and awareness campaigns).

Sperimentazione clinica e iniziative di tutela della salute (es. trial clinici, studi su dispositivi medici, studi non interventistici, biobanche, empowerment dei pazienti, cliniche veterinarie, giornate informative e di prevenzione, campagne di screening e di sensibilizzazione).

B. "Clinical trials and health protection initiatives refer to a series of actions characterized by wide transversality, which therefore have significant economic, social, and cultural impacts, particularly in the perspective of implementing public policies in this direction" (33).

"Per sperimentazione clinica e iniziative di tutela della salute si intendono una serie di azioni caratterizzate da ampia trasversalità e che pertanto producono ricadute significative in ambito economico così come impatti sociali e culturali particolarmente rilevanti, anche nella prospettiva di implementazione di politiche pubbliche che vadano in questa direzione" (33).

Action field f)

A. Lifelong learning and open education (e.g., continuing education courses, Continuing Medical Education, MOOCs).

Formazione permanente e didattica aperta (es. corsi di formazione continua, Educazione Continua in Medicina, MOOC).

B. "Lifelong learning and open education refer to activities carried out by institutions (individually or in collaboration and agreement with external entities/organizations) targeting non-traditional users (such as early school leavers, NEET - Not in Education Employment or Training, elderly individuals, unemployed individuals, migrants, workers, professionals). These activities aim to bring about change in terms of professional qualification or requalification, such as the acquisition of knowledge and skills, with particular attention to key competences for lifelong learning as indicated by the European Commission in the European Qualifications Framework" (37).

"Per formazione permanente e didattica aperta si intendono le attività realizzate dalle Istituzioni (da sole o in rete) e/o in collaborazione e convenzione con enti/organizzazioni esterne rivolte ad utenti non tradizionali (ad esempio early school leavers, NEET - Not in Education Employment or Training, anziani, disoccupati, migranti, lavoratori, professionisti), che abbiano prodotto un cambiamento anche in relazione alla qualificazione o alla riqualificazione professionale (ad esempio, l'acquisizione di conoscenze e di competenze con particolare attenzione alle competenze chiave per l'apprendimento permanente indicate dalla Commissione Europea nell'European Qualification Framework)" (37).

Action field g)

A. Activities related to Public Engagement include: i. Organizing cultural activities of public interest (e.g., concerts, theatrical performances[…]); ii. Scientific outreach (e.g., publications targeting non-academic audiences[…]); iii. Initiatives to involve citizens in research (e.g., debates, science festivals[…]); iv. Engaging and interacting with the school community (e.g., simulations, hands-on experiments, and other laboratory activities). *Attività di Public Engagement, riconducibili a: i. Organizzazione di attività culturali di pubblica utilità (es. concerti, spettacoli teatrali[…]); ii. Divulgazione scientifica (es. pubblicazioni dedicate al pubblico non accademico[…]); iii. Iniziative di coinvolgimento dei cittadini nella ricerca (es. dibattiti, festival[…]); iv. Attività di coinvolgimento e interazione con il mondo della scuola (es. simulazioni ed esperimenti hands-on e altre attività laboratoriali).*	B. "Public Engagement refers to a set of activities carried out by institutions aimed at non-experts, with educational, cultural, and social development value. These activities include: i) organizing cultural activities of public interest; ii) scientific outreach; iii) initiatives to involve citizens in research; iv) engaging and interacting with the school community" (41). *"Per Public Engagement si intende l'insieme di attività rivolte a non esperti da parte delle Istituzioni, con valore educativo, culturale e di sviluppo sociale, in relazione a i) organizzazione di attività culturali di pubblica utilità; ii) divulgazione scientifica; iii) iniziative di coinvolgimento dei cittadini nella ricerca; iv) attività di coinvolgimento e interazione con il mondo della scuola" (41).*
Action field h)	
A. Production of public goods of a social, educational, and policy nature for inclusion (e.g. formulation of programs of public interest, participation in urban development projects or territorial enhancement, and initiatives of participatory democracy, consensus conferences, and citizen panels). *Produzione di beni pubblici di natura sociale, educativa e politiche per l'inclusione (es. formulazione di programmi di pubblico interesse, partecipazione a progetti di sviluppo urbano o valorizzazione del territorio e a iniziative di democrazia partecipativa, consensus conferences, citizen panel).*	B. "Case studies are characterized by the use of collaborative organizational methods and investment approaches, the creation of physical and virtual spaces for people to meet, and the emergence and representation of demands for new public policies and/or services promoted by the private sector and the third sector in order to overcome conditions of inequality" (44). *"I casi studio si caratterizzano per l'utilizzo di metodi organizzativi e approcci all'investimento di tipo collaborativo, l'apertura di spazi (fisici e virtuali) di incontro tra le persone e l'emersione e rappresentazione di istanze di nuove politiche pubbliche e/o servizi promossi dal mondo privato e dal terzo settore, onde superare condizioni di diseguaglianza" (44).*
Action field i)	
A.Innovative tools to support Open Science. *Strumenti innovativi a sostegno dell'Open Science.*	B. "This field of action is referred to all case studies that describe actions based on principles of transparency, rigor, reproducibility, and sharing of research and its methods in all stages, from conception to results and their potential applications, are taken into consideration" (48). *"In questo campo di azione sono presi in considerazione tutti i casi studio che descrivono le azioni fondate su principi di trasparenza, rigore, riproducibilità, condivisione della ricerca e dei suoi metodi in tutte le fasi, dall'ideazione ai risultati e alle loro eventuali applicazioni" (48).*

Action field j)

A. Activities related to the UN Agenda 2030 and the Sustainable Development Goals (SDGs). *Attività collegate all'Agenda ONU 2030 e agli Obiettivi di Sviluppo Sostenibile (SDGs).*	B. "In this field of action, all case studies that describe activities related to the UN Agenda 2030 and the Sustainable Development Goals (SDGs) are taken into consideration. The scope of this field is broad and cross-cutting, as it encompasses all the goals, sub-goals, and targets of the Agenda 2030" (44). "In questo campo di azione sono presi in considerazione tutti i casi studio che descrivono attività collegate all'Agenda ONU 2030 e agli Obiettivi di Sviluppo Sostenibile (SDGs, Sustainable Development Goals) […] Il campo di azione è, inoltre, molto ampio e trasversale in quanto riguarda tutti gli obiettivi, sotto-obiettivi e target dell'Agenda 2030" (52).

6_17 VQR3-TM: evaluation criteria for the action field c (ANVUR, 2021b: 24-29).

a) the social, economic, and cultural impact

"the ability to contribute to the strengthening of the regional, national, and European economic systems, generating employment, particularly skilled employment, and economic returns through the practical application of research results in various forms […] the capacity to foster collaborative networks and drive innovation, social and cultural growth […] the capability of institutions to mobilize knowledge and technologies, channeling them through the skills of students and researchers into diverse work contexts […] the potential to enhance competitiveness and fortify territorial networks by creating opportunities for collaborations and knowledge transfer, enabling local businesses to generate significant incremental innovations that they often lack the resources for, and granting access to global networks of knowledge production and circulation […] the development of models of knowledge production in close collaboration with the business world and other social actors, who possess diverse knowledge and languages […] the dissemination of […] organizational methods, and cultural innovations within small and medium-sized enterprises, thereby increasing productivity, improving working conditions, and minimizing their environmental impact.

The […] indicators may include the increase and enhancement of collaborations with companies, such as through the initiation of research or service contracts; […] the generation of employment opportunities, particularly the increase in the employment of young PhDs and researchers within companies, can serve as a significant indicator; […] Other indicators to consider are the reinforcement of a business culture and the promotion of new forms of entrepreneurship. […] Creating spaces and opportunities for interaction and cross-pollination with the business world and other social actors can also be important; the growth and dissemination of a research-oriented, innovative, and collaborative culture; etc.".

"*capacità di contribuire al rafforzamento della competitività del sistema economico regionale, nazionale, europeo, di generare occupazione, soprattutto qualificata, e ritorni economici attraverso la valorizzazione e applicazione concreta dei risultati della ricerca nelle varie forme possibili […] la capacità di favorire le reti di collaborazione e generare innovazione, crescita sociale e culturale […] la capacità delle Istituzioni di mobilitare la conoscenza e le tecnologie, portandole tramite le competenze degli studenti e dei ricercatori nei diversi contesti di lavoro[…] la capacità di accrescere la competitività e rafforzare le reti territoriali mediante la creazione di opportunità di collaborazioni e il trasferimento delle conoscenze, per consentire alle imprese del territorio di produrre significative innovazioni incrementali che spesso non realizzano per mancanza di risorse e accedere alle reti mondiali di produzione e circolazione della conoscenza […] lo sviluppo di modelli di produzione della conoscenza in cooperazione stretta con il mondo produttivo e gli altri attori sociali, portatori di saperi e linguaggi diversi […] la diffusione di […] metodi organizzativi, innovazioni culturali nelle piccole e medie imprese che ne accrescano la produttività, migliorino le condizioni di lavoro e minimizzino l'impatto ambientale.*

*C*ome indicatori per documentare e quantificare l'impatto […] l'aumento e il rafforzamento della collaborazione con le imprese […]; le ricadute occupazionali e in particolare, l' aumento dell'impiego di giovani dottorati/ricercatori nelle imprese; […] il rafforzamento della cultura di impresa e/o di nuove forme di imprenditoria; la creazione di spazi e momenti di match-making e contaminazione con il mondo produttivo e altri attori sociali; […] l'aumento e la diffusione della cultura di ricerca, innovazione e della collaborazione; etc.".

b) the relevance in relation to the reference context

"The reference context will be defined in two ways: in relation to the internal and external environment. The external context encompasses the economic activities within the specified territory (such as an industrial district, province, region) or industry sector at the national, European, and/or international level. The internal context, on the other hand, is associated with the institutional and mission-specific aspects (such as strategies and organization) of the Institution... This will be explored through an analysis of actions aimed at organizing the technology transfer service from the supply side, as well as through actions focused on listening, intercepting, and interpreting the demand […] the Institution's inclination to consistently engage its various components, and its commitment to establishing enduring collaborative relationships with other public and private entities in the area, play a crucial role in promoting the productive transformation and utilization of knowledge within the business system […] In terms of external relevance, the case study should describe how the Institution cultivates connections with the local community, with an emphasis on leveraging research outcomes […] this includes the ability to identify and interpret the demand, even the latent demand, for knowledge, skills, and technologies among actors in the territory. Additionally, the study should evaluate the impact on the region's attractiveness and the diffusion of an entrepreneurial culture.

The evaluated party may utilize indicators to document and quantify the impact of the case study. For instance, regarding 'internal relevance', they can consider the implementation of TT service structures, paying close attention to their structural nature and the level of engagement from different components within the institution […] the quantity and nature of relationships established with the local community, the number of collaborations forged with enterprises, surveys and assessments of emerging needs and demands, feedback collected from businesses and other stakeholders in the region, the enhancement of the territory's appeal, and the dissemination of entrepreneurial culture".

"Il contesto di riferimento verrà definito in modo duplice, ossia in rapporto all'ambiente interno ed esterno. Il contesto esterno attiene al complesso delle attività economiche del territorio di riferimento (distretto industriale, provincia, regione) o del settore industriale a livello nazionale, europeo e/o internazionale. Quello interno potrà essere legato alle specificità istituzionali e di mission (per esempio strategie e organizzazione) dell'Istituzione […] mediante l'analisi delle azioni per organizzare il servizio di TT dal lato dell'offerta […] ma anche mediante le azioni finalizzate ad ascoltare, intercettare e interpretare la domanda […] la propensione dell'Istituzione a coinvolgere stabilmente le diverse componenti dell'Istituzione, così come quella ad istituire rapporti stabili di collaborazione con altri soggetti, pubblici e privati del territorio, allo scopo di promuovere la trasformazione produttiva della conoscenza nonché il suo utilizzo da parte del sistema delle imprese […] Per quanto riguarda la rilevanza esterna il caso studio dovrà descrivere come l'Istituzione sviluppi i rapporti con il territorio, anche nell'ottica della valorizzazione dei risultati della ricerca prodotta […] la capacità di raccogliere e interpretare la domanda, anche quella inespressa, di conoscenze, competenze e tecnologie, degli attori del territorio; l'impatto sull'attrattività del territorio e la diffusione della cultura imprenditoriale.

Il soggetto valutato potrà utilizzare come indicatori per documentare e quantificare l'impatto del caso studio, a titolo di esempio, con riferimento alla "rilevanza interna", le azioni poste in essere per strutturare il servizio di TT con particolare attenzione al carattere strutturale e al grado di coinvolgimento delle diverse componenti dell'Istituzione; […] il numero e il tipo di rapporti con il territorio; il numero di collaborazioni con imprese; le rilevazioni e indagini su bisogni e domande emergenti e la raccolta di feedback da parte delle imprese e degli altri stakeholder del territorio; l'aumento di attrattività del territorio; la diffusione della cultura imprenditoriale."

c) the added value for the beneficiaries

"The activities carried out by the brokerage and technology transfer (TT) structures have the potential to generate various benefits for both internal and external stakeholders of the Institution. The case study will generate value in different ways depending on the type of beneficiary. These include funding for research by the Institutions, fostering international collaborations, enhancing the visibility of the Institution, generating revenues through licensing or technology transfer activities, sharing know-how, initiating joint projects, creating employment opportunities for students and graduates, developing entrepreneurial skills, and increasing the attractiveness of the territory […] The brokerage and TT structures must strive to create value for these diverse entities. In particular, the assessment will focus on operability (describing ongoing activities or providing records of previous activities), the availability of data and indicators on activities, clear descriptions of the activities and involved parties, stakeholders (explicitly indicating third parties involved or benefiting from the activities), and other elements considered useful during the evaluation phase.

Possible indicators include the involvement of companies in collaborations, the strengthening of partnerships with business associations, increased allocation of resources to research and innovation, the number of students engaged in projects developed in collaboration with external entities, etc."

"Le attività svolte dalle strutture di intermediazione e TT potranno generare diversi benefici per le varie tipologie di soggetti coinvolti interni ed esterni all'Istituzione. Il valore generato dal caso studio assumerà declinazioni diverse a seconda della tipologia di beneficiario: dal finanziamento della ricerca da parte delle Istituzioni, alla attivazione di collaborazioni internazionali, dalla visibilità dell'Istituzione, agli introiti per attività di licensing o TT o di know-how, dai progetti congiunti avviati, alla creazione di posti di lavoro per studenti e laureati, ad azioni di sviluppo delle competenze imprenditoriali, o all'aumento di attrattività del territorio. […] Le strutture di intermediazione e TT dovranno creare valore per i diversi soggetti beneficiari. In particolare sarà valutata l'operatività (il soggetto descrive attività effettivamente in corso o comunica/archivia attività precedenti), la presenza di dati e indicatori sulle attività, la descrizione delle attività e dei soggetti coinvolti, gli stakeholder (indicazione esplicita di soggetti terzi coinvolti o beneficiari delle attività) ed altri elementi ritenuti utili in fase di valutazione.

Tra i possibili indicatori figurano: le imprese coinvolte nelle collaborazioni; […] il rafforzamento di collaborazioni con associazioni di imprese; l'aumento delle risorse destinate alla ricerca e innovazione […] il numero di studenti coinvolti i progetti elaborati e sviluppati in collaborazione con soggetti esterni all'Istituzione; etc."

d) the contribution of the proposing structure

"The institution's contribution to the case study, both qualitatively and quantitatively, will be assessed, taking into account the scientific aspect if relevant. The connections between the institution and scientific activities must be documented, providing quantitative and/or qualitative evidence. The actions taken to establish and structure the technology transfer (TT) function will be examined. This includes analyzing and organizing content related to the transferable results, ensuring that they are easily usable by companies. Additionally, networking tools such as websites, collaborations, and participation in collaborative projects will be considered. The institution's commitment to funding these initiatives and structures, as well as providing adequate resources such as personnel, equipment, and space, will also be evaluated.

Possible indicators, for example, could encompass the degree of innovativeness, the level of technological performance, the number of full-time equivalent (FTE) staff dedicated to technology transfer functions, the allocated budget in relation to the number of affiliated entities, and so on".

"Sarà valutato il contributo qualitativo e quantitativo fornito dall'Istituzione al caso studio considerando, se pertinente, anche l'aspetto scientifico. Andranno documentati, in modo quantitativo e/o qualitativo, i legami delle strutture con l'attività scientifica. Si esamineranno le azioni messe in campo per strutturare la funzione di TT (es. analisi e organizzazione dei contenuti inerenti ai risultati da trasferire, che possano risultare facilmente fruibili dalle imprese; gli strumenti di networking quali siti web, collaborazioni, partecipazione a soggetti misti). Si valuterà l'impegno dell'Istituzione sia a finanziare tali iniziative e strutture sia a dotarle adeguatamente di risorse di personale, strumentazione e spazi.

Tra i possibili indicatori, a titolo di esempio, rientrano il grado di innovatività, il livello di performance tecnologica; il numero di unità di personale ETP adibite alle funzioni di TT; il budget impegnato/numero di soggetti affiliati; etc."

Chapter 7

Prototype experimentation

This chapter will delve into the second block of projects. The structure for retracing each design follows the same format as Chapter 5. However, before starting to analyze the two competitions mentioned here, it is essential to provide a brief introduction to the firms selected through the Polito Studio open call. These firms are the key players in this chapter and are integral to the initiative. The first paragraph will therefore outline the structure and interests of each firm, along with the primary requirements of the open call.

7.1 Placing the partakers

On February 2, 2021, the webinar titled 'Working with China: Opportunities and Exchanges in Architectural Practice' was held presenting the initiative Polito Studio to Turinese architectural scenario. It provided a comprehensive overview of the Chinese market and job prospects for designers, targeting legal professionals and interested faculty members from Polito. The event featured presentations from economists, architects, and experts from China who shared valuable insights into the country's economic scenarios and employment opportunities. These insights were further supported by case studies, where actual design experiences were analyzed and compared. At the closing of the event, a call for applications was announced to select 12 professionals or associates who would participate in a two-year training and mentorship program focused on the

Chinese market. The objective of the call was to form working groups consisting of professionals, researchers, and partners to take part in practical higher education workshops. These workshops aimed to equip participants with the necessary skills and networks to pursue real projects and architecture competitions in China. The ultimate goal was to enhance the professional capabilities of individuals and create new opportunities. The call was organized in collaboration with the TOChina Center at the University of Turin and the Italy-China Foundation. As part of the application requirements, applicants were asked to submit a portfolio showcasing five projects and five prizes, with a particular emphasis on international projects and recognition.

On March 8, a total of 22 applications were received. The jury, consisting of carefully selected members from both the initiative board and external participants[1], reviewed the applications and selected twelve participants based on specific criteria. These criteria included affiliation with OAT or graduation from Polito, with a particular emphasis on encouraging the participation of younger architects. Additionally, extra points were awarded during the selection process to individuals who had been enrolled in OAT for less than 10 years or were alumni of Polito.

The selection, published on April 1st, 2021 on Polito Studio web page[2], comprises a diverse group of professional firms with varying sizes, experiences, and areas of expertise. The participants range from individual professionals and recent graduates to well-established firms that have been operating in the Turin region for several decades. Additionally, the group includes exceptionally promising professional firms that have achieved significant success in major competitions in recent years, despite their relatively young experience.

To avoid delving into excessive detail regarding the specific characteristics of the professional studios, as it is beyond the scope of this work, the upcoming pages will include a concise summary table that provides essential information

[1] One of these participants is Haohao Xu, a professor-architect affiliated with SCUT, who previously collaborated with CR on design projects.

[2] Available online at: https://www.oato.it/2021/04/01/gli-architetti-di-polito-studio/ (Accessed on March 13th, 2023).

about each studio. This table will enable a practical comparison with the previously presented actors.

PS activities commenced shortly after the official announcement of the shortlisting. They involved conducting approximately two meetings per month, each lasting a couple of hours and involving at least one representative for each selected team. During these meetings, PS board and CR advisors briefly introduced the participating members as well as the various project possibilities, including the main implications of consultancies and competitions. Discussions were also held regarding work organization, an attempt calendar, and other PS-related initiatives such as the aforementioned internships. Additionally, the team visited the *China Goes Urban* exhibition at MAO[3], which was curated by CR. In these first meetings moreover, the group made efforts to establish its identity through a collective portfolio and the development of a brand identity identified as Turin Design Hub (TDH). In addition, a short video was produced featuring individual participants introducing themselves and sharing their interests in Polito Studio. This video served as a valuable resource for creating both concise and comprehensive dissemination videos, with the purpose of introducing the team to the audience in China.

Towards the end of June, a competition and a potential project were presented. However, neither of them reached a finalized stage. The competition had an extremely tight schedule, dissuading firms from participating. As for the consultancy project, it made some initial progress but encountered obstacles and slowdowns along the way, ultimately leading to a stalemate or impasse.

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[3] *China Goes Urban* is an exhibition held at the MAO Museum of Oriental Art in Turin from September 2020 to October 2021. It is curated by Politecnico di Torino and Prospekt Photographers in collaboration with Tsinghua University in Beijing, with support from Fondazione Torino Musei and Intesa San Paolo. The exhibition centered on the exploration of the contemporary Chinese city in the context of planetary urbanization. It aimed to shift perspectives and encourage a fresh outlook on reality, transcending predetermined categories and models. The exhibition served as an invitation to rediscover the world, embarking on a journey through the realms of city and architectural designs of both the present and the future. For further information: https://www.chinagoesurban.com/ (Accessed on March 13th, 2023).

7_01 Comparative overview of the Turinese practitioners involved in PS

2MIX Architetti		
A. Turin, Italy B. Architectural firm C. 6 Founders, 1 Partner, 6 Architects, 3 Designers, 1 Energy designer D. 2009 E. 2mix.it	F. "2MIX architetti is a multi-disciplinary practice born in 2009 to develop design projects, investigating the many forms transforming reality. The title 't(w)o mix' explores the complexities of the contemporary design industry, spanning from scales and competencies".	G. Strategic urban planning, housing interior design, 2nd place in a competition for the transformation of a public square, 2nd place in a competition for the transformation of a public park, 2nd place in a competition for a stadium design, 2nd place in a competition for a housing complex.
Archisbang		
A. Turin, Italy B. Architectural firm C. 3 Founders, 2 Architects, 2 Junior Architects D. 2008 E. archisbang.com	F. "Archisbang is an italian architecture firm that designs spaces for the community and the territory, as well as barrier-free environments promoting well-being where you can work, learn, live and freely use your creativity".	G. School refurbishment, residential building design, mansion transformation into headquarters, residential villa transformation into offices, abandoned villa transformation into a mixed-use building.
BLA Balance Architettura		
A. Turin and Cuneo, Italy B. Architectural firm C. 2 Founders, 5 Architects, 2 Junior Architects, 2 Interns D. 2011 E. blaarchitettura.it	F. "BALANCE ARCHITETTURA is an international Architecture firm based in Italy. As a belief, Balance Architettura thinks that Architecture is the assembly and composition of elements and functions in the three dimensions".	G. Directional building design, industrial refurbishment into headquarters, mixed-use cultural center refurbishment, headquarters interior design.
BDR Bureau		
A. Turin, Italy B. Architectural firm C. 2 Founders, 3 Junior Architects D. 2016 E. bdrbureau.com	F. "BDR bureau works in the fields of architecture, experiments with spatial solutions based on the idea of an open, simple and unexpected architecture that meet the evolving needs of our times".	G. School refurbishment, industrial renovation into an office building, masterplan of a mixed-use tower in Kosovo, preliminary design of a mixed-use tower in Mexico, 2nd prize in an international competition for a school campus.
Corbellaro SA		

(A. location, B. type, C. structure, D. constitution year, E. site, G. mission, H. main projects typology)

A. Gaglianico, Biella, Italy B. Architectural firm C. 2 Founders, 1 Architect D. 2000 E. tpz.it	F. “Corbellaro SA is an Architecture firm based at the foothills of the Italian Alps. The activity of the studio is focused on well-being design, in the continuous and constant search for users’ comfort”.	G. Headquarters design, visitor center design, bridge design, visitor center design in a national park, vehicular bridge design.
De Ferrari Architetti		
A. Turin, Italy B. Architectural firm C. 1 Founder, 2 Partners, 2 Architects D. 1983 E. deferrariarchitetti.it	F. “In its design approach, De Ferrari pays special attention to the historical, functional and expressive values of the setting in which the project is embedded”.	G. Office and research center design, pedestrian and vehicular bridge design, elderly residence design, residential building transformation into social housing and primary school, pedestrian road masterplan and design.
Eudes Margaria		
A. T Cuneo, Italy B. Practitioner C. -- D. 2016 E. --	F. “Eudes Margaria works as an independent architect as well as in collaboration with some architectural offices between Cuneo and France, facing the project at various scales”.	G. Collaborations on strategic urban planning, residential building renovation, residential interior design, facade insulation, and refurbishment.
Gianpiero Moretti		
A. Québec, Canada B. Professor and Practitioner C. -- D. 1990 E. --	F. “Gianpiero Moretti is Professor of architectural and urban design at the School of Architecture of the Laval University, in Canada. Between 2013 and 2017 he was Director of the same Faculty. Alongside the academic activity and experimental research, he contributed to the artistic direction of architectural and urban projects in Canada, France, and Italy”.	G. Multifamily housing design in Canada, industrial refurbishment, pedestrian and vehicular bridge refurbishment in Canada, diffused-hotel interior design in France, prototype for raw-earth hose in Ethiopia.
PENNAZIO architects + engineers		
A. Turin, Italy B. Architectural and Engineering Firm C. 1 Founder D. 2014 E. edilportale.com/edoardo-pennazio	F. “Founded by Edoardo Pennazio, placing sustainability and quality of life as central themes of his works, stimulating the interaction between man and environment”.	G. Seaside villas complex refurbishment, restaurant interior design in Kenya, concept design of headquarters in the United Arab Emirates, housing design in Kenya, fish market design in Qatar.
PAT. Architetti		

A. Turin, Italy B. Architectural firm C. 4 Founders, 5 Architects D. 2007 E. patdesign.it	F. “PAT. is an architecture firm who endorses an integrated design approach to conceive sustainable buildings, based on the effective use of materials and energy resources”.	G. Collaboration on a new town masterplan in Ghana, on a residential complex design in India, on a shopping center design, on a wellness center design, and on an industrial refurbishment into a restaurant and cocktail bar.

Studio Cavaglion

A. Turin, Italy B. Architectural firm and design office C. 2 Founders D. 2019 E. --	F. “Cavaglion is an architecture and design office based in Turin, Italy.The studio was founded in 2019 by Emanuele and Giovanni Cavaglion with the ambition of creating a multidisciplinary workplace for the development of creative projects and innovative ideas”.	G. 1st place in an international competition for a microhome, 5th place in an international competition for a hotel room design, interior design of a cosmetic store, and honorable mention in an international competition for a museum in Portugal.

Studio Vaj

A. Chivasso, Turin, Italy B. Architectural and Engineering Firm C. 2 Partners, 1 Architect D. 1946 E. studiovaj.com	F. “The firm works on a wide range of projects, architecture and interior design studies for public, cultural, educational, residential, commercial, tertiary and industrial functions; it has worked with public agencies and private clients”.	G. Participation in an industrial building refurbishment into an innovation center, participation in international train station design, participation in headquarters design in Saudi Arabia, mentioned in an international competition for a college design in Germany, brand guidelines and interior design for a pizzeria franchise in Switzerland and United Arab Emirates.

7.2 Unpacking the designs: Block 2

Architectural Scheme and Design Development of Fucheng Guanlan Industrial Land Development Overall Interest Coordination Project of Meiguan Innovative Industry Corridor (Plots 01-03)

The Project at a glance[4]

Location: Longhua District, Shenzhen, Guangdong Province, People's Republic of China

Scope: Architectural schematic design and full-discipline design development

Program: Residence, office, industry, and retail

Type of assignment: International competition in three stages[5]
1. Prequalification: company profile and qualification supporting documents, resulting in the selection of 5 shortlisted;
2. Design Competition: schematic design, resulting in the selection of 3 winning schemes;
3. Winner Deciding: same materials of the design competition, resulting in the winner being awarded the design contract for the project (without compensation)
Awarded 4th prize in the Design Competition phase

Timeline: 2021
1. Prequalification: July 7th/September 13th, 2021
2. Design Competition: September 28th/November 15th, then postponed to November 22nd, 2021

Design framework: The project represents the initial endeavor in coordinating the comprehensive development of Longhua District, and in particular the Fucheng Guanlan industrial land of Meiguan Innovative Industry Corridor. Situated in the core area of the northeast segment of Jiulongshan Intelligent Technology City, one of Shenzhen's 18 key

[4] For the extensive credits see Appendix 2.3a.

[5] The requirements and design stages information has been extracted from the competition brief and relevant reference materials (Shenzhen Longhua Talents Housing, 2021a; 2021b). For further informations see: https://www.archdaily.com/967608/prequalification-announcement-on-the-tendering-for-architectural-scheme-and-design-development-of-fucheng-guanlan-industrial-land-development-overall-interest-coordination-project-of-meiguan-innovative-industry-corridor-plots-01-03 (Accessed on March 13th, 2023).

municipal-level zones, it serves as a significant catalyst for driving the advancement of Jiulongshan Intelligent Technology City. The project is divided into three adjacent plots. The planned gross floor area (GFA) incorporated into the floor area ratio (FAR) calculation comprises 243'800 sqm for Plot 01, 211'400 sqm for Plot 02, and 205'000 sqm for Plot 03.

Project scale: 102'400 sqm

Typology: new development

Organizer: Shenzhen Longhua Talents Housing Co., Ltd.

Architectural Design & Research Institute of SCUT Co., Ltd. and Turin Design Hub (PAT Architetti - representative, China Room/Politecnico di Torino, Gianpiero Moretti, Edoardo Pennazio, Studio Cavaglion, Francesco Vaj)

Residential and Office Design: Shenzhen Wowa International Engineering And Design Co., Ltd.Guangzhou Company
Interior residential design: Piemonte Home Design
Landscape Design: CZ Studio
Eco-strategies: Francesca Thiebat, Corrado Carbonaro, and Lorenzo Savio/Politecnico di Torino – Department of Architecture and Design (DAD)

Narrative introduction

The Meiguan Innovative Industry Corridor project marks the inaugural collaboration between Turin designers and the PS framework. It serves as both a test and a prototype, representing the first application of this model. The project was initiated a few months after the launch of the PS initiative, amidst the ongoing pandemic. At this stage, the participating firms had only met once in person and had limited online interactions. In the months between the call announcement to the first workshop, the meetings have primarily been focused on establishing a cohesive group dynamic. This involved tasks such as creating a brand identity and a shared portfolio, setting up a WeChat account, establishing a mailing list, organizing a common drive, and clarifying the internship mechanism. The goal was to gradually align interests and objectives among participants to prepare the field for the hands-on work and ended up with the structuring of TDH Turin Design Hub.

The Meiguan bidding process commenced with the first workshop held on Tuesday, July 6th at 15.00 (CET) at the OAT venue, hence just before the summer vacation period. However, the timeline and competition requirements seemed to be reasonable, and in line with the group's interests, it indeed interlaced the previous experiences of some of the partakers, as well as the contents of previous research of the research group. The workshop was organized by contacting the entire group; it served as a platform to present the bidding details. The following participants were present: MB/Michele Bonino, EB/Edoardo Bruno, VF/Valeria Federighi, CF/Camilla Forina (online), XL/Xian Lu (online), and LP/Lidia Preti from China Room; PJ/Peter Jaeger, UG/Urszula Grodzicka, and RI/Roberta Ingaramo from OAT [that coordinated the activity]; JT/Jacopo Testa and AV/ Andrea Veglia from PAT. Architetti; EP/Edoardo Pennazio from PENNAZIO Architects + Engineering; GC/Giovanni Cavaglion from Studio Cavaglion; FV/ Francesco Vaj from Studio Vaj; ADF/Agostino De Ferrari from DE FERRARI Architetti; GM/Gianpiero Moretti (online); EM/Eudes Margaria (online); AL/ Andrei Laikart and SF/Sabrina Faroppa from Politecnico di Torino (master degree in ACC) [that took part in the activity].

During the first workshop, the contents of the pre-announcement were presented, paying special attention to the site and the design topic. The coordinators also shared their past experiences in international competitions, along with similar designs relevant to the bidding topic.

On September 7th, as summer came to an end, the official call for the competition was published. Following this, a second workshop was organized, which was attended by: EB, VF, CF, and LP [coordinators]; JT, EP, GC, FV, GM (online); AL, and SF [participants].

Since the bidding process was led by a private real estate company, it entailed a rather tight work schedule and a highly detailed program to meet the government's strict deadlines for site development. The initial phase of the competition, which took place on September 13th, 2021, did not require design proposals. Instead, applicants were required to submit a **prequalification application document** (certificate of legal representative and power of attorney of legal representative, valid business license, relevant qualification documents of

the companies, basic information of the applicants, list of similar projects of the applicants, chief designer introduction and achievements, project leader introduction and achievements, principal designers introduction and experiences, design service assurance measure) demonstrating their qualifications for the subsequent phases. SCAD/Architectural Design & Research Institute of SCUT had already expressed interest in participating, while TDH was called to consider whether to join the competition. The temporary group consisting of all the participants in the second workshop decided to participate by having PAT Architects as their representatives.

On September 28th, the results of the first phase were published, and the team SCADXTDH was selected among the five shortlisted among more than 20 applications. A tight schedule of meetings and individual work developed in the next seven weeks for the completion of the bidding materials consisting of the **commercial bid** (letter of bid, consortium bidding agreement, summary of designers to be involved in the project, basic information of designers to be involved in the project, quotation list, bid bank guarantee, commitment for bid with integrity), **design documents** (an A3 size booklet of about 300 pages with all the drawings and scheme related to investigation analysis, design concept, project parameters), **scheme presentation file** (a multimedia file of no more than 10min), **five A1 size display boards**, **a maquette in scale 1:500.**

On November 22nd, the proposal was submitted to the competition office in Shenzhen. Two weeks later, on December 6th, the project leader and the three chief designers participated in the design presentation before the judging committee. Just a day after, on December 7th, the results were announced: the design team was awarded 4th place. Although it was not sufficient to proceed with the assignment, the outcome was nevertheless outstanding. The participants exhibited great enthusiasm, and the prize received was partly allocated to cover incurred expenses such as renderings and maquettes, while the remaining portion was saved as a reserve for the group's future participation in competitive opportunities.

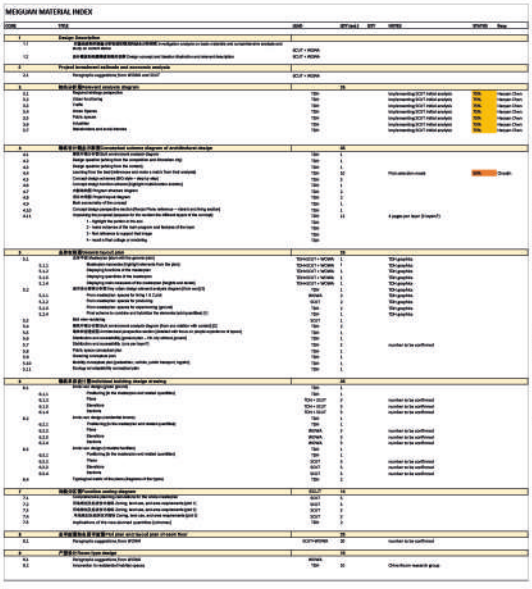
The design object

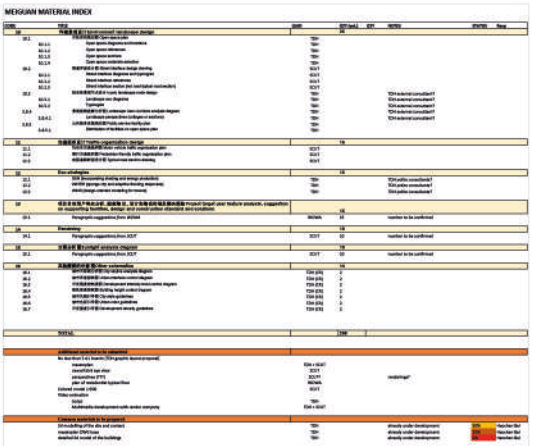
The tender involves the implementation of an architectural scheme and design

development for a previously industrial area located on the northern outskirts of Shenzhen. This area is marked by the presence of multiple urban villages and is currently undergoing substantial redevelopment, encompassing both infrastructure and building structures. Notably, the site is positioned along a significant infrastructural axis known as the 'science-innovation corridor', which aims to promote the growth of high-tech industries. This corridor is set to extend over 100 kilometers, connecting Hong Kong to Guangzhou. In this sense, the design proposal involves a comprehensive traffic study that examines the road network within the plot, as well as the landscape design of the so-called 'supporting area'. Additionally, it is expressively required for the proposal to integrate thematic research elements, such as evaluating height restrictions, implementing flood control measures, ensuring seismic resistance, promoting sustainable building practices, emphasizing energy conservation, implementing soil and water conservation strategies, conducting environmental impact assessments, addressing geological hazards, conducting traffic impact analyses, and planning for road openings.

Grounded on this backdrop, TDH developed a proposal aiming to transform the site into a vibrant hub of open public space, serving as "a permeable attractor […] a condenser of open public space […] a collective resource to promote a new form of citizenship" (Meiguan Design Proposal: 46). To achieve this, the design is structured with three superimposed layers. The first layer is a tridimensional public space at the base, creating a freely-walkable ground level that seamlessly integrates public facilities with a series of open public spaces, pedestrian streets, squares, and courtyards. The second layer is a suspended park, which acts as a buffer zone between the public facilities embedded in the ground and the private buildings above it. This park, characterized by a curved dome, serves as a continuous platform connecting all three lots at an elevated height. It can be accessed directly from the ground through gentle slopes located at multiple points. Along its borders, the park features various types of equipment, shapes, and greenery, creating a dynamic and diverse environment. Lastly, the third layer encompasses the buildings distributed along the perimeter of the site, which contributes to the creation of an open urban courtyard. The interplay between indoor and outdoor spaces establishes a porous boundary. The ring of buildings

7_02 Programme of the first workshop, and workflow of the Meiguan competition





consists of x-shaped high-rise residential buildings in plots 1 and 2. In lot 3, there are longitudinally placed industrial sticks that are connected to each other by an elevated pathwalk. Additionally, an office tower is positioned at the northwest corner, serving as a prominent landmark within the overall masterplan. Its integration into the public system and its green rooftop provide visitors with a unique observation point.

Phase I: Prequalification

It is noteworthy that during the first workshop, the official competition had not yet been published. Only a pre-announcement was made, which provided a brief introduction to the project overview, tender content, registration requirements, and main rules. However, specific design schedules and award fees were only tentative. Moving on to the organization of the second workshop, although the bidding had been published, it was clarified that the initial phase primarily involved completing bureaucratic modules and did not encompass any design aspects. This condition allowed to temporarily set aside work on the layout and instead focus the first meeting on providing an overview of how the experience would unfold (in the brighter scenario that hypothesized the progression to the second stage). Consequently, the first event centered around hypothesizing a credible timeline and gaining a deeper understanding of the approach and expected outcomes of the proposed project. In this context, the formation and progression of China's housing market were explored, along with the practices employed by private real estate companies in China regarding housing supply. This exploration was complemented by the presentation of comparable projects that centered on urban revitalization, providing a more comprehensive outlook on the potential results. Additionally, valuable insights were drawn from the expertise obtained from the Lishui project (refer to Chapter 5), coupled with a thorough analysis of the materials generated over weeks of work and effective collaboration with the Chinese partner.

With this context in mind, the group's activities for the early summer period concluded. The project topic undoubtedly piqued the interest of all workshop participants, however, actual participation was still subject to verification of the level of interest from the Chinese partner, which was confirmed a few days after

the official bidding announcement. The second workshop focused on discussing and understanding the process of completing administrative documents. This included tasks such as determining the representative firm, selecting the relevant projects to include, and preparing the specific content required for submission. Additionally, it was requested that each key member of the design team present five projects similar to the competition topic. This requirement aimed to ensure that the team members possessed the necessary expertise to compete effectively. Since Italian firms lacked sufficient experience in this specific area, it was decided that it would be more advantageous to entrust the key positions to SCAD, while selecting only one representative from the Italian participants. PAT. Architetti was chosen to participate as Principal Designer 1 due to their portfolio, which showcased among the other projects, the involvement in a high-rise tower in Dubai and a public library in a smart city in South Korea; both the two were still under construction when the application was delivered.

Phase II: Design

In October 2021, the second phase of the competition was launched. In an initial online meeting, the two main teams, TDH and SCAD, reached an agreement to assign the artistic direction of the design to TDH. This included architectural references, volumetrics, spatial organization of the lots, facades layout, and distribution of public spaces on the ground floor. SCAD, on the other hand, would handle verification in accordance with current Chinese regulations, technical implementation, and standards calculation. The work proceeded with a weekly rhythm of meetings between TDH and SCAD on Tuesdays, along with ongoing exchanges on a WeChat common group. Meanwhile, TDH took charge of the assigned tasks by coordinating them among the individual practices. During the initial weeks, each practice was assigned specific targets and responsibilities to ensure the project's smooth progress. As the project advanced, the practices were paired together to collaboratively address and specify certain issues, fostering a collective approach toward finding solutions. They also involved Chinese students as interns in the firms and established various forms of communication, including online calls every two days to progressively assemble the design proposal for the Tuesday meeting with SCAD. In a nutshell, the work proceeds by daily communications on different WeChat groups, and a weekly in-

person workshop held on Wednesdays following the SCAD meeting.

The TDH team was at this point joined by the students Haochen Bai, Haoyan Chen, Chaojin Ruan, Peining Wang, and Ming Zhao as interns in CR, Bingqi Liu as intern at EP; Xiaoxu Liang as intern in GC and EC, and Lishui Xue as intern in FV. During the first week, CR focused his efforts on extensive research on the site and the competition requirements. As a result, in the second collective online meeting on October 19th, both TDH and SCAD agreed on the necessity to expand the design team. This was done to effectively address the specific demands of the competition by selecting expertise tailored to the project.

The first addition to the team involved the design of the residential blocks, and SCAD recommended a specialized company, Shenzhen Wowa International Engineering and Design Co., Ltd. Guangzhou Company (hereinafter referred to as WOWA), to investigate the most suitable housing prototype based on market demands and housing regulations. Concurrently, the involvement of WOWA led to the collaboration with a group of researchers affiliated with CR who were working on a regional project called Piemonte Home Design (hereinafter referred to as PHD). The aim of the project was to promote local companies in the residential sector by developing housing models for foreign markets.

The workflow was consequently reorganized to proceed simultaneously on two parallel channels between the weekly meetings. On one hand, TDH and SCAD focused on the outer envelope, public spaces, and office towers. On the other hand, WOWA and PHD worked on the interior of the residential towers. As the design proposal progressed, the concept of a suspended park emerged. In the weeks leading up to the deadline, additional teams were brought in to maximize the park development and address sustainability and energy consumption issues.

At the end of October, CZ Studio (hereafter CZs), a landscape design architecture firm, was tasked with implementing and detailing the design of the public park. In early November, researchers specializing in energy efficiency, namely Francesca Thiebat, Corrado Carbonaro, and Lorenzo Savio, all affiliated with Politecnico di Torino/DAD (hereafter DAD3), were entrusted with developing eco-strategies. These two new teams worked alongside TDH and SCAD, refining and improving the architectural proposal.

On November 22nd, the proposal was submitted to the competition office in Shenzhen. Two weeks later, on December 6th, the project leader (SCAD) and the three chief designers (one belonging to TDH (PAT.) and the other two to SCAD) attended the design presentation before the judging committee. The results were released the following day: 4th place.

Knowledge production

Although it hasn't been enough time yet to produce a comprehensive scientific output in the traditional sense for this case — the first one will be a paper to be presented at the UIA World Congress of Architects CPH 2023 on July 4th, then this work, and later probably other outputs reflecting on the entire study framework —, it can still acknowledge a knowledge production in this process too. Obviously, the approach in this case differs a lot from previous instances. First and foremost, in terms of working conditions, it is worth noting that while the two cases in Block 1 involved the convergence of designer and researcher roles, this case represents a progression by introducing additional variables and opportunities for observation. Secondly, the specific topic and site addressed in the design are significant. The project is indeed connected to a series of policies aimed at further developing an area that has already undergone rapid transformations in recent years. Previous Ph.D. theses within the CR group have examined the development of the Pearl River Delta and Shenzhen (Bruno, 2018; Naso, 2021), however, the Meiguan competition was a valuable opportunity to delve deeper into the process from an internal perspective, aligning with emerging trends in recent years.

In this view, the Meiguan approach is undoubtedly influenced by the accumulated experiences from past projects and research.

The collaboration with the studios compelled the researchers to transcend their previous experiences, seeking to distill them into general insights — a process that was also evident in the published work. Moreover, as the project advanced, there was a concerted effort to introduce socio-cultural and architectural awareness in line with the operational context, and the project's overarching

themes. This involved gaining a comprehensive and nuanced understanding of the site and its specific requirements, similar to the achievements made in Lishui's publication, that are the result of the aforementioned research. Although these endeavors were not fully captured in a formal publication, they were communicated to the studios, providing, albeit in a partial guise, a representative reflection of the project's societal impact.

The knowledge gained in the initial phase, which involves comprehending the project process and the Chinese practice context — encompassing DI dynamics, norms, communication styles, etc. — represents valuable expertise encompassing know-what, know-how, and other elements. This expertise serves as the focus of technology transfer, imparted to the studios through workshops initially at a theoretical-descriptive level and later in project development, where it materializes at a more practical-prescriptive scale.

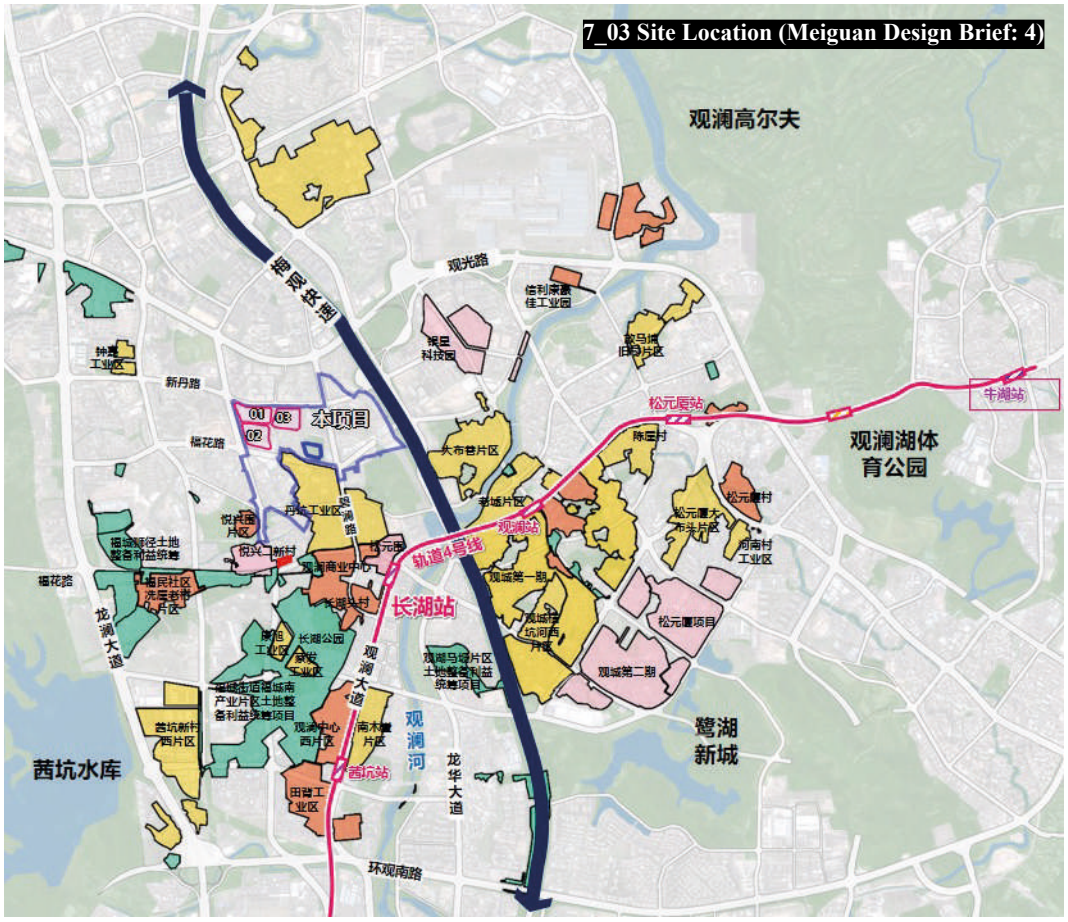
This influence is evident not only in the tangible construction of design developments that heavily draw upon Lishui's booklet but also in the management of architectural-scale proposals, such as the tower in the plot1 and the public platform on the ground floor, which incorporate insights learned from the intricate relationship with DI and the construction firm of the Oxygen Factory, encompassing both successes and failures. Undoubtedly, it is a highly practical form of knowledge that seeks to reposition itself for a new type of audience, one that is either distant or less inclined towards the theoretical and reflective aspects typically associated with academic research, but more closely aligned with the research involved in project exercises. However, considering the Oxygen Factory project, the approach adopted by the CR project team and in the workshops with ICAR/14 faculty is quite similar to the work carried out for Meiguan. Certainly, the key differentiation emerges in the second case where the formal aspect of design experimentation was predominantly delegated to professionals. As a result, academics were able to assume a more supportive role, with a greater emphasis on observation, documentation, and specification, rather than actively participating in the practical execution of tasks.

Moreover, acknowledging the scientific significance of the project process, wherein similar conditions can yield similar outcomes, it becomes evident that

expanding knowledge requires undertaking additional projects. In this regard, the Meiguan case stands out as the most comprehensive among the cases examined. It not only introduced the variable of Italian professional firms but also involved a Chinese real estate entity, another research group specifically assembled for this endeavor, and a parallel business development project in collaboration with Polito. Consequently, this enabled a deeper comprehension of the dynamics within the Chinese construction market and provided valuable access to an internal database of information crucial for further research on this subject.

Publications and dissertations referred to the case study:

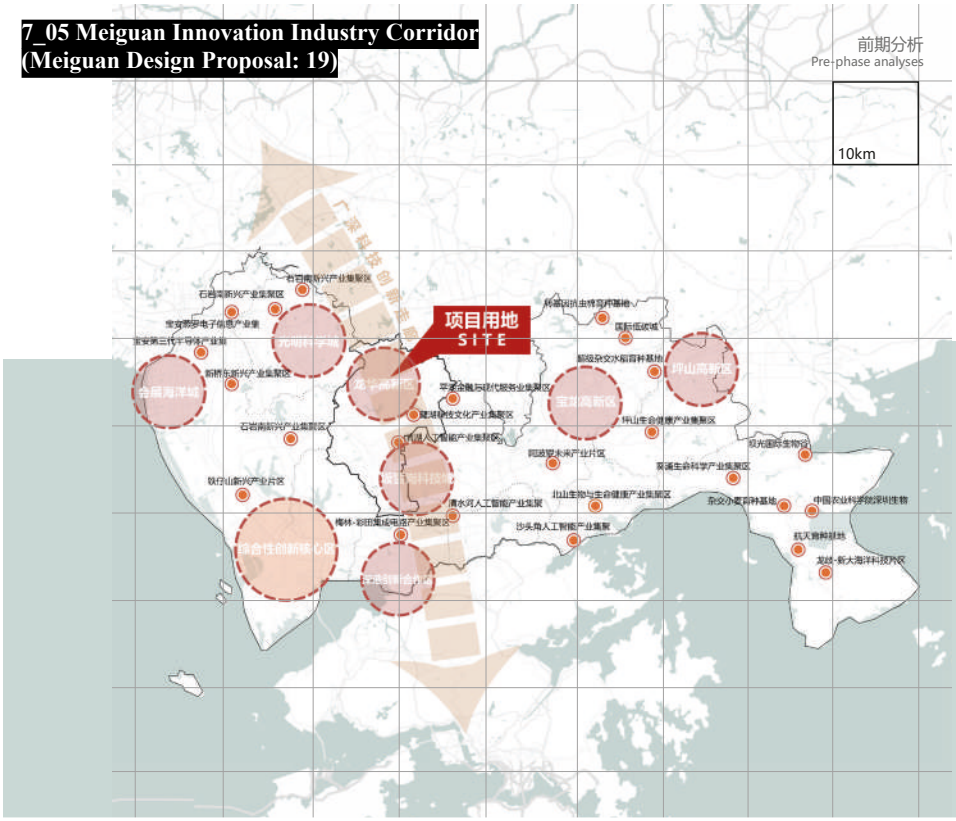
Bonino M., Federighi V., Forina C., Preti L., Rizzi L., Jager P. (ongoing). Polito Studio, a collaborative experiment between academia and practice. In *UIA World Congress of Architects 2023 CPH Science Track.*



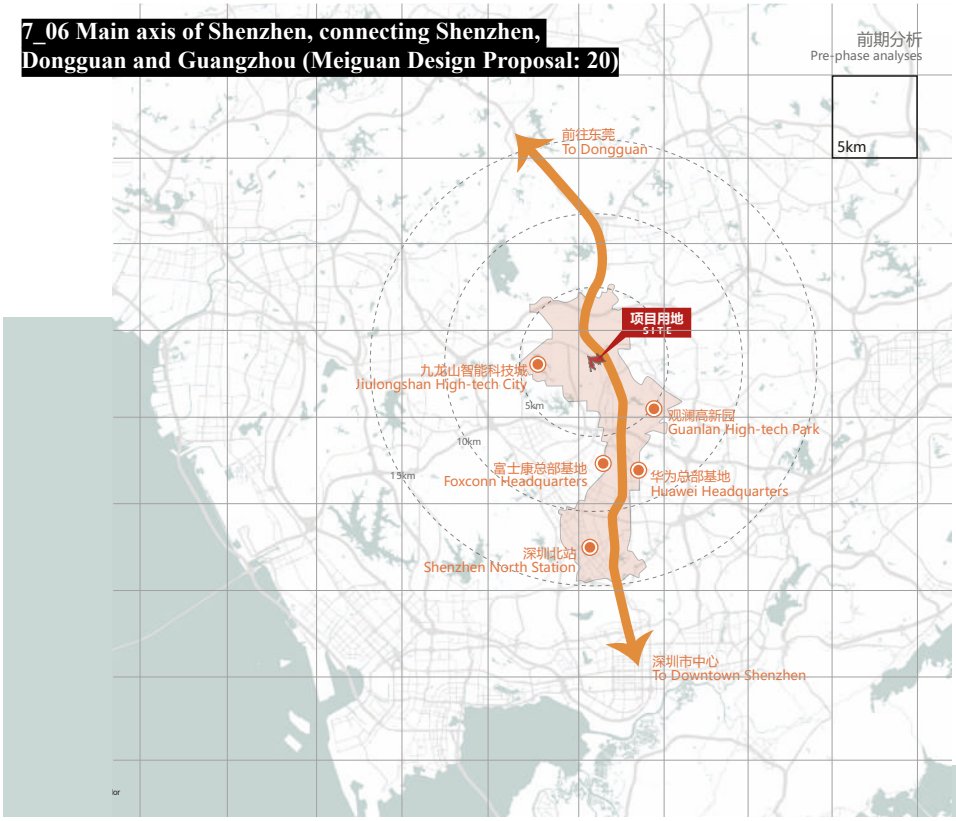
7_03 Site Location (Meiguan Design Brief: 4)

7_04 Site Conditions (Meiguan Design Brief: 6)

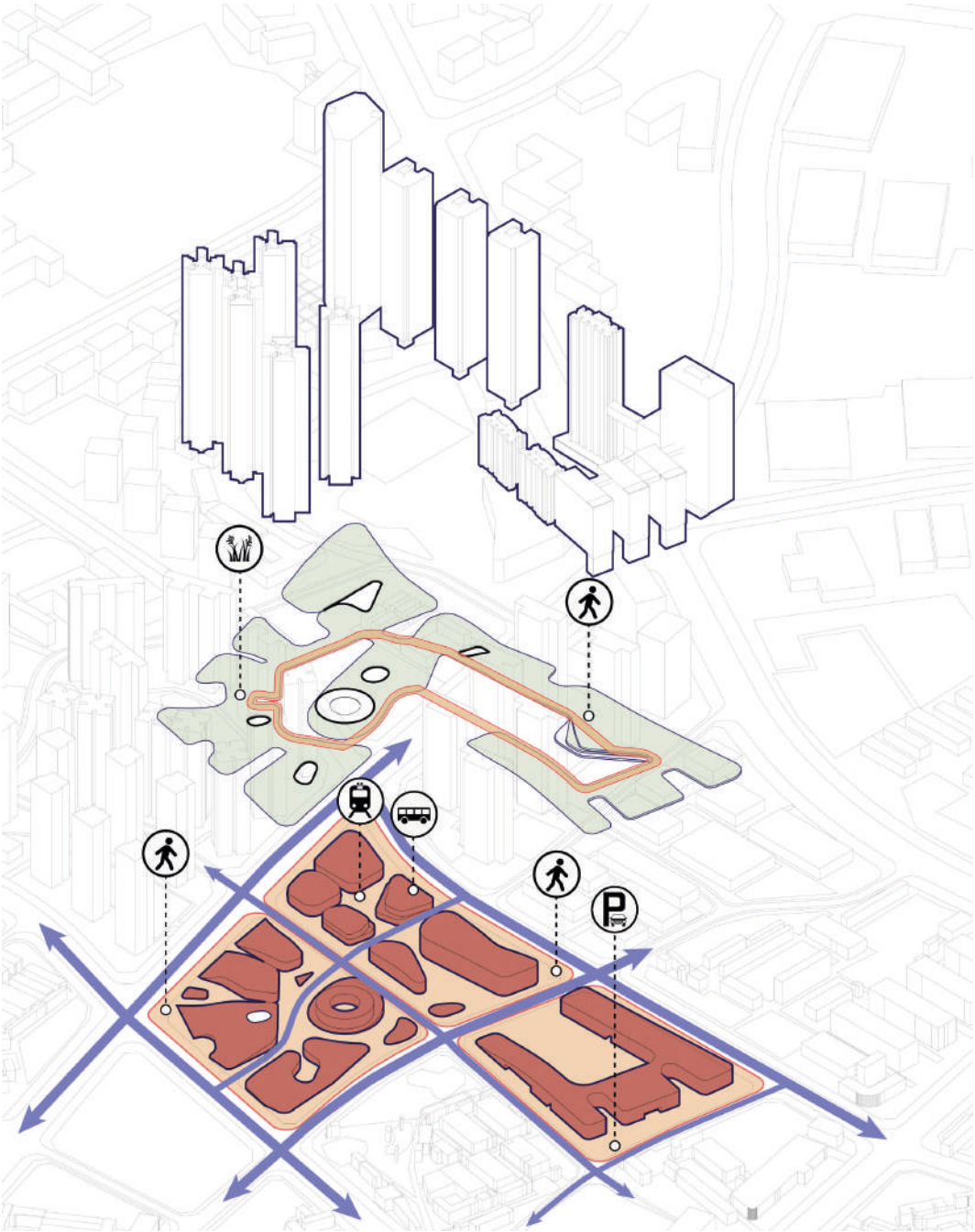
7_05 Meiguan Innovation Industry Corridor (Meiguan Design Proposal: 19)



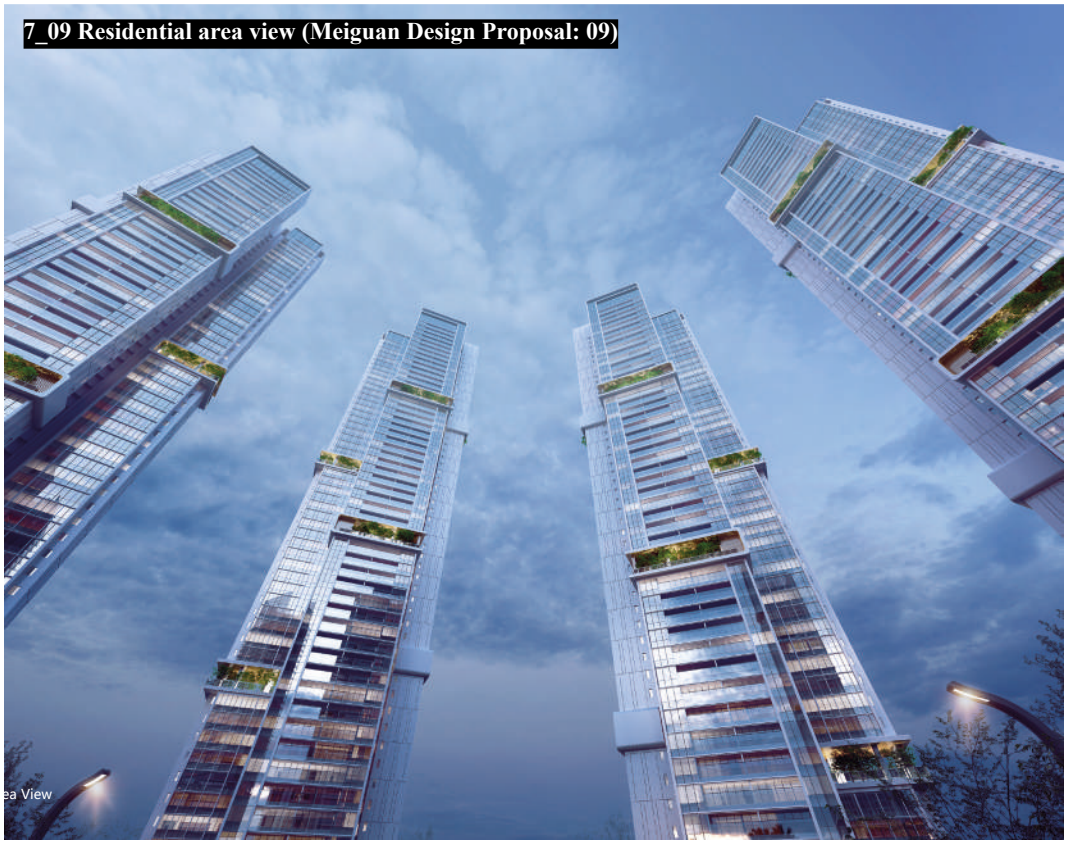
7_06 Main axis of Shenzhen, connecting Shenzhen, Dongguan and Guangzhou (Meiguan Design Proposal: 20)



7_07 Exploded view of the design concept (Meiguan Design Proposal: 105)



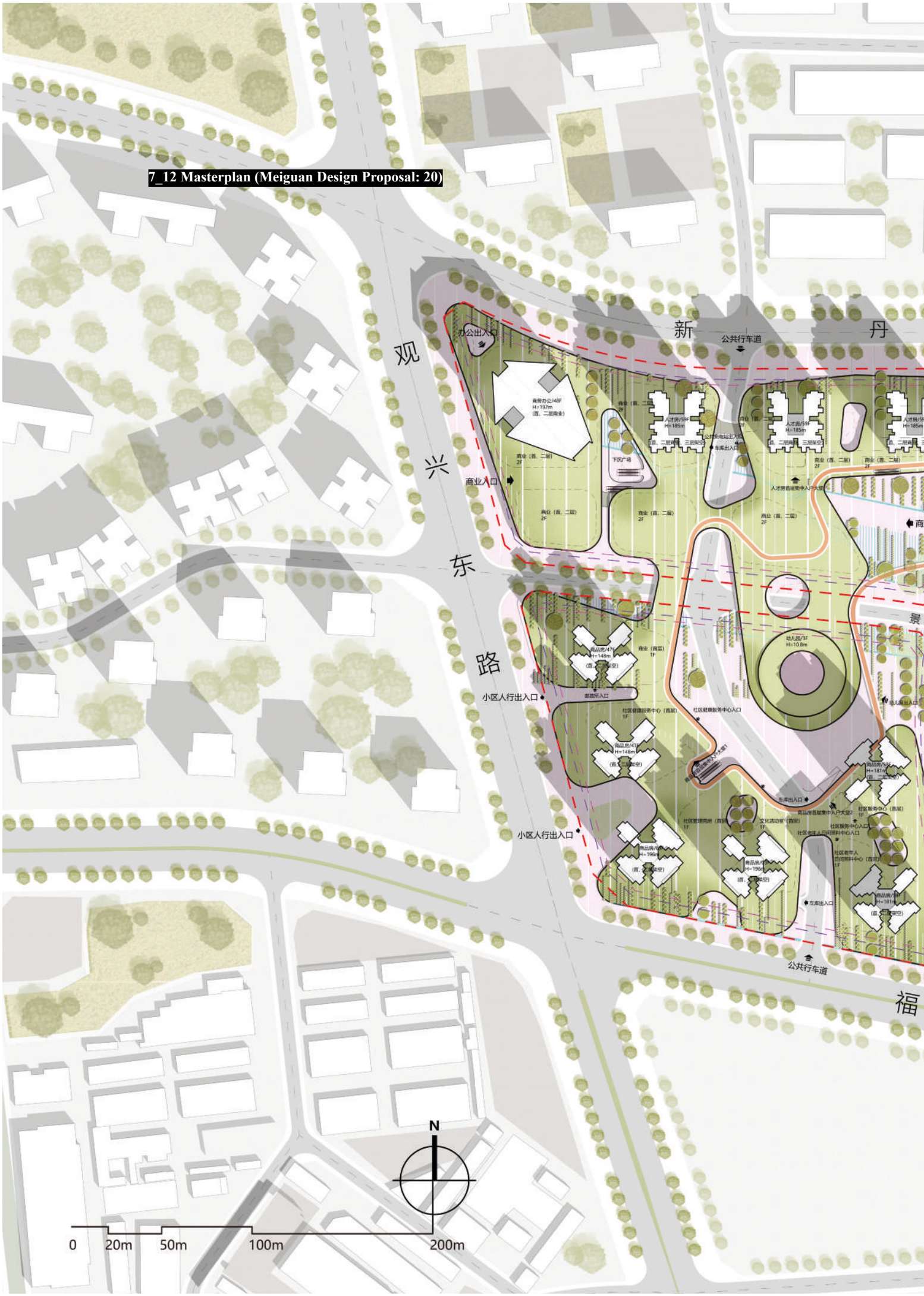

7_08 Northeastern Birdview (Meiguan Design Proposal: 04)


7_09 Residential area view (Meiguan Design Proposal: 09)

7_10 Human subjective of the commercial area (Meiguan Design Proposal: 12)

7_11 Perspective of the park platform (Meiguan Design Proposal: 11)

7_12 Masterplan (Meiguan Design Proposal: 20)

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研发厂房出入口
研发厂房出入口
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H=87.5m
研发厂房/32F
H=149m
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H=92m
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H=92m
回迁宿舍/27F
H=93.5m
(原：二层研发厂房)
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福
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碧
澜
路
用地红线
建筑6m退线
车库出入口
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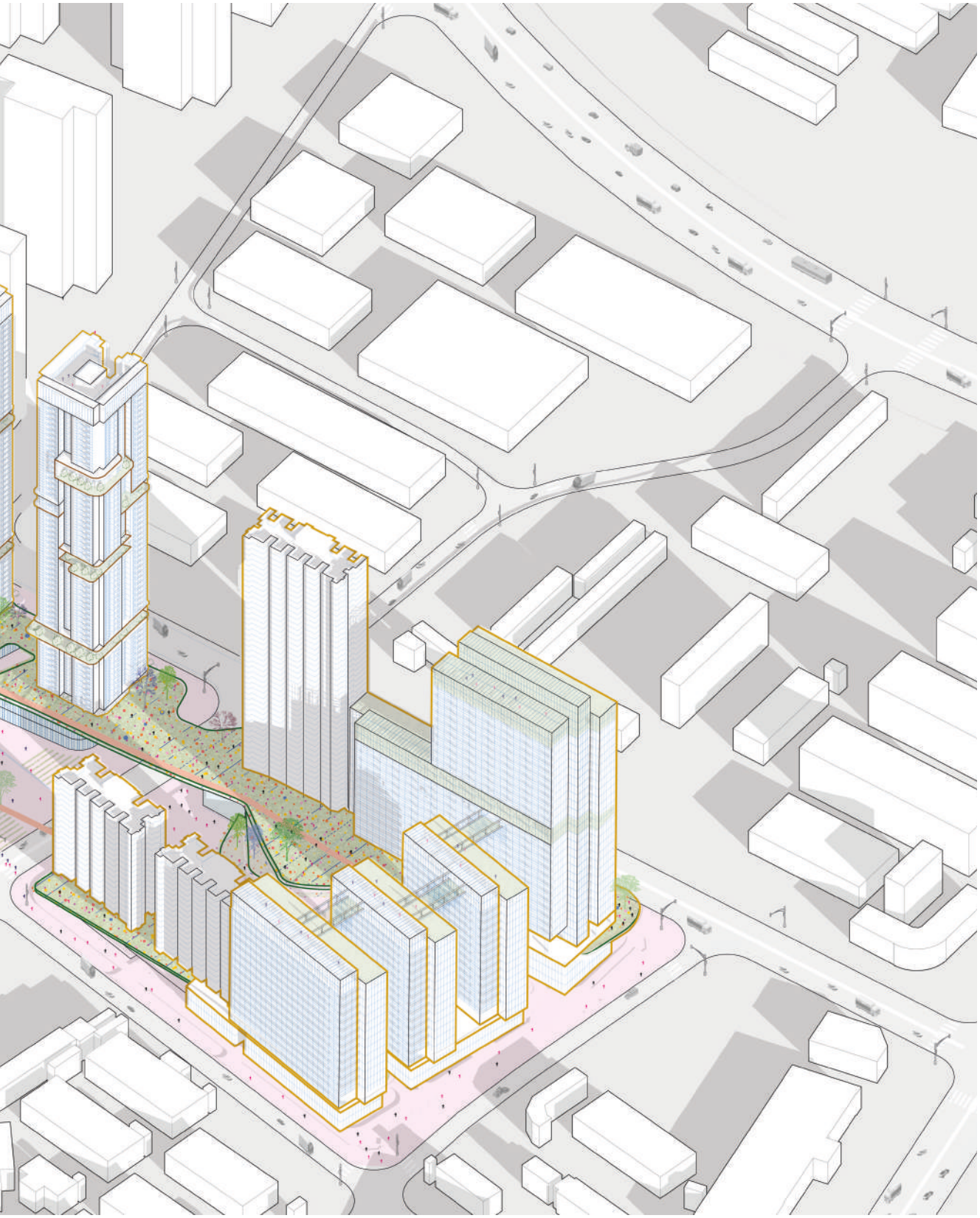
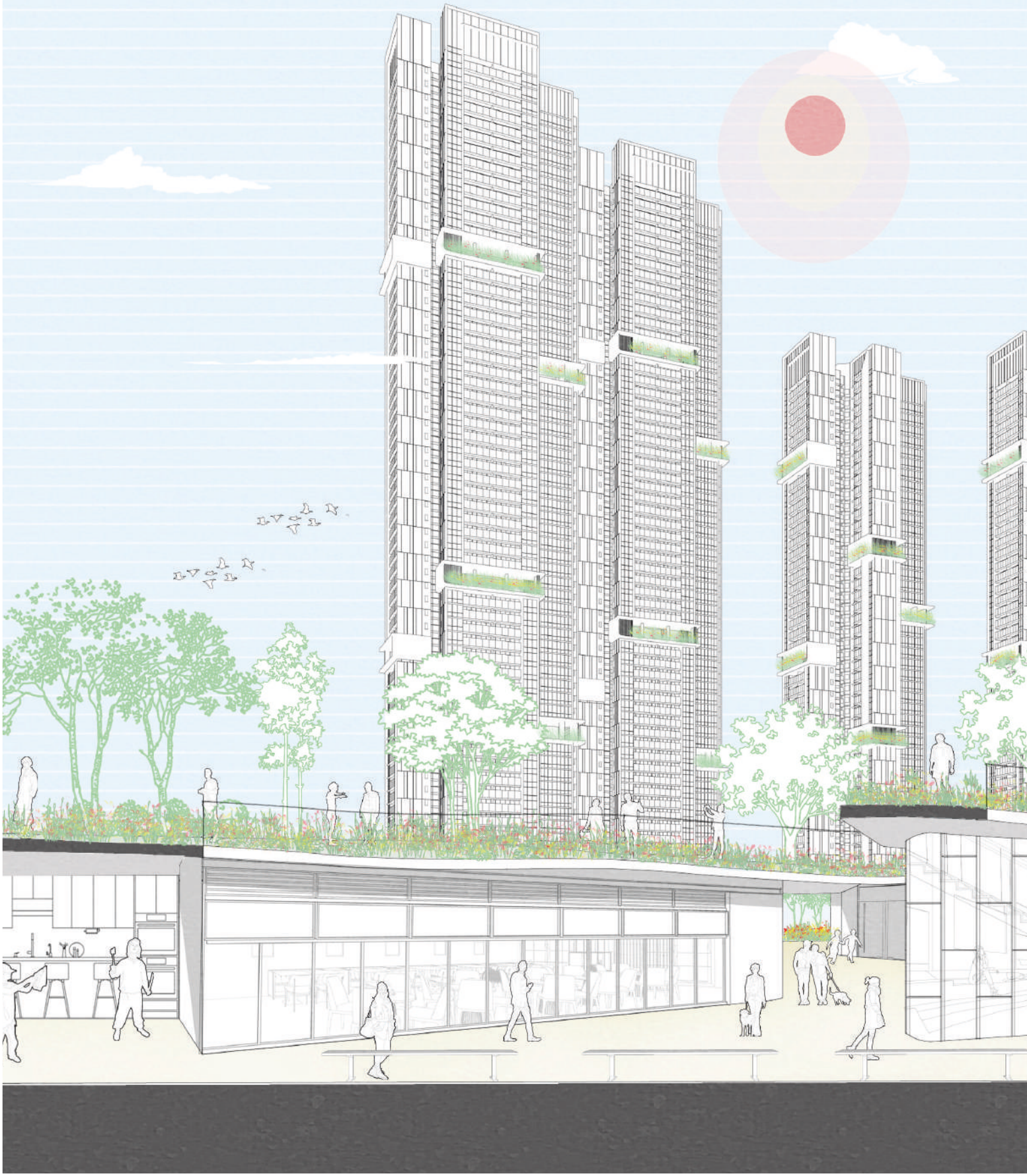
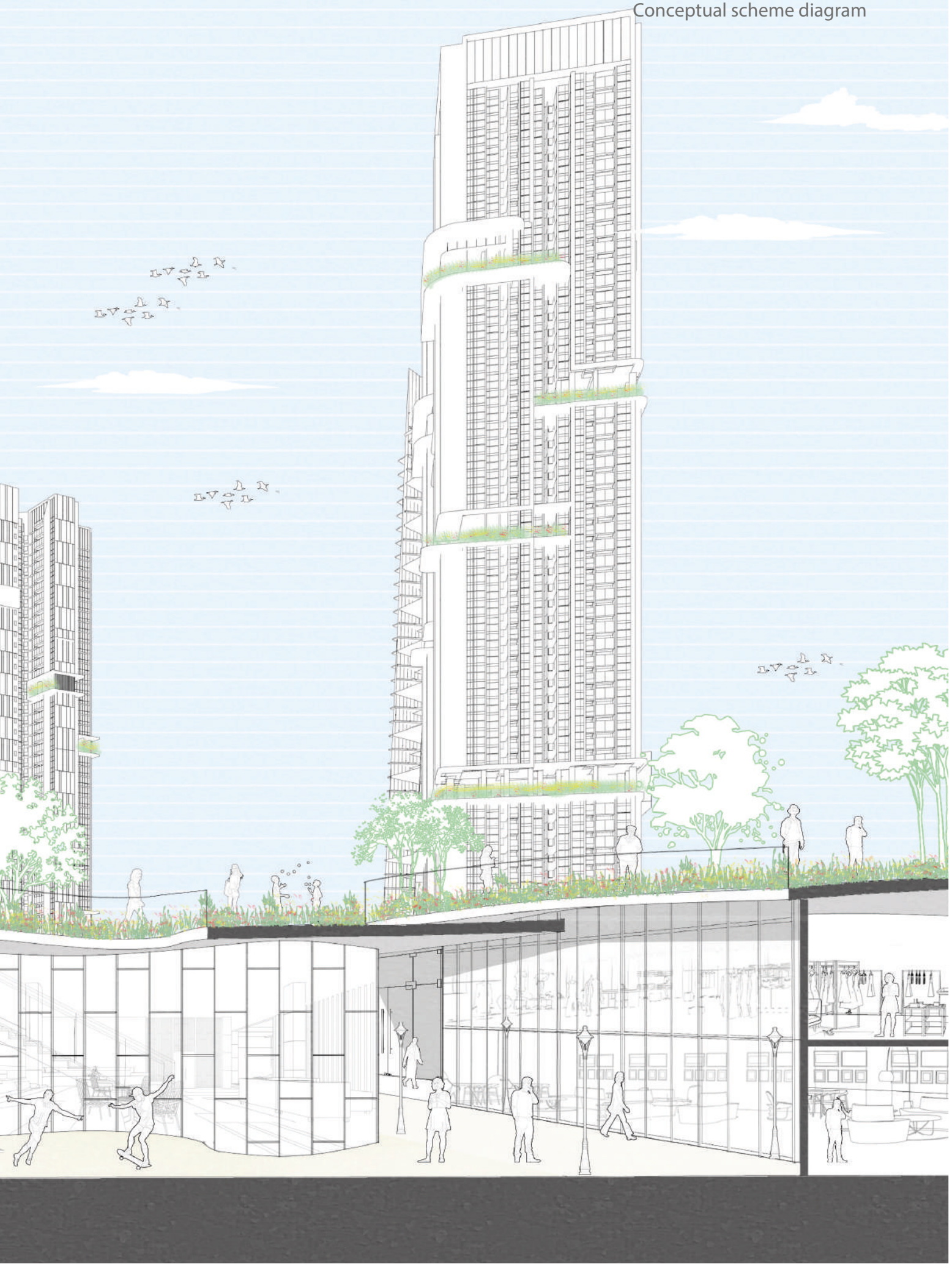
7_07 Axonometric view (Meiguan Design Proposal: 82)



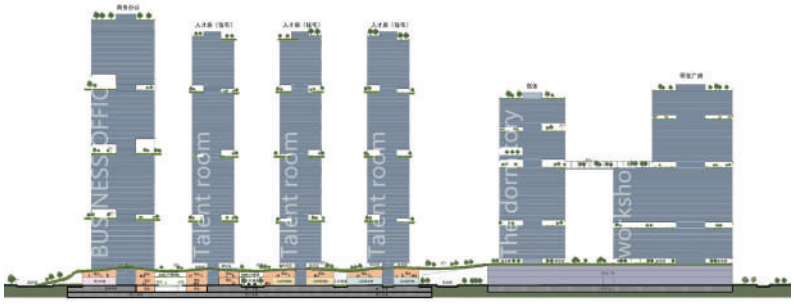
7_13 Axonometric view (Meiguan Design Proposal: 82)



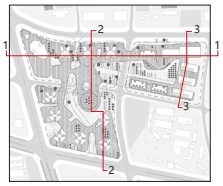
概念分析
Conceptual scheme diagram



7_14 Site profiles (Meiguan Design Proposal: 131)



1-1剖面图



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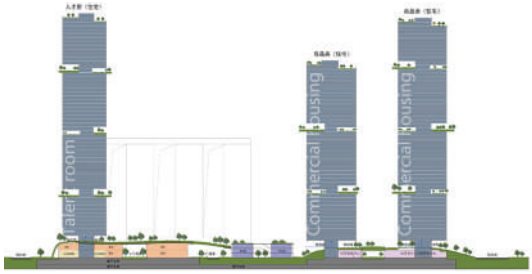
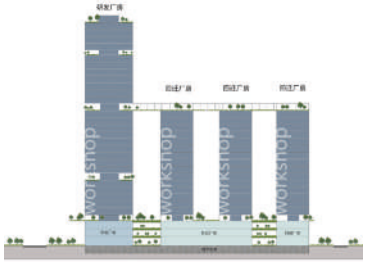
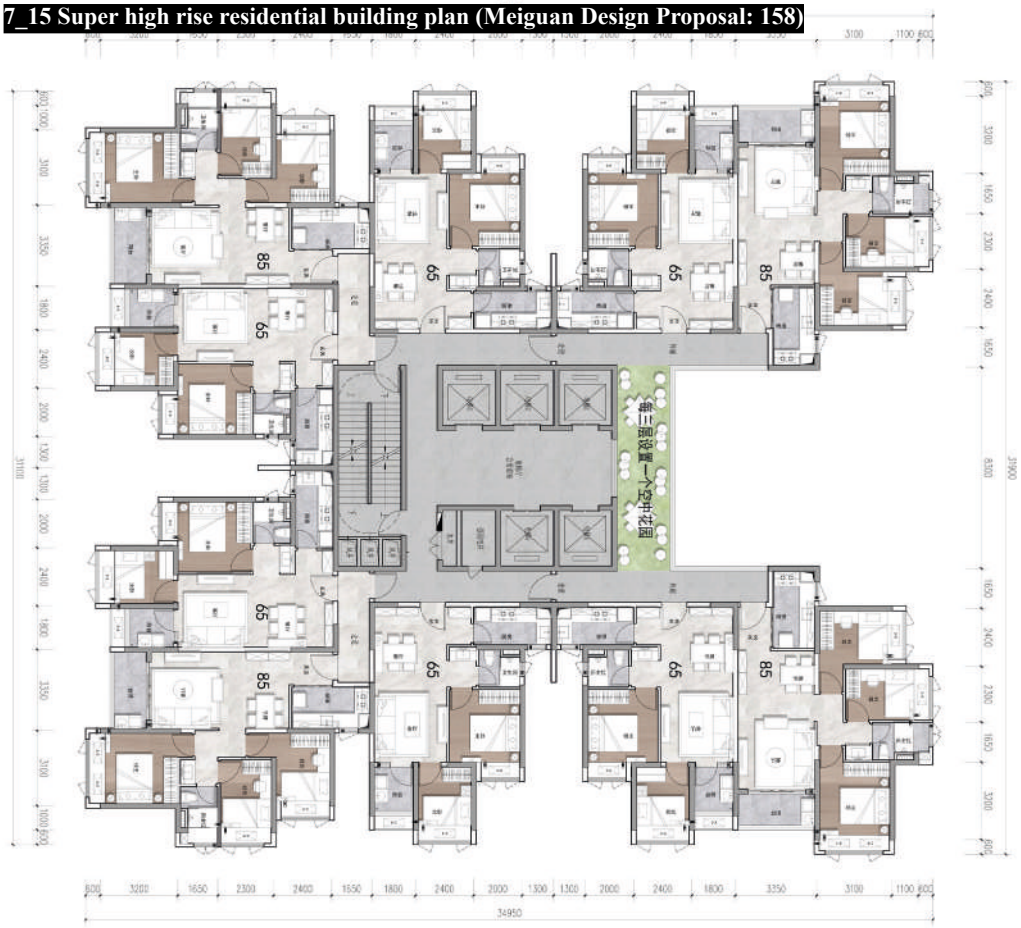


2-2剖面图



3-3剖面图

7_15 Super high rise residential building plan (Meiguan Design Proposal: 158)



7_16 Comparative overview of the three institutions

SCAD A. Guangzhou, Guangdong, PRC B. University-led Design Institute C. Around 1,000 members organized in 25 production departments, 4 technical and functional management departments and 2 subsidiary companies D: 1953 (1981) E.scutad.com.cn	F. "After more than 60 years of accumulation and development, our institute has become an architectural design institute with strong technical force, reasonable talent structure, complete professional supporting facilities and advanced design methods. At present, it has many qualifications such as construction engineering, architectural intelligence, urban planning, municipal, landscape, environmental engineering, engineering consulting (architecture and urban planning), cultural relics protection, survey and design, etc., and has passed the ISO9001 quality system certification".	G. cultural architecture, education architecture, mega-high-rise architecture, sports architecture, exhibition architecture, new science and technology industrial parks, transportation hubs.
TDH Turin Design Hub		
China Room A. Turin, Italy B. University Research Group C. 7 Professors, 9 Fellows, 15 Junior Fellows D. 2016 E. chinaroom.polito.it	F. "China Room is a research hub that focuses on Chinese architecture and urbanism. Its activities span between Research, Education, and Practice. It aims at strengthening the collaboration with Chinese universities, scholars, and public institutions, thus contributing to redefining the global academic debate. The goal is to be an active hub of competencies as well as a repository of information, prompting scholars' exchanges and mutual understanding".	G. Masterplan for the redevelopment of a fishing village in China, industrial regeneration into a visitor center for the Olympics in China, industrial regeneration into a mixed-use cultural space in China, 1st place into an international competition on net-zero energy micro-housing, curatorship of an international Biennale.
Gianpiero Moretti A. Québec, Canada B. Professor and Practitioner C. -- D. 1990 E. --	F. "Gianpiero Moretti is Professor of architectural and urban design at the School of Architecture of the Laval University, in Canada. Between 2013 and 2017 he was Director of the same Faculty. Alongside the academic activity and experimental research, he contributed to the artistic direction of architectural and urban projects in Canada, France, and Italy".	G. Multifamily housing design in Canada, industrial refurbishment, pedestrian and vehicular bridge refurbishment in Canada, diffused-hotel interior design in France, prototype for raw-earth hose in Ethiopia.
PAT. Architetti - *Rapresentative* A. Turin, Italy B. Architectural firm C. 4 Founders, 5 Architects D. 2007 E. patdesign.it	F. "PAT. is an architecture firm who endorses an integrated design approach to conceive sustainable buildings, based on the effective use of materials and energy resources".	G. Collaboration on a new town masterplan in Ghana, on a residential complex design in India, on a shopping center design, on a wellness center design, and on an industrial refurbishment into a restaurant and cocktail bar.

(A. location, B. type, C. structure, D. constitution year, E. site, G. mission, H. main projects typology)

PENNAZIO architects + engineers

A. Turin, Italy

B. Architectural and Engineering Firm

C. 1 Founder

D. 2014

E. edilportale.com/edoardo-pennazio

F. “Founded by Edoardo Pennazio, placing sustainability and quality of life as central themes of his works, stimulating the interaction between man and environment”.

G. Seaside villas complex refurbishment, restaurant interior design in Kenya, concept design of headquarters in the United Arab Emirates, housing design in Kenya, fish market design in Qatar.

Studio Cavaglion

A. Turin, Italy

B. Architectural firm and design office

C. 2 Founders

D. 2019

E. --

F. “Cavaglion is an architecture and design office based in Turin, Italy.The studio was founded in 2019 by Emanuele and Giovanni Cavaglion with the ambition of creating a multidisciplinary workplace for the development of creative projects and innovative ideas”.

G. 1st place in an international competition for a microhome, 5th place in an international competition for a hotel room design, interior design of a cosmetic store, and honorable mention in an international competition for a museum in Portugal.

Studio Vaj

A. Chivasso, Turin, Italy

B. Architectural and Engineering Firm

C. 2 Partners, 1 Architect

D. 1946

E. studiovaj.com

F. “The firm works on a wide range of projects, architecture and interior design studies for public, cultural, educational, residential, commercial, tertiary and industrial functions; it has worked with public agencies and private clients”.

G. Participation in an industrial building refurbishment into an innovation center, participation in international train station design, participation in headquarters design in Saudi Arabia, mentioned in an international competition for a college design in Germany, brand guidelines and interior design for a pizzeria franchise in Switzerland and United Arab Emirates.

深圳和华国际工程与设计有限公司

Shenzhen WOWA International Engineering and Design Co. Ltd.

A.Shenzhen, Guangdong, PRC

B. Architectural and Engineering company

C. Nearly 1,000 employees

D. 2005

E. wowa.cc

F. “The company’s design philosophy is to create value by design. When facing every design project, ‘maximize land value and rationalize cost control’ is always our first goal. ‘Efficiency’ design service concept. The company advocates the corporate culture concept of ‘efficient work, quality life’-efficient work is the source of our happiness, and we also carefully create a colorful life”.

G. Pre-planning, urban design, construction design, interior design, landscape design, green building design, architectural BIM design, prefabricated building design, project management and other whole-process consulting services. Project types cover urban renewal, industrial parks, large residential areas, large complexes, hotels, tourism and vacations. District and medical care, etc.

Piemonte Home Design

A. Turin, Italy B. Regional business development project C. 36 companies, 1 Research Group D. 2020 E. piemontehomedesign.com	F. “The team aims to promote the excellence of the region in an integrated and consistent approach, through the design of housing solutions that bring together regional productions in a synergistic and coherent way, verifying their effectiveness on the target countries”.	G. --
CZ Studio		
A.Venice, Italy B. Architecture and landscape firm C. 2 founders, 3 architects D: 2006 E. czstudio.com	F. “Every project is approached holistically, with a multidisciplinary vision that carefully examines the intricacies of future scenarios. Our professional endeavors are complemented by research, university teaching at esteemed institutions like Padua, Venice, and Barcelona, as well as the publication of architectural and landscape writings”.	G. Transformation of complex urban spaces, architectural and landscape design and research for infrastructure and mobility, public and private parks, and environmental and renewable resource management.
Thiebat /Carbonaro /Savio		
A.Turin, Italy B. Scholars affiliated to local University C. 3 researchers belonging to different research groups D: -- E. --	F. The team, assembled specifically for the competition, consists of figures specializing in technological innovation for the built environment in the areas of energy rehabilitation at the building and neighborhood scale, urban energy planning, and natural materials for sustainable architecture.	G. --

Beyond YUE|Jianhu Revival - Shaoxing Jianhu Planning and Design

Location: Jianhu, Keqiao District, Shaoxing City, Zhejiang Province, China

Scope: Conceptual planning and urban design

Program: residential, manufacturing, agricultural

Type of assignment: International competition in two stages[6]
1. Prequalification: company profile and qualification supporting documents, plus conceptual design proposal, resulting in the selection of 6 shortlisted;
2. Design Competition: conceptual planning and urban design and competition review, resulting in the selection of first, second and third prizes
Placed 15th in the Prequalification phase over 46 valid applications

Timeline:
1. Prequalification: January 31st/February 18th, then postponed to May 8th, 2022

Design framework: Jianhu (Jian Lake) stands as a significant cultural landmark, bearing witness to a rich history as one of China's oldest water conservancy projects and being renowned as the birthplace of Shaoxing rice wine. The project site spans both banks of Jianhu, it is situated within the Jianhu Tourist Resort, stretching approximately 12.6 kilometers from east to west. The project proceeds on a dual scale. The conceptual planning aims to coordinate the relationship between 'landscape and city, cultural heritage and modern industry, tourism and citizen life', defining a vibrant space with ecological vitality beyond the YUE region, cultural tension, and dynamic industrial coupling. On the other hand, urban design focuses on shaping the cultural space and features of eight core areas within a total extension of 15.0 square kilometers. This includes refining the functional format of each area, designing spatial forms, and enhancing public open spaces.

Project scale: 35'400'000 sqm

Organizer: People's Government of Keqiao District, Shaoxing City, Zhejiang Province
Contractor: Jianhu Tourist Resort Management Committee, Keqiao District, Shaoxing City, Zhejiang Province
Co-organizer: One-tenth Art Company

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[6] The requirements and design stages information has been extracted from the competition brief and relevant reference materials (People's Government of Keqiao District, 2022a; 2021b). For further information see: https://www.onetenth.cn/en/competitionDetail/Jianhu#qualification (Accessed on March 13th, 2023).

Typology: urban planning

Design Team:

Architectural Design & Research Institute of SCUT Co., Ltd. and Turin Design Hub (2MIX ARCHITETTI – representative, China Room/ Politecnico di Torino, Archisbang, Balance Architettura, Corbellaro SA, Gianpiero Moretti, Studio Cavaglion)

Narrative introduction

Following the initial application of the model on November 30th, 2021, the participants convened a meeting at the OAT venue to share their experience and present the design results to the other firms. A representative from each TDH firm attended the meeting. The presentation aimed to address two key points. Firstly, the workflow and communication management with SCUT were briefly summarized by EB at the beginning of the meeting. Secondly, the progress of the work and the achieved outcomes were discussed. Representatives from each participating firm provided insights into both the formal design output and the specific aspects of their deliveries, including the challenges encountered.

On the same day, the pre-announcement of another competition was introduced, featuring a completely different scale and topic, but (possibly) the same partner, SCUT. However, the official launch faced some delays until the beginning of February when the two educational workshops for the Shaoxing competition were held. Once again, each firm had the freedom to decide whether to participate in the initial workshop and, subsequently, in the design competition.

The first Shaoxing workshop took place on February 9th, 2022, from 14:30 to 17:30, at Castello del Valentino (Politecnico di Torino campus). The participants included firms that already participated in the previous project, such as EC and GC from Studio Cavaglion, and GM (online); as well as new participants like BM/Bruno Maiolo and DT/Dalila Tondo from 2MIX Architects; SM/Silvia Minutolo and EC/Eugenio Chironna from Archisbang; AL/Alberto Lessan, JB/ Jacopo Bracco; and AA/Alp Arda from Balance Architettura; FC/Filippo Corbellaro (online), and NC/Nicolò Corbellaro from Corbellaro SA [participants]; VF, CF, LP, XL (online), EB from CR [organizers], and DB/Davide Borra (master

student in ACC) as CR intern.

Similar to the Meiguan project, the main focus of the first workshop was to introduce the bidding contents and discuss the project timeline. Moreover, since the topic was closely related to the exhibition content that the firms had previously explored, as well as the Lishui project and certain aspects from the book *The City after Chinese New Towns* (Bonino et al., 2019), relevant materials were discussed and distributed among the participants. At the end of the meeting, participants shared their initial reflections on the site, and together they worked on a large print of the entire valley, dividing it into sections to concentrate their research on specific plots.

One week later, on February 16th, the second workshop took place once again in Castello del Valentino, with nearly the same group of participants: EC, GM (online), BM, SM, EC, AL, JB, FC (online), NC, CF, LP, XL (online), EB, and DB. The firms arrived with insights gathered from in-depth investigations of their assigned plots, highlighting the main issues to address in the valley's design, such as mobility, sustainability, and managing existing structures. Concurrently, CR prepared general materials encompassing the entire area large-scale, which would serve as a starting point for the design work. At the end of the workshop, the firms discussed the possibility of moving forward with the project and ultimately decided to proceed. The collective work has just started, spanning slightly over two months.

However, this second endeavor did not achieve the same level of success as Meiguan. The group indeed did not advance beyond the first stage. Nonetheless, the involvement of certain participants proved valuable as they effectively guided the group in anticipating the primary requirements of the new competition.

The design object

The project leverages the inherent potential of the location as a meeting point for diverse spatial realities between the expanding Hangzhou and Shaoxing metropolitan areas, to establish development axes that align with the urban planning goals of Shaoxing County and facilitate the enhancement of local characteristics. Rather than imposing a new structure upon it, it adopts a multi-

scale analysis approach to promote social harmony encompassing industry, culture, and ecology. 'Archipelago Jianhu', as the design is titled, hence seeks to address the challenge launched by the competition by adapting to the existing natural and urban conditions through the concept of 'smart densification'.

This strategy entails the interrelation of four key actions: densification from the north, lighter urbanization from the south, intensification of the diagonal connections, and implementation of attractive features within the area.

In this scheme, water organized and defined the city parcels, while four robust development axes form the foundational elements of the new urban structure, extending from the northeast towards the mountains. These primary axes establish improved linkages with the surrounding neighborhoods and enhance the internal street network to enhance the overall livability of the area. Furthermore, these axes facilitate concentrated densification along their routes while promoting lighter urbanization around green spaces and agricultural areas.

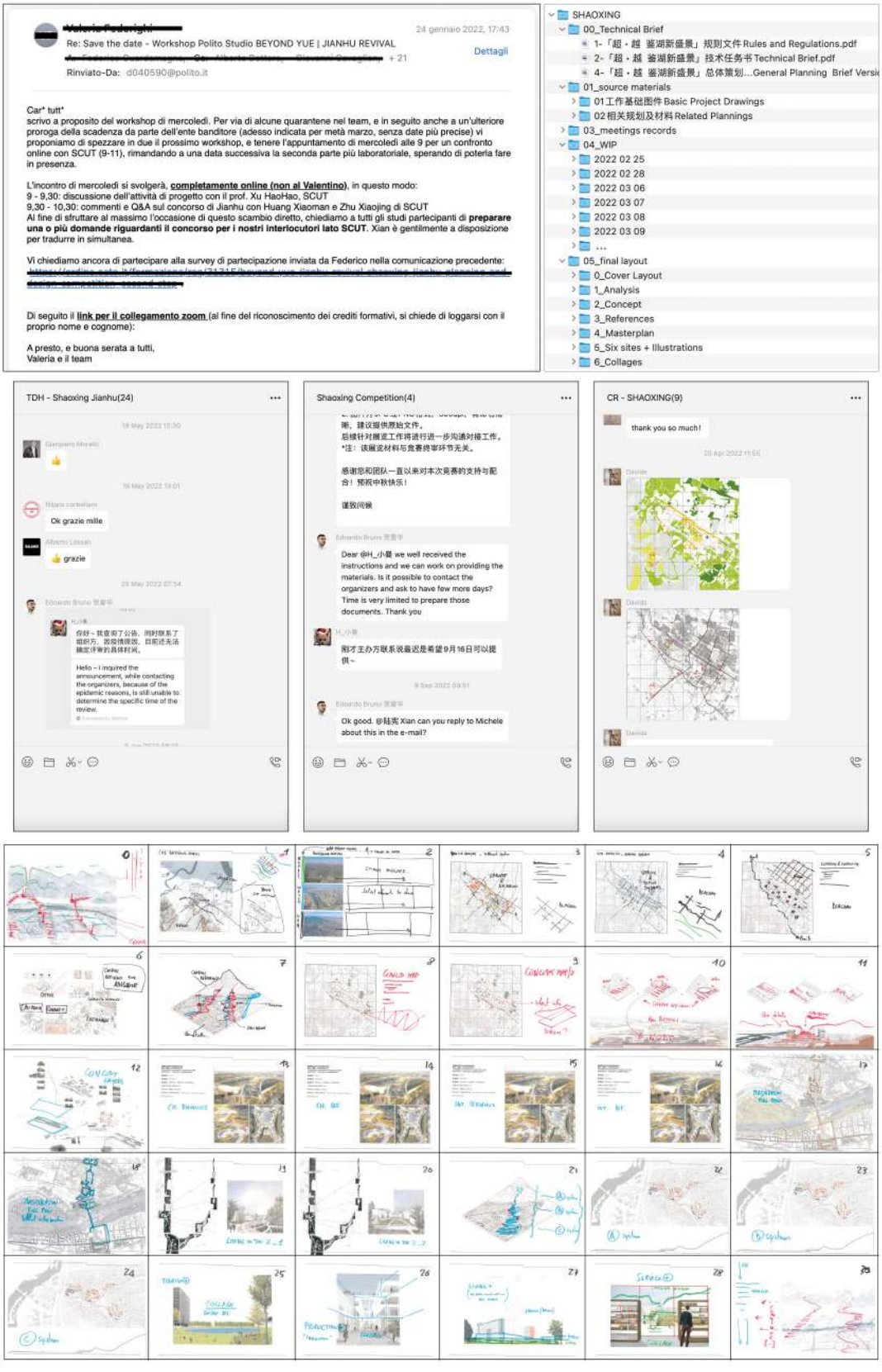
In a nutshell, this innovative framework aims in enabling maximum urbanization while concurrently preserving natural and agricultural areas, creating a less densely built environment that counterbalances the southwest direction. At the heart of the project area, these two dynamics converge, resulting in a complex network of water channels.

Phase I: Schematic Design

Unlike Meiguan, but similar to Lishui, the Shaoxing competition's initial phase required participants to submit both registration documents and a conceptual design proposal. The proposal took the form of a booklet, consisting of up to 30 horizontal A3 pages, which should showcase the design and ideas through a combination of graphics and text. The booklet aimed to provide a comprehensive understanding of the project, including its core intentions and design concepts. However, in contrast to Lishui, participants had more time to work on their proposals for the Shaoxing competition.

As observed in previous cases, during the initial qualification phase, the team from Turin had more independence and fewer meetings with SCAD. Throughout

7_17 Programme of the first workshop, and workflow of the Shaoxing competition



the entire work period, TDH continued its efforts on a weekly basis, holding meetings to review progress and share materials among the participating firms, with SCAD joining the discussion only twice. Initially, TDH firms worked individually, presenting a synthesis and analysis of a specific area of the competition site in the weekly meetings, while also engaging in discussions regarding the overall project approach. As time progressed, each firm's focus naturally gravitated towards specific issues, resulting in layered and complex discussions about the project's overall aspects. Hence, throughout the week, each firm made progress on its specific area of interest, incorporating insights gained from the collective discussions. Meanwhile, the CR team, which had expanded to include interns SY/Shi Yongde, LM/Liu Ming, WY/Wang Yixuan, and LX/Liu Xiao (master students in ACC), continued to coordinate and conduct in-depth site analysis, producing a comprehensive file that incorporated information discussed in the meetings.

By the March 18th meeting, a preliminary synthesis had been achieved, and the project was presented for the first time to external advisors MB and AS. The meeting served as an opportunity to evaluate the project concept and the analyses conducted thus far, while also expanding the conversation to encompass spatial, morphological, and strategic considerations. At the end of the meeting, the group discussed how to integrate remarks received, as well as who would represent the group in the application documents and ultimately chose 2MIX due to their portfolio's alignment with the competition's theme.

In the next week's meeting, an outline for the first booklet was established, with each studio or pair assigned specific sections. (CR - context analysis, pp 2-8; EC and GC - concept, 9-12; Archisbang - master plans and visualizations, pp 13, 17, 18, 23, 27, 29; 2MIX and Corbellaro SA - design proposals, pp 19-22, 24-26, 28; BLA - perspective views, pp 1, 20-22, 25-26, 28, 30; GM - references, pp 16-16). Subsequent meetings continued still on a weekly basis, focusing not only on the project itself but also on its representation, gradually expanding its scope.

On May 6th, the materials created in Turin, including the booklet and application documents, were sent to SCAD. Over the following days, SCAD managed the portfolio implementation, incorporating their own projects,

conducting a final verification to ensure compliance with all requirements, and proceeding with the printing process. Finally, on May 8th, 2022, the physical materials were delivered to the competition offices in Shaoxing. Just over a month later, on June 23, the selection of the top 6 finalists was announced, with TDHXSCUT ranking 15th out of a total of 46 valid applications submitted by 89 international planning and design units, firms, and individuals.

Knowledge production

Even in this scenario, there are no conventional scientific outputs based on the Shaoxing experience. However, yet, proceeding in the direction intercurred in Meiguan, it it possible to catch a glimpse of the emerging paradigm of collective knowledge production. On one hand, the adopted structure allowed the research group to delve into insights and data related to the site, while the firms, after sharing on a weekly basis a general approach, independently worked on developing parallel proposals. This sequence of conditions mirrored the *research-by-design* approach seen in the Lishui project, moving the lens from the didactic experiment to the professional one.

On the other hand, engaging in discussions with external scholars (such as MB and AS) expanded the design's horizons by enhancing the interplay between different knowledge domains. This facilitated the transformation of theoretical-critical knowledge into practical applications and nurtured the exchange of ideas, expertise, competencies, and proficiency. As a result, a greater depth was injected into the adopted framework of actions. Indeed, it is worth noting that following this event, the group focused more specifically on developing the booklet materials while also maintaining a cohesive approach to questioning the design. In particular, the group revisited and utilized previously shared materials from past publications, as well as other resources from the 2014 Shaoxing Water City Planning Strategy. These materials were scrutinized to modify and address fundamental aspects of the project, such as the interpretation of the territory and the directionality of urban development.

Nonetheless, in this particular instance, the experience was somewhat restricted, both in terms of the allocated time frame and the project's degree of complexity or the amount of data and insights that it embodies. Since the proposal

was unable to advance beyond the first selection phase, certain aspects of the formal and contextual reasoning were left at an approximate level. Additionally, the potential broadening of the team and competencies involved that would probably be expected in a second phase remained not addressed. As a result, it is likely that the Shaoxing trial did not foster a profound transformative exchange among the participants; nevertheless, the effort could have been prioritized as laying the foundation for future concrete exchanges among the participating groups. Regrettably, it appears that even this opportunity was missed, in hindsight.

Upon the completion of this project, indeed, an opportunity arose to participate in the 2022 Shenzhen Biennale. This could have served as an ideal platform to build upon the progress made thus far by the partakers — especially considering that almost all the firms involved in this project (2MIX Architetti, Archisbang, Balance Architettura, BDR Bureau, Corbellaro SA Architettura, Gianpiero Moretti, PAT Architetti Associati, Pennazio Engineering + Architects, Studio Cavaglion) already participated in at least one of the two trial developed in the PS framework. Instead of further refining a common framework and utilizing Shaoxing and Meiguan as a starting point to delve into the possibilities of a collective platform thigh, a different approach was chosen for the installation.

GBA Uninterrupted — this is the title of the installation that draws inspiration from the acclaimed *Rome Interrupted* research conducted in 1978 — sought to portray three distinct locations within the Greater Bay Area[7]: the Kingway Brewery, the old Guangzhou Baiyun Airport, and the Jiangmen Sugar Factory. sought to portray three distinct locations within the Greater Bay Area: the Kingway Brewery, the old Guangzhou Baiyun Airport, and the Jiangmen Sugar Factory. These locations were organized into a sequence of nine squares, each measuring 200x200 meters. Each square was assigned to a separate studio, allowing them to work independently on their own visualizations while adhering to a shared graphic and representation style. These individual visions were then arranged to create a cohesive and interconnected composition, facilitating an exploration of the potential continuity between the past and future through the lens of industrial regeneration, encompassing a 25-year perspective.

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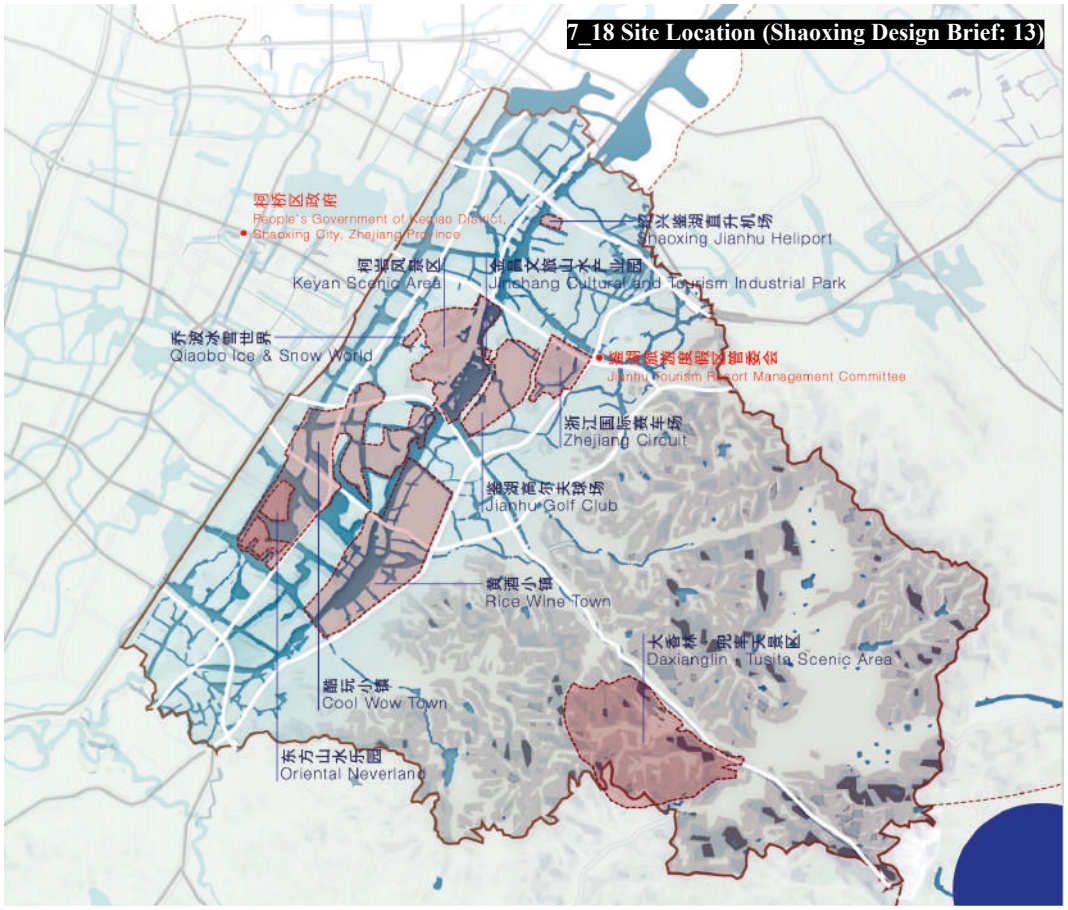
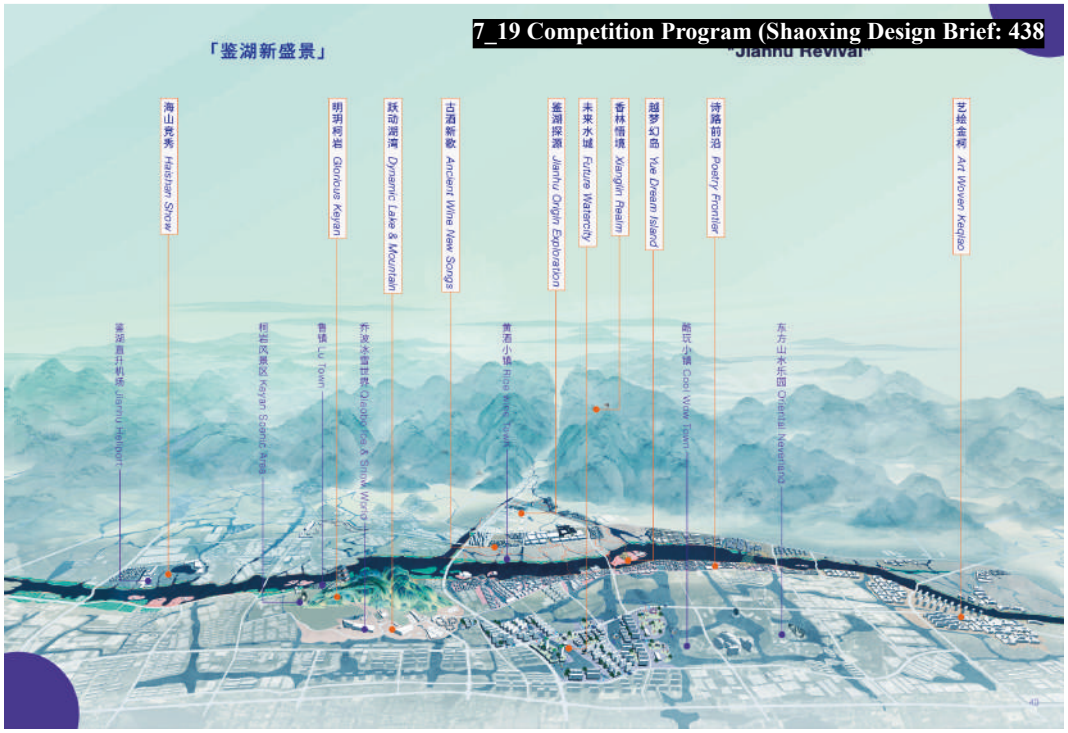
[7] See: https://www.polito.it/ateneo/comunicazione-e-ufficio-stampa/comunicati-stampa/gba-uninterrupted-l-installazione-realizzata-dagli (Accessed on March 13th, 2023).

This is to highlight that, from the perspective adopted in this work, the potential for new knowledge production experiments lies not solely in the realization or non-realization of projects, but rather in the level of exchange and interaction they trigger. With each transfer of information between different spheres and partakers, the project undergoes transformation and evolution, gaining additional meanings and signifiers. In this regard, the extent of such exchanges and interactions varies depending on the project's degree of complexity, such as conceptual design, schematic design, the artistic direction of the construction process, retrospective reflection, and so on. Merely identifying the opportunities for expanding distributed knowledge within a project is therefore not sufficient. The project itself must demonstrate that it has reached a significant degree of complexity, indicating that it has accumulated a range of information (procedural, formal, morphological, contextual, and so on), which can only be achieved through incremental exchanges. It is through these transmissions and exchanges among various professional and academic spheres of knowledge that the project evolves and broadens its scope, leading to a comprehensive and intricate comprehension of its particular and general instances.

Publications and dissertations referred to the case study:



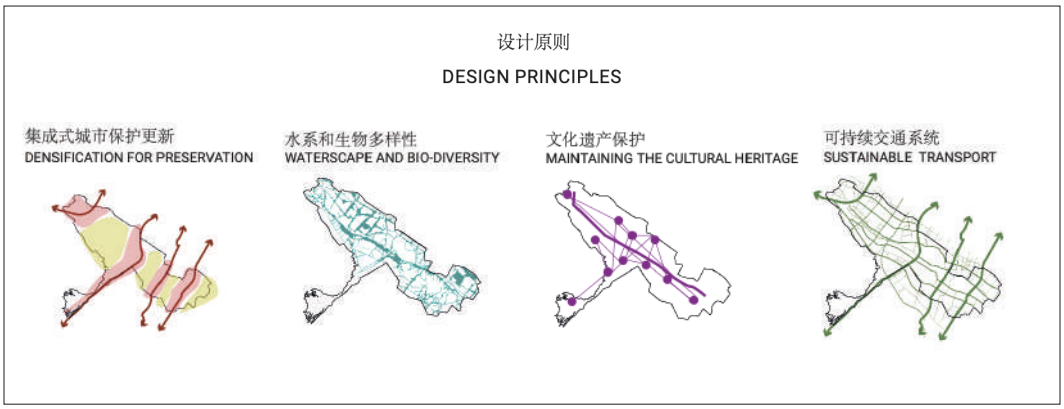
7_18 Site Location (Shaoxing Design Brief: 13)



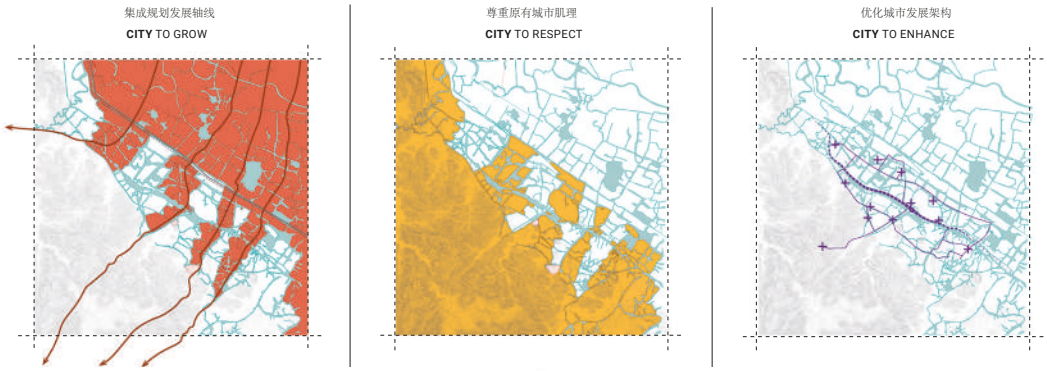
7_19 Competition Program (Shaoxing Design Brief: 438

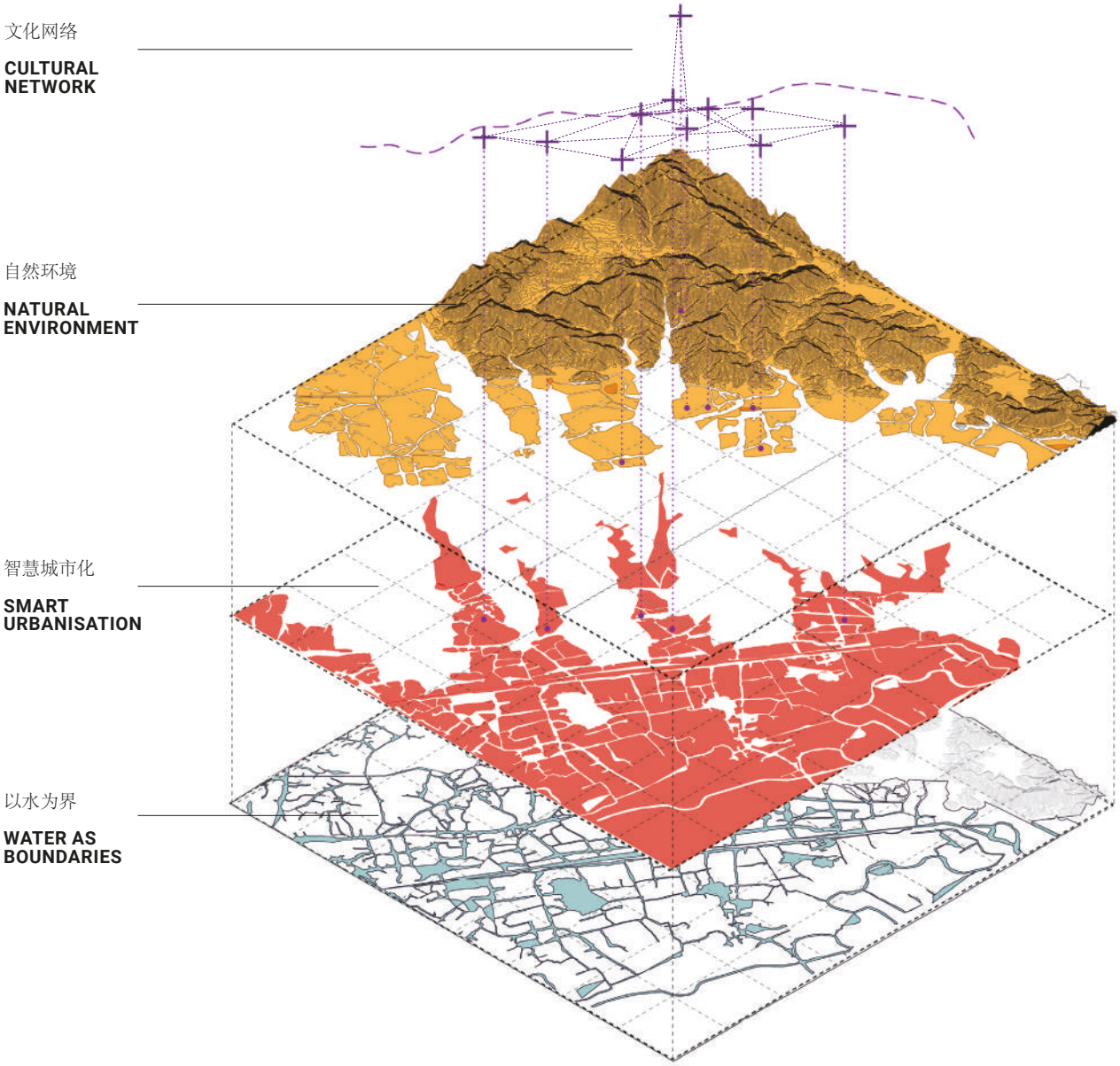
7_20 Site Analysis (Shaoxing Design Proposal: 2)

7_21 Design Principles (Shaoxing Design Proposal: 11)

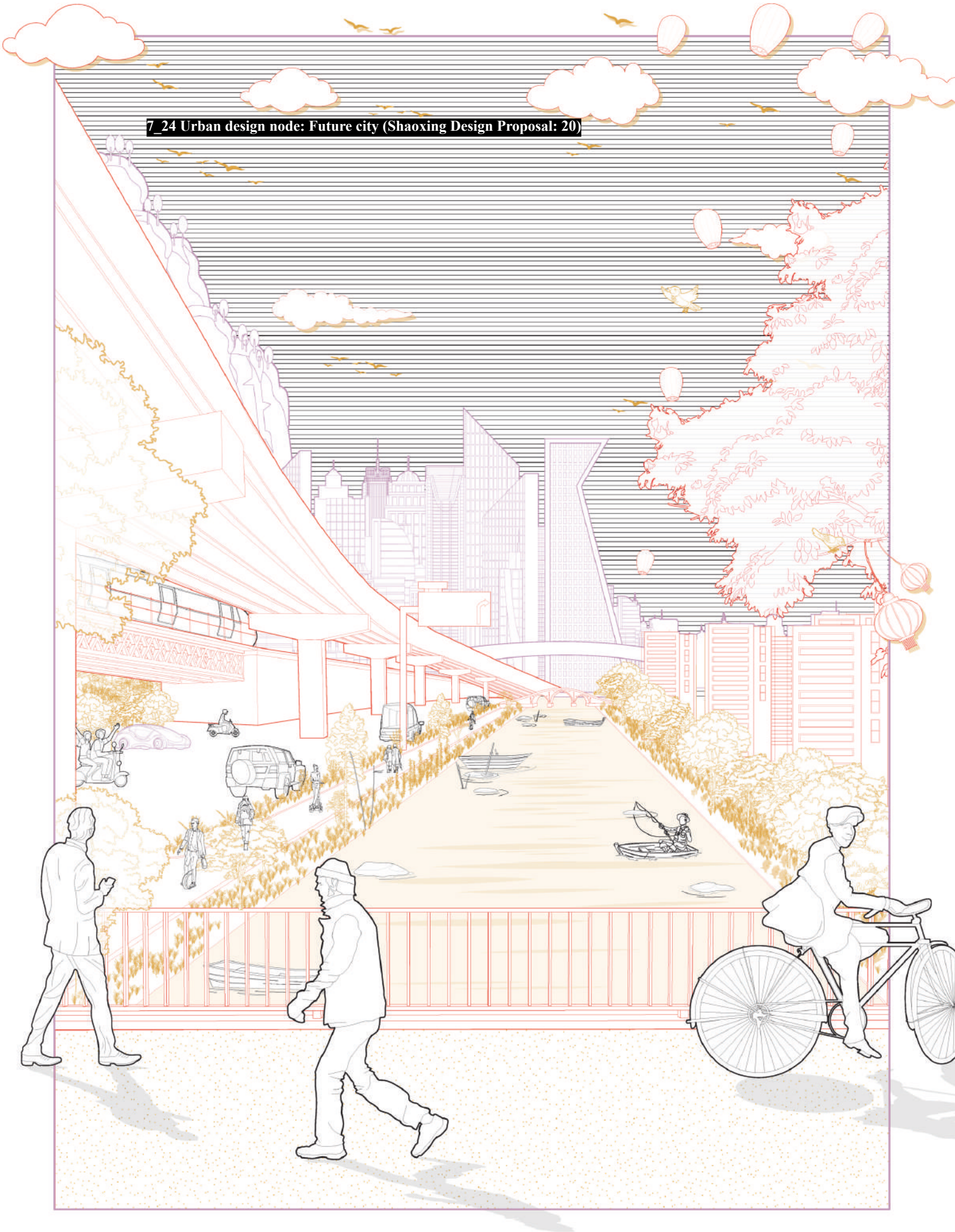


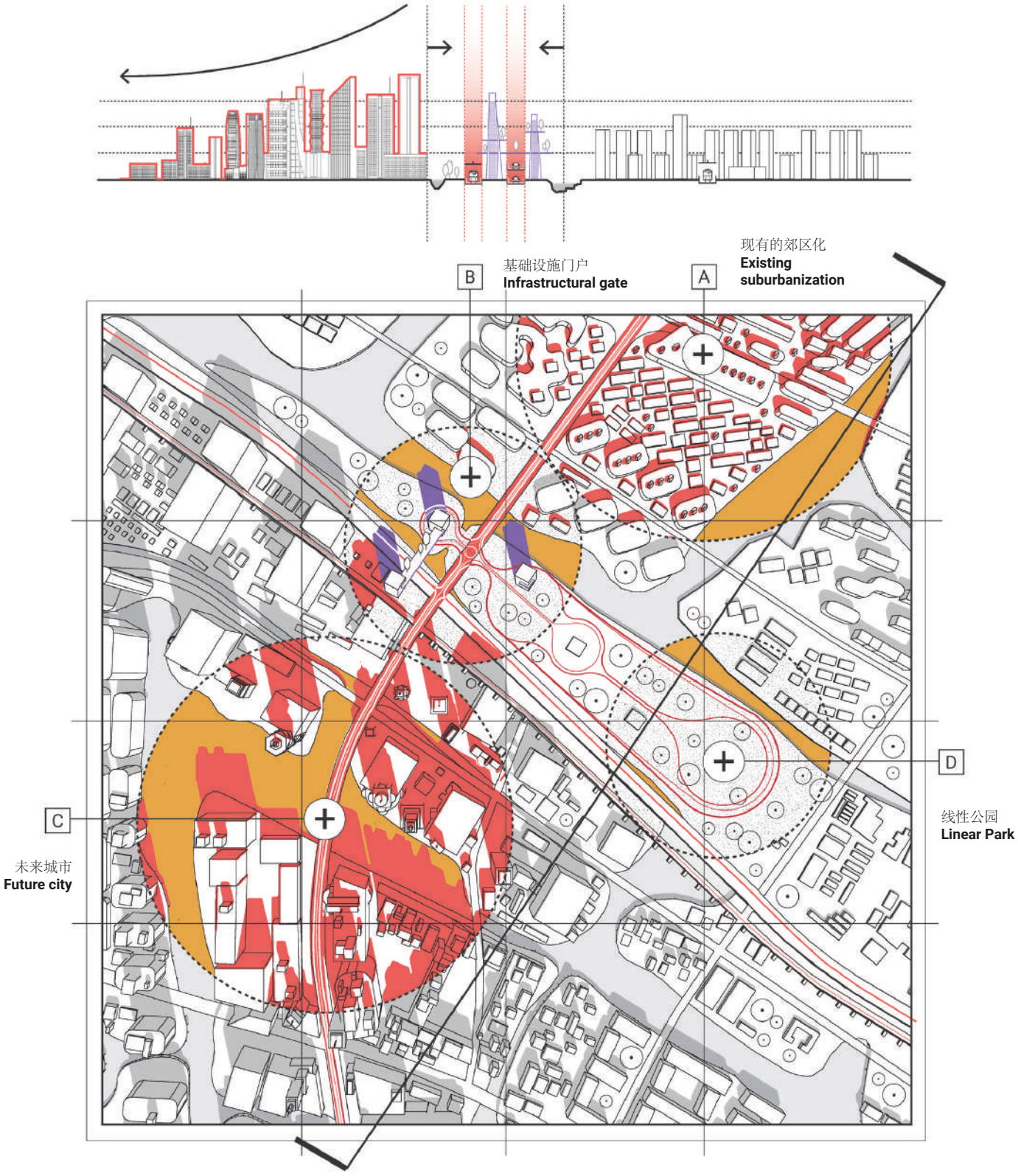
7_22 Design concept (Shaoxing Design Proposal: 9-10)






7_23 Masterplan (Shaoxing Design Proposal: 17)


7_24 Urban design node: Future city (Shaoxing Design Proposal: 20)



A

一个新的极点将作为区域连接和最新的当地城市结构之间的基础设施交汇点

A new pole will serve as an infrastructural interchange between regional connections and the latest local urban structure.

B

它将成为现有城市结构和新城区之间的缓冲地带，通过线性生态廊道促进新公共设施的布局。

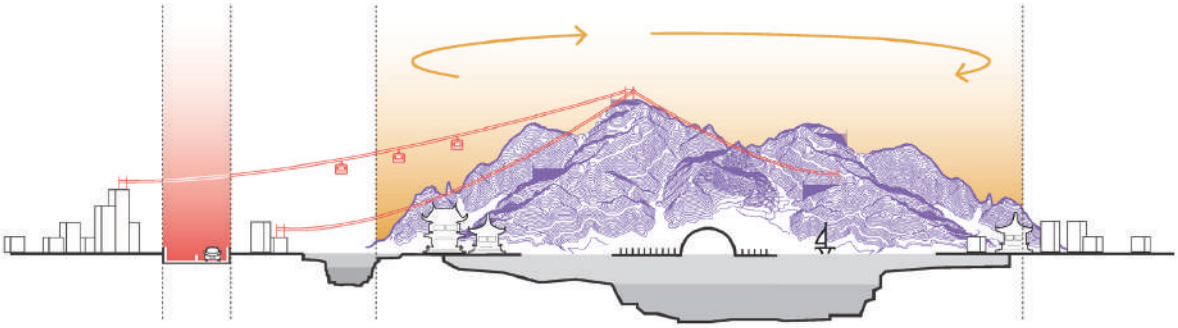
It will be the buffer zone between existing urban structures and the new city, facilitating the distribution of new public facilities with linear eco-corridors.

C

高层及高密度的未来城将承载一个充满活力的公共空间，与水资源和高速连接直接相连。

Its high-rise density will host a vibrant public space directly connected with water resources and high-speed connections.

7_25 Urban design node: Turistic spiral (Shaoxing Design Proposal: 25)



A

这是一个在低密度城市策略下诞生的独特景观，是一个生态集群和一个主要的旅游点。

It is a landscape feature emerging from low-dense urban strategies, defining an ecological cluster and a primary touristic spot.

B

通过保护性策略的及时干预，对水系的强化使得慢速的观光网络与周边的自然资源成为一体。

The reinforcement of the waterways permits connecting the slow tourist network with nearby natural resources thanks to punctual interventions based on preservation strategies.

C

基础设施接入景观，被视为它的延续，并设置观景点和促进慢行的交通策略。

Infrastructural connections will be imagined to dissolve themselves in continuity with landscape resources, juxtaposing observation spots and promoting slow traffic strategies.

7_26 Human subjective of a public facility (Shaoxing Design Proposal: 27)


古酒新歌

7_27 Human subjective of the slow-mobility connections (Shaoxing Design Proposal: 23)

7_26 Human subjective of the waterfront (Shaoxing Design Proposal: 29)

7_28 Comparative overview of the three institutions

SCAD A. Guangzhou, Guangdong, PRC B. University-led Design Institute C. Around 1,000 members organized in 25 production departments, 4 technical and functional management departments and 2 subsidiary companies D: 1953 (1981) E.scutad.com.cn	F. “After more than 60 years of accumulation and development, our institute has become an architectural design institute with strong technical force, reasonable talent structure, complete professional supporting facilities and advanced design methods. At present, it has many qualifications such as construction engineering, architectural intelligence, urban planning, municipal, landscape, environmental engineering, engineering consulting (architecture and urban planning), cultural relics protection, survey and design, etc., and has passed the ISO9001 quality system certification”.	G. cultural architecture, education architecture, mega-high-rise architecture, sports architecture, exhibition architecture, new science and technology industrial parks, transportation hubs.
TDH Turin Design Hub		
China Room A. Turin, Italy B. University Research Group C. 7 Professors, 9 Fellows, 15 Junior Fellows D. 2016 E. chinaroom.polito.it	F. “China Room is a research hub that focuses on Chinese architecture and urbanism. Its activities span between Research, Education, and Practice. It aims at strengthening the collaboration with Chinese universities, scholars, and public institutions, thus contributing to redefining the global academic debate. The goal is to be an active hub of competencies as well as a repository of information, prompting scholars’ exchanges and mutual understanding”.	G. Masterplan for the redevelopment of a fishing village in China, industrial regeneration into a visitor center for the Olympics in China, industrial regeneration into a mixed-use cultural space in China, 1st place into an international competition on net-zero energy micro-housing, curatorship of an international Biennale.
2MIX Architetti A. Turin, Italy B. Architectural firm C. 6 Founders, 1 Partner, 6 Architects, 3 Designers, 1 Energy designer D. 2009 E. 2mix.it	F. “2MIX architetti is a multi-disciplinary practice born in 2009 to develop design projects, investigating the many forms transforming reality. The title ‘t(w)o mix’ explores the complexities of the contemporary design industry, spanning from scales and competencies”.	G. Strategic urban planning, housing interior design, 2nd place in a competition for the transformation of a public square, 2nd place in a competition for the transformation of a public park, 2nd place in a competition for a stadium design, 2nd place in a competition for a housing complex.
Archisbang A. Turin, Italy B. Architectural firm C. 3 Founders, 2 Architects, 2 Junior Architects D. 2008 E. archisbang.com	F. “Archisbang is an italian architecture firm that designs spaces for the community and the territory, as well as barrier-free environments promoting well-being where you can work, learn, live and freely use your creativity”.	G. School refurbishment, residential building design, mansion transformation into headquarters, residential villa transformation into offices, abandoned villa transformation into a mixed-use building.

(A. location, B. type, C. structure, D. constitution year, E. site, G. mission, H. main projects typology)

BLA Balance Architettura A. Turin and Cuneo, Italy B. Architectural firm C. 2 Founders, 5 Architects, 2 Junior Architects, 2 Interns D. 2011 E. blaarchitettura.it	F. “BALANCE ARCHITETTURA is an international Architecture firm based in Italy. As a belief, Balance Architettura thinks that Architecture is the assembly and composition of elements and functions in the three dimensions”.	G. Directional building design, industrial refurbishment into headquarters, mixed-use cultural center refurbishment, headquarters interior design.
Corbellaro SA A. Gaglianico, Biella, Italy B. Architectural firm C. 2 Founders, 1 Architect D. 2000 E. tpz.it	F. “Corbellaro SA is an Architecture firm based at the foothills of the Italian Alps. The activity of the studio is focused on well-being design, in the continuous and constant search for users’ comfort”.	G. Headquarters design, visitor center design, bridge design, visitor center design in a national park, vehicular bridge design.
Gianpiero Moretti A. Québec, Canada B. Professor and Practitioner C. -- D. 1990 E. --	F. “Gianpiero Moretti is Professor of architectural and urban design at the School of Architecture of the Laval University, in Canada. Between 2013 and 2017 he was Director of the same Faculty. Alongside the academic activity and experimental research, he contributed to the artistic direction of architectural and urban projects in Canada, France, and Italy”.	G. Multifamily housing design in Canada, industrial refurbishment, pedestrian and vehicular bridge refurbishment in Canada, diffused-hotel interior design in France, prototype for raw-earth hose in Ethiopia.
Studio Cavaglion A. Turin, Italy B. Architectural firm and design office C. 2 Founders D. 2019 E. --	F. “Cavaglion is an architecture and design office based in Turin, Italy.The studio was founded in 2019 by Emanuele and Giovanni Cavaglion with the ambition of creating a multidisciplinary workplace for the development of creative projects and innovative ideas”.	G. 1st place in an international competition for a microhome, 5th place in an international competition for a hotel room design, interior design of a cosmetic store, and honorable mention in an international competition for a museum in Portugal.

7.3 Comments on the project analysis

In conclusion of this central section of the work which delved into the core subject of observation—specifically, the actions developed by CR in recent years using on-site and practical activities to foster research in China—it is worthwhile to spend a few more pages reflecting on what the act of documenting and analyzing these events has meant for this dissertation. The previous three chapters discussed some of the CR experiences, focusing on the design of certain artifacts and the actors involved in these dynamics. Chapters 5 and 7 organize the project analysis into two blocks, while Chapter 6 examines the codification and institutionalization of the mechanism for technology transfer, that basically participated in transitioning from the introspective design activity of the former cases to the collective platform approach of the latter. With the benefit of hindsight, rereading these chapters and how the projects are discussed might denounce a different and less extensive focus on text development. Indeed, the significant contribution these projects made to the overall discourse of the general thesis is not strongly emphasized; rather, they are presented with a rigid and concise structure. Critically reassessing the work and its development over the years, I attribute this to two main issues, both indicating that the project analysis presented here should not be fully considered as the primary case study of the research but rather as a tool for reflection, leading to the foundation of the overall argument.

The first point pertains to the origin of this work, which has been mentioned many times, especially in the prologue. Briefly, this research began with the aim of leveraging the activities collected by the research group, particularly considering my position and the experiences I accumulated within it long before starting my PhD. This aim translated into a mandate to investigate the validity of the project as a scientific product, using the design I was involved with as part of the CR research group to better investigate and question the methods by which such activities were conducted. This initial broad scope was then complemented by the initiation of the PS activities, first for its arrangement and then for its actual implementation. As I examined these diverse cases, the issue of the third mission emerged. Amid the heterogeneous project contents and ambitions, as well as the discourse on how to approach architectural design within the faculty, a common

element that continually surfaced was the discussion about TM and its divisiveness in accepting and classifying its role in contemporary universities. Concurrently, a number of publications related to the aforementioned projects began to be published, aiming to capitalize on these activities for more practical academic purposes. This gradually shifted the research question toward a slightly different perspective. While still related to the validity of design as a research output, the focus became more specifically on the relationship between TM activities and editorial products in contemporary academic dynamics. As an effect, I initiated a deeper investigation of how research assessment systems function especially in relation to TM and their importance in the overall academic career system. Such investigation became then crucial in the construction of the entire argument.

Observed from this perspective, the observation and participation in the projects discussed in the first and second blocks provided the foundation and catalysts for the general introduction and construction of the argument, yet not its core. Hence, these designs have been the driving steers behind the progressive assembly of the validation framework that this work aims to propose for further collective reflection, but not yet the actual tools to implement it. Consequently, the focus of the work moved to the progressive development of this collective/ distributed approach to architectural design in academia that technology transfer can launch.

At the same time, shifting the focus from applied design research activities to viewing them through the TM lens involved moving beyond the initial investigation of how the project could be considered a scientific activity *per se*, focusing instead more on the potential that these activities have in bridging the discourse to a new scenario. Within this context, due to the consistency of the case study, my observation deepened the understanding of technology transfer. As an effect, the shift toward broad tools for examining research in architecture (such as the VQR) necessitated seeking a more general and adaptable tool for reflecting on the specific activities I was participating in, one capable of encompassing various disciplinary fields of knowledge and adaptable to many practices and interpretations. Practically, this meant the decision to not detail in the project analysis too much the realization process, specific events, design proceedings, or

interactions, while trying to maintain a general overview that could highlight some of the main issues touched by the overall argumentation. On the other hand, I am aware that this choice carries the risk of making this part of the dissertation seem like the weakest point of the discussion. Nevertheless, this approach has been adopted to prevent a partial interpretation of the design's meaning and functioning, which would have otherwise shifted the entire work towards a specific field of investigation, that was not the objective in this case. A detailed observation would indeed have required adopting a specific lens for interpreting design activity, thus diverting attention to another debate related to different approaches to understanding design action, such as typological, compositional, processual, or constructive perspectives. In a nutshell, although it is possible to outline my specific understanding of design and its processes from this text, I chose to move toward a more general verification method. This approach is not intended to describe a single solution for evaluating a project as a scientific output in itself — thus not relying solely on its publication —; instead, it encompasses various aspects of architecture, preparing the ground for different methods of delving into architectural research.

Last but not least, both reasons contribute to defining the outcome of this work as a device fully immersed in the dynamics from which it is generated. The ultimate goal was to establish a framework for validating a particular approach (though not a specific method) to address the interaction between the third mission and architectural research, the emerging surge of reclaiming a more direct interaction with the dynamics of the non-academic world and the nudge for a consensus outreach within it, open the doors for new operational conditions. As contemporary universities increasingly move towards a transdisciplinary, socially distributed approach to knowledge production, this research adopts this perspective by incorporating crucial features proposed by these new dynamics. Consequently, the result outlined in the next chapter does not offer a definitive solution to the issue, instead, it aims to define a device capable of communicating and interacting with the collectives from which it originates, encouraging further collaborative implementations. In essence, the open schema central to this observation has evolved into a broader open schema, attempting to encompass a wide range of approaches and possibilities for mutual interaction. This approach

fully embraces the need for a more collective and horizontal reappropriation of knowledge creation, production, and distribution. It places this collective approach at its core, using it for validation and refinement. In the device outlined in the final part of this work, knowledge is produced mainly through mutual exchanges among different poles of power and environment, it can be demonstrated through various upgrading techniques, and be assessed only by a heterogeneous group, while simultaneously emphasizing the need to launch a broader participatory discourse.

PART III

Final remarks

Chapter 8

Worksheet Proposal

After the unpacking of the case studies, this chapter expands to include more comprehensive arguments. It positions the research issues and project insights within a well-defined framework that aims to propose an assessment of a 'design-mode' in the production and transmission of knowledge. Specifically, the proposal bridges the gap between scientific investigations disseminated through academic publications and the practical mechanisms of universities' third mission.

By ideally building upon Amirante's pursuit of a more performative mode of assessing architectural projects as scientific outputs (2018), this work capitalizes on the insights gained from observing the research group engaging in third-mission activities and technology transfer to advance the research agenda and drawing on experimental approach in steering scientific investigation. By leveraging the scheme developed by VQR-TM Gev in the VQR3-TM case assessment, this work proposes the development of a similar structure to evaluate the architectural design as a scientific product.

Precisely defining the knowledge produced through its *transmission*, the depicted scheme establishes a shared model for validating projects. The proposal recommends seizing the opportunity presented by the cumulative efforts of the scientific community in VQR-08a to refine more appropriate criteria and indicators. The ultimate goal is to integrate this model into individual-focused

systems, such as the ASN.

Proposal conceptualization

The examination of projects undertaken both before and after the establishment of Polito Studio encompasses both initiatives within and beyond the incubator, aiming to emphasize their unique contributions to the research agenda and their diverse exploitation.

The projects discussed in Part II indeed testify to significant heterogeneity, yet a discernible sequence can be observed.

The work commenced with the Shougang project, where a university team embarked on a venture that presented a wider range of possibilities as it was conducted abroad, thus surpassing the constraints imposed by the Italian regulatory environment. This successful experience, which closely aligned with the design proposal intentions despite numerous global setbacks, provided a remarkable opportunity for department-level discussions rarely seen in the past within the institution. However, it was disheartening to witness that, in order to have this endeavor recognized as a research activity, it was necessary a 'translation', or 'transcript' of such understanding. Hence the work on the publications, and especially the book published by ORO. The outcome can be defined as a 'critical transcription' of the design experience, which reveals that the processes developed within this unique context contain valuable knowledge worthy of further investigation and exploration in various directions. The primary focus is related to the scale of the design process and professional practice in China, deliberately disregarding the formal/compositional, and site-specific aspects.

Considering the intriguing insights/outcome of the initial experiment, the team decided to proceed with a trial that led to further experimentation in a second case: Lishui. Once again, in spite of the result obtained, once again promising, a transcription of the experience has been needed. Upon reviewing the publication, the differences compared to the previous book are evident. In this second case, the 'transcription' is less interpretive and more descriptive, delving deeper into themes related to the situated knowledge of the operating context, the political and

social dynamics underpinning the competition requirements, and especially exploring formal experimentation in urban and architectural visions that extended to the didactic scale (including two dedicated studios and a thesis seminar).

At this stage, two applied experiments were conducted and capitalized upon. The interest and the necessity to concentrate efforts on research interests (methodological, contextual, procedural, and formal) led to the making of the Polito Studio Initiative. Meticulous efforts were invested in defining its operation, which proved crucial in exploring the mechanisms, interpretations, and implications of TM and TT. Subsequently, through TDH projects, it became evident that beyond the initial workshops, where the actual technology transfer occurs, an ongoing and gradual transmission of knowledge (contextual, processual, and formal) still happened throughout the entire design phase.

Through these observations — gaining an insider perspective on various design approaches, partially witnessing the efforts made in translating these experiences into editorial publications, and gaining an insider perspective on the roundtable discussions that gradually shaped and launched the PS skeleton — a logical argument gradually emerges. It suggests that the transmission of operational knowledge holds the potential for the same transcription to be detected in the resulting publishing products. This line of reasoning played a central role in discovering a procedure for these empirical-design experimentation experiences to evolve into a new model of knowledge production and transmission. The PS experience served as a notable example, highlighting that models fully aligned with the third mission, which incidentally the project already embodies, can be integrated and associated to enhance scientific investigations. The project's already established recognition among potential scientific products further strengthens this assertion.

Building upon this contextual and somewhat limited reflection, the objective of this concluding chapter is to expand the viewpoint and address the issue on the broader topic of how to recognize scientific advancement through design. Moreover, although the underlying contents of this work are primarily centered around understanding architectural practice in the various nuances related to a specific situation — including the freelance profession, the academic

environment, and the Chinese mixed academic/professional environment —, the disciplinary interests extend beyond these areas, as mentioned by MIUR **[1_02]**, encompassing typological, compositional, processual, and constructive aspects of architecture. Hence, the objective of the entire narration has been to establish spaces and conditions that allow for design-driven research in Italy, despite the constant risk of conflicts of interest. One viable approach seems the definition of technology transfer; in this sense, the work has focused on projects that adhere to existing regulations and involve researchers who have the potential to transition into practice-oriented research, although it is not currently the case. Within this spectrum, it is crucial to underscore the various stages that constitute the technology transfer mechanism and how it encompasses diverse fields of application.

The design unpacked in Chapter 7, in fact, surpasses the boundaries of PS by engaging in a deliberate collaboration between private firms and research groups. This exchange transcends the sole perspective of technology transfer and evolves into a dynamic of mutual exchange and practical collaboration, fostering the accumulation of contextual knowledge and architectural expertise. In this regard, while the VQR-TM plays a crucial role in positioning the PS initiative as a technology transfer mechanism, it is not suited to highlight the subsequent activities that are primarily centered around knowledge production rather than its transmission. This production process is predominantly a design-driven approach to the research. In this sense, the collaboration between university and professionals, which is at the core of Polito Studio, plays a crucial role in showcasing its effectiveness as a knowledge transfer mechanism through the VQR-TM evaluation model and serves as a stepping stone to go beyond the limitations of a formative/educational initiative and transition towards a disciplinary-based assessment approach (VQR-08a).

With this in mind, similar to what has been done in the TDH projects, the objective is to embrace a more experimental methodology, encouraging professionals and researchers to engage in empirical investigation within the realm of design production, to subsequently explore and examine the obtained effects. As a result, while the activities within the incubator align with the categories validated by VQR-TM as third-stream activities in the national

assessment, the events that extend beyond the incubator are more related to the perspective of disciplinary scientific production, aligning with the university's second mission of research. In other words, these activities align with the dynamics described and assessed in the VQR-08a, prompting to revisit the fundamental question that underpins all of this work, and hence how architectural design can effectively be delivered and evaluated within universities.

In order to fully grasp and evaluate the contribution and the knowledge that such a research approach generates, it is essential to contemplate the diverse aspects of its production and dissemination, not only in a general sense but also in terms of the university's interaction and communication with society. As widely debated, restricting architectural knowledge to written or published discourse overlooks the diverse ways it is produced and represented within the discipline. This limitation is also evident when considering the pedagogical methods employed to convey knowledge, which include both theoretical-conceptual teachings and practical-experimental approaches. In this context, learning is not a unidirectional process from teacher to student, but rather an interactive exchange involving the exploration of different actions and reactions. A similar dynamic, with necessary variations, can be applied to technology transfer and a mixed academic-professional approach to the design. The significance of learning design practice extends beyond mere preparation for professional work or maximizing the commercial value of research and its networks, although these aspects remain partial objectives, particularly from the perspective of the recipients. It encompasses broader aspects as well, recognizing the value of diverse learning experiences.

Simultaneously, it is essential to systematize these issues within the current research agenda, as it becomes increasingly intertwined with strategic choices guided by evaluative mechanisms. These mechanisms tend to prioritize scientific output and institutional responsibilities, often relegating teaching and designing to a secondary or tertiary position. Moreover, research is increasingly influenced by external pressures extending beyond academia's confines. These pressures are particularly evident in the direct connection to real-world society, challenging the notion of research existing solely within the isolated realm of traditional academia often referred to as the 'ivory tower'. Within this framework, the project (intended

here as the architectural project) can serve as the nexus that encompasses all these influences.

However, achieving this integration requires aligning with the assessment mechanisms embedded in the university's production chain, specifically the evaluative measures that determine the allocation and distribution of funds. In this perspective, if the reintegration of the project into architecture faculties is a qualitative consideration aimed at exerting practical and theoretical impacts on both research (i.e., the way to observe the world) and teaching (i.e., the way to prepare for the world), its alignment with evaluative models primarily relies on a quantitative and utilitarian perspective. The objective is to ensure that the project receives the recognition and value it rightfully deserves, commensurate with the efforts and time invested from the point of view of the group involved. This recognition will ultimately lead to acknowledgment and contribute to the professional advancement of single partakers.

In this direction, the proposal elaborated in this work leveraged the VQR opportunity as a platform for nurturing and spreading novel approaches in conducting research in architecture. This endeavor is identified as stemming from the synergistic interplay between established methods of knowledge production and dissemination, alongside innovative design-based tools.

Therefore, the aim of this work is to enhance the recognition and evaluation of design projects as scientific outputs, building upon what Roberta Amirante has already identified as the necessity for a format that would "establish connections with other research products acknowledged by the scientific community and progressively establish recognizable and shared evaluation criteria"[1] (Amirante, 2018: 119).

Specifically, the proposal here presented and the one discussed by Amirante seeks to bridge the study in supporting ANVUR's decision to endorse a research-oriented approach that recognizes design practice as a platform for empirical investigation. At this stage, it is crucial, as it has been for the VQR-TM, to

[1] "Essere apparentato agli altri prodotti di ricerca riconosciuti dalla comunità scientifica e consentire di costruirne progressivamente logiche di valutazione riconoscibili e condivise" (Amirante, 2018: 119).

establish a framework or set the boundaries within which these activities can be recognized as scientific outputs. It is essentially a matter of defining the conditions under which a design project can be proposed for assessment in the VQR, distinguishing projects developed solely for the pure interest of the practical doer from one that has been deployed for scientific experimentation. It means to put aside professional practitional discipline for professional academic ones, or at least to define when one is instrumental to the other and vice versa.

By identifying the aspects of generalizability of an architectural project in its translation and transmission in a form that highlights its logic and recurring patterns — "the narrative serves as a (self-)critical exercise that enriches understanding by unveiling the mechanisms behind object production and, in theory, enables others to replicate them. It facilitates the assessment of the author's awareness, their aptitude to elucidate the project, deconstruct the process, specify the materials and techniques employed, impart disciplinary significance to an external mandate, conceptualize particular steps, formalize specific choices, and demonstrate the coherence or deliberate deviations within the design outcome"[2] (Amirante, 2018: 121) —, it is also a matter of ascertaining when and how this transmission has occurred — transmission or *dissemination* to use a term more closely associated with TM but not far from the function that 'scientific products' have in spreading research results in closely specialized disciplinary domains.

In this regard, looking again at VQR-TM, it does not affect all the initiatives developed within the institution while encompassing exclusively the projects (intended here in a broader sense, not limited to architecture) that have had verifiable impacts on the social, economic, and cultural landscape, intersecting with one of the potential action fields. Hence this definition already put aside a list of projects developed within the university that didn't surpass the institutional

[2] "Il racconto è un esercizio (auto)critico che produce un aumento di conoscenza perché rivela i meccanismi che hanno portato alla produzione di un oggetto e, almeno in teoria, consente a qualcun altro di riprodurli. Consente dunque di valutare la consapevolezza dell'autore, la sua capacità di spiegare il progetto, di scomporre il procedimento e di segnalare i materiali e le tecniche utilizzate, di dare senso disciplinare a una prescrizione esterna, di concettualizzare alcuni passaggi, di formalizzare alcune scelte, di mostrare la coerenza o la controllata incoerenza del prodotto progettuale" (Amirante, 2018: 121).

borders, still leaving space for many possibilities. Similarly, the knowledge generated through a project can be considered as truly *transmitted* exclusively when it already made an effort to extend beyond the confined setting in which it originated. In other words, when it is possible to individuate an endeavor to condense the design experience into a concise, structured, and communicable format that captures the core of the experience (or past experiences) in a logical, systematic, and replicable manner. This entails reconstructing the set of practices, choices, explorations, and effects that were progressively embraced or incorporated throughout the process.

Such an endeavor can be accomplished in various ways. Firstly, it can be achieved *a posteriori* through the dissemination of findings via the publication of written outputs or through public seminars, as demonstrated in the case studies examined in Chapter 5 of this work. This approach represents a stratified method of capitalizing on design projects. It aligns with established categories that have already been well-assessed in terms of scientific output. However, it is important to note that since the scientific products for VQR are eligible for only one category, the ones presented in this textual form align more closely with a-e type of outputs **[1_04]**. Hence, this approach deviates slightly from the conventional understanding of the project itself as a scientific product, still maintaining a deep connection to academic practices that primarily recognize the validity of research exclusively through printed publications.

Another potential approach to achieve this objective is through *real-time* dissemination, either during the design process itself or as a means of instructing other participants, as exemplified in the technology transfer experiment described in the sixth and seventh chapters of this work. This approach represents a distinct operation, characterized by a different type of content. In the case of posterior transmission, the knowledge shared can be summarized as a critical systematization of the project's characters, making it more suitable for theoretical speculation and broader understanding. On the other hand, in the *in-itinere* transmission, the shared knowledge is more focused on operational effectiveness, directly applicable to guiding subsequent design actions. While the types of knowledge transmitted through these two modes may not directly correspond, they are inherently interconnected. The former, in fact, plays an instrumental role

in guiding the latter, while the latter contributes to the further advancement of the former, creating a cycle of mutual dependence.

The acknowledgment of these two vectors would emphasize the intrinsic value and aspirational nature of socially distributed knowledge, even within the realm of the area's VQR. The result would be an alignment of all three missions (education-research-impact) to a shared paradigm that holds significant relevance, especially in the context of architectural design. The discipline itself is indeed inherently grounded in a multidisciplinary and transdisciplinary approach, making it particularly conducive to embracing such principles.

Application

The proposed approach would involve moving away from the notion that, as seen in the context of the VQR-08a, the qualification of products is solely determined by their typology — which by the way includes projects among other categories **[1_04]** —with differentiation solely according to the support in which they are placed. On the contrary, the presented proposal aims to further develop the methodologies of VQR-08a by incorporating insights gathered from the VQR-TM. The main perspective is, obviously, related to the format for submitting projects in VQR-08a that could be structured using modalities that partially adapt the one already established and experimented with in VQR-TM. In other words, the VQR-TM is in this concluding part of the work deployed as a guiding framework for proposing a new format for the assessment of design products in the VQR-08a.

The first change would be related to the evaluation **criteria**. In VQR-08a there are no specific criteria for the different types of products **[1_03]**, nor diverse or more precise evaluation methods than those used for other academic fields, which also tend to be quite general when compared to their counterparts in the third mission. Differently, although VQR-TM maintains the same indicators for all the action fields (that correspond to the VQR-08a products) **[6_17]**, it also differentiates them in a wider gradient based on the specific field of action **[6_19]**.

Furthermore, it is essential to acknowledge the experimental nature of VQR-TM schedules as a comprehensive evaluation tool, particularly in their call for

collaborative refinement and structuring of the evaluation model and verification indicators. This process of improvement necessitated the active involvement of the authors themselves, who had to propose and define potential quantitative indicators for measuring the aforementioned criteria. Similar practices can be observed in other European initiatives, such as the Horizon calls. The challenge lies not only in overcoming the difficulty of identifying a universally applicable set of measurement tools—an issue faced by project evaluation in VQR-08a, ASN, and academic competitions in general—but also in recognizing the relatively nascent nature of these evaluation mechanisms and the activities they aim to assess. The goal is to collectively refine a tool that resonates with the stakeholders, particularly those intimately familiar with the proposed product and aware of the specific details worth exploring.

Last but not least, for VQR-08a the only condition is that the project has achieved recognition or commendation within the five-year evaluation period or has generally been published **[1_04]**. Based on this definition, very few, if any, of the projects presented in this work would meet the eligibility criteria for VQR standards. Disregarding the question of how to evaluate the scientific value of a project publication — which in any case does not affect the evaluation of the projects, which are assessed "based on their own characteristics rather than as objects of publication"[3] (ANVUR, 2021e: all. 1, p 2) —, it is important to note that ANVUR does not offer specific guidelines regarding the required type of publication. This leaves space for publications that primarily concentrate on the formal aspects, which are frequently encountered in architecture journals. However, considering the distinction between practitioner research and scholarly research in architecture, where the latter emphasizes a more methodological investigation, it becomes apparent that there should also be a divergence in the presentation of architectural design.

Therefore, in summary, the adaptation of the worksheet allows for the submission of projects, regardless of whether they are accompanied by

[3] "Per le proprie caratteristiche e non in quanto oggetto di pubblicazione" (ANVUR, 2021e: all. 1, p 2).

publications, with a focus on the proponent's ability to demonstrate how the proposed design addresses the assessment criteria and their quantification. Within these submission formats, there is a distinction between projects developed exclusively within academia, which require further translation into textual products for social dissemination, and projects that have transcended academic boundaries during the design process itself. In the first case, these designs would be presented in VQR-08a through their published outputs, falling into the a-e categories. In the second case, where the social impact occurs *in-the-making* of the design process, the submitting authors provide a form with a description highlighting how the project fulfills the criteria outlined in the scheme. They also propose indicators that can assist the GEV in the evaluation process, potentially including relevant publications related to the case. The ultimate goal is to establish a shared model for recognizing and validating projects within the disciplinary domain by leveraging the cumulative effect of various VQR exercises. This approach encourages active engagement from the scientific community to refine the proposal, with the vision of integrating this model into individual-focused systems, such as the ASN.

In the following pages, the three VQR-08a evaluation criteria are emphasized, demonstrating how they can be specifically applied to projects, extending their application beyond the primary focus on written outputs.

Worksheet proposal for e2-type products submission in VQR-08a (design projects)

Title
Design typology
A. Institution **B. Relative department(s)** **C. Academic discipline involved** (among all the SSDs of the scientific areas) **D. Figures involved specifying the position, role, and affiliation (**including students and external figures) **E. Status**
F. Detailed description of the case study **G. Detailed description of the scientific impact**
H. Eventual indicators for the measurement of the scientific impact
I. Eventual publications referred to the case study
Eventual attachments

Declaration of evaluation criteria for e2-type products submission in VQR-08a (design projects)

a) originality which refers to the level at which the product introduces a new way of thinking and/or interpreting in relation to the scientific object of research, distinguishing itself and innovating compared to previous approaches on the same subject. *Da intendersi come il livello al quale il prodotto introduce un nuovo modo di pensare e/o interpretare in relazione all'oggetto scientifico della ricerca, e si distingue e innova rispetto agli approcci precedenti sullo stesso oggetto.*

The originality of the case will be assessed by considering new ways of approaching the scientific subject, including any action in-the-running adopted to periodically re-set the objectives that occurred throughout the project or upon its completion. The project's experimentation and any questioning initiatives will be evaluated based on the tangible changes brought about by the case study, as well as its ability to address the initial circumstances in terms of spatial, social, and cultural conditions. This evaluation will take into account both the local impact of

the project and its interactions with the surrounding city or landscape, considering both the physical nature of the intervention itself and the progressive implementation process.

The assessment will also take into account the approach to structuring, managing, and enhancing the different phases of the project has seen significant improvements, including the roles and involvement of team members. This includes the introduction of new collaborative models that promote experimental expansion into new subjects and practices, such as increased transdisciplinarity and interdisciplinarity. These collaborations extend beyond the university, including partnerships with external institutions and organizations, even outside of academia. Additionally, there has been a focus on legal forms, operational efficiency, expanding the university's network of relationships, and exploring new research directions. The originality of the approach lies in the departure from the initial situation, with interventions aimed at expanding, modifying, and capitalizing on the roles necessary to complete the project.

Indicators may include: the involvement of research groups, departments, and external experts; the establishment of a dedicated legal framework; methods for measuring and estimating the required contributions within the project team; the development of new tools and approaches that enhance scientific collaboration with other disciplines and fields; and the timely engagement of the public through participatory inquiries, with clear documentation of the outcomes and impacts on the project.

b) methodological rigor

which refers to the level at which the product clearly presents the research objectives and the state of the art in the literature, adopts an appropriate methodology for the research object, and demonstrates that the objectives have been achieved.

Da intendersi come il livello al quale il prodotto presenta in modo chiaro gli obiettivi della ricerca e lo stato dell'arte nella letteratura, adotta una metodologia appropriata all'oggetto della ricerca e dimostra che gli obiettivi sono stati raggiunti.

Methodological rigor will be assessed by referencing the national, European, and/or international bibliographical debate in which it is situated. This includes

considering the approach used, the specific content of the project addressed, and the solutions adopted, or a combination of all these points. The bibliographical context should reflect the academic discourse relevant to the project, taking into account both national specificities and broader issues. Theoretical assumptions related to typological, compositional, processual, or constructive aspects of different architectural scales should also be addressed. Additionally, the ability to synthesize various literatures and approaches into a concise intervention will be evaluated, identifying the benefits that the discipline can gain from the conducted experiment. This assessment will highlight the connection between the research objectives and the practical implementation of the project.

Methodological rigor will be also assessed based on the rigor in defining the methodology adopted for approaching and documenting the experiment, ensuring that it can be falsified. In this case, not only the methodological rigor of the documentation will be examined, but also the capacity to establish a clear cause-and-effect relationship and repeatability between research objectives and practical implementation. Additionally, the ability to identify new potential scenarios for future application and observation will be evaluated, both in terms of the methodologies employed and the insights gained from transdisciplinary and interdisciplinary approaches. Moreover, the evaluation will consider the aptitude for identifying critical issues and proposing possible modifications to the methodologies used. It will also assess the potential for fruitful interactions with other disciplines and professional spheres, with the aim of conducting subsequent tests under similar or related conditions.

Indicators can include: the ability to identify the boundaries of the target context; the significance of the case in the national and international debate (for typology, location or programme); the capacity to foster a culture of collaboration and shared responsibility for investigation; the effectiveness of tools used for case registration in assessing the incremental impact on operational arrangements; the involvement of specific types of collaborations, such as partnerships with local and non-local institutions, and the integration of research into urban/territorial research and development projects.

c) impact

which refers to the level at which the product exerts, or is expected to exert, an influence on the international scientific community or, where appropriate, the national community in relevant disciplines.

Da intendersi come il livello al quale il prodotto esercita, o è presumibile che eserciterà, un'influenza sulla comunità scientifica internazionale o, per le discipline in cui è appropriato, su quella nazionale.

The impact of the project will be assessed based on the various benefits it generates for different stakeholders, both internal and external to the institution. Additionally, the evaluation will consider the potential for further research, dissemination, and educational activities related to the project. The value generated by the case study will vary depending on the beneficiaries and the environment in which the results are shared, including the potential for additional funding on a national or international scale.

Special attention will be given to the development, documentation, and dissemination of "open" collaboration and research models that can be adapted to different environments, contexts, and conditions. Authors should provide a comprehensive overview of the activities conducted, with a focus on initiatives aimed at promoting, supporting, and enhancing the industrial and intellectual approaches developed. It would be beneficial to include additional examples that demonstrate the connection to scientific research, such as the relationship between scientific publications preceding and following the project, as well as other relevant factors deemed valuable during the evaluation phase.

Epilogue

This work should be regarded as an endeavor to unify various discussions that have been ongoing within the disciplinary field for years. These discussions encompass research-by-design, the third mission, scientific assessment of research, the relationship between society and the university, as well as the balance between the university and the profession. However, it is evident that in most cases these debates proceed on parallel and non-overlapping channels. By attempting to systematize these disparate strands, this thesis seeks to provide a current overview of the Italian academic landscape, and to some extent, the European landscape as well. It puts forth potential future scenarios where these vectors intersect and converge, allowing for the realization of their respective potentials. Naturally, this undertaking involves grappling with the sensitive and controversial issues inherent in each of these discussions. These include the conflict of interest when involving faculty, doctoral students, and students in third mission activities, particularly in terms of intensifying collaborations and modes of engagement with external companies.

While on the one hand, embracing collaboration and a global approach to innovation enables universities to adapt to the evolving academic landscape and effectively meet societal needs, on the other hand, there is a potential risk that such an attitude may lead to behaviors that undermine academic excellence, integrity, and independent thinking. Instead, it may prioritize entrepreneurial behaviors driven by different timelines, interests, and models that diverge from the principles of research. Within this context, there are specific themes that

deserve attention. The duality between faculty and professionals, the involvement of students (without compensation) in activities that inherently correspond to commercial endeavors, and the management and direction of doctoral research topics in relation to their presumed cultural and applied independence are all significant aspects to consider. Unfortunately, the thesis did not have sufficient time and space to directly address these central themes.

To promote university engagement in activities such as knowledge transfer, industrial partnerships, and community involvement, it is essential to provide appropriate incentives and recognition for their contributions, as well as establish a supportive institutional environment that values and facilitates their participation. These aspects are still largely underdeveloped in architecture schools, often relying solely on the good intentions of those organizing and overseeing such activities. Similarly, while student participation can bring valuable perspectives, and help bridge the gaps in the preparation for the profession, it is crucial to strike a balance with their primary focus on academic pursuits. As a result, universities need to design initiatives that align with students' educational objectives, providing meaningful and respectful learning experiences. The presence of necessary support structures is crucial to ensure the success of their engagement, enabling students to contribute without burdening them with extracurricular obligations that could impede their academic progress. A similar consideration applies to doctoral candidates and young researchers, who often drive these initiatives but face challenges in leveraging them to advance their careers through the necessary credentials and certificates.

Hence, building effective bridges between universities and industry necessitates promoting mutual trust, identifying shared values and goals, and creating collaborative mechanisms that offer mutual benefits and long-term sustainability. It is important to anticipate long-term success rather than focusing solely on initial outcomes. Addressing these challenges requires the creation of supportive policies at both the institutional level and within research groups, taking into account the specific roles and mandates of the individuals involved. By actively recognizing and addressing these challenges, universities can develop stronger and more successful initiatives that effectively meet the needs of society while upholding academic excellence and integrity.

Another critical aspect of this work is the extensive focus on the VQR. However, it is important to clarify that this perspective does not view this mechanism as a flawless and impervious solution, as discussed in part in the first chapter of this work. Within academia, the VQR, particularly the area-based evaluation, is widely acknowledged as one of the primary drivers behind the standardization of scientific outputs over the past decade, along with the subsequent surge (or bulimia as defined by Bianchetti) in publications. It is crucial also to highlight the substantial lack of transparency inherent in this model, as the evaluation methods are difficult to verify, and access to the data is practically impossible. This applies to both the VQR-08a and VQR-TM evaluations. As a confirmation of this point, consider the case of this work, where a doctoral candidate affiliated with the university, in collaboration with her supervisor, who also serves as the rector-delegate, was conducting research on a university project that aligns with the strategic plan and contributes to the university's achievements in the VQR-TM. Despite the expressed commitment of the relevant offices to full cooperation, obtaining a copy or even a brief glimpse of the evaluation forms and corresponding assessments proved impossible. The apparent reason behind this obstacle is likely the significant financial resources associated with the VQR, which consequently intensifies competition among universities by turning the applications themselves into significant documents, possessing even greater value than the activities they aim to present.

I would also like to specify some considerations on the observed case, namely Polito Studio. The project is still in its third year, so it is premature to draw conclusions about the results it has achieved and those it can aspire to. Further experimentation is undoubtedly necessary to gather sufficient data for both a quantitative and qualitative evaluation of the experiment. However, a preliminary indication can be gleaned from the trajectory of its 'Latin American twin'. One year after the Chinese experiment, a corresponding project was launched in Latin America, another scenario where Polito has strong relations. This counterpart is struggling to take off, and as the author writes these lines, there is even a

discussion about discontinuing it altogether. This demonstrates how much the success of this experiment primarily depends on the context in which it is implemented and the supporting structure that manages its operations.

As evident from these pages, the China Room is a very strong research group in terms of both its numbers and the profile of the individuals involved. Moreover, the specific operating context has, as mentioned before, facilitated a design-oriented approach to research activities. However, it is important to acknowledge that this recognition also aligns with a strong inclination towards entrepreneurship, particularly in forging partnerships with prominent corporations, as evidenced by the cases examined. This poses a significant challenge, given the traditional roles of universities as educational and research institutions, and the expectations placed upon them to drive social and economic progress. Balancing these two objectives requires careful navigation, delving deeper into both practical and ethical aspects of operational methods and contexts, to ensure that the fundamental function of research is not compromised by an excessively entrepreneurial attitude. This reflects the evolution of the intersection between the academic and entrepreneurial worlds, where research groups function as entities resembling businesses, lacking only a direct profit motive to become full-fledged companies as well as the transformation of university professors in more management than research profiles, or knowledge.

In conclusion, it is worth noting that despite the emphasis on interdisciplinary collaboration and bridging the gap between universities and industry, there still exists an inherent contradiction. The desire to elevate projects as scientific products, rather than solely focusing on buildings or tangible outcomes, often requires written documents, such as this thesis, to articulate and communicate the research. This adds another layer of complexity and raises questions about the objectification of research. The proposed solution at the conclusion of this work partially contradicts the underlying assumptions from which we started. While continuing to attribute value to written documents, attempts have been made to identify possibilities that allow for greater adaptation to a wider range of approaches and research, thus complementing the more "traditional" scientific

production with a more "experimental" or applied approach. This is by no means an attempt to replace or reject already well-structured and stratified methods but rather to open the doors to the possibility of adjusting the course based on the dynamics of contemporary research, society, and the market, especially considering the central role that access to non-governmental funding has gained and will continue to gain in the future years.

Appendixes

Ap_1 Timeline of the Evolution of professional practice and Universities in China

1898	Inizia la Rivolta dei Boxer (1898-1901)
	Pratica Professionale Il *Municipal Council of the International Settlement* di Shangai approva e adotta una appendice alla *Land Regulation* di Shanghai tesa a regolamentare la fase di verifica e approvazione del processo edilizio, è la prima norma a tal riguardo ad essere approvata in Cina.
1900	**Pratica Professionale** Approvazione del primo codice normativo edilizio: *Chinese Building Rules*, proposto dal Municipal Council of the International Settlement di Shangai; i suoi contenuti si applicano esclusivamente agli edifici tradizionali cinesi realizzati perlopiù da architetti e progettisti cinesi.
1901	**Pratica Professionale** Fondazione della prima organizzazione professionale in Cina, la *Shanghai Society of Engineers and Architects*; i suoi iscritti sono per la maggior parte ingegneri stranieri che lavorano nel paese.
1903	**Pratica Professionale** Approvazione del primo codice normativo edilizio riferito ad edifici con caratteri 'esteri' e realizzati in particolare da progettisti stranieri: *Foreign Building Rules*, proposto dal Municipal Council of the International Settlement di Shangai.
1905	**Università** Xu Hong-yu, Bei Shou-tong, Chen Shen e Xu Shi-e sono i primi aspiranti architetti cinesi che vanno a studiare all'estero, nello specifico nel Regno Unito, in Germania, in Italia e in Giappone.
1907	**Pratica Professionale** Il quotidiano *The North China News* riceve e pubblica una lettera firmata a nome di "un cittadino che paga le tasse" in cui si richiede che i progetti architettonici siano solo ad appannaggio di professionisti qualificati.
1908	**Università** Approvazione e promozione del programma denominato *Boxer Indemnity Scholarship Program* che prevede l'investimento dell'indennità di guerra pagata dalla Cina a seguito della Rivolta dei Boxer (1899-1901) per finanziare borse di studio presso Università nord americane destinate esclusivamente a studenti di nazionalità cinese.
1913	Prime elezioni democratiche per eleggere i componenti del parlamento della Repubblica di Cina proclamata a Shanghai l'anno precedente (1 gennaio 1912) con Sun Yat-sen come primo presidente.
	Pratica Professionale Lo *Shanghai Municipal Council* riceve una petizione firmata da 24 architetti e ingegneri per l'istituzione di un sistema di abilitazione locale.
1917	**Pratica Professionale** La *Shanghai Building Regulation* viene ulteriormente modificata per comprendere, oltre alle regolamentazioni agenti su edifici 'nativi' e 'stranieri', anche norme inerenti caratteristiche e proprietà dei materiali da costruzione.
1921	Sull'onda del Movimento del 4 Maggio, iniziato nel 1919 contro i termini del Trattato di Versailles, è fondato a Shanghai il Partito Comunista Cinese; alla prima riunione partecipano 13 membri tra cui Mao Zedong.
	Pratica Professionale Nasce il primo studio professionale in Cina: lo *Yianji Design Firm*, fondato a Shanghai dall'architetto Lu Yanzhi, laureato presso la Cornell University

1924	**Università** Gli architetti Liu Shiying, Liu Dunzhen, Zhu Shigui e Huang Zumiao, tutti laureati in Giappone, inaugurano il primo corso di laurea in Architettura presso la *Suzhou Industrial Tech Institution* (*Suzhou Gongye Zhuanmen Xuexiao*), il corso è inserito all'interno della facoltà di ingegneria.
1927	Chiang Kai-shek, leader del Koumintang dalla morte di Sun Yat-sen, nomina Nanjing capitale della Repubblica, e guida l'esercito rivoluzionario nazionale alla riconquista delle aree settentrionali del paese.
	Pratica Professionale Fondazione del primo ente professionale: la *Shangai Society of Architects* (*Shanghai Jianzhushi Xuenhui*), ispirato all'inglese (RIBA - *Royal Institute of British Architects*).
	Università L'architetto Liu Futai, laureato presso la *Oregon University*, al suo rientro in Cina fonda la prima Facoltà di Architettura: la *Faculty of Architecture and Construction* presso la *Zhongyang University* di Nanjing, il corso di laurea in Architettura della *Suzhou Industrial Tech Institution* viene trasferito a Nanjing.
1928	**Pratica Professionale** L'Ufficio dei Lavori Pubblici di Shanghai pubblica sul diffuso quotidiano *Shenbao* il *Bulletin No. 18 - Architectural Designer and Engineer Registration Ordinance*: la prima ordinanza governativa ad inquadra la professione di architetto. Nel solo primo anno di validità dell'ordinanza sono abilitati a Shanghai 133 architetti di primo livello (ovvero a tempo pieno) e 50 architetti di secondo livello (ovvero a tempo parziale), introducendo in questo modo una differenziazione nella tipologia di commesse che ogni professionista può intraprendere. Nello stesso anno vengono introdotti nuovi standard e criteri per il calcolo della parcella che, fino a questo momento, seguiva il sistema adottato da RIBA: la percentuale varia a seconda di tipologia ed estensione del progetto.
	Università Gli architetti Liang Sicheng e Lin Huiyin, entrambi laureati presso la *University of Pennsylvania*, istituiscono due nuovi corsi di formazione in Architettura, uno presso la *Northeast University* a Shenyang, di cui sono anche fondatori, l'altro presso il neonato dipartimento di Architettura della *Beiping University*, la Scuola di Belle Arti di Beijing in seguito rinominata *Beijing University*; entrambi i corsi sono ispirati al modello americano di Beaux-Art.
1929	**Pratica Professionale** Viene coniato il termine cinese per libero professionista: *Ziyou Zhiye Zhe*.
1930	**Pratica Professionale** La *Shangai Society of Architects* cambia il nome in *Chinese Society of Architects* (*Zhongguo Jianzhushi Xuenhui*), i suoi principali scopi sono la facilitazione della ricerca accademica, lo sviluppo e la comunicazione della professione di architetto. L'architetto Zhu Qiqian fonda la *Society for Research in Chinese Architecture* (*Zhongguo Yngzao Xueshe*), tra i suoi membri più noti anche Liang Sicheng, Liu Dunzhen e Lin Huiyin; pur mancando nel suo statuto un riferimento diretto all'architettura, si inserisce all'interno del dibattito intellettuale relativo alla concezione dell'architettura moderna in Cina spingendo per un maggiore coinvolgimento di diversi campi di studio.
	Università Le scuole di architettura, pubbliche o private, continuano ad aumentare; tra il 1930 e il 1950 se ne contano altre 9.
1931	Invasione Giapponese della Manciuria.
	Pratica Professionale Fondazione della *Shanghai Construction and Architectural Association* aperta esclusivamente ad architetti, costruttori e appaltatori di nazionalità cinese; l'intento è quello di avviare un dibattito teso alla definizione di un linguaggio architettonico nazionale e condiviso, che recuperi e attualizzi conoscenze, tecniche e materiali locali tradizionali.
1932	Cina e Giappone firmano una tregua in seguito all'inteaurazione del governo del Manciukuò in Manciura.
	Pratica Professionale Pubblicazione del primo numero del *Journal of the Chinese Architecture*: la prima rivista di settore.

1935	Dopo 370 giorni e 12.000 chilometri si conclude la Lunga Marcia dell'Armata Rossa Cinese in fuga dalle truppe del Kuomintang.
	Pratica Professionale A nome del Ministro dell'Interno si richiede a tutti gli Uffici dei Lavori Pubblici a livello municipale di stabilire un sistema di registrazione per gli architetti praticanti, così da impedire a coloro che non sono abilitati di praticare.
1936	**Pratica Professionale** Il Museo Municipale di Shanghai inaugura la prima mostra di Architettura tenuta in Cina, è intitolata *Chinese Architecture and Construction* ed espone disegni, materiali di costruzione, plastici e antichi macchinari di costruzione.
1945	Resa incondizionata del Giappone.
	Pratica Professionale Sul quotidiano *Shen Bao* viene pubblicata la *Architecture Law* che per la prima volta fornisce una definizione legale del termine architetto e dei criteri per esercitare la professione: è necessaria una formazione in architettura o ingegneria civile, con regolare registrazione alla locale *Society of Architects* e abilitazione alla pratica.
1949	Proclamazione della Repubblica Popolare Cinese (PRC), Mao Zedong è il primo presidente del Partito Comunista Cinese, il mercato azionario viene chiuso definitivamente.
	Pratica Professionale Inizio del processo di nazionalizzazione della professione: agli studi stranieri vengono imposte crescenti imposte e restrizioni indirettamente forzando gli architetti stranieri a lasciare i confini nazionali, gli studi privati vengono progressivamente smantellati e i progettisti di nazionalità cinese vengono raggruppati all'interno di società statali; gli Uffici dei Lavori Pubblici sono trasformati in *Local Bureaus of Construction* posti sotto il controllo del governo municipale locale.
	Università Chiusura di tutte le Università private, quelle pubbliche sono esaminate da una commissione governativa centralizzata.
	Design Institutes Fondazione delle prime due aziende statali di costruzione a Tianjin e Beijing.
1950	Guerra di Korea (1950-1953), gli Stati Uniti sottopongono la Cina ad un embargo totale.
	Pratica Professionale Promulgazione della norma nazionale che prevede l'assegnazione dei finanziamenti per le opere di architettura previa approvazione del governo centrale del progetto preliminare e degli schemi di costruzione.
	Università Il Ministero dell'Istruzione pubblica il documento *Decision on Implementing Curriculum Reform in Institutions of Higher Learning* in cui sono delineati gli obiettivi della formazione universitaria della neonata PRC, ovvero una formazione che miri ad ottenere un alto numero di tecnici esperti in un breve periodo. Sulla base di influenze sovietiche le università vengono gradualemente ristrutturate dirigendo il sistema educativo principalmente verso studi professionalizzanti e istituzioni che incorporassero l'ideologia del Partito: le facoltà di scienze sociali e naturali vengono smantellate dando la priorità alle discipline applicate come ingegneria, medicina e agricoltura.
	Design Institutes Prosegue la fase di accorpamento delle società di costruzione presenti sul territorio nazionale in grandi aziende statali e Design Institute statali posti sotto il controllo del governo centrale, provincinciale o municipale.
1951	**Pratica Professionale** Il processo edilizio viene suddiviso in tre stadi: progettazione preliminare, progettazione tecnica e verifica della documentazione di costruzione.
1952	Iniziano i movimenti anti-destra, come la campagna dei tre-anti e dei cinque-anti, con l'obiettivo di scovare ed allontanare capitalisti e nemici del partito.

	Design Institutes I decreti *Decisions of Establishing Official Architectural Department and State-owned Architectural Firms* e *Establishment of Government-owned Architecturale Design and Construction Enterprises after the "Three-Anti" Movement* sanciscono la formalizzazione dei Design Institute statali. Viene istituito il *Ministry of Construction Engineering* (MCE), successivamente rinominato *Ministry of Construction* (MOC), con il compito di gestire i rapporti tra i Design Institute statali e le aziende di costruzione, ma anche per facilitare e velocizzare la trasformazione delle aziende private e degli studi professionali ancora in funzione di diventare entità statali. Nella prima edizione della *National Architectural and Construction Industry Conference* organizzata per indirizzare il mandato del neonato *Ministry of Construction Engineering* con delle linee guida condivise a livello nazionale, viene introdotto il motto "*Defense construction first, Industrial Constructions second, civil constructions third, and renovation fourth*" poi divenuto *"function, economy, and appearence when circumstances allow"*.
1953	Il governo centrale comunica per la prima volta l'intendo di stabilire una *economia socialista*; emendamento del Primo Five-Year Plan.
	Pratica Professionale Il viceministro del *Ministry of Construction* annuncia l'impossibilità per studi e aziende private di partecipare a progetti realizzati con finanziamenti pubblici.
	Design Institutes Aumento dei Design Institute statali a Beijing, Nanjing, Shanghai, Tianjing, Wuhan con l'intento di definire una rete nazionale in grado di sostenere un ritmo annuo di 700 progetti.
1954	**Pratica Professionale** Istituzione della *People's Construction Bank of China*, incaricata di supervisionare gli aspetti finanziari legati alla produzione architettonica. Fondazione dell'*Architectural Society of China* (ASC) e pubblicazione del primo numero dell'*Architectural Journal*.
	Design Institutes Aumentano gli incentivi tesi a facilitare il passaggio da aziende private a pubbliche specialmente nel campo dell'architettura; al fianco dei Design Institute governativi se ne definisce un nuovo tipo costituito da una joint-venture pubblico-privata.
1955	**Pratica Professionale** Introduzione del *Engineering Registration Stipulation*, un sistema nazionale di classificazione di ingegneri e tecnici basato su 3 livelli e diverse categorie corrispondenti.
1956	Fondazione del *Ministry of City Construction*.
	Pratica Professionale Emendamento della *Stipulation Regarding Stronger Management of Private Design Practice* con l'intento di contenere e bloccare il numero di *'underground architect'*, ovvero professionisti indipendenti non affiliati a nessun Design Institute.
	Design Institutes La politica conosciuta come *Socialist Transformation of Private Industry and Capital* velocizza ulterirmente il processo di nazionalizzazione delle aziende in joint-venture pubblico-private.
1957	**Design Institutes** Diversi famosi architetti impegnati nei Design Institute vengono etichettati come 'elementi di destra' ed esiliati nelle campagne per la rieducazione.
1958	Inizia la politica del *Grande Balzo in Avanti* (1958-1961).
	Università Il *Ministry of Education* decreta che gli studenti universitari necessitano di una maggiore formazione applicata, gli studenti delle università situate nelle città più grandi devono quindi passare parte del loro percorso di studi lavorando all'interno di stabilimenti industriali, quelli di università situate in campagna invece in aziende agricole.

	Design Institutes Il Consiglio di Stato e il Governo Centrale presentano l'iniziativa dei *Ten Great Buildings* in cui sollecitano il progetto di 10 importanti edifici da realizzarsi a Beijing in occasione dei primi 10 anni della PRC; per l'occasione sono inviate proposte progettuali da Design Institute di tutto lo stato, comprese le università di Beijing, Shanghai e Nanjing.
1959	Decimo anniversario dalla fondazione della Repubblica Popolare Cinese e inizio della *Grande Carestia* (1959-1961).
	Design Institutes Completamento e inaugurazione dei *Ten Great Buildings*.
1960	Interruzione di tutti i progetti di cooperazione con l'Unione Sovietica.
1965	**Università** Ultimo esame nazionale di ammissione all'Università prima del blocco delle attività didattiche causato dalla Rivoluzione culturale.
1966	Lancio della Rivoluzione Culturale Proletaria (1966-1976).
	Pratica Professionale L'*Architectural Society of China* (ASC) e l'*Architectural Journal* interrompono le loro attività.
	Università Molti docenti sono accusati di essere elementi di destra e allontanati per la rieducazione, le scuole vengono chiuse in tutta la Cina, le attività universitarie proseguono seppur a rilento.
1968	**Design Institutes** Operai e militari vengono inviati in Design Institute, Università e scuole per promuovere il pensiero di Mao Zedong e riformare le menti degli intellettuali.
1969	Istituzionalizzazione della Rivoluzione Culturale Proletaria.
	Università I membri del corpo docente vengono esiliati per essere rieducati nelle campagne: le università cessano le proprie attività.
	Design Institutes A Beijing diversi Design Institutes vengono ricollocati fuori dalla città; in tutto il paese numerosi architetti e ingegneri vengono allontanati dai loro luoghi di lavoro per la rieducazione: l'operato dei Design Institutes è rallentato e in alcuni casi bloccato.
1971	La Repubblica Popolare Cinese è reinserita all'interno delle Nazioni Unite.
	Design Institutes Il governo centrale sollecita la realizzazione di progetti realizzati 'in loco', che tengano in considerazione le opinioni dei lavoratori senza perseguire le normali procedure burocratiche, i Design Institute sono ulteriormente rallentati.
1972	Visita di Nixon in Cina e morte di Liang Sichen dopo anni di attacchi e vessazioni.
	Pratica Professionale Viene reintrodotta l'*Architectural Society of China* (ASC).
	Design Institutes I Design institutes riprendono gradualmente le loro operazioni e vengono reintrodotti nel processo progettuale.
1973	**Pratica Professionale** Riprendono le pubblicazione dell'*Architectural Journal.*
	Università Gli atenei riprendono gradualmente l'attività didattica.

	Design Institutes Le unità produttive affiliate alle Università (Design Instute Universitari) cominciano a recuperare la loro centralità seppur operando esclusivamente all'interno del contesto universitario (campus, ...).
1976	Morte di Mao e arresto della Banda dei Quattro: cessa la rivoluzione culturale.
	Design Institutes Concorso per la realizzazione del Mao Zedong Memorial Hall da realizzarsi a Beijing in Piazza Tiananmen: vengono presentate oltre 80 proposte progettuali elaborate da Design Institute e Università.
1977	**Università** Reintroduzione del test di ammissione nazionale per gli studenti universitari.
	Design Institutes Completamento in soli 9 mesi del Mao Zedong Memorial Hall grazie al lavoro volontario di oltre 700'000 persone; il memoriale è costruito su progetto del *Beijing Institute of Architecture*.
1978	Deng Xiaoping annuncia il lancio dell'*Open Door Policy*.
1979	Istituzione delle quattro Zone economiche speciali: Shenzhen, Zhuhai, Shantou, Xiamen.
	Pratica Professionale Pubblicazione del primo numero della rivista *The Architect*.
	Design Institutes Il mercato edilizio comincia gradualmente a riaprirsi; viene riconosciuto ai Design Institute la possibilità di addebitare una commissione per le spese di progettazione (circa il 2% dell'importo totale dei lavori*) e di stipulare contratti direttamente con i clienti. Il *Ministry of Education* riconosce pubblicamente il ruolo che i Design Institute a conduzione universitaria hanno avuto e stanno avendo sia da un punto di vista tecnico che didattico nell'accellerare la riapertura delle università e le attività di ricerca.
1980	**Pratica Professionale** Istituzione di un sistema di registrazione degli studi professionali, comincia nuovamente a delinearsi la figura del progettista: fondazione della prima società di progettazione in joint venture, la *Huasen Architectural and Engineering Designing Consultants Ltd.* a Hong Kong.
	Università Pubblicazione del primo numero di *World Architecture,* la rivista curata dalla Tsinghua University di Beijing.
1981	**Università** Il *Ministry of Education* conferisce a sei Design Institute a guida universitaria la licenza commerciale, sono gli istuituti affiliati a: Nanjing Institute of Technology (Southeast University dal 1988), South China Institute of Technology (South China University of Technology dal 1984), Tianjin University, Tongji University, Tsinghua University e Zhejiang University.
1982	Fondazione del *Ministry of City and Rural Construction and Environmental Protection.*
	Pratica Professionale A progettisti e studi stranieri viene gradualmente concesso di rientrare in Cina, ma esclusivamente nelle grandi città di Beijing, Shanghai e Guangzhou. Grazie a questa norma nei pressi di Beijing viene realizzato il Fragrant Hill Hotel su progetto dello studio americano I. M. Pei & Partners: è il primo progetto realizzato da uno studio straniero dalla nascita della Repubblica Popolare Cinese. Viene introdotta la distinzione tra le aree 'urbane' e quelle 'rurali' regolamentandone i relativi usi del suolo e i diritti di proprietà; i collettivi rurali sono gli unici che riescono a mantenere privilegi sulle terre che possedevano.
	Università Primo tentativo di normalizzazione del sistema di formazione universitaria in 3 step successivi: diploma di laurea, master, dottorato di ricerca.

1983	**Design Institutes** Revoca dei fondi governativi ai Design Institute a livello provinciale: gli istituti devono autofinanziarsi attraverso le *design fee*; un decreto ministeriale inoltre suddivide li in quattro classi in base a scala, budget e grado di difficoltà dei progetti che possono gestire (A, B, C, D).
1984	**Pratica Professionale** Ai professionisti è concesso di lavorare autonomamente in studi privati esterni affiliati ai Design Institute più grandi, sia statali che universitari.
	Università Conferimento dei primi Ph.D in Architettura e Urbanistica a Zhao Dazhuang e Xiang Bingrun presso la Tsinghua University e la Southeast University.
	Design Institutes La revoca dei fondi governativi è estesa a tutti i Design Institute statali.
1985	**Pratica Professionale** Aumenta il numero di piccoli studi professionali ufficialmente riconosciuti nel mercato architettonico tra cui 'Great Earth' fondato a Pechino da Alfred P. G. Peng di ritorno dal Nord America e il più grande studio 'Zhong Jing' fondato dall'ASC e dalla Beijing Association of Civil Engineering and Architecture. Comincia la pubblicazione del *China Building Industry Year Book*.
	Università Il *Ministry of Education* emana il decreto *Decision of the Communist Party of China Central Committee on the Reform of the Education System* normalizzando il percorso universitario secondo una struttura che prevede un sistema di lauree triennali e magistrali; le università più influenti del paese avviano diversi programmi di scambio e collaborazione con istituzioni occidentali. La ricerca che negli anni precedenti era stata affidata esclusivamente agli uffici statali o alla *Chinese Academy of Sciences* è reintrodotta come principale missione e responsabilità dell'ambiente accademico.
1986	**Pratica Professionale** Il *National Committee of Planning* e il *Ministry of Foreign Economic Trade* decretano che gli architetti stranieri possono tornare a praticare entro i confini nazionali, devono tuttavia sempre avvalersi della collaborazione con Design Institute locali.
	Università Il numero di Università accreditate per fornire corsi di laurea in Architettura sia salito a 64, tuttavia non esiste ancora un titolo specifico ad esse riservato, gli studenti ottengono ancora una laurea in Ingegneria.
1988	Il mercato azionario riapre con la borsa di Shanghai e quella di Shenzhen.
	Università Istituzione e normazione della Scuola di Architettura sulla base del dipartimento della Tsinghua University di Beijing, non è ancora riconosciuta una laurea specifica in Architettura.
1989	Moti studenteschi e repressione delle manifestazioni in Piazza Tiananmen.
	Pratica Professionale 14'400 progetti in fase di realizzazione sono bloccati a tempo indefinito per frenare l'inflazione dovuta ad una eccedenza della manodopera nel settore edile.
1990	Undicesima edizione degli Asian Games a Beijing. Promulgazione della *Land Use Reform*.
	Università Internazionalizzazione del processo di peer-review nei processi di selezione e pubblicazione delle riviste scientifiche: *Social Science in China* e *Journal of Zhejiang University* sono le prime riviste a coinvolgere reviewer stranieri.
	Design Institute Il recupero di Ju'er Hutong, un complesso di case a corte a tre piani a Beijing, eseguito dal Design Institute affiliato alla Tsinghua University (THAD) è premiato a livello internazionale per l'organicità del suo restauro.

1991	Shanghai è la prima città a privatizzare il settore abitativo: i cittadini per la prima volta dalla nascita della PRC partecipano economicamente all'acquisto della propria casa; altre province adottano un piano simile.
1992	Deng Xiaoping parte per il Tour del Sud, circa 800 città riaprono alla presenza straniera.
	Università Istituzionalizzazione della Laurea in Architettura: quattro università sono accreditate per la laurea in architettura e un comitato nazionale è incaricato di orientare monitorare gli atenei riguardo ai corsi erogati.
1993	**Pratica Professionale** Fondazione della *China Society of Urban Planning*.
	Università I fondi governativi non sono più sufficienti per coprire le spese degli Atenei, le Università iniziano a reperire indipendentemente fondi attraverso le tasse di iscrizione.
1994	Aumentano le riforme per garantire l'accesso al mercato a compagnie e fabbriche statali; riduzione dell'orario lavorativo da 38 a 34 ore settimanali.
	Pratica Professionale Prima sperimentazione dell'esame nazionale di abilitazione alla professione nella città di Shenyang sotto la supervisione di AIA, RIBA e HKIA. A Shenzhen viene fondato il primo studio professionale privato: Zuo Xiaosi Architect Design Ltd.
	Università *China Architectural Education Committee* e *American Collegiate Committee of Architecture* firmano un accordo di collaborazione.
	Design Institutes Diminuisce il potere economico dei Design Institute: molti si accorpano, vengono smantellati o privatizzati.
1995	**Pratica Professionale** Promulgazione della *Ordinance of registered architects in People's Republic of China* (RAO); 9100 persone partecipano al primo esame di abilitazione nazionale monitorato dagli ordini professionali di USA, UK, Giappone, Corea, Singapore e Hong Kong; Cina e USA firmano un accordo che stabilisce il mutuo riconoscimento delle qualifiche professionali degli architetti in entrambi gli stati a partire dal 1998.
	Università Le università accreditate per la laurea in Architettura aumentano a 10; lancio del Progetto 211 per lo sviluppo degli Atenei nel panorama internazionale.
1996	**Pratica Professionale** Promulgazione della *Rules for Implementation of the Registered Architects Ordinance of the Peoples' Republic of China* (RIRAO); il numero di professionisti abilitati è di 5.285 Architetti di Classe 1.
1998	**Pratica Professionale** Concorso internazionale per il *Grand National Theater* di Beijing, delle 40 proposte presentate molte provengono da progettisti stranieri.
	Università Lancio del Progetto 985 per lo sviluppo degli Atenei Universitari, la Francia rilascia 50 borse di studio a studenti cinesi per il progetto *50 architects in France*.
	Design Institutes L'*East China Architectural Design Institute* e lo *Shanghai Architectural Design Institute* si fondono nello *Shanghai Xian Dai (modern) Group* che conta 20 aziende affiliate e oltre 2000 dipendenti.
1999	**Pratica Professionale** Ventesimo Congresso Mondiale di UIA a Beijing, partecipano circa 6000 persone da tutto il mondo; pubblicazione della Carta di Pechino.
	Università Fondazione del *Research Institute of Architecture* presso la Beijing University, Yung Ho Chang ne è il direttore.

2000	**Pratica Professionale** Paul Andreu si aggiudica il concorso per il Centro Nazionale per le Arti dello Spettacolo di Beijing attirandosi le critiche di architetti e ingegneri affiliate alla *Chinese Academy of Science* e *Academy of Engineering*; il *Beijing Institute of Architectural Design* partecipa al progetto come local architect.
	Università In molte città diversi Atenei si fondono, il numero di studenti immatricolati sale a 3'000'000.
	Design Institutes La *Nanjing University* inaugura il *Nanjing Architectural Design & Research Institute*.
2001	La Cina entra nel World Trade Organization assicurando una maggiore apertura del mercato, anche di quello dell'architettura. Beijing vince la candidatura per ospitare i Giochi Olimpici del 2008.
	Pratica Professionale Alla *International Conference on Architecture and Local Culture* tenuta a Beijing partecipano oltre 650 persone da dieci diversi paesi nel mondo.
	Università Le Università accreditate per la laurea in Architettura salgono a 80
2002	Shanghai si aggiudica l'edizione del 2010 dell'Expo.
	Pratica Professionale Concorso internazionale per il progetto della CCTV a Beijing, lo studio olandese OMA si aggiudica il primo premio.
2003	Epidemia di Sars
	Pratica Professionale Concorsi internazionali per la realizzazione degli edifici olimpici in vista dei Giochi del 2008, la maggiorparte dei progetti è affidata a studi stranieri in collaborazione con local design institute: *Bird's Nest (*Herzog & De Meron, China Architecture Design Group), *Water Cube* (PTW Architects, Arup, China State Construction Engineering Corporation, CSCEC Shenzhen Design Institute), foresta olimpica (Hu Jie, direttore del Beijing Tsinghua Urban Planning and Design Institute), *Shooting Range Hall* e *Judo and Taekwondo Gymnasium* (Architectural Design and Research Institute of Tsinghua University), *Wrestling Arena* e *Badminton Hall* (Architectural Design Research Institute of SCUT), Terminal 3 del *Beijing Capital International Airport* (Foster and Partners, Beijing Institute of Architectural Design), Table Tennis Hall (Design Institute della Tongji University). Nella stessa occasione sono stati per la prima volta definiti i criteri nazionali per la valutazione della sostenibilità degli edifici attraverso il *Green Olympic Building Assessment System.*
2004	**Pratica Professionale** Accordo con *Royal Institute of British Architects* per riconoscere gli architetti cinesi come membri.
	Università Le scuole accreditate per la laurea in Architettura salgono a 120.
2005	**Pratica Professionale** Nell'area di OCT-LOFT a Shenzhen si tiene la prima edizione della Bi-City Biennale of Urbanism/Architecture sotto il nome di Urban Architecture Biennale, il tema della prima edizione si intitola *City, Open Door!* ed è curata da Yung Ho Chang.
2006	**Pratica Professionale** Il *Ministry of Construction* dichiara che, dato l'aumento nel costo medio delle abitazioni, il 70% dello sviluppo abitativo nazionale sarà costituito da unità di dimensioni inferiori a 90 metri quadrati.
2007	**Pratica Professionale** L'azienda americana AECOM acquista una società di progettazione di Shenzhen
2008	Olimpiadi a Beijing

2009	**Università** Lancio della C9 League
2010	World Expo a Shangai partecipano più di 100 paesi in un'area che si estente circa 5 km quadrati; si contano oltre 700,000 visitors in sei mesi
2012	**Pratica Professionale** Wang Shu vince il Premio Pritzker, è il primo architetto cinese a vincerlo
2014	**Pratica Professionale** Il presidente cinese Xi Jinping critica in un suo discorso pubblico gli 'edifici strani', facendo diretto riferimento ai recenti lavori di studi come OMA, Zaha Hadid Architects, e altri chiede di porre fine alla realizzazione di queste 'strane opere architettoniche'

Ap_2 Extensive credits and timeline of the projects

Ap_2.1 Building A of the Oxygen Factory Complex Big Air Venue

Ap_2.1a Extensive credits

Design Team:

BUILDING A - ARCHITECTURAL DESIGN

Schematic Design: Politecnico di Torino (DAD - China Room)

Principal Architects: Michele Bonino (coordinator), Edoardo Bruno

Design Team: Camilla Forina (coordinator), Andrea Tinazzo, Alberto Bologna, Francesco Carota, Huishu Deng, Valeria Federighi, Maria Paola Repellino

Construction Design: THAD

BIG AIR VENUE MASTERPLAN AND DESIGN COORDINATION

Atelier TeamMinus, THAD

Principal Architect: Zhang Li

Design Team: Dou Guanglu, Bai Xue (Sophia), Hu Po, Nie Shibing

BUILDING A - LIGHTING DESIGN

Zhang Xin Studio, School of Architecture, Tsinghua University

BUILDING A - STRUCTURAL DESIGN

Schematic Design: Walter Ceretto, Politecnico di Torino / Department of Structural, Construction and Geotechnical Engineering (DISEG).Construction Design: Li Guo, Pan Ping'an (THAD)

BUILDING A - PLANT DESIGN

Enrico Fabrizio, Politecnico di Torino / Department of Energy (DENERG)

Construction Design: Xu Qing, Zhai Shasha - water supply and drainage; Jia Zhaokai, Liu Huili - HVAC; Wang Lei, Zhong Xin - electrics (THAD)

BUILDING A - DESIGN BOARD

Gustavo Ambrosini, Mauro Berta, Massimo Crotti, Davide Rolfo, Elena Vigliocco (rooftop); Pierre-Alain Croset (playground); Simona Canepa, Alessandro Mazzotta (façades); Elena Vigliocco, Rossella Maspoli (restoration); Michela Barosio, Giovanni Durbiano, Mario Grosso, Roberta Ingaramo, Paolo Mellano, Marco Trisciuoglio, Manfredo di Robilant, Marco Vaudetti - Politecnico di Torino (DAD)

BUILDING A - MANAGEMENT

Politecnico di Torino - International Affairs Office - China Center

Ap_2.1b Record of the design phases - Building A of the Oxygen Factory Complex Big Air Venue

Alphabetical list of the participants involved in the proceeding with specifics about affiliation and position:

China Room

AB Alberto Bologna - Research Fellow with time contract (RTDa) ICAR/14
AT Andrea Tinazzo - Visiting Staff, Research Grant holder
CF Camilla Forina - Visiting Staff, Research Granter holder
EB Edoardo Bruno - Ph.D. Student ICAR/14
DH Deng Huishu (Freda) - Ph.D. Student ICAR/14
FC Francesco Carota - Ph.D. Student ICAR/14
MB Michele Bonino - Associate Professor ICAR/14
MBe Mauro Berta - Assistant Professor ICAR/14
MM Marta Mancini - Ph.D. Student ICAR/14
MPR Maria Paola Repellino - Research Fellow ICAR/14
VF Valeria Federighi - Visiting Staff, Research Fellow ICAR/14

Department of Architecture and Design

AM Alessandro Mazzotta - Confirmed Assistant Professor ICAR/12
DR Davide Rolfo - Confirmed Assistant Professor ICAR/14
EF Enrico Fabrizio - Associate Professor ING-IND 11
EV Elena Vigliocco - Confirmed Assistant Professor ICAR/14
GA Gustavo Ambrosini - Full Professor ICAR/14
GD Giovanni Durbiano - Full Professor ICAR/14
MBa Michela Barosio - Confirmed Assistant Professor ICAR/14
MC Massimo Crotti - Confirmed Assistant Professor ICAR/14
MDR Manfredo di Robilant - Research Fellow with time contract (RTDa) ICAR/14
MG Mario Grosso - Scientific Responsible of the Laboratory Systems for Technology Innovation (STI) of the Department of Architecture and Design
MT Marco Trisciuoglio - Full Professor ICAR/14
MV Marco Vaudetti - Confirmed Assistant Professor ICAR/16
PAC Pierre-Alain Croset - Full Professor ICAR/14
PM Paolo Mellano - Full Professor ICAR/14
RI Roberta Ingaramo - Associate Professor ICAR/14
RM Rossella Maspoli - Associate Professor ICAR/12
SC Simona Canepa - Research Fellow with time contract (RTDa) ICAR/16

External partakers

BX Bai Xue - Architect at Teamminus

WC Walter Ceretto - Freelancer and external professor at Polito

ZL Zhang Li - Tenured Professor at Tsinghua University

Ap_2.2 Future Shan Shui City International Urban Design Competition

Ap_2.2a Extensive credits

Design Team:

Project leader: Sun Yimin - South China University of Technology

Chief designers: Mauro Berta, Michele Bonino - Politecnico di Torino

Project managers: Edoardo Bruno - Politecnico di Torino; Huang Yeqiang, Zhu Xiaojing - South China University of Technology

Project planners: Francesca Governa, Leonardo Ramondetti, Astrid Safina, Angelo Sampieri - Politecnico di Torino; Su Ping, Zhang Chunyang - South China University of Technology

Project architects: Antonio De Rossi, Roberto Dini, Camilla Forina, Martina Franco, Lu Xian - Politecnico di Torino; Lin Ziyu, Xu Haohao, Zhang Qunjie - South China University of Technology

Design team: Simona Belluscio, Alessandro Delforno, Ahmed Mansouri, Riccardo Masala, Matteo Migliaccio, Lidia Preti, Piera Elisa Ragusa, Ottavia Valz Gris, Andrea Zegna - Politecnico di Torino; Xia Sheng , Lv Yingyi, Chen Huirong, Zheng Wentian, Huang Manjiao, Chen Weiying - South China University of Technology

Academic design board: Alessandro Armando, Michela Barosio, Giulia Bertola, Daniela Bosia, Simona Canepa, Martina Crapolicchio, Massimo Crotti, Eleonora Gabbarini, Rossella Gugliotta, Roberta Ingaramo, Lin Yang, Paolo Mellano, Maicol Negrello, Francesco Novelli, Maria Paola Repellino, Ana Ricchiardi, Davide Rolfo, Francesca Ronco, Marco Trisciuoglio, Zeynep Tulumen, Elena Vigliocco, Zhang Ting - Politecnico di Torino

Ap_2.2b Record of the design phases - Future Shan Shui City International Urban Design Competition

Alphabetical list of the participants involved in the proceeding with specifics about affiliation and position:

China Room

AS Angelo Sampieri -
ASf Astrid Safina - Ph.D. Student ICAR/21
CF Camilla Forina - Ph.D. Student ICAR/14
FG Francesca Governa -
EB Edoardo Bruno - Research Associate with time contract (RTDa) ICAR/14
LP - Lidia Preti - Ph.D. Student ICAR/14
LR Leonardo Ramondetti - Ph.D. Student ICAR/21
MB Michele Bonino - Associate Professor ICAR/14
MBe Mauro Berta - Assistant Professor ICAR/14
MF Martina Franco - Visiting Staff, Research Granter holder
MM Matteo Migliaccio - Ph.D. Student ICAR/14
MPR Maria Paola Repellino - Research Fellow ICAR/14
XL Xian Lu - Ph.D. Student ICAR/14

Department of Architecture and Design

ADR Antonio De Rossi - Full Professor ICAR/14
RD Roberto Dini - Assistant Professor with time contract ICAR/14

SB Simona Belluscio - Intern in CR, Master Degree Course in “Architecture Construction City”
AD Alessandro Delforno - Intern in CR, Master Degree Course in “Architecture Construction City”
AM Ahmed Mansouri - Intern in CR, Master Degree Course in “Architecture Construction City”
RM Riccardo Masala - Intern in CR, Master Degree Course in “Architecture Construction City”
PER Piera Elisa Ragusa - Intern in CR, Master Degree Course in “Architecture Construction City”
OVG Ottavia Valz Gris - Intern in CR, Master Degree Course in “Architecture Construction City”
AZ Andrea Zegna - Intern in CR, Master Degree Course in “Architecture Construction City”

AA Alessandro Armando - Associate Professor ICAR/14
AR Ana Ricchiardi - Ph.D. Student ICAR/14
DB Daniela Bosia - Assistant Professor with time contract (RTDb) ICAR/12
DR Davide Rolfo - Confirmed Assistant Professor ICAR/14
EG Elenora Gabbarini - Ph.D. Student ICAR/14
EV Elena Vigliocco - Confirmed Assistant Professor ICAR/14
FN Francesco Novelli - Assistant Professor with time contract ICAR/19
FR Francesca Ronco - - Research Associate with time contract (RTDa) ICAR/17
GB Giulia Bertola - Research Associate with time contract (RTDa) ICAR/17
LY Lin Yang - Ph.D. Student ICAR/14
MBa Michela Barosio - Confirmed Assistant Professor ICAR/14
MC Massimo Crotti - Confirmed Assistant Professor ICAR/14
MCr Martina Crapolicchio - Ph.D. Student ICAR/14
MN Maicol Negrello - Ph.D. Student ICAR/14
MT Marco Trisciuoglio - Full Professor ICAR/14
PM Paolo Mellano - Full Professor ICAR/14
RI Roberta Ingaramo - Associate Professor ICAR/14
RG Rossella Gugliotta - Ph.D. Student ICAR/14
SC Simona Canepa - Research Fellow with time contract (RTDa) ICAR/16
ZT Zeynep Tulumen - Ph.D. Student ICAR/14
ZTi Zhang Ting - Ph.D. Student ICAR/14

Ap_2.3 Architectural Scheme and Design Development of Fucheng Guanlan Industrial Land Development Overall Interest Coordination Project of Meiguan Innovative Industry Corridor (Plots 01-03)

Ap_2.3a Extensive credits

Design Team:

Chief Designer: Sun Yimin - SCAD

Project Leader: Yang Meng - SCAD

Principal Designers: Yang Meng, Xu Weirong - SCAD; Jacopo Testa - TDH

Design Principal Advisor: Edoardo Bruno – CR

Residential and Office Design Advisor: Yang Xin - Wowa International

Project Managers: Deng Fang, Chen Junhao - SCAD

Designers: (alphabetical order)

China Room: Edoardo Bruno / Camilla Forina / Xian Lu with Haochen Bai / Haoyan Chen / Sabina Faroppa / Andrei Mihai Laikart / Chaojin Ruan / Peining Wang / Ming Zhao

CZ Architects: Paolo Ceccon / Laura Zampieri with Francesca Bortolato / Gabriela Gomez

Piemonte Home Design: Francesco Carota / Xiang Ling with Beini Guo / Jihao Zhong / Zhang Shuyu / Xing Tongxin

SCAD: Sun Yimin / Yang Meng /Xu Weirong/ Deng Fang/ Liang Zhanyi /Liu Qing/Liang Shudi

TDH: Gianpiero Moretti with Samuel Bernier-Lavigne / Maxime Lebel / Étienne Gelinas; PAT Architetti - Andrea Veglia / Jacopo Testa with Lorenzo Buonomo / Fabrizio Davino / Nicolò Radicioni / Angelica Rossi / Fulya Tanyel / Giuseppe Veglia; Edoardo Pennazio with Bingqi Liu; Studio Cavaglion - Giovanni Cavaglion / Emanuele Cavaglion with Xiaoxu Liang; Francesco Vaj with Lishui Xue

Wowa International: Yang Xin/ Chen Junhao/Ke Liang/Li Borong/Wu Siqing/Nie Fangbin

Ap_2.2b Record of the design phases - Architectural Scheme and Design Development of Fucheng Guanlan Industrial Land Development Overall Interest Coordination Project of Meiguan Innovative Industry Corridor (Plots 01-03)

Alphabetical list of the participants involved in the proceeding with specifics about affiliation and position:

DESIGN TEAM

China Room

CF Camilla Forina - Ph.D. student ICAR/14
EB Edoardo Bruno - Ricercatore a Tempo Determinato di Tipo A ICAR/14
FC Francesco Carota - Research Fellow ICAR/14
LP Lidia Preti - Ph.D. student ICAR/14
LX Lu Xian - Ph.D. student ICAR/14
LiX Ling Xiang - Ph.D. student ICAR/14

AML Andrei Mihai Laikart - Intern in CR, Master Degree Course in "Architecture Construction City"
BG Beini Guo - Intern in CR, Master Degree Course in "Architecture Construction City"
ChR Chaojin Ruan - Intern in CR, Co-Run Master Degree Course Polito/SCUT
HB Haochen Bai - Intern in CR, Co-Run Master Degree Course Polito/SCUT
HC Haoyan Chen - Intern in CR, Co-Run Master Degree Course Polito/SCUT
JZ Jihao Zhong - Intern in CR, Master Degree Course in "Architecture Construction City"
MZ Ming Zhao - Intern in CR, Co-Run Master Degree Course Polito/SCUT
PW Peining Wang - Intern in CR, Co-Run Master Degree Course Polito/SCUT
SF Sabina Faroppa - Intern in CR, Master Degree Course in "Architecture Construction City"
XT Xing Tongxin - Intern in CR, Master Degree Course in "Architecture Construction City"
ZS Zhang Shuyu - Intern in CR, Master Degree Course in "Architecture Construction City"

Academic advisor
AS Angelo Sampieri - Associate Professor ICAR/21

Professionals

AR Angelica Rossi - PAT Architetti, collaborator
AV Andrea Veglia - PAT Architetti, co-founder
FD Fabrizio Davino - PAT Architetti, collaborator
FT Fulya Tanyel - PAT Architetti, collaborator
GV Giuseppe Veglia
LB Lorenzo Buonomo - PAT Architetti, collaborator
JT Jacopo Testa - PAT Architetti, co-founder
NR Nicolò Radicioni - PAT Architetti, Architect

EP Edoardo Pennazio - PENNAZIO architects + engineers, founder
Bingqi Liu - Intern in PENNAZIO architects + engineers, Master Degree Course in "Architecture Construction City"

EC Emanuele Cavaglion - Studio Cavaglion, co-founder
GC Giovanni Cavaglion - Studio Cavaglion, co-founder
XL Xiaoxu Liang - Intern in PENNAZIO architects + engineers, Master Degree Course in "Architecture Construction City"

GM Gianpiero Moretti - Freelancer
SBL Samuel Bernier-Lavigne - Collaborator GM
ML Maxime Lebel - Collaborator GM
EG Étienne Gelinas - Collaborator GM

FV Francesco Vaj - Studio Vaj, co-founder
LX Lishui Xue - Intern in Studio Vaj, Master Degree Course in "Architecture Construction City"

Ap_2.4 Beyond YUE|Jianhu Revival - Shaoxing Jianhu Planning and Design

Ap_2.3a Extensive credits

Since the proposal did not advance to the second stage of the competition, the parties agreed to keep the one in brief as credit, without negotiating on an extended version of the project credits.

Ap_2.2b Record of the design phases - Architectural Scheme and Design Development of Fucheng Guanlan Industrial Land Development Overall Interest Coordination Project of Meiguan Innovative Industry Corridor (Plots 01-03)

Alphabetical list of the participants involved in the proceeding with specifics about affiliation and position:

DESIGN TEAM

China Room

CF Camilla Forina - Ph.D. student ICAR/14
EB Edoardo Bruno - Ricercatore a Tempo Determinato di Tipo A ICAR/14
LP Lidia Preti - Ph.D. student ICAR/14
LX Lu Xian - Ph.D. student ICAR/14
LiX Ling Xiang - Ph.D. student ICAR/14

DB - Davide Borra - Intern in CR, Master Degree Course in “Architecture Construction City”
LM - Liu Ming - Intern in CR, Master Degree Course in “Architecture Construction City”
LiXi - Liu Xiao - Intern in CR, Master Degree Course in “Architecture Construction City”
SY - Shi Yongde - Intern in CR, Master Degree Course in “Architecture Construction City”
WY - Wang Yixuan - Intern in CR, Master Degree Course in “Architecture Construction City”

Academic advisor
AS Angelo Sampieri - Professore Associato ICAR/21

Professionals

BM Bruno Maiolo - 2MIX Architetti, co-founder
DL Dalila Tondo - 2MIX Architetti, Creative Director

DF Daria Fossà - Archisbang, junior architect
EC Eugenio Chironna - Archisbang, architect
SM Silvia Minutolo - Archisbang, co-founder

AA Alp Arda - Balance Architettura, junior architect
AL Alberto Lessan - Balance Architettura, co-founder
JB Jacopo Bracco - Balance Architettura, co-founder

EC Emanuele Cavaglion - Studio Cavaglion, co-founder
GC Giovanni Cavaglion - Studio Cavaglion, co-founder

FC Filippo Corbellaro - Corbellaro SA, co-founder
NC Nicolò Corbellaro - Corbellaro SA, co-founder

GM Gianpiero Moretti - Freelancer

Ap_3 Record of organizational meetings for the structuring of Polito Studio

2023.02.06 a distanza
MB VF CF EB
LSavio - RIngaramo
LR - FGuardamagna - GPerrone - PJager

LR - da parlare oggi:
1- side event congresso UIA
2- paper congresso UIA
3- chiusura gruppo TDH e lancio nuova call China
4- punto su LatAm
5- prospettiva eventuale programma Africa
6- comunicazione e sito web
7- scadenza di PS a settembre ed eventuale rinnovo a settembre
8- come rispondere ad arch Matteo Milano che ha chiesto accesso agli atti per essere stato escluso da progetto LatAm (e ha mandato lettera di lamentela a lavoro della commissione)

[MB - dopo dimissioni di urszula tavolo ordine chi c'è?

LR - posto vacante per un po', poi subentrata RI come delegata di PM e anche consigliera dell'ordine]

VF su punto 2 - stiamo ancora aspettando accettazione dopo aver mandato il paper modificato secondo le critiche, ancora nessuna notizia su date e programma definitivo inoltre

MB - per evento in Svezia, ho provato a sentire Francesca XXX per invitare l'ospite (Francis Kerè) ma anche lei non era riuscita a contattarlo, forse possiamo invitare l'altro in lista che è meno inflazionato (meno noto) Kunle Adeyeni (?) e più interessante per i temi che vogliamo toccare dopo

VF- si e poi gli svedesi avevano contatto diretto

LR- mi sembra che evento stia in piedi da solo e sia già ottimo come programma, andiamo avanti anche senza kere

PJ- anche io d'accordo con laura che programma funziona anche da solo, certo che keynote speaker può essere utile a richiamare attenzione, ho perplessità su accettazione di paper

VF- si perchè core di convegno sono gli sdg, però evento è altro discorso

MB- posso chiedere a Dal se hanno contatti con Kunle Adeyeni (?) e sentire se per caso si offrono loro di gestire i contatti

VF- io intanto ho scritto a francienne van XXX (Het Neue) ma ancora nessuna risposta, le riscriverò a breve

LR - ok, tanto abbiamo tempo fino al primo marzo per presentare programma

MB- rimane da affrontare tema del budget per evento svedese, come diceva johan la compagnia mette 2000 euro circa, forse rimane una quota da mettere per nostre due istituzioni, da budget erano stimati 17k in tutto. Forse possiamo dire metà torino e metà svedesi. In sostanza è come se ogni istituzione torinese spendesse 3500 euro.

LR- per quanto ci riguarda abbiamo già messo un piccolo ordine a bilancio, quanto dovrà essere si stabilirà in qualche settimana e poi si presenta.

PJ- badget in effetti già stato previsto, bisogna capire meglio la parte di catering ma dovremmo esserci

MB- noi dovremmo fare richiesto alla giunta di dipartimento, con una lettera e micropresentazione, parlandone con mellano prima però dovrebbe andare in porto. Meglio farlo subito però

LR- prossimo argomento, biennio Ch sta per concludersi, abbiamo avviato prima call a feb 2021, i lavori sono iniziati verso giugno, quindi in prossimo semestre il primo biennio si esaurisce. Dato che TDH si è rivelato così dinamico e coeso possiamo offrire una partecipazione a nuovo concorso/progetto o meglio partire subito da nuova call?

MB- mi sembra che anche rispetto a commenti ricevuti su entusiasmo nel voler tenere insieme qualcosa potremmo fare nuovo giro con questo gruppo ma intanto mantenere possibilità a proseguire anche dopo scadenza di PS. (Corbellaro è venuto apposta per chiedere di proseguire). Si potrebbe usare evento del 2 marzo da seta per poi fare cena e presentare sia 4round di progetto che possibili formule per andare avanti e a valle bandire call per nuovo gruppo cosi da avere sovrapposizione tra le due coorti.

EB- c'è voluto del tempo per rodare il gruppo ma nelle ultime fasi si è lavorato in maniera molto più sciolta. si dovrebbe si dare uno slancio ma anche dare opzioni così che ci sia un soggetto indipendente che ha acquisito una certa autonomia (come previsto da progetto) che possa proseguire poi autonomamente > in questo forse è opportuno ancora una fase di accompagnamento. a livello cronologico forse è momento migliore per sollecitarli anche a chiedere a loro cosa vogliano o come si immaginino di proseguire

LR- io volevo tornare un attimo indietr, abbiamo avuto un cambio di referenti, quando nel 2020 abbiamo fatto prima call e firma non era assolutamente scontato che funzionasse, è stata bella soddisfazione vedere che andava, grande ringraziamento a Cr che ha gestito e anche soprattutto a TDH. sembra che si sia compiuto quello che oat cerca di fare da tempo, dare occasioni a studi per

lavorare insieme a progetti all'estero che altrimenti non sarebbero raggiungibili. anche io sono dell'idea di fare ancora qualcosa insieme a loro e poi magari ragionare su come procedere dopo. noi simo soddisfatti, mi sembra che ora noi abbiamo anche obbligo di arruolare nuove studi… cosa succede se alcuni si ricandidano?

RI- anche per consiglio è stata esperienza positiva da ripetere e da aprire ad altri gruppi in modo che sia modalità di interazione tra ordine e polito per far si che sia iniziativa che continua a produrre collaborazioni e operazioni di concorsi e gare internazionali. bisogna capire come muoversi, fare altra call? io farei turnover, non possono ricandidarsi subito ma in caso ad una call successiva

PJ- io qualche perplessità la avevo, invece CR e TDH hanno dato davvero ottimo risultato, molto dovuto a lavoro vostro, MB VF EB siete instancabili. bello che nascano collabo che vadano anche oltre polito studio.. Io non sono tanto dell'idea che studi che hanno partecipato non si possano ricandidare, se alcuni si ricandidano è solo una conferma della bontà dell'iniziativa e poi con criterio si selezionerà nuova cordata.

MB- bisogna capire se possibilità di ripresentare candidatura non vado in contrasto con spinta a proseguire in autonomia

RI- appunto, si può chiedere di tentare prima di proseguire in autonomia

LR- io metterei in nuovo accordo la possibilità di continuare a lavorare con questi gruppi di studi e beneficiare di accompagnamento. però per nuovo biennio e nuovi 12 studi vorrei persone nuove altrimenti creiamo un cluster di privilegiati che continuano ad accedere ad un percorso di formazione di alto livello

EB- secondo me fattore essenziali è formalizzare il finale, che sia un ente economico o qualcosa di simile. così che poi gruppo successivo parte da questo e va avanti da li. Sito web non lo hanno fatto, comunicazione neanche, una legal entity che magari possa lavorare anche in italia. poi ricambio è necessario, però manca una coda che vada in sovrapposizione con altra

MB- possiamo dire che per accedere a seconda parte di questo accompagnamento è che chi è interessato si organizzi per proseguire con un'idea o un programma

PJ- io rimarrei inclusivo perchè proprio su cr e tdh c'era un livello alto, e non so quanti altri studi a to abbiano un profilo così, e altrimenti rischiamo di andare incontro ad un danno di immagine

MB- su questo hai ragione, possiamo fare nuova call ridotta, con la prospettiva di andare ad alimentare tdh con altre competenze, quindi potrebbe essere pensato in un modo diverso

LR- si potrebbe fare accordo con studi attuali che seguano nuovi studi in fase di wrksp

MB- oppure si potrebbe aprire a nuove province

PJ- forse difficile

MB- si ancora troppo presto, però idea che ci sia quel meccanismo di sostegno/affiancamento è interessante. è simile poi a quello che proponeva corbellaro

VF- potrebbe a questo punto anche essere che in giuria ci sono alcuni degli studi di tdh

MB- si anche. plausibilmente quindi in un ipotetico secondo giro di tdh sarebbero in 8 quelli che prenderebbero impegno di andare avanti

LR- possiamo tornarci sopra con idee più formalizzate

EB- sarebbe utile formalizzare un soggetto economico a nome di tdh, perchè altrimenti ogni volta bisogna fare firmare a uno studio e non è molto equo. trovare modo per una legal entity è anche scardinare una dinamica propria di professione in ita e fare questi raggruppamenti di x studi professionali che si presentano come unicum

LR- forse dobbiamo fare una riunione dedicata

VF. come andata con commercialista?

LR- abbiamo fatto incontro con legale di ordine e uno di polito ma non abbiamo poi sollecitato ulteriormente, solo partito confronto, potrebbe essere obiettivo fase 2

MB- forse anche per far rendere conto a studi di fase 2 si può proseguire con loro fino a giugno e fargli fare un piccolo studio di fattibilità (fino a settembre)

VF- peter diceva giustamente che oat è realtà locale ma su bottom up ad esempio sono stati selezionati anche da fuori di to, possiamo ad esempio riservare un posto per un 'esterno' molto motivato. può essere interessante anche per partecipanti che cosi conoscono nuovi professionisti con cui non hanno lavorato prima

MB- ora che progetto ha preso sua identità possiamo anche togliere il vincolo dell'aver studiato al Poli che era nel bando. Possiamo mettere a punto questa opzione e raccontarla a tdh il 2, evento è alle 7 poi a 8,30 possiamo andare a cena e presentare questa possibilità, interesse deve essere pieno, sia per assistenza che per il resto.

PJ- magari noi iniziamo a parlarne anche in consiglio, io non mi sento di fare delle scelte al riguardo.

RI- si sarebbe il caso di capire meglio anche tecnicamente come gestire queste due opzioni/CANALI e avere schema più chiaro. se avessimo una mezza paginetta da poter portare in consiglio per discussione sarebbe meglio

MB - LatAm trovare qualcosa da far fare ai 12 che aspettano da mesi!

VF- io ultima volta che ho partecipato era per capire se ci fosse possibilità di partecipare a quel concorso, ma dato che la javriana partecipava già con altra formazione quindi non poteva partecipare con due gruppi

MB- a MONTERREY ora c'è Fra Carota come docente associato, sta facendo una seire di corsi collegati con parchi industriali

LS- stiamo cercando bandi, ne avevamo trovato uno ma non possiamo partecipare come gruppo perchè era

necessario trovare uno sviluppatore immobiliare, abbiamo però ricevuto venerdi una conferma ad un loro possibile interesse per partecipare a bando a città del messico, che ci ha segnalato direttamente il gruppo. è un bando per realizzazione di padiglione in un parco, proposto da rivista messicana (archin?), bando piccolo in cui non necessario che partecipino tutti. ci si può iscrivere fino a 27 feb, scadenza proposta tra un mese (6 marzo), premio 4800 e, javeriana sarebbe disposta a partecipare se vogliamo, ma possiamo anche partecipare con altri volendo o anche svincolati proprio. possiamo chiedere a gruppo se qualcuno di loro vuole partecipare. poi ne abbiamo esplorati altri che però non vanno bene.

MB- importante far vedere che ci siamo, quindi meglio proporlo anche se nessuno vuole partecipare

VF- in realtà nella chat erano in un po' a voler partecipare (3/4 gruppi)

MB- possiamo proporlo allora. poi c'è monterrey in cui Fra Carota si sta confrontando con questo developer per capire se ci sono possibilità

LS- vedendo anche progetto ch, mi sembra importante che per far funzionare operazione deve esserci anche vero interesse del partner straniero, ora sembra che su questa piccola esperienza del messico siano interessati e quindi si può partire

MB- lorenzo prova a mettere giù una mail tipo quelle condivise in ch, e mandiamo

LR- eventuale apertura in Africa forse è tema un po' lungo, vogliamo rimandare a prossimo incontro?

prossimo martedì 14 feb alle 14.30 direttamente su zoom

2022.04.01 a distanza per LatAm
MB VF CF, PMellano, LSavio, GP Gianmarco Perrone, PJ Pjaeger, RIngaramo, FGuardamagna

PM + LS - molto utile durante primo lancio di progetto il dialogo con arch italiana laureata a sapienza ma che ora lavora a bogotà in ufficio che si sviluppa di riqualificazione urbana > ci saranno in futuro vari progetti di metropolitana e fermate e riqualificazionr/rigenerazione urbana di parti di città che stanno evolvendo + attività a supporto di azioni ministeriali (social housing, ….), hanno inoltre info su tutti i bandi che escono > potremmo collaborare con loro come partner o da soli, inoltre collaborano con javeriana, quindi in linea con i nostri contatti
riccardo la rota - prof di javeriana che lavora a molti concorsi e anche di prg della scuola di belle arti alla javeriana che ha vinto molti premi, possiamo organizzare con lui una riunione online per spiegare polito studio e vedere se si riesce a chiudere accordo

PM - io ho fatto incontro con responsabile di ambasciata, e dice che loro sono in contatto con imprese italiane che lavorano li e si potrebbe fare incontro in remoto con amministratori delegati di queste imprese per esporre il progetto, in generale comunque c'è stato buon riscontro, potremmo partire con la selezione degli studi per poi provare a organizzare un wrksp con la design factory della javeriana e coinvolgendo l'architetta romana e arch colombiano (che si sono dimostrati disponibili e interessati ad entrare in gioco)

MB - bando è uscito, quindi potremmo ipotizzare anche data per inizio di lavori. inoltre consiglio di includere uno della javeriana nella giuria di selezione come aveva fatto HH che era risultato utile

PM - potremmo chiamare paolo gomez

LR - 11 aprile Q&A per bando, scadenza quesiti 13 aprile, scadenza candidature 20 aprile, 9 maggio > risultati selezione

GP - una settimana dopo potrebbe iniziare il primo wrksp, commissione deve essere tra 20 apr e 9 maggio

PM - chi fa parte di commissione?

LR - nel bando dice che sarà nominata e comunicato dopo scadenza delle candidature, l'altra volta era stato scelto lo stesso tavolo di lavoro + un esperto, bisogna capire se vogliamo ripetere uguale

PM - importante però che non siano troppo persone

LR - potrebbe essere come l'altra volta 3 poli + 3 ordine + 1 esperto bogotà (alfonso gomez - dean di facoltà di arch e disegno di javeriana?)

PM - lato polito potrebbero essere valeria michele e lorenzo

RI - potrei partecipare anche io se necessario

MB - ma tu saresti lato ordine

LR - l'altra volta erano stati selezionati lato ordine urszula, cristina e cinotto

PJ - potremmo rifare uguale: io + urszula + cinotto

LR - ok, decidiamo data, dal 21 in avanti sempre bene, decidiamo quando.. per il decano potrebbe essere come con HH che entra in gioco solo in selezione finale,

PM - chiamiamolo dopo prima scrematura e valutazione preliminare > direttamente con shortlist, per non chiedergli troppo

MB - potremmo proporre 29 o 6 (pomeriggio, considerando la differenza di fuso), mentre incontro tra noi 22 e 29

MB - mi sembra che ci sia più interesse, forse perchè è contesto più morbido

LR - cosa ti aspetti?

LS - mi aspetto che javeriana / architetta italiana Giovanna Victoria Sfera Velazquez si mettano a cercare bandi e ce le comunichino così da costruire gruppi di lavoro con arch italiani + javeriana + altri progettisti esterni (chiamati da javeriana) e costruire così gruppi per partecipare

MB - enfatizzo due cose per questi gruppi: 1 la necessità di includere nel gruppo anche polito sia per facilitazione che per semplificare il progetto, quindi capire se hai

bisogno di allargare il gruppo anche ad altre persone oltre te che abbiano già esperienza in colombia. utile anche per lanciare ulteriori tirocini/tesi/eccetera tipo i tirocinanti cinesi che partecipano a polito studio

LS - forse il problema è che sul sud-america non c'è una struttura così definita come china room, potremmo pero includere studenti sud-americani che sono impegnati nei corsi di laurea magistrale e vedere se/come coinvolgerli e anche altri docenti ad esempio

MB - visto che l'altra volta si è creato un problema per quanto riguarda i crediti di questo consorzio (ufficioso) che si fa per i concorsi si puo organizzare incontro per avere consulenza?

LR - in realtà non abbiamo consulente specifico di questi temi legali, possiamo però parlare con consulente amministrativista oppure parlare con nostro commercialista

MB - forse commercialista è già sufficente, potremmo avere primo incontro come tavolo di lavoro e poi magari allargare a TDH

LR - lato politecnico si può interpellare qualcuno?

MB - ora noi abbiamo consulente giuridico a shangai, bisogna capire però più lato italiano, poi magari si può fare come secondo giro l'incontro con lo specialista di shanghai

VF - lo scorso anno mi aveva contattato un avvocato esperto di mediazione con la cina

LR - vogliamo ipotizzare delle domande tipo? magari io preparo bozza e poi condivido…

MB - abbiamo notizie degli spazi? > PJ - no, l'area è definita nel layout ma i lavori ancora non sono finiti…

MB - potremmo fare più spesso incursioni anche da parte del tavolo di lavoro come quella che abbiamo fatto io e Angelo Sampieri per il concorso di Shaoxing

2022.02.17 a distanza
MB - VF - CF+ LR - FG (federico guardamagna) - GG (g gasverde) - LM (mastrolia) - MBe (mad bertone) - RL (raffaella lecchi, ?)

comincia LR parlando di lancio di LatAm:

1. seminario webinar aperto a iscritti ordine + polito in cui si presenta mercato
2. data 23 marzo, in contemporanea con italian design day (?)
3. ho preso programma cina e ho adattato a bogotà

poi lascia parola a VF che è più informata su quanto deciso con mellano:

1. durata 2h in diretta con Bogotà 16-18.30
2. presentazione di progetti tra colombia-italia-panama con saluti istituzionali
3. tavola rotonda, si spiega come sta funzionando in ch e da li si apre discussione su come potrebbe funzionare in latAm
4. pomeriggio invece partecipa solo chi è interessato e sta li (qua in italia finisce)
5. lingua italiano e spagnolo

MB ambasciata trasmetterà tramite zoom, quindi bisogna risolvere questione con presenze prese su gotomeet, inoltre se poi bisogna lanciare il bando le 18.30 rischia di essere tardi.
poi 1,5h di discussione è troppo tempo, servirebbero delle testimonianze di qualche ospite > 5 marzo tutto pronto

GG appena abbiamo calendario definitivo possiamo far partire notizia del seminario

MB - importante finire un primo video così da pubblicare come articolo su wc

LM - stiamo lavorando su tutti e tre i tipi di video allo stesso tempo

LR - chiudiamo con questione crediti

meglio accreditare sempre wrksp da 2h cosi siamo sicuri di riuscire > altrimenti si perdono crediti
inoltre COLLEGARSI SEMPRE SU GOTOMEETING CON NOME COGNOME altrimenti non si possono avere crediti
nei fogli firme INSERIRE SEMPRE ANCHE I NOMI DEI RELATORI (io e edo)

2021.11.30 in sede OAT
MB - VF - CF - LP + LR - RIngaramo - UG - LM - LS (savio) - ACinotto

1 - questione video
2 - vittoria China Awards!

LR - Polito Studio ha vinto il premio (PRESSO FONDAZIONE ITALIA-CINA), siamo invitati a ritirare premio a Milano (in trasmissione televisiva): videointervista, visibilità su sito e in booklet eccetera… questo sulla base di quota di partecipazione (3000 euro)

MB - come enti pubblici per noi non è tanto plausibile spendere questi soldi, forse anche professionisti non hanno molto da guadagnare… per combinazione domani a milano incontro filippo fasuli (aveva partecipato a primo meeting) e magari mi faccio dire da lui come funziona (quanti sono i vincitori eccetera…), magari riusciamo a mantenere il premio ma senza spendere rinunciando a interviste e pubblicazione (1000 euro come gettone?)

LR - io comunque non posso accettare questa spesa, deve passare da consiglio

LM - video editati nel primo format, già inoltrate le prime osservazioni al videomaker. lui ha chiesto di fornirgli noi alcune robe di grafica. per video generale lui non è in grado di fare selezione del materiale quindi dobbiamo indirizzarlo noi. >>> serve una persona che ipotizzi struttura critica del video e che comunichi i minutaggi da inserire

MB - potrebbe essere analogo di youtube e instah, noi possiamo fare proposta per video più lungo (max 4min) ma per uno spot (max 1min) a livello di grafica e regia forse meglio faccia lui. Obiettivo è promozione! Anche perchè la formula sta funzionando, SUN ha capito molto bene ed è entusiasta

LM - quindi sintesi critica per quello da 4min

MB - forse sarebbe meglio inserire anche qualcosa dei workshop e su metodo di lavoro, quindi quasi una storia, possiamo anche usare materiali di meiguan (video eccetera). Per la parte di grafica si potrebbe chiedere a Dalila (2MIX)

LR - programmi 2022 e sede.

MB - momento ancora interlocutorio per LatAm

LS - venerdi abbiamo riunione con Angelo Bobbio (direttore camera commercio a bogotà - referente per colombia e panama) così possiamo partire con esperienza pilota con colombia (Javeriana / Les Andes / Natinal hanno tanti rapporti con Polito). CCom dovrebbe aiutarci a capire quali sono le possibilità di lavoro e metterci in comunicazione con aziende ita che già lavorano li (ENEL, Lavazza, …). Prima di estate Ang Bobbio si era detto interessato, a settembre anche, ora proviamo a stringere un po' per capire se si prendono ruolo di supporto, per le uni no problema perchè rapporti sono già consolidati. SI era detto inoltre che per differenziare da esperienza cinese si potrebbe concentrare più su interior design che in effetti sarebbe appoggiato anche da Bobbio.

MB - partiamo dalle occasioni, sarebbe bello perchè per interior si erano candidati studi interessanti, però non fissiamoci. Si può tener conto nel bando (a partire da esperienza cina in cui si fanno gruppi piu piccoli) di fare bando adeguato a queste poi possibilità.

LR - vogliamo fissare giornata ad hoc per la sede? stiamo selezionando un professionista per la parte impiantistica, quindi parliamone verso gennaio (prima sopralluogo e poi riunione).

MB - entro dicembre LatAm e gennaio sede

2021.11.02 in sala feste e fasti
MB - VF - CF + PM (mellano) - PJ - LR - RI - UG - AC - LM - LS (savio)

1- VF introduce brevemente gli sviluppi sul concorso di Meiguan:
> consegna concorso posticipata di 7 giorni
> ruoli: Pennazio - script per il video, PAT + Cavaglion + Moretti - direzione artistica progetto architettonico, Vaj - impaginazione tavole, Wowa - tipologie residenziale, SCUT - aspetti tecnici, Frontop - Rendering (se li gestisce SCUT), Scut - modellino

MB si possono inserire consulenti e cosi succederà quindi per tutti i partecipanti (al di fuori di PAT che è capofila con SCUT) - lo faranno sia cavaglion, moretti, etc che wowa

PJ mi ha chiamato Veglia per sapere come dividersi i crediti, io gli ho detto che ora non è momento di infangarsi su sta cosa, perche in ch sono fissati su documentazione (copie conforme etc) quindi per ora meglio lavorare su concorso e poi a medio lungo termine si capisce bene come organizzarsi e suddividersi anche crediti e ruoli perchè è struttura molto formale in CH

MB bisogna accordarsi internamente in modo che dopo concorso se si vuole pubblicare progetto compariamo tutti come progettisti

VF stiamo anche vedendo come funzionano i tirocini, che per ora stanno andando bene, ci sono vari tirocinanti sia lato cr che profesionisti che stanno contribuendo molto al concorso

2- questioni generali e prossimi step Ch

VF - abbiamo delle scadenze su quando organizzare prossimo wrksp?

LR - noi non abbiamo più luciana, abbiamo indetto bando per un tirocinante che però inizierà a dicembre, quindi saremo pronti per supporto organizzativo a partire da gennaio, non prima (con una persona dedicata)

MB difficile organizzare un wrksp senza una persona come LM, quindi passiamo a gennaio; anche percjhè se partiamo al 1 dicembre, con orientativamente una scadenza due settimane dopo, che però significherebbe lavorare poi sotto natale, forse meglio posticipare?

LR ma poi non c'è problema di capodanno cinese?

VF forse si potrebbe cercare concorso con prima selezione solo su titoli

PJ sarebbe bello dopo 2/3 di queste esperienze dare visibilità all'iniziativa e a quanto è stato fatto

MB magari estate prossima! per ora esiste già dossier di parte di wrksp, si potrebbe continuare anche con risultati successivi

PM si potrebbe fare anche mostra qui al castello e in contemporanea fare anche presentazione alla stampa di quanto fatto finora

MB si potrebbe fare evento plenario a marzo (per america latina) e insieme fare questa cosa; se però aspettiamo fino a dopo capodanno diventa troppo in la. Si potrebbe fare uno che scade il 20 dicembre. Prima si potrebbe fare wrksp (26 novembre - ore 15.00) in cui potrebbero raccontare quelli che hanno partecipato come è andata, allo stesso tempo si chiede disponibilità a partecipare ad altro concorso e si chiede a XL se riesce a trovare qualcosa. Si chiede se qualcuno è disponibile per fare altro ciclo di wrksp prima di natale.

LR ok, allora scriviamo noi a tutti quanti (scrive LM)

3 - PS LatinAmerica

PM bisogna fare primo wrksp, ma da quel lato non stanno facendo molto….

VF aggiornamento: abbiamo avviato comunicazioni con università

LS volevamo partire con esperienza pilota con colombia

PM vorremmo provare a fare primo concorso con colombia o panama, 17 nov c'è direttore della javeriana in visita a studenti di doppia laurea, in questa occasione si potrebbe pressare un po' su procedere in maniera più rapida

MB noi avevamo fatto inizialmente un evento plenario per chiamare un po' di professionisti, in quella occasione presentare il bando e da aprile quindi avere la selezione dei professionisti

PM ho paura che al momento di quagliare questi scompaiono o non si trovano occasioni

RI ma se invece provassimo africa o nord america (canada)? io posso provare a sondare avendo qualche contatto…

MB la domanda di partenza però è la stess: perchè profes ita sarebbero utili in canada?

RI non lo so, però in prossimi anni ci sarà tutto lavoro su recupero patrimonio del moderno, io posso provare a sentire

PM solo che li non abbiamo alcun contatto con ambasciata ne camera di commercio….

MB io partire dal principio per cui polito mette a disposizione rete strutturata in corso di anni e professionisti mettono esperienza e creatività. secondo me in sud america abbiamo già cosi tante cose fatte che in qualche modo si dovrebbe riuscire…angelo coppo (?) in una riunone aveva detto proprio che ita in Sud Ame erano ben visti e ricercati per tutta la parte di interior, considerando che in parte ch abbiamo lasciato fuori progettisti di interior e retail, che invece potrebbero essere coinvolti in questo

LR non è il caso di rimandare a prossimo anno? perchè mi sembra che cose sono ancora poco chiare

PM dobbiamo capire se da parte LatAm ci sono delle occasioni da sfruttare

MB per parte cina abbiamo fatto tutta una serie di passi e lavori per rendere tutto più funzionale, tipo HH in commissione etc…però sarebbe il caso di porsi una scadenza per prendere decisione…facciamo nuova riunione 10-15 dicembre per capire avanzamenti LatAm?

OK

4-questione video

PJ è stato approvato budget in ultimi consigli, quindi si può partire

LR abbiamo già dato incarico

LM vi condivido cartella con video, possiamo dare uno sguardo e commentare a chi si occupa qualche parere raccolto

MB riorganizzazione del sito?

LM non abbiamo avuto risposte… quindi stiamo aspettando come fare (abbiamo previsto box tematici)

LR consideriamo comunque che il sito dell'ordine ha una sua struttura, per ora continuiamo cosi, poi a gen possiamo pensare di cambiare maggiormente

MB possiamo pensare poi di fare un sito separato, anche perchè sarebbe utile averne una versione anche in inglese con cui quindi illustrare all'esterno. inoltre HH ha proposto di aprire account su account ch che potrebbero essere utili (tipo position)

5-varie

LR consiglio si riunira per avanzare proposte per nuova sede via piave, sono stati chiariti punti critici del progetto e quindi 10 nov ci sarà relazione per procedere su progetto. proprietario ha finito demolizioni, si stanno ora progettando impianti (da far passare dentro intonaci strutturali), tra una 20 di gg si potrà decidere meglio quali sono gli spazi che polito studio occuperà e quali impianti necessita

MB a tavolino o in visita?

LR come preferite, meglio a tavolino forse

MB potremmo fare alla prossima riunione del 10/12 dicembre

2021.09.17 in sede OAT
MB - VF - CF - LP + LR + UG + PJ peter jaeger - RI (Ingaramo) - LM

si parla dei vari ruoli, competenze e responsabilità delle figure coinvolte da parte dell'ordine

da ora in poi riunioni ogni 2/3 settimane

LR - forse si può fare organigramma con ruoli e tempi di tutti i coinvolti (per PJ in particolare)

come partecipare a concorsi? possiamo fare raggruppamento straniero per partecipanti

2021.07.23
MB - VF - CF - LP - EB + LM Luciana Mastrolia + LR + UG + PJ peter jaeger

1-tirocini:
VF - rimandiamo inizio attività a settembre così tirocinanti lavorano su wrksp? (sarebbe meglio lavorassero a cose polito studio piuttosto che su lavori random di studio

MB - se qualche studio che ha già fatto wrksp I li vuole già da agosto si può fare anche prima, per chi non ha partecipato a wrksp potrebbe in effetti iniziare a settembre. facendo comunque si che tirocinanti si trovino a lavorare più su politostdio

2-wrksp:

MB-problema che non esce bando > sentito liu lei ma ancora non sanno, forse fine prossimo mese….rischio 20 agosto

LM-OAT chiuso da 5 a 31

chiedi a lidia

LR su video > trovato montaggio a 2.600 euro

LR su CEIP > non si riesce ad avviare nulla, provare a contattare camera di commercio per chiedere finanziamento a loro per PS (finanziamenti piccoli:

5/10.000 euro)

inoltre mandata relazione a polito per erogazione primo contributo finalizzato a progetto PS

inoltre, tirocinio di LM finisce a fine ottobre > sarebbe il caso di trovare qualcun'altro (ne riparliamo a settembre?)

2021.05.03
MB - VF - CF - LP + CC Cristina Coscia - UG Urszula Grodzicka - LR - AC - LM Luciana Mastrolia

LR - Punti all'ordine del giorno

per professionisti:
aprire account we chat tutti >> info
mandare mailing list con contatti di tutti
chiedere autorizzazione formale ad utilizzare progetti e dati conferiti con portfolio
aprire drive comune
qualcuno deve fare revisione critica di portfolio e paternità dei progetti
spiegare bene meccanismo dei tirocini

lato nostro:
portfolio con testi normalizzati entro 15 gg [Camilla]
incontri HIT e SCUT
brand/nome/logo
interviste per gli studi > come?

MB - come facciamo? mandiamo breve report?

CC - dobbiamo essere chiari a comunicare che questa roba devono farla prima del wrksp.

MB - due ordini di urgenza: 1. indirizzo per drive; 2. proporsi per due gruppi > qualcuno per il portfolio e qualcuno per brand/logo >>> entro la settimana. poi verso metà mese wechat e tirocini. poi per fine mese magari canovaccio interviste.

Si può fare file di istruzioni per l'uso in cui si chiarisce questa cosa e possono programmarsi.

CC - noi chiediamo cosa preferiscono tra le due opzioni ma poi i veri abbinamenti chi li fa (in caso di squilibrio)?

MB - lo vediamo di fronte a caso concreto, in base a loro esperienza e oggetto specifico del concorso. Scriviamo mail in maniera non da verbale [Luciana]. Tempistiche tirocini?

VF - opportuno dare tempistiche mirate (10 gg tra invio descrizione dettagliata e scadenza della richiesta sul sito?). Poi si dovrà trovare il modo per fare comunicazione mirata a studenti cinesi di questa cosa.

CC - periodo utile (in base a nostre necessità)?

VF - consideriamo che sono 250 ore di tirocinio

MB - quanto durano?

VF - dipende se vogliono farlo concentrato

LM - di solito 2mesi e mezzo max 3

MB - si può scrivere 5 righe ora su tirocini e poi verso il 20 maggio si manda una scheda più dettagliata.

VF - Manca ancora scrivere un progetto formativo per questa modalità. Si può anche pubblicare una parte di questa call sul sito di Polito Studio.

LR - quando ne abbiamo parlato in call li ho sentiti freddi rispetto a iniziativa, forse bisogna aiutarli a fare la pratica necessaria ad avviare.

VF - posso impostare e sentirmi poi con giulia per caricarlo

MB - se qualcuno vuole richiederlo anche se non è selezionato Polito Studio? Possiamo fare attenzione che i 12 mandino progetto formativo adeguato

LT - quando ci sarà lavoro da fare per concorso può essere OAT stesso a prendere un tirocinante per raccogliere materiale e mandare o ci pensa CR?

MB - la consegna non dovrebbe ricadere su OAT, però in effetti un tirocinante cinese a OAT potrebbe essere utile di collegamento con tavolo tecnico CR (EB + XL + CF). Quindi buona idea che OAT prenda un tirocinante. Si potrebbe fare che i 12 prendano tirocini OAT potrebbe prenderselo quando partono due wrksp in contemporanea a Giugno (quindi il tirocinante di ordine sarebbe un po' diverso dagli altri, per preparazione dei wrksp).

LR - forse se ne può riparlare quando usciranno maggiori info per sugar factory.

MB - @Lidia si potrebbe chiedere a qualcuno del nostro corso?

VF - no, tirocinio ancora non è previsto per ACC e non si possono fare crediti liberi presso aziende esterne.

MB - si può fare qualcosa di simile a quanto fatto per Lishui e prendere un tirocinante che possa istruire il wrksp insieme a CR (materiale grafico eccetera) sulla base di cui far funzionare le mattinate dei wrksp. Poi se lo facciano al POLI o a OAT cambia poco. Stiamo già facendo qualcosa di simile a venezia, con studenti che controllano montaggio del padiglione Ch visto che cinesi non possono venire. >> Facciamo tutto il necessario per istruire al meglio questi wrksp

CC - dove li facciamo? Dobbiamo provare a verificare con Poli? La nostra sala grande ha soltanto 15 posti.

LR - inoltre si dovrebbe tenere distanza a 2m e poi regione piemonte blocca attività formativa ancora oggi

MB - non possiamo farlo nel cortile della casa dell'architettura?

LR - hanno già iniziato cantiere quindi probabilmente non si potrà anche perchè nella corte armano una gru e poi ponteggio in facciata

CC - se facessimo accordo con convitto? (Umberto I - hanno anche un teatrino > noi abbiamo buon rapporto perchè stiamo facendo pedonalizzazione della via)ed è davanti alla sede di OAT dove ci sarà anche sala del PoliTo.

MB - facciamolo durante evento di pedonalizzazione

CC - non avverrà prima del 2 giugno (troppo tardi)

LR - L'evento alla piazzetta del polo del 900?

CC - anche quello troppo lontano

MB - possiamo chiedere di fare eventi esterni al poli, capire disponibilità se a giugno si potranno usare aule per fare eventi non lezioni

LR - Si potrebbe chiedere sala delle colonne, cosi lasciamo aperto e arieggiato

MB - si può chiedere a Mellano di interessarsene [chiedo io]

MB - incontri HIT e SCUT, iniziamo noi a sentirli e gli anticipiamo qualcosa. sarebbe bello coinvolgerli per un primo wrksp. HIT è interessante perchè è molto organizzato, edificio realizzato appositamente (ed è enorme). Sarebbe bello quindi avere una loro presentazione durante primo incontro [potrebbe farla FLORA (?) per HIT e HH per SCUT]. noi facciamo riunioni informali entro fine di questo mese e chi vuole può unirsi.

MB - Interviste. Discutiamone meglio:

CC - che tagli dobbiamo dare? quali le caratteristiche di efficacia?

MB - bisogna capire se sono le stesse che poi possono servirci alla fine per fare documentario. Facciamone una China oriented (per ora). E facciamola in inglese. Quella invece per presentare/promuovere progetto in IT può essere anche in italiano.

CC - chiediamo di:

1. multicompetenza
2. cosa ti ha spinto a partecipare
3. ???

VF - ne parlavamo qualche giorno fa con LM e CF, potrebbe essere tre gruppo di domande ad ognuno e poi da queste selezioniamo le parti che ci interessano.

CC - chiediamo anche cosa hanno trovato di innovativo in questo progetto

MB - molto bene per la parte italiana questo, per quanto riguarda parte dei cinesi può anche essere più libero. Ch apprezzano di italiani originalità, quindi chiediamogli cosa vogliono fare (libera) in inglese, mentre le altre più mirate.

Considerando che professionismo freelance è nato da poco in Ch, quindi non hanno ben presente immagine di bottega, fino a poco fa c'erano solo i grandi istituti. Quindi facciamo interviste con sfondo da studio italiano con modellini, disegni, etc…

UG - quindi non sono puntate ma un unico video?

CC - si, intervista unica con sfondo accattivante.

MB - tu UG cosa avevi in mente? perchè potrebbe essere interessante per il lato italia a puntate

UG - avevo trovato una serie di interviste fatte ad arch italiani all'estero. Era molto interessante, domande molto dirette e specifiche. Però è format completamente diverso, puntate più lunghe.

MB - si potrebbero pubblicare sul sito nel corso del tempo in effetti

UG - a livello pratico: pensavo di girarli col telefono questi video, ma per fare video professionale servirebbe strumentazione e poi montaggio molto più dispendioso. Secondo voi è la strada giusta? Dobbiamo chiedere permessi specifici? Possiamo intervistare/mostrare anche collaboratori?

VF - riguardo alle riprese forse sarebbe il caso di stabilire delle regole un po' precise, perchè ad esempio (nome del professionista in canada) dovrà registrarsi da solo

MB - prima cosa da fare è acquisire immagini e interviste e poi dopo vedremo cosa fare, magari tra due anni prendiamo un filmmaker professionista e fa lui montaggio. Quindi si meglio avere regole fisse per tipologia di immagini che prendiamo.

UG - c'è modo di parlare con chi farà montaggio così da avere indicazioni di massima?

MB - in effetti abbiamo fatto esperienza simile. Nel realizzare video per l'installazione a venezia, si potrebbe chiedere a lei. Ma voi ordine avete persone di riferimento perchè avete fatto cose del genere?

LR - molta esperienza, su canale youtube ci sono tante interviste. solitamente noi giriamo e poi postproduzione la facciamo esterna. Alcuni di questi hanno lavorato con noi varie volte quindi sicuramente UG può parlare con loro e chiedere a loro. Però bisogna avere idee chiare su cosa si vuole ottenere

MB - pensando al futuro queste 13 pillole di cui parlava UG potrebbero essere molto utili e interessanti. Magari 12 brevi pillole e poi un riassunto generale a fine anno con qualche immagine anche dei progetti magari. + un terzo prodotto più immediato per i cinesi (non è neanche detto che compaiano poi tutti).

UG - da mandare in ch prima o dopo primo wrksp

MB - direi dopo cosi possiamo mettere anche immagini di wrksp. Una cosa che propongo magari organizzare di andare con i 12 studi a visitare la mostra China Goes Urban + ape dopo (così ci vediamo live!!!).

CC - possiamo segnalare a studi che la mostra è riaperta e cheidere se qualcuno l'ha già vista.

MB - si ma possiamo comunque organizzare una data e poi chi interessato partecipa.

LM si occupa di mail:
1 portfolio
2 logo
3 ???

poi degli altri se ne riparlerà dopo

2021.04.19
MB - VF - CF - LP + CC Cristina Coscia - UG Urszula Grodzicka - LR - AC - Edoardo Bruno

MB - presentazione dei singoli professionisti potrebbe essere finalizzata a raccogliere aspettative e domande
>> iniziamo presentazione con slide con principali punti di agenda

>> iniziare con concorso come caso 1 e poi caso 2: studio di fattibilità

>> non partiamo subito con un concorso perchè scadenze sono troppo ravvicinate, ma illustriamo come potrebbe funzionare

CC - sono d'accordo, deve funzionare bene quindi meglio aspettare occasione più adatta

>> se poi diamo possibilità di scegliere tra concorso e studio di fattibilità significa che bisogna avere il tempo per preparare materiali idonei a entrambe le condizioni

…commenti specifici alla presentazione

LR - per la fase di raccolta dati e archivio immagini/video ci penseranno la tirocinante e Giulia Gasverde

MB - in Cina fondamentale 'metterci la faccia' e quindi realizzare brevi o lunghi video per promuovere e presentare esperienza e partecipanti

CC - parlerò io domani di tirocini; in futuro si potrebbe far si che i tirocini non siano solo curriculari ma anche quelli professionalizzanti (non di lingua cinese) che però sono retribuiti al contrario dei primi (possibile sviluppo futuro)

2021.04.01
MB - VF - CF - LP + CC Cristina Coscia - UG Urszula Grodzicka - LR - MaBe Maddalena Bertone (Fondazione per l'Architettura / Formazione) - AC

Si inizia discutendo di come pubblicare info di graduatoria concorso, saranno tutti idonei, ma si proseguirà seguendo la graduatoria (primi 12, poi se qualcuno rinuncia il 13, e cosi via)

LR - primo incontro con possibile tirocinante ma non puo andare perchè sta facendo tirocinio a Berlino. Serve qualcuno full-time per cominciare a lavorare ai wrksp. Se iniziano subito serve qualcuno da subito, altrimenti settembre

MB - meglio iniziare qualcosa prima di estate, importante mandare un messaggio!

LR - dopo pasqua primo incontro

MB - è il caso allora di immaginare i primi passi, proviamo a farlo ora!

AC - riguardo a Bacheca: bisogna archiviare i bandi i scaduti >> verificare! poi alcuni hanno solo testo in cinese, quindi è il caso di inserire due righe di spiegazione.

MB - per implementare: visto che siamo molto in contatto con archiposition si potrebbe fare proposta di partnerariato in cui ci mandano loro aggiornamenti periodici.

AC - sarebbe meglio riuscire ad avere materiali in inglese. Si potrebbe aggiungere una nota in cui si avverte se i materiali sono in inglese o in cinese

MB - da un certo punto di vista questo sottolinea utilità di politostudio

AC - sarebbe utile comunicare se qualcuno potesse avere una convenzione con studenti del poli per avere un supporto per partecipare a questi concorsi…sarebbe anche interessante inserire info di quante persone hanno visualizzato la pagina (?)

MB - sistematizzare info? CF > sono già sistematizzate
In generale bisogna fare attenzione ora che iniziano i wrksp a non dimenticarsi osservatorio/bacheca >> parlare con loro di fronte alla tabella excel e far capire loro sequenza delle info come è importante rispettarle.

Proporre nuovo layout costante >> aggiungere una breve frase discorsiva di 'abstract' del tema

MB - cadenza più che mensile noi non possiamo farla! se arriva la stagista si può lavorare anche con lei per aumentare il ritmo >> ci sarebbe ragazza cinese di ferrara (non xian!)

….

UG - ci sono molti bandi per giovani in Sud America, potremmo già avere una bacheca

CC - vanno stimolati, si potrebbe iniziare già sia per osservatorio che per bandi di concorso

ORGANIZZAZIONE WRKSP

CC - primo a distanza ma poi sarebbe più utile in presenza

MB - progetto pensato molto sui concorsi, ma ci sono anche altri tipi di collaborazioni che potrebbero esserci. Tipo Sugar Factory e quindi consilenza straniera per portare approccio specifico (tipo recupero industriale). Inoltre consolato Chongqing mi ha chiamato per sviluppo residenziale >> sarebbe il caso di preparare qualcosa per convincere developer cinese (questo significa che non hai scadenza, però è+ una bella scommessa!) >> puntiamo anche a questo?

CC - questo ha taglio immobiliare, è molto interessante! secondo me sono interessanti entrambi anche se con sbocchi diversi e impostazioni del wrksp diverse!

AC - secondo me bisogna chiedere a chi è stato selezionato cosa vuole fare! (Io farei developer)

MB - potrebbe anche essere un modo per dividere in due il gruppone di 12! presentiamo entrambi gli scenari e si distribuiscono. Rapporti con imprenditori in Ch sono estenuanti!

Si potrebbe quindi puntare a fare per il primo giro un concorso con alcuni e developer per altri

CC - sarebbe ancora più innovativo, nessuno la fa una

roba del genere!

MB - a me fa molto piacere che qst cosa venga da loro, Pagani ha sentito presentazione e la vede molto promettente.
sarebbe utile partire creando per prima cosa un portfolio comune dei 12, mischiando tra tutti i progetti e dare un nome alla squadra così che sia ben riconoscibile. Non può chiamarsi Polito STUDIO ma deve avere nome specifico, solo per questa squadra con riconoscibilità!

AC - forse il nome dovrebbe essere scelto dalla squadra così che sia più coinvolgente.

MB - per la prima riunione si potrebbe fare una bozza di portfolio, mettendo in sequenza per temi (mettendo i migliori 25 >> 2/3 a testa), ma senza rifiniture da proiettare e poi discutere il nome. All'inizio nuovo testo che introduce da dove arriva questa squadra e il profilo di chi ne fa parte (nomi, e poco altro)

LR - discutiamo con loro attività su cui strutturare primo wrksp o la istruiamo prima noi?

MB - calendario: tra 15 e 20 prima riunione >> avere già in mano info piu precise! (se concorso uno che scade primi di giugno!) e poi approfondire Sugar Factory o Chongqing, quella con basi più solide

LR - dividiamo in due gruppi da 6?

MB - un gruppo piu ampio diventa difficile, per primo incontro portfolio e nome, definizione dei due primi casi e formazione delle squadre

LR - siamo in difficoltà di immagini! ne servono di nuove! possiamo usare quelle dei concorsi? o usare video/ immagini del mao?

MB - CGU ha fatto tutto pellecchia quindi possiamo parlare con lui.
se facciamo riunione intorno al 20 serve qualcosa che scade primi di giugno >> cosi riusciamo a trovare partner cinese e impostare candidatura

LR - minimo 40 gg di preparazione

MB - potremmo scegliere un concorso che però non pubblichiamo sulla bacheca! (CF + XL)

CF - siamo sicuri che questo non sia un problema?

AC - mi sembra complicato partecipare autonomamente a concorsi di questo tipo, pubblichiamo in ogni caso così anche gli altri iscritti vedono e si rendono conto che i selezionati partecipano con appoggio polito. poi se qualcuno riesce a farlo autonomamente e vincere…
Io direi addirittura di aggiungere in bacheca l'info che questo bando viene fatto da Polito STUDIO, rendiamo tutto il più trasparente possibile!

AC - il 9 aprile scade il concorso CEI, che non è semplice, forse sarebbe meglio fare incontro successivamente?

LR - sarebbe il caso di fare una mail per aggiornamenti PIF (?) e CEIP

CC - noi abbiamo pubblicato almeno 20 gg fa (ma cosa?) >> però glielo ricordiamo!

MaBe - siccome il wrksp darà crediti c'è bisogno di un programma, bisogna capire se il secondo wrksp va fatto in presenza se la nostra aula è sufficiente…bisogna verificare alcune questioni normative (…)

LR - saranno due incontri di 4 ore l'uno, per un totale di 6 persone (tranne quelli che partecipano in forma associata…) Ora come ora la formazione in presenza è vietata, speriamo che le cose migliorino…

CC - non so se noi al poli avremo posto, perchè se le lezioni riprendono le aule sono tutte prese…

MaBe - se è un wrksp di progettazione si può usare nostro salone + presidenza

LR - scelta del giorno: 16 aprile o 20 aprile mattina > CF chiede a MB e poi si manda mail

2021.03.30 -> Magalhaes
MB - VF - CF - LP + CC Cristina Coscia - UG Urszula Grodzicka - PM Paolo Mellano - RZ Roberto Zanino - LS Lorenzo Savio

2021.02.17 -> chiedere a valeria
MB - VF - CF - LP + CC Cristina Coscia - AC Antonio Cinotto - LR Laura Rizzi - UG Urszula Grodzicka

ordine del giorno:
1. commento al progetto operativo (ad uso interno + rettore - presidente - direttrice polito) -> scadenza entro lunedì per tutti
2. Q&A di domani, 17.00 - 19.00 -> alla fine si fa unico file sia con quelli arrivati in pvt che quelli che usciranno domani da pubblicare online

sono arrivati due quesiti da parte di docenti polito: iscritti ad albo docenti (a contratto), possono partecipare o c'è conflitto di interessi?

MB - se meritevoli di entrare meglio tenerli, possono facilitare questo rapporto tra univ e professione. Rispondiamo che non c'è problema!
LR - controllare nei regolamenti se c'è qualche problema
MB/CC - strutturati non ha senso che partecipino, però in effetti il bando non lo esclude chiaramente
LR - a quel punto bisogna verificare incompatibilità, forse unico ad avere conflitti di interesse è Mellano (perchè direttore dipartimento e quindi ha rapporto gerarchico)
ALL - risolviamo questa prima questione, poi se arrivano domande da parte di strutturati verifichiamo come gestirli
LR - c'è giovane laureata politecnico cinese che si iscrive all'ordine proprio per partecipare al bando
…persa connessione…

MB - parteciperanno studi grandi per ora sembra, bisogna invece cercare di spingere sui giovani! -> spingere su Alumni.
LR - faremo recall della notizia in newsletter del 22 feb
MB - possiamo coordinare anche con nwslt polito
MB - come si fa se sono 4/5 professionisti che lavorano insieme ma non come studio associato?
LR - il partecipante deve essere una unica partita iva ma collabo si può considerare in base a portfolio. Dovremo poi regolamentare bene partecipazione ai wrksp.
AC - in caso di due che collaborano si puo cheidere che

loro siano raggruppamento con un capofila a cui rivolgersi.
…persa connessione…

2021.01.27
MB - VF - CF - LP + CC Cristina Coscia - AC Antonio Cinotto - LR Laura Rizzi - UG Urszula Grodzicka

non si riesce ad attivare sezione politostudio sul sito per questa settimana e neanche per il webinar, si aggiornerà invece la settimana successiva (9 febbraio)

LR - sarebbe interessante iniziare internship in collaborazione (forse anche lato UNITO) max 6 mesi, ragazza neolaureata Polito

CC - dovrebbe fare sia parte di segreteria che in parte organizzazione wrksp (segreteria scientifica)

UG - accenno al focus di lunedì (solo 6 persone presenti): preoccupazioni a livello di tempo (-> sarebbe il caso di definire numero e grandezza dei concorsi rispetto all'anno, così da capire di quanto tempo si necessiti; inoltre si può dire di no ogni tanto?), seconda cosa questione economica (spiegare che garanzie economiche non ce ne sono, ma che molti concorsi sono retribuiti nella seconda fase e ci si puo dividere cifre -> in che modo? accennare per trasparenza!) e ruolo (bisogna fare manager o lavoro di produzione vera e propria con collaboratori) inoltre se ci sono cose poco chiare si possono fare delle FAQ (lasciarle fare a loro o prepararle già noi)

LR - si potrebbe fare un incontro online prima della scadenza in cui fare Q&A -> annunciare questo incontro già il 2 feb

MB - facciamo combinazione, call in cui raccogliere un po' di FAQ e poi pubblicarle sul sito per scritto. Per quanto riguarda questione tempo bisogna assolutamente risolvere, per questione di produzione dipende da interesse del singolo (decisione imprenditoriale dei partecipanti) soprattuto in seconda fase decideranno loro quante risorse mettere in campo. Questione economica è difficile anticiparla, tema molto delicato -> spieghiamo meccanismo: obiettivo non tanto guadagnare soldi quanto piuttosto esperienza formativa! noi in 2 anni diamo chiave di accesso e conoscenza del mercato cinese molto approfondita senza chiedere compenso oltretutto!

LR - si puo fare specchietto in cui si comunica che percentuale dei concorsi ha un rimborso spese già alla prima fase

MB - non inseriamo valori economici nel bando, ma rimandiamo a bacheca concorsi!

UG - diamo quadro generale di come si divideranno eventuali compensi

MB&CC - ma questo è il risultato di scrittura pvt, non ci sono regole scritte; dopo la scrittura pvt il gruppo si stacca da politostudio e incubatore e partono distaccati come partecipanti a procedura professionale

LR - però è una domanda a cui preparare una risposta, perchè è unico modo per capire se vale la pena investire in questa formazione, forse nella premessa in modo molto sintetico andrebbe scritto anche nel bando, obiettivo:
- formazione applicata
- informazione
- ingresso per un periodo di 2 anni in incubatore

cosa succede dopo non riguarda politostudio, però è il caso di preparare qualche regola di ingaggio

VF - a questo proposito bisogna togliere dal bando che i partecipanti devono partecipare a tutti gli eventi formativi -> si era detto che potevano rifiutarsi due volte. Inoltre saranno riconosciuti crediti formativi a professionisti? perchè sarebbe un buon modo per ovviare problema di compenso

MB - il distacco da incubatore succede diverse volte (a scelta del professionista), e coinvolgimento a rotazione dei professionisti -> spiegarlo potrebbe dare più serenità ai professionisti.

Metodo di scelta: graduatoria VS 2 squadre parallele che si alternano (che si potrebbero non comunicare subito, ma durante primo incontro; si formano in base a criteri oggettivi e graduatoria e richieste del concorso)

LR - che numero di concorsi assicuriamo?

MB - essendo solo noi a preparare e gestire forze di wrksp formativi, si potrebbe far ripartire il meccanismo ogni 3/4 mesi, quindi circa 3 l'anno e 6 nel biennio (-> quindi ogni professionista potrebbe partecipare a 3 concorsi). diciamo 5 così siamo più tranquilli! E il professionista deve partecipare almeno a 2. Come calendario cosa ci immaginiamo? il 2 c'è evento, la call quando viene pubblicata?

LR - dobbiamo chiudere bozza, portarlo al legale e poi al consiglio dell'ordine. potrebbe essere approvato il 3 feb e uscire insieme alla newsletter dell'8

CC - non si potrà quindi scorrere il bando, ma si potrà entrare più nel merito.

MB - dal punto del poli non si devono fare passaggi perchè meglio che polito non rientri direttamente nel bando. anche se uno sguardo vorremmo darlo.

LR - in articolo 1 della call potrebbero rientrare tutto quello che ci siamo detti questo mattina

MB - mettiamo in evidenza nel bando lo spessore della formazione che stiamo offrendo. si potranno poi organizzare anche incontri con figure specifiche come quelle che ci saranno il 2 feb anche più avanti. fondamentali nel capire come funziona il mercato.

LR - si daranno crediti per partecipazione a wrksp, 1 ogni ora soltanto per le ore in webinar, non per quelle che si svolgono poi in solitaria per preparazione materiali. questo prg potrebbe far parte del ciclo 'alta formazione'.

LR aggiorna bozza e ci invia per le 18 così possiamo guardare anche noi

CALENDARIO:
8 feb pubblicazione call
8 mar scadenza consegna
fine mar pubblicazione risultati

come compensiamo lavoro per il tavolo di lavoro per chi non è dipendente polito ne OAT? e con chi farà inter (andrebbe mandato via dopo 6 mesi ma se ci troviamo bene sarebbe bello tenerlo)? LR e CC ne parlano in direttivo…

ppt ognuno ha il suo, per sicurezza si mandano anche tutti a maddalena, si potrebbe fare slide iniziale uguale per tutti, con titolo e nome guest

2021.01.21
MB - VF - CF - LP + CC Cristina Coscia - AC Antonio Cinotto - LR Laura Rizzi - UG Urszula Grodzicka + GG Giulia Gasverde

si parla inizialmente di come strutturare Pagina PolitoStudio in sito OAT -> deve essere pronta entro evento del 2 feb

AC propone che in bacheca concorsi ci sia possibilità anche di mettere in contatto tra loro vari professionisti interessati a partecipare ai concorsi (dato che sono molto estesi)

GG meglio rimandare tutto a Linkedin

LR come fanno a partecipare senza partner cinese? potrebbero usare LEy

CC iscrizioni stanno andando bene, in 2 giorni già 150 iscritti

seconda parte dedicata a Open Call per PolitoStudio

1. questa prima call vale solo per mercato cinese
2. durata: non oltre 24 mesi
3. soggetti professionali: singoli o associati o ATP non costituito solo se i singoli che ne fanno parte presentano un unico portfolio (di lavori svolti in collaborazione)
4. si esperienze internazionali ma di vario genere

—> seminario ex Alumni

presentazione iniziale del progetto: CC - UG - VF - MB -
Q&A:
Felice Vai - che benefici posso avere da questo progetto? quali caratteristiche richieste ai professionisti?

CC - il 2 feb lanceremo call, questa call è uno dei passaggi fondamentali, fase 1 del processo PolitoStudio. anticipo che obiettivo della call è creare sinergie e una community, quindi favorire aggregazione di competenze. Infatti scala dei progetti cinesi sono molto differenti da quelle a cui siamo abituati in italia -> progetti a vasta scala necessitano collabo di tasselli anche molto specialistici

MB - riassume i tre step del progetto: bacheca (e quindi partecipazione indipendente) + capacity building (evento 2 feb) + open call (progetto biennale di politostudio)

Felice Vai - quindi si formeranno dei gruppi di lavoro in questa community con professionalità esperienze e seniority differenti integrando tutti questi elementi, per partecipare poi a concorsi.

MB - polito e OAT costruiscono incubatore. poi fa introduzione al mercato cinese (rimandi a consulenze di Shougang e Lishui), ogni 3 anni 50.000.000 si spostano in città, e dati su professionisti cinesi vs italiani 45.000 a 160.000, committenti cercano background arch italiana, fluida multidisciplinarietà e enfasi su pre-progetto (funzionale più che altro).

2021.01.12
MB - VF - CF - LP + CC Cristina Coscia - AC Antonio Cinotto - LR Laura Rizzi - UG Urszula Grodzicka MBe Maddalena Bertone - PM Pietro Martinetti (ufficio comunicazione OAT) - GG Giulia Gasverde (ufficio comunicazione OAT) - SB Silvia Brannetti (ufficio comunicazione PoliTO)

topic: comunicazione seminario del 2 feb

MB: si potrebbe fare un seminario con alumni per promuovere incontro di feb (sarà su piattaforma dell'ordine ma si può iscrivere chiunque fino a 1000 iscrizioni). Lato poli possiamo diffondere a tutti docenti/ dottorandi DAD e DIST + una news sul sito Polito.

MBe: ho contattato tutti, ho avuto tutte conferme tranne Edoardo Bruno…non abbiamo i titoli degli interventi. Possiamo quindi inviare mail per fissare prova tecnica tra tutti i guests così da progettare direttamente con tutti.

MB: adesso il progetto è molto piu strutturato rispetto a come è stato lanciato a settembre. interessante inoltre che si tenti di costruire punto di contatto tra parte progettuale e quella del mercato. Gli interventi quindi coprono entrambi, prima metà mercato, seconda metà progetto. Michele Armando unico caso particolare di architetto italiano con studio in Cina.

SB: c'è testo più esteso della call di selezione? così possiamo pubblicarlo

CC: ne parliamo adesso, l'ordine ne ha già parlato e ora verifichiamo con Polito. Possiamo però condividere poi il Bando in procinto dell'evento così da pubblicarlo magari.

MB: chi vuole si candida a questo bando con portfolio e altri docs, si entra in questo gruppo composto da tre squadre parallele che poi partecipano a bandi concreti attraverso LEy eccetera…dopo due anni si staccheranno e se vorranno potranno continuare autonomamente a lavorare in Ch facendo comunque appoggio a LEy se necessario.

LR: spunti per comunicazione: mettere in evidenza valore del convegno del 2 feb, livello di innovazione della formula che stiamo proponendo, evidenziare ambizione di incubatore di avvicinare al mercato i professionisti, inoltre l'osservatorio e la bacheca bandi.

MB: il 26 intervistiamo Penn Praxis, ma è privata

PM: poi si dovrà capire come comunicare questi sviluppi di Politostudio attraverso vari giornalisti e categorie di spazi

LR: che strumenti consigliate oltre a comunicato stampa congiunto e invito di giornalisti al webinar?

PM: per quanto riguarda relazioni con i media no, attraverso siti/social/streaming del poli si può rendere fruibile anche a pubblico più generalista?

SB: possiamo valutare ma come argomento è un po' specifico. Per il 2 il bando della Call sarà definitivo?

CC: si, sarà lancio ufficiale (dobbiamo sottoporlo a ufficio legale prima del 2 feb).

MB: è un modo anche per dimostrare come funzioni il meccanismo cinese, e dimostrare sua validità. Il vantaggio è duplice: professionisti possono partecipare a queste esperienze, il poli può meglio rispondere a partner stranieri avendo più parsone a lavorare a progetti. Inoltre cosi saremo sempre più dentro a processi reali e potremo portarci dentro anche studenti!

LR: il 18 uscirà comunicazione e aprono iscrizioni a webinar del 2 feb.

—

seconda parte senza comunicazione:

MBe: troviamo una data in cui provare tutti quanti che tutto funzioni -> 22 gennaio ore 9.30

MB: se non si può anticipare troppo nel seminario del 21 con Alumni di cosa parliamo? Illustriamo casi osservatorio?

andando avanti:

LR: prima pagina osservatorio la lanciamo con recall di mailing list Politostudio del 25 gennaio

MB: il 25 potremmo anche pubblicare qualche link a concorso

andando avanti sul BANDO:

LR: prima bozza circolata ieri tra colleghi OAT, ricevuti già dei commenti e la condividiamo per mail domani dopo aggiornamenti. Sono emerse parecchie questioni e nodi, ancora non soddisfacente, dobbiamo ancora approfondire tutti insieme.

MB: mandateci anche programma definitivo del webinar + testo comunicazione cosi poi noi lo diffondiamo su politoweekly, potremmo avere programma per venerdi e pubblicare sabato! cosi politoweekly e newsletter OAT escono insieme.

presentazione LEy

MB: oltre che focus su architettura c'è anche ingegneria e energia. tra 2014-2020 8% di inurbanizzazione di più

- business plan approvato
- Konosko Group a shangai sta verificando questioni legali
- sede sarà dentro Tsinghu

struttura.
WOFE wholly owned foreign enterprise
polito è uno dei due soci fondatori
il secondo è links che la controlla

acquisirà licenze per 4 macrosettori (di cui uno è architettura e planning)

sede legale presso studio legale e una di rappresentanza dentro Design Institute di Tsinghua di DongCheng

board of directors: 3 persone
advisory board: china center
segreteria: inizialmente un solo responsabile amministrativo

per pagamento si ha contratto diretto tra committente cinede e WOFE che tiene una fee e poi gira a Polito o Links, in caso anche a professionisti in futuro

AC: LEy agisce solo in Ch o anche in futuro altri paesi? Se potesse lavorare anche in Italia sarebbe un problema, perchè sarebbe ente pubblico con partecipazione cinese

MB: non è pubblico, ma privata, attiva sul mercato cinese ma totalmente straniera, quindi non con partecipazione cinese (100% italiano). Essendo una WOFE cinesi non potranno mai comprarne una parte. Non è tra obiettivi che WOFE prenda del personale all'interno in futuro, non si è mai verificato nè parlato della possibilità di poterla fare operare altrove rispetto a CH e meno che mai Italia. Inoltre per ora acquisterà solo licenze per mercato cinese. Non potrà mai operare in Sud-America, è concepita per lavorare solo nel mercato cinese.

2020.12.23
MB - VF - CF - LP + CC Cristina Coscia - AC Antonio Cinotto - LR Laura Rizzi - UG Urszula Grodzicka

sistemazione programma del 2 feb e confronto su pubblicazione news sul sito OAT.

Conferenza stampa di settembre, non è andata benissimo; puntiamo con evento del 2 feb a ottenere risultati migliori con maggior ritorno stampa.

iscrizioni aperte a webinar da metà gennaio fino al giorno stesso

MB potremmo fare qualche giorno prima seminario informale con ex-allievi in cui promuovere il webinar di PolitoStudio (circa 90% di iscritti OAT sono ex-Poli)

CC durante questo seminario informale si può presentare a ex-allievi anche il focus group giovani di OAT.

Modalità di selezione dei professionisti:
molto complesso compilare lista dei partecipanti e definire i rapporti con LE o partner cinese.

MB ricordiamo che non è Poli non è mandatario ma uno dei partecipanti ufficiali, LE è mandatario, o alla peggio il partner cinese. Se ente banditore ch obbliga a strutturarsi in un ATI cinese si dovrà fare, ma solo per seconda fase, in una prima fase basta lettera di intenti (o scrittura privata) non formalizzata in cui si definiscono già quote e ruoli.

MB essendo LE privata non è indispensabile albo fornitori, ma per rendere più trasparente si puo fare albo fornitori da cui poi si selezionano professionisti. Tra i criteri con cui si selezionano i partecipanti c'è quello di aver partecipato a PolitoStudio.

A gennaio si farà business plan della LE.

LE è una scatola amministrativa (vuota, non ci sono professionisti), con sede legale presso studio dell'avvocato e una sede rappresentativo alla Tsinghua ma commissiona professionisti in caso di gare o di affidamento diretto

Dobbiamo preparare un quadro conoscitivo dei vari modelli di interazione tra pratica e accademia.

MB dobbiamo arrivare al 20 gennaio con un progetto operativo pronto e condiviso -> facciamo prova con concorso di shenzhen

LR bisogna creare sul sito OAT un posto per pubblicazione di bandi e casi studio

Riunione con … (?) anche con Elena Fogliafranke
1. comunicazione
2. presentazione di LE
3. presentazione dell'arco temporale su Shenzhen
4. presentazione call
5. bacheca bandi e casi studio

2020.12.01 (America Latina)
MB - VF - CF - LP + PM Paolo Mellano - CC Cristina Coscia - RZ Roberto Zanino

AH Alfredo Hidalgo (techn di Monterray, associate dean for research, international relation)
AC Aris Castillo (università technol Panama)
AG Alfonso Gomez (dean of the faculty of architecture and design at Pontificia Universidad Javeriana Bogota - in ritardo)
DO Daniel Opazo (Director Académico y de Relaciones Internacionales FAU UChile)
EO Evelyn Obregon (uni Panama, interntional relation office)
FS Francisco Spadoni (assoc prof a San Paolo)
ICA Isabel Cristina Arteaga (coordinator di architecture master, Universidad de Los Andes, Arquitectura)
KT Karol Trautman
LBR Luis Bosch Roig (vice dean di arch in Valencia)
MR Marion Reiningen (UChile Fau, international relation)
PC Paula Carmo
PF Priscila Farias (designer, prof Uni of San Paolo, arch e urbanism, president di international relation office)
VO Valantina Osorio (universita de los andes, student(?))

1. Introduction di RZ
2. brief presentation
3. presentazione Valeria (15.54)
4. intervento MB + CC + PM
5. discussion (16.20)

KT: 1. can you give us a practical example of what r you going to doing with Ch? 2. will it be a multilateral agreement with all of us (LAns') or single agreement with polito?
MB: about penn praxis and Ch (riferimenti indiretti a Shougang, Lishui, …). dal 2021 cominceremo a collaborare con studi profess torinesi. Guardando modello Ch ci sono due elementi: modello accademico IT - professionisti IT - università Ch. interesse da tutti: professionisti lavorano di più, ch possono lavorare con uni italiane che da buon segnale, è possibile essere in contatto con design institute, polito prosegue e moltiplica sua attività. Parlando di LA può essere interessante giocare d'anticipo avendo qualche riferimento a modelli di collaboraz tra uni e professionisti grazie a chi sta partecipando oggi alla riunione.

PC: quale è il nostro ruolo come università europea? noi stiamo iniziando nuovo stage in international relation e vorremmo allargare la rete, ma cosa vi aspettate da noi come partner EU?
CC: un altro livello del progetto prevede di creare tirocini professionalizzanti in firm private, è importante la relazione tra mondo accademico e professionale, è ulteriore progetto di politostudio in previsione.
PC. abbiamo rete molto forte di internship, quindi non sarà un problema, si potrà fare a qualunque livello Phd - master - Bachelor

FS: non so se ho capito bene la relazione tra queste due componenti, io sono professionista ma anche ricercatore (ora coordinatore Phd in design area). la biggest challenge è creare questo rapporto appunto tra pratica e research dentro uni, noi ci stiamo provando. la mia posizione è di trovare modo per mettere insieme queste due attività cosa non facile, non sono sicuro di aver capito potenzialità di questo network ma sono senz'altro interessato, ma io penso: come creare questo rapporto? specialmente all'interno di università?
RZ: la mia comprensione della questione è questa: in Ch esiste questo stretto rapporto (DIs) se noi sviluppiamo una forte relazione tra accademia e università e lo affianchiamo a rapporti polito con uni cinesi significa riuscire ad arrivare a condizioni altrimenti impossibili. in LA possiamo fare cosa simile grazie a Maghalaes network (?) e altre practices, cominciando col capire con vostre università come funziona il rapporto con firm private, per esempio facendo best practices anche in LA.

AC: noi come UTT panama abbiamo qualche possibilità di essere coinvolti in questo progetto, noi abbiamo già rapporti con alcuni professionisti a Panama e abbiamo due research center che si occupano di ricerca applicata anche in collaborazione con governo in costruction and design. la mia domanda: devo dare possibilità a vostri studenti di venire a fare intnership e voi fate la stessa cosa per i nostri? Quali possono essere prossimi passi e timeline per arrivare a questo consorzio?
MB: itnernship è sicuramente un aspetto, per timeline abbiamo già qualche scadenza per progetto Ch (che elenca). per quanto riguarda LA abbiamo un anno a partire da oggi per creare un modello molto pratico, ovviamente rispettando tutte le norme di ogni paese coinvolto e magari adattare progetto a contesto specifico (?).
AC: quindi tipo fare un wrksp in Panama e uno in Chile?
RZ: si potrebbe fare, ma per ora l'interesse principale è capire ingredienti principali di questo accordo, per capire se funziona e se ci interessa eccetera…

AH: noi abbiamo/abbiamo avuto rapporti con tutte univ presenti oggi; vorrei più chiarezza per capire quali studenti saranno coinvolti? ogni università dovrà avere partner professionista del paese di appartenenza?
MB: noi solitamente coinvolgiamo spesso master student e sono molto reattivi, spesso starting point delle loro tesi e anche di percorso professionale, quindi direi master/phd. seconda domanda: ognuno di noi potrebbe compilare una pagina spiegando su come funziona adesso rapporto tra accademia e mondo professionale nel country di

appartenenza e usare queste schede per impostare prossimi step del progetto.
RZ: potremmo preparare noi Polito dei form con 3/4 domande a cui partecipanti devono rispondere cosi da capire bene che info servono e costruire database confrontabile
CC: politostudio è ancora un prototipo in italia, probabilmente primo progetto formalizzato tra ordine degli arch e università. è un processo in costruzione, è importante costruirlo insieme a voi!
PM: è un esperimento! possiamo provare a trovare uno o due casi studio per testare questa idea e organizzarci in un contesto pratico e testare questo gruppo, questa rete e alcuni studi di professionisti. Passiamo a fase sperimentale ASAP!

KT: dove dovremmo trovare i fondi?
MB: il modello di partenza di politostudio è small funding di polito e OAT (?). Inoltre abbiamo dedicato due borse di dottorato a questo progetto (CF - LP)
RZ: dobbiamo prima verificare interesse di progetto pilota e poi possiamo capire dove e come trovare i fondi

AC: come ho detto sono molto interessata al progetto, abbiamo ottimi rapporti con practitioners. mia domanda riguarda further opportunità per dual programme in master o PhD e quindi avere più studenti coinvolti in ricerca . partire da scenario condiviso di studenti/phd e dalli trovare più possibilità per fondi

RZ: vi manderemo a breve doc con domande per approfondire ulteriormente e magari facciamo nuovo incontro a inizio del prossimo anno.

FS: credete sia necessario creare bilateral agreement tra università per portare avanti questo progetto o no?
RZ: in realtà la struttura dipende dalla conferma dei partecipanti, se vogliono farlo 7 università possiamo formalizzare un accordo multilaterale e poi lavorare sotto questo 'ombrello'. possiamo farlo ma dobbiamo prima capire chi vuole partecipare, poi scrivere qualche linea guida e poi firmare.

MB: potremmo fare una sorta di seminario: topics nati da questionari e farvi fare brevi speech cosi da costruire common knowledge tra noi a gennaio.

RZ: grazie a tutti!

2020.11.27
MB - VF - CF - LP +
AC Antonio Cinotto
CC Cristina Coscia
LR Laura Rizzi
ML Milena Lasaponara
RP Roberta Pavarino (legale polito)
SL Shiva Loccisano (legale polito)
UG Urszula Grodzicka

nel caso in cui ci sia passaggio a seconda fase ci sarà legal entity che Poli sta aprendo in Ch che farà contratti singoli con le parti -> così ognuno ha proprietà intellettuale

come dividersi già da primo momento impegno e quindi introiti in maniera agile? così da facilitare anche accordo per seconda fase senza dover fare troppo passaggi amministrativi

modalità di selezione?

gen 2021 - Ch
gen 2022 - LA (Latin America)
gen 2023 - Ch' + Af
gen 2024 - LA'
eccetera….

Laura Rizzi LR - Associazione temporanea andrebbe fatta in maniera snella per non appesantire troppo, e poi andrebbe fatta da polito/dipartimenti e professionisti -> è sufficiente scrittura provata tra parti? poli è istituzione con interesse diversi da professionisti, probabilmente quello che basta ad una non basta all'altro!

Roberta Pavarino RP - Polito accordo fatto tra Poli e OAT fa riferimento a legge specifica art. 15, per natura di attvitità che viene svolta sotto questi accordi è linea di attività istituzionale di didattica e ricerca -> bisogna puntare attenzione che tutte attività che si svolgono quindi devono fermarsi a questa tipologia (incontri formativi, wrksp, …) altre attività svolte in ambito istituzionale che hanno carattere commerciale (quindi per conto terzi)

legal entity: fa contratti in attività conto terzi e che nulla hanno a che vedere con art. 15! come funziona? prende commessa in Ch e poi fa contratti singoli a Poli/ dipartimenti e professionisti

legge 63: università non fa attività professionali!

Shiva Loccisano SL - CONCORSO -> problema! le regole del singolo concorso potrebbero richiedere strutture specifiche di organizzazioni non è detto che la legal entity (LEy) sia adatta, magari vogliono altre persone giuridiche. Quindi come si fa? si presta molto di piu a committenze dirette la LEty

MB - LEty società privata di diritto cinese controllata dall'italia con una serie di licenze - inizialmente vuota di competenze - facilitatore di procedure - si spera apra nel 2021

SL - ci sono due casi:
1. una società vince contratto (LEy) e poi subappalta
2. c'è accordo sin dall'inizio tra diverse figure: LEy, Professionisti, PoliTo

RP - gara pubblica (strumento con cui Ch assegna partite) è gara a cui necessariamente deve partecipare LEy fin dal primo momento!

MB - LEty ci sarà sempre perchè oltretutto funge da partner cinese

RP - prematuro definire adesso considerando che non sappiamo neanche come si configura LEy nè procedure e non potremmo neanche scegliere tra le due possibilita di accordo. Non sarà Politostudio a partecipare perchè questo accordo è fatto con ordine e non puo dare vita ad attività commerciali, quindi chi partecipa a concorsi non è e non sarà mai Politostudio!!!

LR - OAT non è interessato a comparire in accordi, partecipa per salvaguardare diritti e interessi di professionisti in questo momento.
Abbastanza chiaro cosa succede quando il concorso si vince, ma quando stazione appaltante ch indice gara, a

torino si mobilitano dipartimenti e professionisti -> come ci si accorda in fase iniziale? non ci si può mettere a lavorare in maniera informale, servono subito le regole -> come si regolano rapporti in questa fase in cui LEy non è ancora coinvolta? Bisogna anche definire molto bene i ruoli in questa fase, cosa farà chi, rapporti di forza/ debolezza eccetera

SL - casi simili in precedenza di raggruppamenti con professsionisti? no, non ci sono, di solito partecipiamo con aziende e non con studi/professionisti, però agreement con soggetti privati ce ne sono.

RP - bisogna capire cosa viene fatto oggi al riguardo, struttura che se ne occupa è quella degli appalti, bisogna anche dire che per quanto riguarda partecipazione conto terzi (dipartimento o altri) dipende dal fatto se è i interesse di un singolo dipartimento o di diversi. Polito dovrà capire con chi andare in contratto ogni volta, si dovranno fare approfondimenti, si può provare a fare un passaggio di aggiornamento/approfondimento su tema e verifica anche con colleghi per verificare eventuali casi precedenti di condizioni simili (raggruppamento con professionisti). Poi si può fare nuovo incontro in cui andare avanti partendo da consapevolezze maggiori.

MB - contratto del poli sarebbe con LEy uniformando i passaggi ogni volta che fa un accordo/progetto quindi magari questa modalità standard potrebbe essere la stessa di conto terzi o magari modificarsi ogni volta

SL - distinzione ammin centrale/dip/eccetera sono divisioni interne, entità giuridica del poli è solo una anche ai fini esterni. se andiamo in scenario in cui esiste LEy apposita si renderanno modalità di rapporto con essa come standard cosi da velocizzare processo (potrà approvarlo direttore dipartimento/…). Noi siamo ente pubblico che puo agire entro certi limiti come operatore privato in un'area grigia molto complessa. Rispondiamo come operatore economico a gara indetta da altra amministrazione, nel raggrupparci con altri soggetti è molto complesso perchè in quanto ente pubblico questi soggetti che sono con noi si ritrovano in vantaggio rispetto ad altri che partecipano in autonomia, dobbiamo quindi fare attenzione perchè non c'è giurisprudenza sufficiente al riguardo. Solitamente risolviamo essendo MANDANTI insieme ad altri e non MANDATARI, però sono aspetti da approfondire!

RP - questo problema (giuridico e politico) forse si può aggirare con selezione dei professionisti, OAT può fare passaggio di selezione come sua funzione su territorio?

LR - stiamo verificando come fare, sicuramente può fare call a titolo volontario, ma c'è problema di come polito giustifichi di essersi affidato con alcuni e non con altri. Probabilmente sarebbe meglio fare un BANDO cosi da definire meglio come avviene selezione (secondo quali criteri).

MB - dobbiamo trovare nomenclatura di riferimento, onde evitare di fare casino e scatenare discussioni! PoliToStudio = INCUBATORE

LR - chi fa call per la selezione? perchè se il poli ha criteri da rispettare più stretti è meglio che la call la faccia lui?

MB - forse meglio che siamo tutti parte di mandanti paritaria, e selezione la fa l'ordine che è più affine.

2020.11.19
Come si ingaggiano professionisti e figure del Polito? Si fa una ATI/ATP che si scioglie se il concorso non si vince?

in appalti pubblici succede così -> ATP formalizzato tramite atto notarile solo in caso di vittoria
altre volte c'è unico soggetto (capogruppo/capo commessa) che partecipa e poi regola privatamente rapporti economici e contrattuali con altre parti coinvolte -> meglio evitarlo questo!

per polito si tratterebbe di fare contratto/accordo con professionista e dipartimento specifico, non devono comparire Ordine degli arch nè Polito

Polito e OAT danno legal entity iniziale ma poi mantengono ruoli diversi e contratti separati

Bisogna poi stabilire vincolo di proprietà intellettuale e definire bene quali sono i ruoli di una e dell'altra figura -> contratti paralleli per essere tutti responsabili del proprio progetto così da poterlo usare/mostrare poi tutti in maniera abbastanza libera
SERVE CONSULENZA LEGALE!

Capofila? chi? può essere sempre entità cinese visto che spesso è richiesto? oppure la legal entity?

schema/organizzazione:
1. Capofila: Legal entity
2. Università cinese come scelta strategica

finche LEy non c'è:
1. Capofila: partner cinese
2. contratto a tre con fatturazione a due step con passaggio da grossa società italiana in cina (tipo quella che già aiuta il Poli in queste situazioni) (iva si paga in cina, la trattengono prima di pagarti) -> praticamente questa società funziona come legal entity (studio di legge che ha società affiancata che ha acquistato una serie di permessi tra cui architettonico eccetera)

ACCORDO tra le tre figure specifiche coinvolte -> non rettore ne istituzione ma direttore dipartimento e x professionisti che partecipano ATTRAVERSO SCRITTURA PRIVATA - TIPO LETTERA DI INTENTI PRIVATA IN CUI SI NOMINA CONCORSO, SI RICHIAMA CORNICE DI POLITOSTUDIO, SI DEFINISCONO RUOLI E PERCENTUALI E REGOLE DI INGAGGIO
poi in caso di vittoria subentra legal entity e partner cinese e si stabilisce esattamente in che modo poi organizzarsi

si dovrebbe trattare di un misto di studi già ben strutturati e altri invece più piccoli e con meno esperienza per spingere ad internazionalizzazione -> una cordata con uno studio strutturato più 2 più giovani e alcuni posti riservati per giovani professionisti

probabilmente 2 compagini da definire per primo anno/ primi due anni -> potrebbe essere per primo anno fatto solo da professionisti giovani, o meglio una squadra under 35 e l'altra libera

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