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International Laboratory
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Discontinuity in Contemporary Cities

当代城市的不连续性

The ILAUD Experience: Shanghai's Urban Voids as an Opportunity for Regeneration

ILAUD 经验：上海的城市空间及再生的机遇

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International Laboratory
of Architecture
& Urban Design

Discontinuity
in Contemporary City

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Discontinuity in Contemporary City

Paolo Ceccarelli

President of the association ILAUD – International Laboratory of Architecture & Urban Planning

This book was expected to be published in 2020, shortly after the ILAUD workshop in Shanghai. The pandemic forced us to delay the publication until now. The lockdown period has been a source of reflections about the life of cities and how they work, but the findings and suggestions from the Putuo experience are still valid and valuable for future programs and policies.

In November 2019, ILAUD (International Laboratory Architecture and Urban Design) in collaboration with the Putuo District organised the *Discontinuity in Contemporary City* workshop in Shanghai, with Politecnico di Milano, University of Pavia – Department of Civil Engineering and Architecture, University of Nottingham - Department of Architecture and Built Environment, Tongji University - College of Design and Innovation and College of Architecture and Urban Planning, Kunming University of Science and Technology, Xiamen University Tan Kah Kee College, Xi'an Jiatong-Liverpool University, Sapienza University of Rome – Department of Architecture and Design , in collaboration with Erasmus+ Higher Education Staff Mobility, Environmental Futures Lab, China Lab Architecture and Urban Studies, with the professors Per Erik Bjornsen, Tiziano Cattaneo, Paolo Ceccarelli, Ali Cheshmehzangi, Xing Fang, Eugenio Mangi, Sandro Rolla, Zhizhong Wu, Xin Zhan, the tutors Enrica Di Toppa, Wenwen Jia, Caterina Pietra, Juan Yan, Dan Zhu and the students involved.

After long months of lockdown, the memory of Putuo's District workshop evokes images of living and working in common, of all being together in one place, which we have certainly lost the habit. At the same time, and in the light of what happened in the aftermath of the pandemic, the work carried out in those days by the various groups of students involved stimulates several reflections and provides interesting contributions for the future.

The opportunity for the workshop arose from the Putuo Local Government's intention to reuse abandoned industrial or manufacturing areas within the urban fabric. These are empty spaces or areas containing obsolete and partly degraded industrial buildings. Due to the relocation of many industrial plants as a result of technological innovation and to reduce pollution, this situation is characteristic of Shanghai but occurs in many other urban areas around the world. Thus, although the case study in the Putuo District is specific and relatively small, it suggests issues of considerable importance.

The situation encountered in Putuo highlights a critical problem of the contemporary city structure: its physical, functional, and temporal discontinuity. In essence, over the last few decades, the modern city has developed in a discontinuous and fragmented way, giving rise to physical places that are very different from each other, both in terms of layout, formal configuration and the functions they perform. This process has taken place in different phases, each characterised by particular reasons and aspects, resulting in a remarkably varied urban fabric in which there is often no physical and functional integration between settlement fragments, even if they are contiguous.

In the contemporary city, it is typical to find areas of high settlement density next to areas that have been abandoned for a long time. Lively places, full of activity, commercial, office and leisure functions, are juxtaposed with residential areas consisting of tower blocks isolated from each other and lacking a social fabric to make them a community. Social fragmentation, which often characterises the world's big cities, has intensified these phenomena: an example is the pockets of slums adjacent to high-rise communities or areas with important tertiary functions. Moreover, the inclusion of large tracts of the countryside and rural villages in the developing urban structure has aggravated these situations. Therefore, in a certain sense, we can say that discontinuity, in its various aspects, is a characteristic of contemporary urbanisation, whose evolving process does not tend to diminish at all.

In the case of the Putuo district, it is interesting to note that the relocation of many industrial plants, production service functions, material depots and even workers' residential settlements has resulted in a patchwork of empty, abandoned and progressively decaying spaces, which raise the question of identifying new functions and new physical solutions. In Shanghai, the decision to use these areas for non-residential construction to avoid further urban population growth has accentuated the problem; therefore, the effort is to imagine uses that improve the city's functioning and the housing districts. This condition also increases the intention to contribute to the improvement of environmental conditions to combat the negative phenomena of climate change. Again, the problem is not specific to Shanghai, but similar situations occur in many cities that have expanded dramatically since the second half of the last century due to industrialisation, motorisation and a large influx of migrants. Consequently, the issue of discontinuity and the need to find new functions for abandoned settlements becomes a fundamental aspect of a contemporary city development strategy for the next future.

The Putuo District workshop focused on an area of abandoned workers' houses within a neighbourhood characterised by residential towers, health functions such as hospitals and clinics for different types of therapy, and some public gardens. These elements are not interconnected, creating social and functional inequalities. However, the study site is only one of many derelict spots in this area of Shanghai, located relatively close to each other. Therefore, the challenge is to imagine solutions that, on the one hand, can improve the specific conditions of the site and its surroundings and, on the other hand, establish a network of varied functions that enhance environmental and social conditions.

In the specific case of the workshop, there were three issues to be answered.

The first was the lack of a meeting place for the local community to integrate inhabitants who do not live in the isolated towers several dozen storeys high. The fact (familiar to many newly developed Chinese cities) that many of the residents, often immigrants from distant inland regions, had gradually aged and were experiencing problems of increasing isolation compounded this condition.

A second aspect was the need for new functions related to daily health care and the convalescence of hospital patients. It was necessary to create suitable spaces for these functions, pleasant ambiences, partly protected and partly natural. Finally, the third significant factor was to give the area a more powerful identity by providing a distinctive and strong image through the establishment of peculiar functions different from those that could be encountered elsewhere. The intention of this strategy was to increase the attractiveness of the area and the sense of community.

The effort of the student groups was to explore a range of different architectural, urban, functional, social and cultural solutions. The works carried out show proposals for partial recovery of the existing historical buildings, despite their modest nature, through rehabilitation and integration interventions. The most relevant architectural operations interact with the existing structures, providing completely new solutions, even working at the underground level. Often, the planned functions consist of playgrounds and educational activities for children, commercial facilities and meeting places, functions that support shared events, including productive ones. An interesting aspect of these proposals is to involve social groups of different ages in leisure and recreational activities. In this sense, some projects have developed ideas related to food production and consumption through collective initiatives. Similar concepts concern craft activities.

Behind these suggestions, there is an awareness (which I consider extremely important) of the social origins of the inhabitants, who often moved to the city when they were young and have not lost the values and knowledge typical of rural areas or small peripheral towns. In addition, there is the need to introduce children born in urban settings to features of the countryside and rural society.

Two other key factors that emerged during the workshop concerned the challenges facing many urban areas in the world today.

The first is the reuse of abandoned industrial areas for the production of fresh food. This involves using part of the soil, considering the pollution produced by past industrial waste, or derelict industrial buildings to cultivate vegetables and fruit using hydroponic

technologies. These complex solutions need to be considered because of their importance in reducing the gap between agricultural production and urban land consumption.

The second, directly linked to the needs of the hospital system adjacent to the study area, concerns the use of abandoned spaces to perform functions complementary to medical care. In this case, the problem is also linked to the ageing of the resident population and the need to create different forms of assistance, opportunities to occupy the free time of pensioners, the need to create new social relations. In some respects, this type of activity can be directly related to the use of land and buildings for agricultural production, becoming an opportunity for voluntary work, leisure and socialisation.

As we have seen from this rapid series of considerations, the experience of the Putuo workshop brought out a wide variety of themes and possible responses to problems that we find in all our countries today. These are elements to be carefully considered in the construction of cities, or parts of cities, capable of providing a more detailed and effective response to the problems that have erupted with the pandemic but which, in fact, we know will be present once it has overcome. Basically, it is impossible to imagine that the development models adopted lightly over many decades and indifferent to the environmental context can be quickly reformed. On the contrary, it is necessary to investigate certain issues and contradictions that prevent more balanced forms of growth. To do this, an in-depth analysis of specific case studies and an effort to draw suggestions for further work from them is crucial.

I believe that the occasion of the Putuo workshop, with the opportunity to reflect on the topic of discontinuity and the research of solutions for abandoned areas in urban fabrics, allows us to suggest, in this book, new directions to work on a variety of challenges concerning urban sustainability. In some cases, they involve the environment and greening policies. In other cases, the addition of new functions promotes increased social collaboration within the community through initiatives that are responsive to the needs of its different components.
The issue of social and cultural inclusion is a significant challenge in a world characterised by powerful migration, by the substantial increase in the youth population and life span, with all the attendant effects.

ILAUD engages on these issues through various initiatives in different parts of the world and programs promoted by numerous international institutions. At present, these initiatives are mainly based on digital platforms but will gradually return to be carried out directly in the various locations. To this end, it is essential to encourage new ideas, suggest new research areas, propose experimental and pilot projects. This commitment can make it possible to adequately train today's students, who will have critical professional responsibilities in their future careers, to meet the new challenges.
Although still in the form of a first proposal and attempts, I hope that the contributions collected in this book will helpful in this much-needed process.

I wish to thank Enrica Di Toppa, Caterina Pietra and Dan Zhu for their excellent editorial work, Erik Bjorsen and Tiziano Cattaneo for their supervision, and Dan Zhu for the translation work of this book. In addition I would like to thank again all the contributors and the representatives of the Putuo District for their warm support.

当代城市的不连续性

保罗 · 塞卡雷利

主席 国际建筑与城市设计实验室

这本书原计划于 2020 年在上海 ILAUD 研讨会之后不久出版。 全球疫情大流行迫使我们将出版日程推迟至今。人们在封城期间思考城市生活及其运作，普陀研讨会的探索和建议对远景规划和政策仍然具有切实有效的价值。

2019 年 11 月，ILAUD(国际建筑与城市设 计实验室)在上海与普陀区合作组织了‘当代 城市不连续性研讨会’。该研讨会联合了意大利 米兰理工大学建筑系与环境设计系，意大利帕维亚大学土木工程与建筑学院，宁波诺丁汉大学建筑与建筑环境系，上海同济大学建筑与城市规划学院、设计创意学院，昆明理工大学建筑与城市规划学院，厦门大学建筑与土木工程学院，西安交通大学-利物浦大学建筑系，罗马大学建筑与设计学院众多国际知名高校，与欧盟伊拉斯谟高等教育人员交换计划、中国上海未来环境实验室、建筑与城市研究中国实验室共同合作，特此感谢 Per Erik Bjornsen、Tiziano Cattaneo、Paolo Ceccarelli、 Ali Cheshmehzangi、Eugenio Mangi、Sandro Rolla、方兴、吴志忠等教授，Enrica Di Toppa、 Wenwen Jia、Caterina Pietra、 颜隽、詹欣、朱丹等导师和各高校建筑与设计专业的学生的共同参与。

因新冠疫情历经长达数月的隔离封锁，记忆唤起了上海普陀研讨会的短暂但同心协力的工作画面，如今自五湖四海师生共聚一处的机会尤为罕见。进入疫情的后续，回顾当年背景各异的学生参与创作的作品的同时，激发了我的一些反思寄以对未来贡献有意义的价值。该研讨会的初衷来自上海市普陀区地方政府在城市肌理中重新利用废弃工业、制造区域的改造计划，这些被遗弃的区域包含陈旧和部分衰败的工业建筑。由于推行技术创新和污染减排导致许多工业厂房的搬迁，这种情况既是上海的特性，也是当今世界许多其他城市地区的共性。因此，尽管普陀区的案例是地方性的小规模研究，但它揭示了相当重要的问题。

普陀旧区改造遇到的情况凸显了当代城市结构的一个关键问题:它的物理、功能和时间上的不连续性。从本质上讲，在过去的几十年里，现代城市不连续和碎片式的发展，产生了各种无论在布局、形式框架还是执行功能方面都迥异的物理空间。该过程出现在不同发展阶段，且各具特点和原因，由此导致了一个非同寻常的多种城市肌理，且各聚居碎片之间通常缺乏 形式上和功能上的整合，即使它们的物理空间是连续的。

在当代城市中，通常出现长期废弃的地区与高密度聚居地区相毗邻。充满活力的商业办公和休闲功能的场所与相互独立的低层住宅区并存，凸显了在此构成社区的社会肌理的缺失。社会分化作为世界大城市的典型特征，加剧了这些现象:例如邻零星贫民窟与高层社区或具有重要第三产业功能的区域毗邻。此外，将大片农村和乡村地区纳入城市发展结构，加剧了这种分化。 因此在某种意义上，综合各个方面来讲，不连续性是当代城市化的一个特征，而它的演进过程将会持续。

就普陀区而言，值得指出的是，许多工业厂房、生产服务功能、物资库甚至工人居住区的搬迁导致空置、废弃和逐渐衰败的空间的现状，引发重新定义新功能和提出新物理(空 间)解决方案。在上海这些地区规划为非住宅建 设，以避免城市人口的进一步增长，但同时更凸显了现存问题;因此，我们需要构想可行的方案来改善城市功能和住宅区。这种情况也加强 了积极改善环境条件以应对气候变化带来的负面现象的意愿。同样，该问题并非上海独有， 自上世纪下半叶以来，由于工业化、机动化和大量移民涌入，许多城市都出现了类似的情况。因 此，不连续性问题和为废弃聚居区配置新的城市功能，成为未来当代城市发展战略的一个 关键。

普陀区研讨会的重点是社区内废弃的工人房屋区域，该社区主要特点为由高层住宅塔楼、 医院和诊所等多种的公共医疗卫生功能，以及公共花园组成。由于这些社区元素相互不关联性而造成了社会和功能上的不平衡。然而，该研究地点只是该区域中众多空间上较集中的废弃地点之 一。因此，挑战在于解决现存问题方案的设想， 能一方面改善场地及其周围环境的特定条件，另一方面建立一个增强环境和社会条件的多功能 网络。

此次研讨会需要具体解答三个问题。第一，当地社区缺乏一个公共聚集场所来整合那些几十层高孤立塔楼以外的居民。事实上(类似 许多中国新开发的城市)许多居民通常是来 自偏远内陆地区的移民，人口逐渐老龄化日益加剧了孤立的问题，使情况更为复杂。第 二，日常保健和住院患者康复相关的新功能的需求。有必要为这些功能创造合适的空间且和自然结合的宜人环境。最后第三，通过创建当地特有的功能来树立标志性的公共形象，从而提高地区识别度，并以此增加该地区的吸引力 和社区氛围。

研讨会的学生们共同努力探索了一系列不同的建筑、城市、功能、社会和文化方面的解决方案。在现有历史建筑相对保存完好的前提下，方

案仍展示了修复和整合干预并部分恢复的全新解决方案，包括主要建筑的改动并与现有结构相结合，甚至考虑增加地下空间的使用。总体来看，功能规划包括儿童游乐场和教育活 动、商业设施和聚集场所、辅助共享活动的功能和生产活动。这些方案的亮点在于允许不同年龄的社会群体共同参与休闲和娱乐活 动。例如，一些项目提出了集体食品生产和消费相关的想法。类似的概念还涉及工艺 活动。

在这些建议的背后，有一种对居民的社会性的认识(我认为这非常重要)，通常这些居民早年移居到城市，但保留了典型农村或周边小城 镇地区的价值观和认识。此外，有必要让城市环境中成长的儿童了解农村和农村社会的特点。

研讨会期间出现的另外两个关键因素与当今世界许多城市地区所面临的挑战有关。第一个是重 新利用废弃的工业区生产新鲜食品。这涉及使用 部分土地资源，考虑过去工业废物产生的污染， 或在废弃的工业建筑中使用水培技术来种植蔬果。解决这些复杂问题的方案，对于如何缩小农业生产与城市土地消耗之间的不连续 性至关重要。第二个与该地区附近医院系统 的需求直接相关，并涉及使用废弃空间补给医 疗服务功能。该情况下，问题还如何保障常住人口老龄化带来的多种的援助、满足养老休闲需求、建立新的社会关系有关。同时，相应的与农业生产直接相关土地和建筑物的使用的活动，为志愿工作、休闲和社交提供了机会。

经过这一系列接连的思考，普陀研讨会的经验提出了广泛的主题，并对我们今天在所有国家发现的问题做出了可能的回应。这些是在城市或城市部分地区建设中需要仔慎重虑的要素，能够对在疫情和后疫情时期爆发的问题提供更详细有效的响应。无法想象，几十年来漠视环境背景的发展而轻率采用的模式会迅速变革。相反，有必要探究某些阻碍更平衡增长形式的问题和矛盾。为此，对具体案例进行深入分析，并尽可能为进一步工作提出建议至关重要。

我相信借普陀研讨会反思‘不连续性’的话题和城市肌理中废弃地区解决方案的研究，让我们有机会在本书中提出了应对各种关于城市可持 续性挑战的新方向。某些情况下涉及到环境和绿化政策。其他情况下，通过响应社区不同组成部 分需求的举措，增加新功能并促进和加强社区内合作。在强大的移民的背景下，青年人口数量和人口寿命大幅增加，也随之带来各种影响，社会和文化包容问题是一项重大挑战。

ILAUD响应世界不同地区提出的各种举措，和众多国际高校和机构推动的计划来解决这些问题。目前，这些举措主要是基于数字平台，但会逐渐落地到各地区直接开展。为此，必须鼓励新的想法、推出新的研究领域、提出实验和试点项 目。这种承诺将更好的培养当今的学生，因为他们将在未来的职业生涯中肩负重要的责任，以迎接新的挑战。尽管仍处于初级阶段的提议和尝试，但我希望本书中收录的设计方案和文章对于这个当务之急作出一些贡献。

特此，真心感谢恩利卡、帕蕾娜和朱丹的编辑工作， Per Erik Bjornsen、Tiziano Cattaneo 的指导，以及朱丹对此书的中文翻译工作。 此外，再次感谢所有本书的投稿人，以及普陀区地方代表的热情支持。

Discontinuity in Contemporary Shanghai: the Challenge of Tongyi Li

Enrica Di Toppa
Caterina Pietra
Dan Zhu

An overview of 21st-century cities reveals how the evolution of the contemporary metropolis has led to the alteration of large portions of territory. Frequently, this development process has left behind untouched pockets of the urban fabric; empty sites, industrial buildings, and marginal areas constitute spatial and functional discontinuity within the urban narrative that has cut off all dialogue with the surrounding context and, in some cases, caused social segregation. At the same time, they represent places of opportunity, waiting to be transformed and reintegrated into the city.

This phenomenon occurs globally, but it is in China that it finds its greatest expression. As Liu Jian points out, the Country's urbanization process is unprecedented; "[f]rom 1981 to 2018, while its urban population increased from 201.7 million to 831.4 million, its cities had increased from 226 to 668 [...] And from 1996 to 2015, the average built-up area expanded from 30.4 square kilometres to 79.4 square kilometres" (Liu, 2020, p. 41).

Shanghai Background

Against this backdrop, Shanghai is an exemplary case, a territory that has enabled China to compete on the global stage. In the mid-19th century, the city began to expand, hosting one of the first ports opened to foreign countries. The British, French and Americans urbanised the area around the walled old town, today's Lao-Cheng-Xiang area, establishing concessions, clusters of Western-style buildings barred to the Chinese population.

These areas depicted a clear separation between West and East, but, following the Small Daggers uprising and the Taiping Rebellion, a wave of Chinese refugees poured into the foreign boundaries seeking asylum from the turmoil of the fighting. Due to the increasing demand for housing in the foreign concessions, new residential neighbourhoods called *lilong* developed. The name is a compound word made up of *li*, which conveys the idea of the settlement as a place of living, and *long*, which identifies the narrow alleyways overlooked by the houses (Zhao, 2004, Liang, 2008).

The *lilong*, or longtang, neighbourhoods constituted the predominant urban fabric of Shanghai and, as Wang Anyi writes in the novel The Song of Everlasting Sorrow, "from the highest point in the city, Shanghai's longtang– her vast neighborhoods inside enclosed alleys– are a magnificent sight. The longtang are the backdrop of this city. Streets and buildings emerge around them in a series of dots and lines, like the subtle brushstrokes that bring life to the empty expanses of white paper in a traditional Chinese landscape painting" (Wang, 2008, p. 3).

The situation changed in the 1980s when the establishment of the Open Door Policy led to an unprecedented phase of formal and technological experimentation. As had already occurred in the West, urbanisation had the arduous task of fuelling the country's economic growth. The progress of the infrastructure system has accelerated the expansion of the cities, changing the physical and temporal perception of the territory. For the first time, the construction market has expanded to include foreign companies, and the national design institutes have assumed dynamics of mutual competition similar to Western private companies.

At this juncture, Shanghai took its great leap forward. The city experienced its first vertical constructions ranging from 15 to 33 storeys, characterised by different units distributed around a central core consisting of a lift and stairs. Over time, these models were improved with the addition of comforts that would guarantee an adequate lifestyle for the foreign clientele they primarily aimed at, becoming the standard of development in the new neighbourhoods of the 1990s (Li & Zhang, 2008).

The symbol of this growth was undoubtedly the Pudong area, designated as the new city centre. In 1990 the State Council approved the plan that declared Pudong New Area a national-level special development zone. The focal point was the Lujiazui district, which took advantage of the foreign experience to experiment with innovative new technologies (Campanella 2008, p. 71). This desire resulted in the Oriental Pearl TV Tower, the first tower that definitively changed the profile of the metropolis.

An unstoppable era of demolition and reconstruction began. As described by Zhu and Qian (2003), the rebuilding processes involving Shanghai's old areas have always been linked to Chinese economic and social changes. The methods are different (Morelli di Popolo 2018):

1) Government investment: until the 1980s, the government gave funds to the administration to demolish homes, and provide new homes for residents. As a consequence, the policy generated economic problems affecting both the government and the administration which in return received no economic benefit.

2) Residents' cooperation with public assistance: in the case the houses were privately owned, the residents could decide whether economically contribute during the project of transformation and evolution of the area. The old owners could buy the newly built houses at a subsidized rent, and the administration beneficiated of the whole earnings. This approach was diffused mainly between 1991 and 1995.

3) Tripartition: administration, collectives and single individuals collaborate to develop their contribution to the reconstruction. The administration takes care of the permits and facilitates the transformation, the collectives collect the funds as an investment for development and renovation, and the individuals pay to buy a new home.

4) Real Estate: Investors find the funds on their own, demolish and rebuild areas of the city.

In 1992, at the Sixth Communist Party Congress in Shanghai, the 365 Plan was announced, providing the demolition of 365 hectares of *lilong* housing defined as dangerous (weifang). In reality, the buildings considered to be dangerous were located in areas of low population density and in the city centre, areas that guaranteed a good investment return. In addition, the housing reform and the establishment of the land market aimed at privatising land for foreign investors, while a series of policies accelerated the renovation process. In 1998 the Department of Construction decided to provide subsidies to private individuals to encourage investment and in 2000 the 365 Plan was finally declared a success. This massive operation resulted in the demolition of 27.000.000 square metres of housing and the reconstruction of 1.000.000 square metres. That same year, Shanghai launched a new demolition campaign to renovate the city centre for commercial purposes. Identifying 307 areas was just the prologue to the new 2006–2010 ¬Eleventh Five-Year Plan, which aimed to replace 4.000.000 square metres of old housing. By 2007, at the dawn of the economic recession of the next two years, the price of property had peaked and urban regeneration operations increased again, doubling the scale of intervention from 4.000.000 to 8.000.000 square metres (Ren 2011, pp. 104–110).

Shanghai changed its face; 1.200.000 inhabitants were relocated to the suburbs and the urban fabric was reshaped to suit the contemporary era, all in less than 20 years.

Focus on Tongyi Li

The phenomenon of demolition and reconstruction that occurred in Shanghai over the last 30 years has led to a massive reshaping of the urban fabric. Many *lilong* neighbourhoods have been razed to the ground, forcing the inhabitants to move to the city's suburbs and generating an enormous process of spatial segregation. Therefore, the urbanization of the suburbs is characterized by newly built areas as well as the satellite cities born in the surroundings of Shanghai resulting from the "One City, Nine towns" project. The thematic cities (Swedish, Italian, German and English, ...) become more a theme park for tourists than a real city for citizens, thus favouring anonymity, solitary life and exclusion.

In this scenario, several areas, still waiting to be transformed, become territory for exploration; among them, we include Tongyi Li, in Putuo District, an abandoned *lilong* residential settlement that in 2019 was a case study addressed in the ILAUD Discontinuity in Contemporary City workshop. Starting from

observing that the intervention site was a discontinuity within the contemporary urban fabric, the workshop aimed to draw out how Tongyi Li could be transformed.

Two years later, the neighbourhood was demolished.

The reasons behind this choice are various and partly related to Chinese reality. In many cases, it is more convenient to demolish existing, often obsolete buildings in favour of new construction, especially in areas where the exchange value of the property is high. At the same time, the replacement of the urban fabric is rooted in a cultural context that is significantly different from the policies and research experienced by the Western city, especially during the 20th century.

From the Western perspective, the urban tissue is the repository of collective memory. Historical buildings, museums, libraries, monuments preserve the history of a city and represent traces of its past. This condition causes the urban narrative to be a set of components linked by a mnemonic functioning. Therefore, the transmission of memory is attributed to the material value of the architectural object, which presupposes its authenticity and existence in that defined place and from that determined time. On the contrary, as Li Shiqiao explains in Understanding the Chinese city, "the entire memory strategy works differently in China; it is deeply intertwined with the Chinese writing system, and with many associated social and political features. At the heart of this distinct character of memory in the Chinese cultural context, in contrast with the Western conception of a universal space and time, seems to be a spatial and temporal relocation" (Li 2014, pp. 167-168).

To support this discourse, the author refers to the Yellow Crane Tower in Wuhan, a pagoda in the province of Hubei dating back to the Three Kingdoms Period, which over the centuries was rebuilt several times. In 1985, the tower acquired completely different characteristics: the latest technology of reinforced concrete replaced the wooden, two floors were added, and the original position was moved by about 1000 m. The construction underwent a spatial and temporal relocation. Its value does not reside in the authenticity of the material but its verisimilitude. Despite the physical alterations it has undergone over time, the Yellow Crane Tower remains one of the most significant places in the Chinese imagination.

In addition to this, there is a more practical reason for replacing urban heritage: the use of perishable materials such as wood. Over time, buildings required substituting portions or frequent reconstructions, a praxis that also sanctioned the passage to a new imperial dynasty. The Forbidden City is perhaps the highest example of this practice; despite the rise of countless emperors has decreed its continuous destruction and rebuilding, the symbolic and sacred meaning of the place has remained unchanged over the centuries.

However, the contribution is not discussing the private rights and interests through the individual case of Tongyi Li, which ended up with its complete demolition. Indeed, it is evident that if considering the combined action of the design-integration based project and the design -codes based management, the urban design's effect will be tightly related to the stakeholders' decisions (Zhuang, 2013).

The Chinese context still offers identifying realities that can demonstrate a great maintenance of the anthropological value of the site and a strong interrelation with the context and the community. From this perspective, Geddes' contribution concerning the 'conservative surgery' is interesting, supporting a thought typical of evolutionism, then developed by the chaos theory. Even taking in consideration a smallest change (the Tongyi Li represents the example in this case), great effects can be generated, bringing into play a series of apparently disconnected and unexpected modifications. If the consolidated city is subjected to extensive interventions, the result would most likely be limited, as large plans often have limited or no impact on the small scale, while, on the other hand, small-scale interventions can have enormous consequences (Batty and Marshall 2009). A flexible and positive development is verified within particular context such as disused areas, waste spaces, infrastructures, urban regeneration, porosity in the urban fabric, that means conceiving initiatives varying from self-made spaces to urban gardens, to temporary spaces. The action also allows a reactivation and speeding up of the development and recovery processes, even

temporary, of areas that have sometimes been stopped for years.

This is exactly the approach that has inspired the students during the workshop and made them reasoning about the correct balance between the intrinsic material value deriving from the site and its components, and the human scale value; that is the balance and harmony between the uses and the synergy with the building itself.

The spatial discontinuity of the site has been deeply analysed showing that Tongyi Li was lacking of a precise urban role within the complex urban system and its urban blight was compromising the level of environmental quality and living conditions of the surrounding communities. The overall design process enhanced the relevance of the community identity which inevitably place the architecture within an extra-dimension if considering the profound interconnections with its history, context and culture.

Indeed, the distinctive sense of communal living brought by the Tongyi Li has been re-created, and it is independent of the *lilong* itself, demonstrating that cultural heritage does not necessarily mean an aesthetic or material choice. The unique character of the place has encouraged experimentations and involved more specific design ideas based on local precedent and contemporary requirements. The results have included both stylistic reproduction and cultural association models, which are valid until the reference is maintained authentic. This aspect is fundamental to ensure the local response and to revitalize the built amenities that the site can offer, thus innovative forms and functions of the existing buildings might necessarily need to evolve to be repurposed.

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Notes

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当代上海的不连续性：统益里的挑战

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对 21 世纪城市的概述揭示了当代大都市的演变如何导致大部分地方性土地的改变。通常，这种发展过程会遗留城市肌理中未触及的零星部分：空地、工业建筑和边缘区域构成了城市叙事中的空间和功能的不连续性，从而切断了与周围环境的所有对话，并在某些情况下造成了社会隔离。同时，这些地方也代表着机遇，有待改造和重新融入城市。

这种现象在全球范围内都有发生，但在中国却得到了最大的体现。正如刘健所指出的，中国的城市化进程是史无前例的；“从 1981 年到 2018 年间，城市人口从 2.017 亿增加到 8.314 亿，但城市从 226 个增加到 668 个[...] 并且从 1996 年到2015年，平均建成区面积从30.4 平方公里扩大到79.4平方公里”（Liu，2020，第 41 页）。

上海背景

在此背景下，上海堪称典范，让中国能够跻身在全球舞台上展开竞争。19世纪中叶，这座城市开始扩展并成为最早对外开放的港口之一；英国、法国和美国人将曾有老城墙环绕的地区（现上海老城厢）城市化，建立了租界和西式建筑群并禁止中国人进入。

这些地区生动的揭示了东西方（居住区）明显的分离，但是，在义和团起义和太平天国叛乱之后，为在战乱中寻求庇护，一波中国难民涌入外国租界边界。外国租界内住房需求的激增，促使了新型社区住宅“里弄”的产生。“里弄”做为一个复合词，“里”表达聚居地的意思，“弄”则表示房屋之间的狭窄小巷（赵，2004；梁，2008）

里弄或弄堂街区构成了上海的主要城市肌理，正如王安忆在小说《长恨歌》中所写，“站一个至高点看上海，上海的弄堂是壮观的景象。它是这城市背景一样的东西。街道和楼房凸现在它之上，是一些点和线，而它则是中国画中称为皴法的那类笔触，是将空白填满的”（王安忆，2008，第三页）。

进入到1980年代，情况发生了变化，改革开放政策的建立将正式和技术实验带入前所未有的阶段。 正如西方已经发生的那样，城市化面肩负着推动国家经济增长的艰巨任务。基础设施系统的进步加速了城市的扩张，改变了我们对土地的物理和时间上理解。类似于西方私营公司的相互竞争态势首次出现，扩大对建筑市场出现了外国公司和国家设计院。

就在此时，上海实现了跨越式发展。这座城市经历了首批15到 33层的高层建筑，其特点是一梯多户。基本模式随着时间的推移得到了改进，针对的外国住户生活方式增加了舒适度，成为1990 年代新社区的发展标准(Li&Zhang,2008)。

被指定为新市中心的浦东地区无疑标志着这种发展模式。1990年国务院批准将浦东新区列为国家级特别开发区的方案。重点是陆家嘴区金融中心，该区利用海外经验尝试新技术创新（Campanella 2008，第 71 页）。随后东方明珠电视塔的建成，首次彻底改变了大都市面貌。

一个势不可挡的拆迁重建时代开始了。正如朱林楚（2003）所描述的，涉及上海旧区的重建过程一直与中国的经济和社会变化有关，方法不同（Morelli di Popolo，2018）：

1）政府投资：直到1980年代，政府拨款给拆迁房屋，并为居民提供新房。结果，该政策产生的经济问题影响了政府和行政部门，而导致没有获得任何经济利益；

2）居民配合公助：如果房屋为私人所有，居民可以决定是否在该地区的改造和发展项目中做出经济贡献。老业主可以以补贴租金的方式购买新建的房屋，管理部门从全部收入中受益。这种方法主要在 1991 年至 1995 年间流行。

3）三方：行政部门、集体和个人共同为重建发展作出贡献。行政部门负责许可证并促进改造，集体融资作为开发和改造的投资，个人则支付购买新房的费用。

4）房地产。投资者自行寻找资金，拆除和重建城市地区。

1992年在上海召开的中共六大宣布了“365计划”，规定拆迁365公顷的里弄危房（潍坊）。实际上，被认为是危险的建筑物位于人口密度低的地区和市中心，这些地区保证了良好的投资回报。此外，住房改革和土地市场的建立旨在为外国投资者土地私有化，而一系列政策加速了改造进程。1998年，建设部决定向私人提供补贴以鼓励投资，2000 年，365 计划终于宣布成功。这次大规模行动导致拆除了27.000.000平

方米的房屋并重建了1.000.000平方米的房屋。同年，上海发起了一项新的拆迁运动，以对市中心进行商业改造。确定的307个区域只是新的2006-2010年“十一五”规划的序幕，该规划旨在更换400万平方米的旧住房。到 2007 年，在接下来两年经济衰退的曙光中，房地产价格达到顶峰，城市更新行动再次增加，干预规模翻了一番，从 4.000.000 平方米增加到 8.000.000平方米（任,2011，第104–110）。

上海的面貌焕然一新；在不到二十年的时间里，1.200.000 名居民搬迁到郊区，城市结构被重塑以适应时代。

有关统益里

上海过去30年的拆迁改造现象，导致了城市肌理的大规模重塑。许多里弄社区被夷为平地，迫使居民搬到城市郊区，该过程产生了巨大的空间隔离。因此，郊区城市化的特点是新建区以及“一城九镇”项目促使上海周边卫星城市的诞生。以“国际化”为理念，引进了西方不同城市和地区的建筑风格，主题城市包括瑞典、意大利、德国和英国小镇，这些小镇更像是游客的主题公园，缺乏与地方生活和居民的联系，而不是真正的市民城市。

在这种情况下，几个尚待改造的区域成为一种探索；其中包括位于普陀区的统益里，这是一个废弃的里弄住宅区，做为2019 年 ILAUD 当代城市不连续性研讨会中的一个案例研究。从观察该地点在当代城市肌理中的不连续性开始，研讨会旨在描绘将如何改造统益里。

这种选择背后的原因是多方面的，部分与中国的现实有关。在许多情况下，拆除现有的、过时的建筑物以方便建造新建筑，尤其是地价高的地区。同时，城市肌理的更替植根于与西方城市所经历的政策和研究截然不同的文化背景，尤其是在20世纪。

从西方的角度来看，集体记忆的储存在城市组织之中。历史建筑、博物馆、图书馆、纪念碑保存着一座城市的历史痕迹。这种情况让城市叙事成为一系列具有记忆功能元素的串联。因此，记忆的承载归因于建筑的物质价值，它是以确定的地点和时间的真实性和存在性为前提。相反，正如李士桥在《理解中国城市》中解释的那样，“整个记忆策略在中国的运作方式不同；它与中国的书写系统以及许多相关的社会和政治特征深深地交织在一起。在中国文化语境中，这种独特的记忆特征的核心，与西方普遍的时空观念相比，似乎是一种时空变迁”（李，2014，第167-168页）。

为了支持这种说法，作者提到了湖北省武汉的宝塔-黄鹤楼，其历史可追溯到三国时期，历经几世纪的重建。1985年，宝塔兼容了完全不同的特征：最新的钢筋混凝土技术取代了木结构，并加建了两层，自原位置移动了约1000米。建筑经历了时空变迁。 它的价值不在于材料的真实性，而在于其逼真度。 尽管随着时间的推移经历了物理变化，黄鹤楼仍然是中国人想象中最重要的地方之一。

此外，替换城市遗产还有一个更实际的原因：易腐烂材料在城市遗产中的使用，如木材。随着时间的推移，建筑物需要替换局部或频繁重建，这种做法也延续至新帝国王朝时期。 故宫也许是这种做法的最高典范； 历经数代帝王的崛起不断的翻新和重建，但这个地方的象征和神圣意义却数个世纪未变。

然而，本文并非希望通过统益里以彻底拆迁告终的个案来讨论私人权益。 事实上，很明显，如果考虑到基于设计集成的项目和基于设计规范的管理的二者的联合作用，城市设计的影响将与利益相关者的决策密切相关（庄，2013）。

中国语境仍然提供了可识别的现实，可以证明该遗址的人类学价值的巨大维护以及与地方性和社区的强大关联。从这个角度来看，Geddes关于“保守手术”的贡献，支持了进化论的典型思想，然后由混沌理论发展而来。即使考虑到最小的变化（本文以统益里为例），也能产生很大的效果，扩展一系列明显的不连贯且出乎意料的变动。如果统一后的城市受到广泛干预，结果很可能是有限的，因为宏观计划通常对小规模的影响有限或没有影响，而另一方面，小规模的干预可能会产生巨大的后果（巴蒂和马歇尔，2009年）。在特定背景下验证灵活和积极的发展，例如废弃区域、废弃空间、基础设施、城市更新、城市肌理中的渗透性，这意味着构思从自制空间到城市花园再到临时空间的各种举措。这些促使了多年被荒置的地区开发和恢复的重新启动和加速，即使短期的。

这正是在研讨会期间启发学生的方法，使他们能够推理出来自场地及其组成部分的内在属性价值与以人为本的价值之间的正确平衡； 使建筑用途以与自身的协同之间建立平衡与和谐。

在对场地的空间不连续性进行了深入分析后，得出统益里在复杂的城市系统中缺乏精确的城市角色，其衰退正在影响周边社区的环境质量和生活条件水平。 整体设计过程增强了社区身份的相关性，如果考虑到与其历史、背景和文化的深刻联系，这不可避免地将建筑置于一个额外的维度中。

的确，统益里带来的独特的社区生活方式被重新创造，它独立于里弄本身，表明文化遗产并不一定意味着审美或物质选择。这个地方的独特性激励了实验性的尝试，并根据当地先例和当代要求加入了更具体的设计理念。结果包括建筑风格复制和文化关联样式，以尊重现存遗址特征。这对于确保当地的响应支持和复兴场地内已建成设施至关重要，因此现有建筑的创新形式和功能可能需要发展以重新利用。

Notes

1 Batty, M., Marshall, S. (2009). *The evolution of cities: Geddes, Abercrombie and the New physicalism*. In Town Planning Review, 80, pp. 551-574.

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Part I

Discontinuity as Opportunity
不连续性与机遇

1. Discontinuity by Design in the contemporary Chinese city[1]

当代中国城市的设计不连续性

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In 2016, in conjunction with the drafting of the 2016–2020 Thirteenth 5-years Plan the Central Committee of the Chinese Communist Party and the State Council issued a series of urban design guidelines during the Central Urban Work Conference aimed, besides other targets, at limiting the growth of the cities “beyond the means of their natural resources and environment” (Xinhua 2016). The document prioritizes the protection of farmland for food production and the provision of affordable housing to low-income residents through the regeneration and renovation of the dilapidated downtown urban areas.

The necessity of land conservation for ecological and agricultural purposes, in contrast to an uncontrolled massive urbanization, is further stressed and refined in the 2021–2025 Fourteenth 5-years Plan. In fact, in addition to the renowned set targets to peak carbon emissions by 2030 and to achieve carbon neutralization by 2060, the document addresses several topics that are intertwined with the urban dimension, and it stresses the priority that will be given to city re-generation, revitalization and re-use plans, while targeting a people centred urbanization. “We [the Chinese Communist Party Central Committee] will implement urban renewal initiatives, promote urban ecological restoration and functional improvement projects, and take an overall planning approach to urban planning, construction and management.” And, even more in detail, “[w] e will enhance historical and cultural preservation, fashion urban landscapes, strengthen renovation of old urban residential areas and construction of neighbourhoods” (Central Committe of the Chinese Comunist Party 2020, p. 31).

2016 年，结合中国“十三五”（2016-2020 年）规划的起草，中共中央、国务院在中央城市工作会议期间发布一系列城市设计指南，除其他目标外，限制城市的“超出其自然资源和环境的能力”发展（新华社，2016年）。该文件将重点保护粮食生产用地，通过对市区破旧区域的更新改造，为低收入居民提供保障性住房。

与不受控制的大规模城市化相比，生态和农业用地的必要性在 2021-2025年“十四五”规划中得到进一步强调和细化。事实上，除了著名的到2030年达到碳排放峰值和到2060年实现碳中和的既定目标外，该文件还讨论了与城市维度交织在一起的几个主题，并针对以人为本的城市化，强调了将优先考虑城市更新、振兴和再利用计划。“我们（中共中央委员会）将实施城市更新举措，推进城市生态修复和功能提升工程，统筹城市规划、建设和管理。”而且，更具体地说，“[我们]将加强历史文化保护，使城市景观成为靓丽风景线，加强旧城区改造和街区建设”（中国共产党中央委员会，2020年，第31页）。

过去三十年来“自上而下的、基于标准的和有抱负的城市规划和设计促使了急剧的城市物理扩张，并创造了单调的宽敞大道和大型超级街区组成的地方城市并导致对私人汽车的依赖”（世界银行，2017 年，第 2 页），全国大部分城市地区遵循非常相似的快速增长和城市扩张模式，上述的文件似乎标志着一个急剧的转变和不连续性。

在这种情况下，学者、设计师和学生在处理当代中国城市和社区时必须转变方法。不同于与广泛和普遍接受的搬迁集中安置、清理（包括社会结构和建筑结构）和重建（国务院，2001 年）的做法 — 以开发新的高档商业综合体和/或私人管理的商业空间为主要目的，更可持续的途径包括，针对破旧街区进行周到的“增量城市更新”，以及经济适用房和为现有社区提供服务（Wu，2017）。

但城市更新计划通常是复杂而艰巨的过程，涉及多个利益相关者，他们的利益往往不同或有分歧。在中国的现实中更是如此，负责此类干预协调措施的主要对话者的公共部门可被比作一个复杂的星际，由相互关联的多层机构组成，这些机构（通常）有不同的目标。社区，作为参与协调中基本利益相关者之一，将直接受项目影响并旨在避免当前情况的恶化和其获益的侵蚀（关于增量城市更新的成功例子，见由同济大学设计与创新学院发起的 ”Open Your Space “，开放营造: 为弹性城市而设计[M]. 倪闵卿, 朱明洁著, 2017）。

在这个复杂的政治、制度、经济和社会框架中，自上而下的决策往往与自下而上的压力混合在一起（Zhang、Lin、Hooimeijer 和 Geertman，2020 年），致力于城市更新计划继承了Rittel和 Webber 提出的定义“棘手问题”（1973 年）。这些问题只有在找到一个或多个合适的解决方案时才能清楚地表述出来，并且需要适应不断变化的场景。正如Roggema(2017)所做的详细解释和证明设计可能是定义此类问题的最合适的工具，因为它基于创造性的飞跃并通过设计过程探索可能的未来场景。

同时ILAUD秉承并推动了设计学科的核心作用，作为一种强大的工具探索自70年代（De Carlo，1977年）概念以来，建筑环境再生的可能情景，与主导知识渐进式细分化的研究、教学和实践理念（ILAUD，2019年）逐渐区分开来。

从这些考虑出发，显而易见在2019年的ILAUD普陀项目讨论会上，学生和导师通过调研得出了几个城市环境场景下的“设计的不连续性”的提议和有趣见解。

通过分析学生的作品，即使内容和方法各不同，但都可以归纳一些共同特征。这些特征逐渐涌现并与中国（以及许多其他国家）过去几十年采用的城市发展模式割裂，因为这种模式已经无法满足现状，并将建筑和非建筑环境的转变成“变形虫一样跨越鸿沟的构筑”（Berleant，2012年，第 99 页）。

与主题相关的第一个特征是，在功能形成过程中，当地社区在提出如何提高居民和用户生活水平的想法上起到核心作用。例如社区的休闲和工作室空间（ICH工作室村）、城市农业干预（第5组和第6组）、社区烹饪中心（11里）和一个分散形式的城市剧院（第8组）。

有关城市肌理的角色，在分析所有作品展版中，很明显看到每个组通过各种形式如何在里弄的保留和规模上做选择：其中一些只保留建筑物

These words seem to mark a sharp turn about and discontinuity in comparison to the breakneck[2] Chinese growth and urban sprawl that followed very similar patterns in most of the urban areas across the country over the last 30 years, when “the physical expansion of cities has been exacerbated by top-down, standards-based and aspirational urban plans and designs, which have created a monotonous urban vernacular made up of wide boulevards and large super-blocks leading to a dependency on private automobiles” (World Bank 2017, p. 2).

In this scenario, it is becoming imperative that scholars, designers and students shift their approach when dealing with the contemporary Chinese cities and communities. Instead of the widespread and commonly accepted practice[3] of the institutionalized re-locating, clearing – both the social and the built fabrics – and rebuilding (State Council 2001), that is mainly aimed at developing new expensive commodity compounds and/or privately managed commercial spaces, an attentive “incremental urban regeneration” of the dilapidated neighbourhoods can provide more sustainable paths that include affordable housing and provision of services for the existing communities (Wu 2017).

But urban regeneration plans are usually complex and pain staking processes that involve several stakeholders with different and often contrasting interests to be preserved. This is even more true for the Chinese reality, where the public sector, that is the main interlocutor for this kind of interventions, can be imagined as a wide constellation composed of interconnected and multi-layered institutions that – often – pursue diverging goals. The other fundamental stakeholder that is generally involved in the negotiations is the community that will be directly affected by the project and that aims at avoiding the deterioration of the current situation and the erosion of its acquired benefits (for a successful example incremental urban regeneration, see the Open Your Space initiative carried on by the College of Design & Innovation of Tongji University and illustrated in the 2017 publication by Ni & Mingjie).

In this complex political, institutional, economic and social framework, where the top-down decisions are often mixed with bottom-up pressures (Zhang, Lin, Hooimeijer, & Geertman 2020), working on urban regeneration schemes

entails what Rittel and Webber define "wicked problems" (1973). These are problems that can be clearly formulated only when one or more suitable solutions are found and that require a constant adaptation to the ever-changing contextual conditions. As already explained and demonstrated in detail by Roggema (2017), design is maybe the most appropriate tool to define this type of problems, because it is based on creative leaps that allow to explore possible future scenarios through the design process.

And the ILAUD embraces and promotes this central role of the design discipline as a powerful inquiry tool to explore possible scenarios for the regeneration of built environments since its conception in the 70s (De Carlo 1977) to the contemporary period, distancing itself from the dominating idea of research, teaching and practice that promote a progressive specialization and compartmentalization of the knowledge (ILA&UD 2019).

Starting from these considerations, it is clear how the themes that were defined during the 2019 ILAUD Putuo charette[4] through the investigations elaborated by the students and tutors, mark several "discontinuities by design" and provide interesting insights on the urban context where they operate.

Analysing the students' works, different for quality and approach, it is possible anyhow to trace various common features which emerge as a series of ruptures with the insatiable urban development model adopted in the last decades in China – and in many other countries and that transformed the built and non-built environments into an "amoeba-like spread of construction across huge distances" (Berleant 2012, p. 99).

The first characteristic that associate the schemes is the central role that the local community acquires in shaping of functional programs, that are mainly thought to enhance the living standards of its inhabitants and users. These include leisure and workshop spaces for the community (ICH Workshop Village), urban farming interventions (Group 5 and Group 6), a sort of culinary centre for the neighbourhood (Eleven Li) and a diffused urban theatre (Group 8).

The second important aspect concerns the role of the existing urban fabric. Analysing the panels, it is possible to note how all the groups opt for retaining the traces and the scale of the dismissed *lilongs* in various forms: some of them only keep

的足迹（例如第5组），其他保留了特有的斜屋顶（例如第 2 组和第3组）。即使是最激进的提案（名为"下一代里弄"），其特点是利用一个大的悬浮平台加强了与周围社区的衔接，平台之下的空间根据现有的住宅布局来构建并保留了一定的原始里弄体量。这些共同点标志着进一步的拆迁重建在实践中的不连续性，这些做法已经且正在在类似的旧城区广泛采用，并假设将已建成环境作为起点和资源，在设计过程中进行创造性的修改。

另一个共同特点是设计意图，所有组都表达了这一方面在建筑尺度上和城市尺度（场地与周边环境）上（重新）定义不同部分之间的物理空间和视觉关系。进一步通过采用多种空间元素来实现，例如地下通道、露台、悬浮人行道、楼梯和坡道等来定义新的公共空间和周边场景。这是对由自给自足、私有化和不可逾越的岛屿组成的城市理念的明确否定（例如封闭性住宅社区和商业购物中心），相反它强调了对共享、灵活的集体空间的关注，这种新空间在一天当中可以在一天的不同时间段呈现不同的含义和功能（Miao，2011年）。

结束语，虽然这些学生作品远非最终实际解决方案，但是这些建议可以被理解为一种关于解决该区域更新和再利用的棘手问题的框架。他们特别强调了该区域以及整个城市的需求、不足和潜力，采用设计方法处理其他调查方法很难追踪的问题。他们提出了一种在多个层面上运作的整体方法，从建筑和城市形式到社会维度，从而标示了与普遍建筑实践和广泛的城市理念的不连续性。

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the footprint of the buildings (such as Group 5), others the volumes with the distinctive pitched roofs (such as Group 2 and Group 3). Even the most radical – apparently – proposal (entitled Next Generation *Lilong*), that is characterized by a large suspended horizontal plane that enhances the connections with the surrounding neighbourhood, is structured according to the existing residences layout and it maintains the *lilongs*' original volumes underneath the plane. These commonalities mark a further discontinuity with the clearing and rebuilding practices that have been – and still are – largely adopted in similar dilapidated downtown areas and they assume the built environment as a starting point and a resource that can be creatively modified and adapted through the design process.

Another common feature is the intention – expressed by all the groups – to (re)define physical and visual relations among the different parts of the schemes at the architecture scale on the one hand, and between the site and its surroundings at the urban scale on the other. This happens through the adoption of several spatial devices, such as underground passages, terraces, suspended walkways, stairs and ramps that link buildings, newly defined public spaces and the surroundings. This is a clear refusal of the idea of a city that is composed of self-sufficient, privatized and impenetrable islands – of which the residential gated communities and the commercial malls are clear examples – and it highlights a renewed interest for the idea of a shared, flexible and collective space that can assume different meanings and programs during the 24 hours of the day (Miao 2011).

In conclusion, far away from being definitive solutions, the students' proposals can be read as the framing of the wicked problems that concern the regeneration and subsequent re-use of this area. They highlight needs, deficiencies and potentials of this part of the district in particular, and of the city in general, that would be difficult to track down adopting different methods of inquiry other than the design one. They mark discontinuities with the common architecture practice and the widespread idea of city by proposing a holistic approach that operates at multiple levels, from the architectural and urban forms to the social dimension.

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Notes

1 **The title of this brief chapter takes inspiration from the theme of the 2019 ILA&UD Putuo *charette, Discontinuity in Contemporary City*, and from the paper by Roggema *Research by Design: Proposition for a Methodological Approach* (2017). According to the author's point of view, the Roggema's work can be adopted as a framework to interpret methods and aims of ILA&UD workshop.**

2 **It is currently difficult to express reliable indicators of the real estate market in China, that is the main economic sector together with its satellite activities, due to the lack of basic statistics and transparent data (Pan & Dong, 2020). At the same time, several reports estimate that the House Vacancy Rate (HVR) is roughly 22% that correspond to 50 million units (Blazyte, 2018), or to an even higher figure (The Economist, 2021).**

3 **According to the author's 10 years' life and working experience in China, the general public sees this practice as an unavoidable cost to be paid in order to achieve prosperity and a certain level of economic and urban development in a short span of time.**

4 **The activity was promoted by the Putuo District Local Government and it was aimed at exploring possible future scenarios for an abandoned *lilong* residential area in Shanghai downtown.**

2. Larger Framework. The Dispersed Infrastructures of an Autonomous Urbanism

宏观的框架：自治城市主义的分散基础设施

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Illustrations: All images are by the author

Cities began as a simple collection of individuals sharing common elements to each other's benefit. They have slowly evolved to include mega-regional, multimodal, geographically carpeting spaces facilitated by vast infrastructural, capital, and political networks. These systems have been manifested by large, far reaching governmental and corporate built forms. With the emergence of dispersed infrastructural realities, we stand at a disruptive moment – where the assumed reliance of human habitat upon top-down urban forms of development is very much in question.

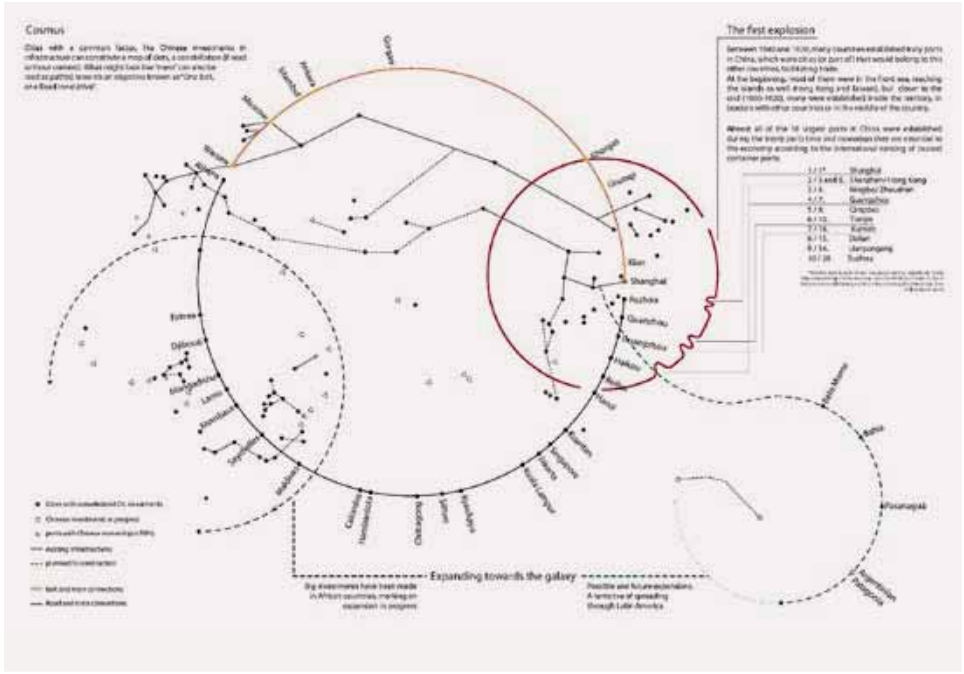
The collective innovations such elements like mobile phones, self-driving technologies, photovoltaic cells, drones, block chain, and AI in general point towards a myriad of possible shared autonomies. The existing development of a "community" requires assorted pipes, wires, banks, and assorted other environmental insertions. But now, we can easily obtain energy from the sky, exchange value directly digitally, move without roads, and much more. These technologies allow for a totally new, or perhaps back to the original roots, form of civilization formation. A new form of interdependent individuality is possible.

The smart city perspective sees all of these societal tools and continues to assume along the same paradigm. Larger powers can employ a top-down system to the benefit of all. But these dispersed infrastructures allow for a total recalibration of the collective.

城市最初是一个简单的共享互益的人的集合，但它们已经慢慢演变为拥有由庞大的基础设施、资本和政治网络推动的大型区域性、多模式性和覆盖性的地理空间。这些系统已经通过大型的、影响深远的政府和企业建筑形式体现出来。随着分散的基础设施的现实，我们站在一个颠覆性的时刻一假设人类居住的依赖是自上而下，城市发展形式仍然存在很大问题。

手机、自动驾驶技术、光伏电池无人机、区块链和人工智能等协同创新通常指向无数可能的共享自主经营。现有（社区）的发展需要各种与环境对接的基础设施如管道电线、平台等。但是现今我们可以轻松地从天空中获取能量，直接进行数字交换，无需道路即可移动等等。这些技术允许一种全新的，或可能回归本源的文明形式一一种相互依存个体的新形式的出现。

从智慧城市的角度看待所有这些社会工具，并继续沿着相同的范式假设。一个自上而下的系统可以被更大的权力所采用，以造福于所有人。这些分散的基础设施允许对整体进行全面重新校准。现在我们的基础设施可以"直接对话"，无需一个高级别的框架。这些用于自治城市化的工具可以是自筹资金、自我管理的，且协同工作。这种复杂基础设施的规模使分步融资、逐步发展和更加自给自足的"城市"发展模式成为可能。



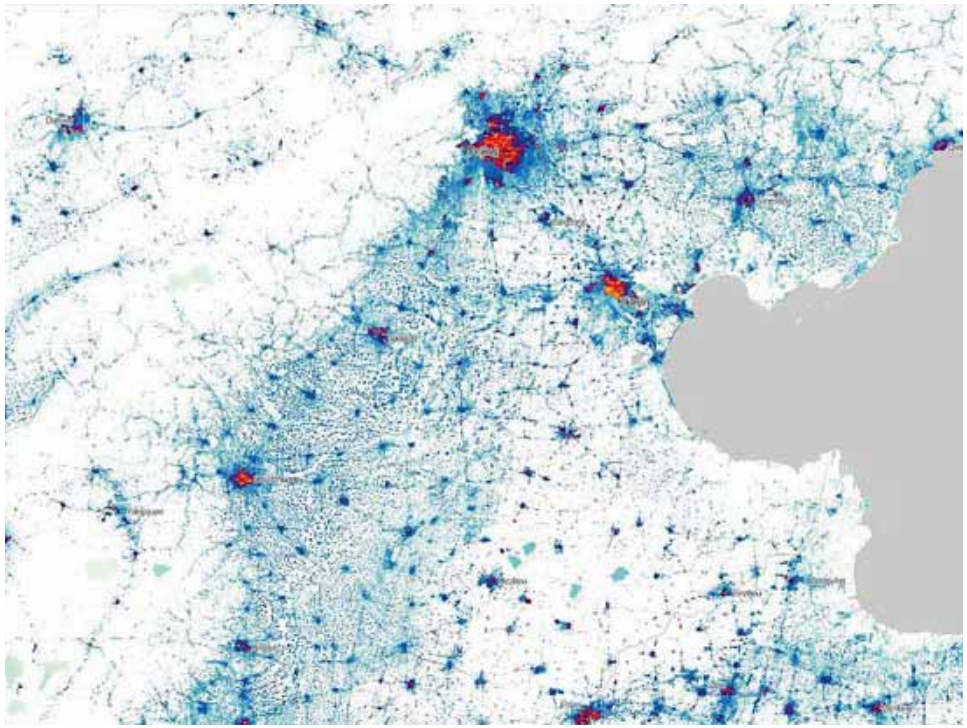


Fig. 1 - Illustration of *Belt Road Initiative, as neither belt nor road but a constellation of linkages*
图例1- "一带一路，既不是一带一路，也不是道路，而是一系列联系 "

Fig. 2 - Image of dispersed but linked reality of Chinese Urbanization
图例2- 中国城市化分散但相互联系的现实形象

Now that our infrastructures can “talk to each other”, an overriding framework is no longer necessitated. These tools for autonomous urbanism can be self-funded, self-managed, and yet all working together. The scale of such imbricated infrastructures allows for stepped funding, evolving phasing, and more self-sufficient modes of urban development.

Open-Source Villages

Our current reality of interconnected global capitalism has left our rural lands beyond in pursuit of more urban conceptions. Whether the vacancies of Italy left behind villagers in China, or ignored realities of small-town in America, the challenges facing the rural have yet to be resolved. But there are hints at models for alternative futures for our rural habitats.

Taobao villages in China point to a future where rural making and craft skills pivot to link to global supply chains and permit for labor realities of the rural to demand potentials of the urban. In older and more formal examples such as Città Diffusa outside of Venice, one can see the potentials of a constellation of urbanism linked to global supply chains. This extends upward and arching to the UK in the form of the Blue Banana – mostly composed of a series of smaller cities linked by transport and economic exchanges. Similar historical examples exist in India, extending from Calcutta to Delhi and have been identified as the urban form of Desakota in Indonesia.

These forms of Constellation Cities point towards a possible new future for our scattered countryside habitats. The necessity for greater logistical, ecological, and economic connections in these places to our new global reality can be seen in Dispersed Infrastructures and accompanying Autonomous Urbanisms.

Dispersed Infrastructures

The inventors and industries that conceived and released cars and elevators upon our cities last century could not foresee the implications of their innovations on our environments and our society. The technology companies now developing new forms of markets, movement, waste, water and energy collection similarly are blind to the

开源村

我们当前相互关联的全球资本主义的现实倾向于城市构想，并已经脱离了我们的农村土地。无论是意大利农村的空置现象，中国农村留守人员，或是被现实遗忘的美国小城镇，这些农村面临的挑战尚未解决。但是未来农村居住在未来有其他可能的模型。

中国的淘宝村预示着一个未来，将农村手工艺制作技能转向连接全球供应链，并对接农村的劳动力现实与城市的需求潜力。已知的例子如威尼斯城外外的“CittaDiffusa”，人们可以看到与全球供应链相关的城市化集群的潜力。它以“蓝香蕉”（欧洲大都市带、曼彻斯特 -米兰轴或欧洲的骨干）的形式向上延伸到英国——系列的小城市通过交通和经济交流联系起来。类似的历史例子也出现在印度，从加尔各答延伸到德里，并被确定为印度尼西亚德萨科塔（城乡结合部）的城市形式。

这些城市集群形式为分散的乡村居住地指明了一个新未来。在分散的基础设施和自治城市主义中可以看到这些地方与新的全球化建立更大的后勤、生态和经济联系的必要性。

分散的基础设施

上个世纪在城市中，汽车和电梯的发明家和行业无法预见他们的创新对我们现金环境和社会影响。 同样，当下正在开发新形市场、物流、废物、水和能源收集的技术公司对未来的影响无法预见。然而，这些技术实验中心形成了一系列遍布全球的案例研究，实地数据可以在这些试验场被记录下来。这些现实空间还可用于新兴环境经验积累和推动。

中国淘宝村和肯尼亚 M-Pesa 的移动银行中心，可作为新市场和金融交易的现实例子。德国具有最具标志性的自动驾驶汽车存储节点以及卢旺达的基加利第一个无人机港口目前正在启用中。未来的水基微型港口也将在中国古老的水上渔村宁德建成。在以色列和摩洛哥社区，Water-gen 等公司正在探索如何从空气中获取淡水。与此同时,马达加斯加正在实施无水小型厕所技术。混合存储、光伏和小规模风力发电的新型微电网系统正在菲律宾群岛的各社区中测试。

Fig. 3 - Diagram of linking systems of Shaji, example of Tao Bao village
图例3 - 沙集连接系统图，以淘宝村为例

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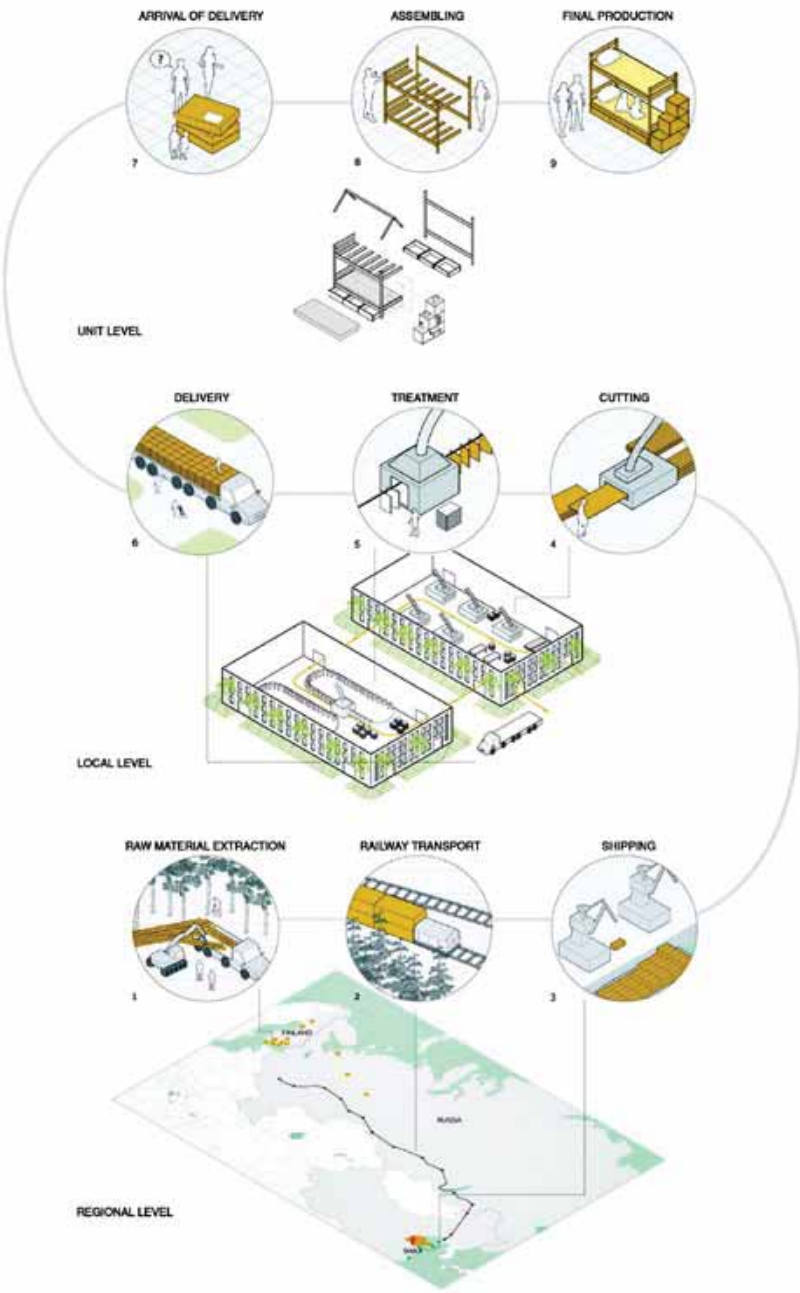

Fig. 4 - Example of drone delivery in rural China
图例4 - 中国农村无人机送货的例子

extrapolations of their works. However, at these test sites, one can document the realities on the ground. The hubs of experimentation for these technologies form a series of case studies spread across the globe. These spatial realities can be used to extrapolate lessons for our emergent environments.

The implications of new markets and financial exchanges can be observed in the so-called Taobao Villages of China and the mobile banking hubs for M-Pesa in Kenya. The most iconic storage nodes for self-driving vehicles are in Germany, while the first drone port is currently underway in Kigali, Rwanda. The future of water-based micro ports is perhaps ancient but ever evolving, as in the floating fishing villages of Ningde, China. The supply of freshwater from the air is being explored by companies like Water-gen in communities of Israel and Morocco. Meanwhile, waterless small scale toilet technologies are being implemented in

非正式的骨架

城市历来是文明和知识中心，但我们现在提出的问题是一什么是城市？“城市”的界线在哪里？城市不仅由规划师、建筑师、开发商和政府定义，而且通常由它们内部的移动元素所定义。20世纪城市中的移动元素的科技衍变一汽车和电梯一改遍了我们现在的集群城市。最近出现的叠瓦式分散基础设施，启发我们从根本上重新构思如何建设和重新概念化周围世界的形式。柯布西耶有句名言：历史悠久的城市是由“像驴迹一样的弯曲街道”构成的，而工业时代将“为人提供长而直的街道”。如果我们不再需要道路、电网、市场大厅，知识将在空中流动一社会还留下什么空间？作为空间设计实践者，我们如何在新的自治城市主义的可能性范围内设置框架？

项目

N3：宁德新自然

在福建省宁德市北部的一个山谷中保留了一系列现有的遗产村，但与之和谐相处的乡村、粮食生产和全球社区的新形式正在形成。

客户并非通过土地开发和食品销售来创造经

Madagascar. New micro grid systems that mix storage, photovoltaics and small-scale wind energy generation are being tested in the islands' communities of the Philippines.

Aformal Armatures

Cities have traditionally been the centres of civilization and knowledge, but we are now at a time where one must ask – what is a city? Where does a “city” stop? Cities have always been defined not merely by planners, architects, developers, and government but often by their moving parts. The shifting technologies of the moving parts of the 20th-century city – i.e., cars and elevators – reformed our now Constellated Cities.

The recent emergence of imbricating Dispersed Infrastructures frames a moment in time where we can fundamentally reconceive how we make, fund, and even reconceptualize the form of the world surrounding us. Le Corbusier famously said that historic cities were made of “curved streets that are a donkey's track” and that the industrial age would allow for “long straight streets for men”. If we no longer necessitate roads, power grids, market halls, and knowledge flow through the air - what space remains for society? How do

济收入，而是通过收集数据和预测农作物最佳生长分布来创造经济收入。这使项目专注于其他的“价值创造”。

农村社区面临着如何发展、如何养活世界的全球挑战。该项目将这些问题重要性集中体现在中国地区农村。通过既不将温室农业视为“食品工厂”，也不将农村生活视为时间冻结，该项目能够为土地和粮食生产基础上的社区建设概念带来全新的解读。

景观和空间的理念是将现代方法和功能与质朴的审美悟性相结合，从而将建筑与周围环境相融合。设计从场地的农业环境开始，并以一种旨在在建筑和农业环境两者之间创建各种公共空间的方法重新阐释。总体规划借鉴了当地田间路堤图案，并将其简化为沿曲线布局的植物盆栽，作为整个场地的基础图案。然后将图案与现场的主要路网和温室布局叠加。弯曲的景观形式与网格形成鲜明对比，使温室和住宅单元周围的空间更随意和舒适、且具备一定私密性和花园般的特质。其中的植物盆栽的曲线布局在重心位置围合成一个小广场/公共空间区域，可以进行各种活动，例如休息、玩耍或餐饮.

中心主题区域主要使用竹子/乡土材质及可食用植物。使用竹子和木材等天然材料，或陶瓷瓦等传统材料，旨在赋予场地质朴的特性，让人们感受乡村和田源的漫步感觉。将现代温室建筑与有机质朴的景观元素相结合，创造了一种新型的农业景观。

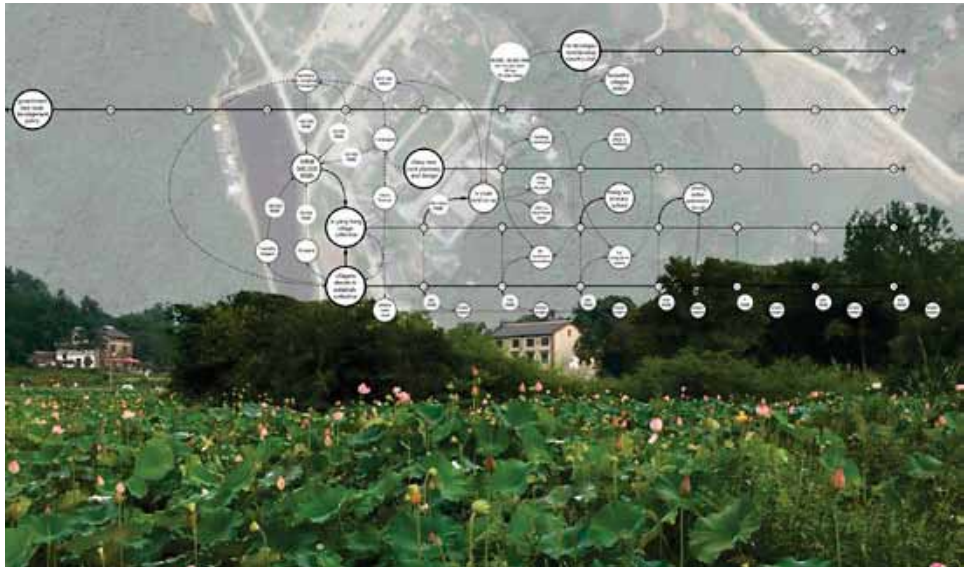

Fig. 5 - Illustration of Aformal Armatures that impact spatial economic realities in rural China
图例5 - 影响中国农村空间经济现实的非正规骨架的说明

we as spatial practitioners set up armatures within the possibilities of a new Autonomous Urbanism?

Project / N3: Ningde New Nature

In a Valley just north of Ningde, Fujian Province, a series of existing heritage villages are maintained, yet a new form of a rural, food producing, global community is formed in harmony with it.

The client does not create economic income via land development or even food sales but by collecting data and distribution on how foodscapes can best grow. This allows the project to focus on other ideas of 'value generation'.

There has been a global challenge to both how our rural communities can evolve and simultaneously how we can feed the planet. This project brings those often-separated questions together and focuses it in a place where both are key to the region-rural China. By neither seeing greenhouse agriculture as factories for food, nor seeing rural life as frozen in time, the project is able to bring a fresh reading to the notion of a community built on the land and food production.

主广场作为村庄的核心，采用了圆形凉亭衔接了小商店，并提供遮阳并突出了中心活动广场。庭院空间提供不同于主广场的私密安静的公共空间。中心竹亭被被植物包围，人们可以自由地坐在长凳上休息或在碎石地上野餐。

独立的封闭式休息小屋/凉亭嵌入有机种植园中，通过小径穿过种植园到达。将有机种盆栽布局成有高差的地形，并添加各种工儿童玩耍的娱乐的设备。

激发新知识的“实验项目”装置在2020年深港双城双年展中展出，进一步探讨了该项目的影响。

装置

数据景观

技术不仅带来了对城市的全新概念的见解，而且还引发了有关城市的定义及组成部分的新概念。随着我们当代城市的实体形式不断扩展，它们的足迹也在不断扩大。农村和城市的二分法开始变得模糊，因为我们的城市空间越来越明显地依赖于“农村”的存在。此外，曾经定义城市概念的基础设施已经延伸到腹地并正在促进农村工业化。集成城市主义等概念试图以城市的网络和节点来描述我们的城市，而不是通过用来定义它们的围墙。但是，尽管有这些系统联系存在，我们现代社会中往往缺乏人际之间的连接。

该装置基于福建省宁德市边缘的一个真实项目

Fig. 6 - Aerial image of Ningde New Nature project with the valley opening to the sea
图例6 - 宁德新自然项目航拍图，山谷向大海开放

The idea of the landscape and spaces is to merge modern approach and function with rustic aesthetic sensitivity, thus merging the architecture with the surrounding context. The design starts from the agricultural contexts of the site and reinterprets it with an approach that aims to create various public spaces in-between. The overall master plan extracts the field embankment patterns and simplifies them into curvy planters as the base pattern of the entire site. The pattern is then overlayed with the strict grids created by the main road and the greenhouse layout. The curvy landscape forms a stark contrast with the grids and renders the spaces around the greenhouses and residential units less formal with more comfortable, intimate, and garden-like qualities. At certain points, the curvy planters are able to frame a small space in the centre as a small plaza/public space area where various activities such as resting, playing or eating can take place.

The central theme surrounding materiality is using bamboo/rural materials and edible planting. Using natural materials such as bamboo and wood or traditional materials such as ceramic roof tiles aims to give the site a rustic quality, reminding people of its rural roots and the feeling of walking in fields. A new type of agricultural landscape is created by combining modern greenhouse architecture with organic rustic landscape elements.

As a central focus of the village, the main plaza has a leading design element of a circular pavilion connecting to the retail shop providing shading and outlining a central place of activity in the plaza. The courtyard spaces aim to provide an intimate and quiet public space different from the main plaza. Being surrounded by plants, the centre features a raised bamboo pavilion. People are free to sit on the long benches, rest on movable furniture or have picnics on the gravel ground.

Individual enclosed resting cabins/pavilions are embedded into the organic planters, with small paths cutting through the planters to reach them. The area is turned into a playscape area by transforming the organic planters into landforms by creating various height differences with mounds and adding various playful equipment to it, allowing kids to have fun.

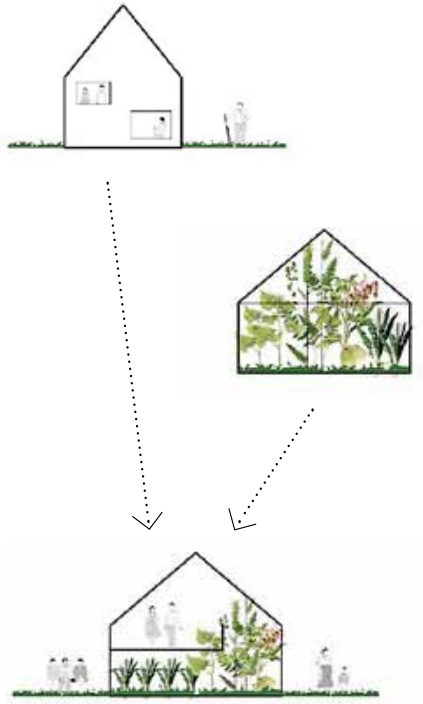

Fig. 7 - *Fresh Rural Living*
Learning from traditional village homes and hybridizing with new ways of food production, a new way of living amongst nature is created.

图例7 - 新鲜的农村生活
从传统的乡村住宅中学习并与新的粮食生产方式相合， 创造了一种新的自然生活方式。

Fig. 8 - *New Mixed Use*
Living and working above what you can eat. Allowing natural systems to flow below.
图例7 - 新的混合用途
生活和工作加高于食物种植之上。 允许自然系统在下面流动。

This is a “truly experimental project” and is really taking place right now, generating new knowledge. Moreover, the projects implications have been further explored through an installation featured in the Shenzhen/Hong Kong Bi-City Biennale of 2020.

Installation / Landscapes of Data

Not only has technology brought about a fresh notion of seeing the city, but it has even brought forth new concepts of what a city is and whom is a part of the city. As our contemporary cities have expanded in physical form, so has their footprint. Dichotomies of rural and urban have started to blur, as it is more and more evident that our urban spaces rely upon the “rural” for their sustenance. Further, the infrastructures that once defined out notions of the city have extended out into the hinterlands and are industrializing the countryside. Concepts like constellation urbanism attempt to describe our cities not by the walls that used to define them, but the nodes and networks that link them. But despite these systematic linkages, the human connections are often lacking in our modern society.

This installation is based upon a real project and real client on the edge of Ningde in Fujian province. The client is a high-tech, data client. They possess spatial imaging patented software that they use to gather data from their satellites, drones, and cameras within greenhouses. With their ‘eyes’ they observe their foodscapes or high-tech farms. They collect these data on how the plants grow, how soil behaves, etc, and that is their “product” – the data – not the plants themselves. This allows them to possess immense knowledge on the nature… of nature… and how it relates to what we all eat to survive.

The installation itself seeks to illustrate how these layers of viewing datascapes allow for a different engagement for citizens with their food, how their food is made, the communities it is made within, the networks that bring them their food, and the communities of people that work to provide these food sources. We literally break the layers of viewing into extruded forms and allow visitors to engage with the plants on different levels and from different perspectives. We project the data harvested from the

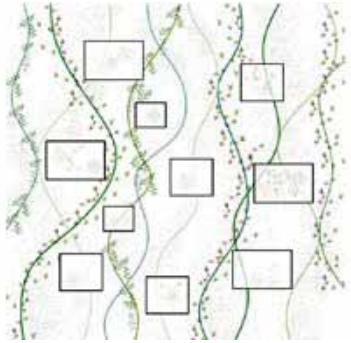

Fig. 9 - *Fresh Grounds*
Idea of in/outdoor is blurred, fully. Foodscape’s meander across the site, in connected networks.
图例9 - 新鲜的理由
室内/室外的概念完全模糊。 Foodscape 在连接的网络中蜿蜒穿过站点

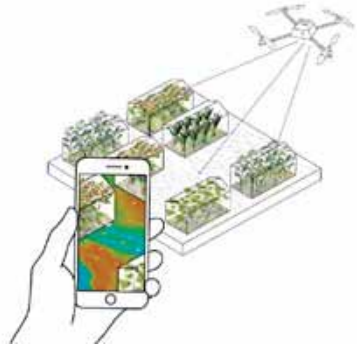

Fig. 10 - *Seeing The Invisible*
Previously known qualities of spaces - heat, wind, groundwater - that were unseeable; are now visible and measurable though new technologies to ‘see the rural anew’.
图例10 - 看见看不见的
先前已知的空间特性—热、风、地下水—是看不见的； 现在通过“重新审视农村”的新技术变得可见和可衡量

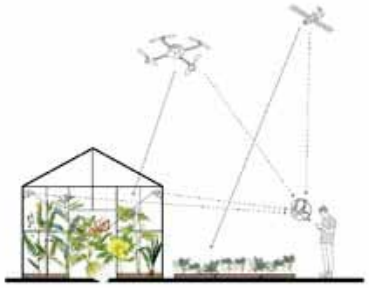

Fig. 11 - *Layered Viewing*
The ability to perceive the landscape is now layered. By using satellites, drones, and cameras in greenhouses we can see our natural context in a whole new series of frames.
图例11 - 分层观看
感知景观的能力现在是分层的。 通过在温室中使用卫星、无人机和相机，全新框架中看展示自然环境

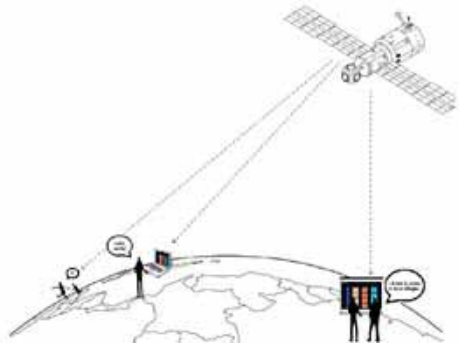

Fig. 12 - *Globally Local*
Community engagement literally takes on a new dimension as the project links local farmers to the global market and knowledge network
图例12 - 全球本地
随着该项目将当地农民与全球市场和知识网络联系起来，社区参与实际上具有了新的维度
.

Fig. 13 - *Layers of Culture*
Traditional field lines and streams are maintained, east/west axis is inserted for efficient solar/logistics, and leisure lines for pedestrian flow throughout.
图例13 - 文化分层
保留了传统的田野线和溪流，插入东西轴线以实现高效的太阳能/物流，以及贯穿整个人流的休闲线

Fig. 14 - *Adjacent Ecologies*
The 'open grounds' allow for assorted biotopes to sit comfortably next to each other. Allowing people to stroll amongst a rich array of wild and machine-maintained foodscapes.
图例14 - 相邻生态
“开放式场地”允许各种生物群落舒适地彼此相邻。让人们可以漫步在丰富的野生和机器维护的美食景观中

Fig. 15 - Initial built greenhouses for researching, collecting data, and for education
图例15 - 最初建造的温室用于研究、收集数据和教育

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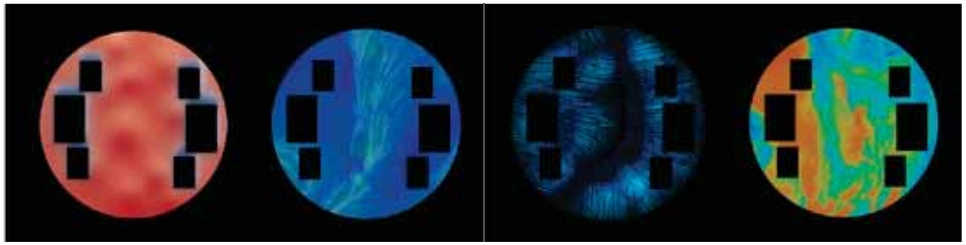
Fig. 16 - Installation of *Landscapes of Data* at Shenzhen Biennale 2020
图例16 - 2020深圳双年展“数据的风景”装置

Fig. 17 - Users interacting with the plants and data.
图例17 - 用户与植物和数据进行交互

Fig. 18 - Illustration of *seeing the unseen*, the data allowing air, heat, and subsurface water to be *seen*
图例18 -“看到不可见”的插图，数据允许“看到”空气、热量和地下水



site back upon the installed landscape components to depict to the viewer the reality of this extra layer that can be ‘seen’ through these new lenses.

As our eyes are no longer limited by our human capacity, our cities are no longer limited by what we humans can walk to. Technology has warped our world and its landscapes. We can leverage this warped reality to bring us closer to each other even if we are far apart.

Our sustainability

The potentials of these emerging realities are manifold. First, it allows a manner of creating less intrusive places on the existing landscapes and systems. Furthermore, it permits the existing networks to remain intact while still linking to larger glow potentials. Further, this way of generating spatial frameworks allows citizens to take a more active and aware role in their impact on our planet. Further, this way of generating spatial frameworks allows citizens to take a more active and aware role in their impact on our planet. And with that comes the potential to form new collectives that enable a more informed sense of sharing and efficiency in using our resources.

This framework of thinking and designing our networked society is a counterpoint to standard urban systems thinking. If we do not require roads, pipes, and wires to create spaces of human habitation, we can redesign our cities into a much more ecological network. This takes notions of sustainability and brings them into our shared collective spaces.

和客户。客户从事高科技和数据领域，并拥有空间成像专利软件，用于卫星、无人机和温室内的相机收集数据，利用“眼睛”观察食物景观或高科技农场。 他们收集关于植物生长和土壤的数据，数据是他们的“产品”而非植物本身。这使他们能够拥有关于自然以及和饮食息息相关的大量知识库。

装置本身试图说明这些可视化数据景观层如何引导公民与食物的互动，他们的食物是如何在社区中制作的并在食物网络中流动，以及社区居民为提供食物来源作出的贡献。通过观看的层次分解，观众可从不同的层面和角度与植物互动。 现场收集的数据被投影到景观组件上，通过这些新镜头让观众“看到”另一层的现实。

由于我们的眼睛不再受人类能力的限制，我们的城市也不再受人类步行范围的限制。技术已经扭曲了我们的世界景观。即使我们相距很远，可以利用这种扭曲的现实来拉近彼此的距离。

Fig. 19 - Illustration of potential to rethink our streets and communities to bring sustainable networks home
图例19 - 重新思考街道和社区以将可持续网络带回家的潜力的说明

关于可持续性

这些新兴科技现实的潜力是多方面的。首先，它创建了对现有景观和系统影响较小的场所，允许现有网络保持完整。 此外，这种生成空间框架允许引发公民对全球的影响采取更积极推动角色。随之而来的是新集体的形成，允许更明智的资源共享意识和效率。

这种思考和设计网络社会的框架是标准城市系统思维的对立点。 如果我们不需要道路、管道和电线来创造人类居住空间，我们就可以将我们的城市重新设计成一个更加生态的网络。这需要将可持续性的概念带入我们共享的集体空间。

3. Learning with *GreenUP*. An Urban Design Strategy for Vertical Edible Green

GreenUP启示：垂直可食用绿化的城市设计策略

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贾科莫 · 皮拉左里
意大利佛罗伦萨大学建筑系

GreenUP is an applied cross-disciplinary research on vertical edible green infrastructure initiated at CrossingLab DiDA-University of Florence by professors Giacomo Pirazzoli (Dept. of Architecture) and Paolo Grossoni (Dept. of Agriculture), presented for the first time at Governing the Large Metropolis international conference in Paris, 2012. One year later, *GreenUP - a Smart City*, the first Internationally endorsed book, was published by Allemandi International (Turin-London-New York)(Pirazzoli & Grossoni, 2013). An early cross-media platform – including a video by Filippo Macelloni with drawings by Agnese Matteini: https://vimeo.com/87993255[1] – provides support for workshops, courses and seminars – mainly carried on internationally, from France to Germany, Australia, China, the US, Brazil etc. – besides being presented at a TEDx conference and the International Climate Change Conference in Rio de Janeiro, etc.

As a holistic urban farming design strategy, *GreenUP* has been developed mostly vertical due to the lack of horizontal farming land within metropolitan areas. Being an innovative way to design new buildings, *GreenUP* turned to be also a good way to interconnect existing horizontal and vertical green, create a new edible landscape across passages and walkways, and finally provide public, semi-public and private vegetable gardens within the existing urban fabric. *GreenUP*, a systemic and affordable edible urban infrastructure, may be better understood through keywords such as *biodiversity, food resilience, climate change, intergenerational dialogue, community building* etc.; it matches up to nine United Nations Sustainable Development Goals, including: No Poverty; Zero Hunger; Good Health and Well-Being; Clean Water and Sanitation; Reduced Inequalities; Sustainable Cities and Communities; Responsible Consumption and Production; Climate Action; Partnership for the Goals.

Presently we are implementing several strategic partnerships to face new challenges on biodiversity, mainly with Archeologia Arborea Foundation, Italy, as well as with Italian CNR-National Research Council; regarding nutrition issues and well-being, with the Italian Ministry of Health, as well as with EMBRAPA (Hortaliças

GreenUP是有关垂直农业的绿色基础设施应用跨学科的研究，由佛罗伦萨大学建筑系贾科莫 · 皮拉左里教授和农业系保罗 · 格罗索尼教授尼在CrossingLab实验室发起，并于2012年首次在巴黎举行的国际会议‘治理大都市’上发表。一年后，Allemandi International（都灵-伦敦-纽约）出版了第一本获得国际认可的出版物GreenUP -a Smart City（皮拉左里和格罗索尼，2013年）。除了在TEDx 会议和里约热内卢国际气候变化会议等上发表之外，还在早期的跨媒体平台（包括Filippo Macelloni的视频和Agnese Matteini的绘画讲习班）传播，同时在法国、德国、澳大利亚、中国、美国、巴西等国家获得一定的知名度。

作为一种整体的城市农业设计策略，GreenUP垂直开发主要针对大都市地区缺乏横向耕地的问题。作为设计新建筑的创新方式，GreenUP 很好的衔接了水平和垂直绿化，在步行通道空间创造可食用绿化景观，为现有的城市肌理提供公共、半公共和私人蔬果园。 GreenUP 的可食用城市基础设施，更系统性更低成本，能更好地从生物多样性、粮食顺应力、气候变化、代际对话、社区建设等方面理解；并符合九个联合国可持续发展目标：无贫困；零饥饿；身体健康和幸福;清洁水和卫生设施; 减少不平等; 可持续城市和社区; 理性消费和生产；气候行动；实现目标的合作关系。

目前，为了应对生物多样性带来的新挑战，我们正在实现以意大利Arborea考古基金会以及意大利CNR国家研究委员会为主的多项战略合作伙伴关系，以及与意大利卫生部以及EMBRAPA（巴西霍塔利萨斯国家农业局，作物和蔬菜部门）关于营养问题和福利进行合作。迄今为止，已有超过200名研究人员、学生和专业人士参与了GreenUP项目。

景观建筑：一个美学驱动的议题?

事实上，GreenUP可能被（误）理解为西方历史中的风景园林，或是类似于从圣经中的传说所罗门神殿的空中花园开始，到文艺复兴时期的花园以及著名的法国十七世纪风景设计师如安德烈 · 勒诺特尔，到布雷 · 马克斯在的巴西作品等。

Illustrations: All images are by the author

Fig. 1 - GreenUp design strategy. Image by Agnese Matteini included in the video GreenUp / a Smart City (CrossingLab) by Filippo Marcelloni
图例1 - GreenUp 设计策略

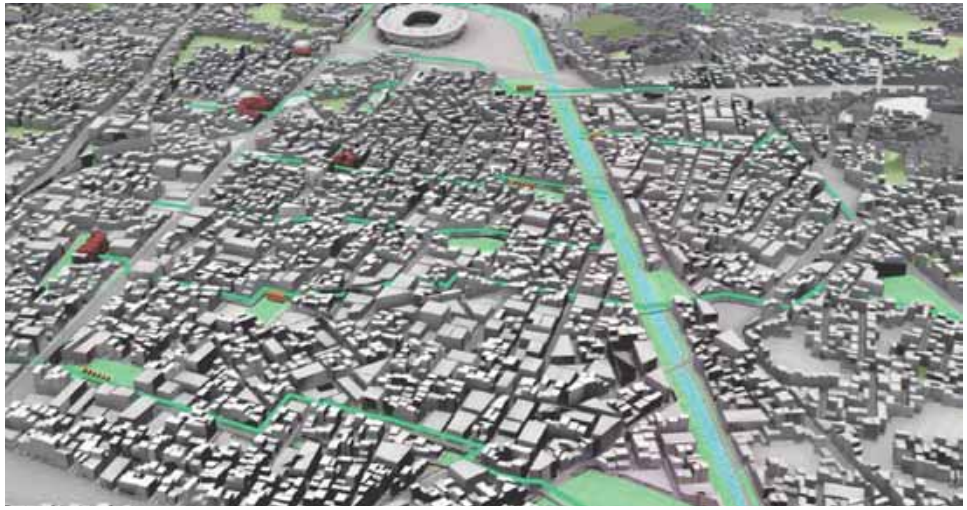

Fig. 2 - GreenUp systemic network
图例1 - GreenUp 系统网络

National Agriculture Agency of Brazil, Crops and Vegetables Unit), to mention a couple. To date, more than 200 researchers, students, and professionals have taken part in *GreenUP.*

Landscape Architecture:
An Aesthetics-only Driven Issue?

As a matter of fact, *GreenUP* may be (mis) understood as something dealing with Western history's landscape architecture, which generally starts from legendary hanging gardens of Solomon's Temple, actually mentioned by the Bible, to include Renaissance gardens plus French XVII Century *Paysagisme* by famous architects such as Le Nôtre, to reach Roberto Burle Marx' Brazilian works etc.

For sure, the mid-concept Landscape Architecture helps understanding how difficult it is for us, the architects, to merge a natural/ living issue – as *landscape* actually should be thought – with an artificial/death one, as *architecture* – using its components – is. Being educated and trained with "death materials" (concrete, iron, stone, glass etc.) supposedly eternally keeping the way we designed them, when dealing with "living materials" (trees, shrubs, crops and vegetables in general), we fail badly. Cult-book *Trees Architecture* by Cesare Leonardi and Franca Stagi helps to reflect on this paradoxical issue the other way round: any tree or living material cannot be drawn appropriately, since it constantly grows or dries or even dies, albeit certainly, it does not keep the same shape and size, as a concrete slab does, instead. Thus, whenever we realise that it is actually impossible to survey living materials, we get clear that dealing with nature/ living materials involves a profound paradigm shift from a regular (dry) architecture mindset. As for Leonardo Da Vinci, when self-training drawing fire, smoke or clouds, we need to be conscious of the impossibility of drawing right and correcting any natural material. Designing nature needs to learn thinking in terms of changing forms, colours and shapes; in other words, it is mostly about un-controlling. In this regard, Gilles Clement's research is brilliantly pivotal when radically self-distancing from the currently obsessive hyper-design of landscape architects who cut and shape plants and gardens, treating them as death/artificial materials instead.

当然，景观建筑这一概念，有助于理解建筑师将自然/有生命的问题（景观）与人造/物质的问题（建筑）组合起来。从教育和实践上理解，在设计中"物质材料"（例如混凝土、钢铁、石材、玻璃等）是永恒的，但是"自然材料"（例如树木、灌木、庄稼和蔬菜）却不然。Cesare Leonardi 和 Franca Stagi 的 建筑书Trees Architecture 让我们反思了这个矛盾：任何树木或自然材料都不可能被精确的绘制，也不会保持类似混凝土板的常规形状和尺寸，因为它们在不断地生长或干枯甚至死亡。因此，由于不可能精确测绘自然材料，处理自然/ 有生命的材料意味着，常规建筑思维方式需要转变。像达芬奇在自学画火、烟或云的自然现象时，我们应该认识到，精确地绘制和修改任何自然材料是不可能的。在设计自然元素时，需要运用发展和变化的思维，例如造型、色彩、形状的变化；换句话说，不去刻意控制变化。在这方面，吉尔斯·克莱门特的研究非常有价值，因为它彻底摆脱了当前景观设计师将植物和花园视为人造/物质材料并过度设计的痴迷。

垂直化

自然与人工结合及启发，有少数富有远见的建筑参考，如 James Wines 的 Highrise of Homes (1981)，Lina Bo Bardi为圣保罗州设计的开创性垂直花园（1990，未建成），埃米利奥·安巴斯的福冈县绿色屋顶 (1993)，让·努维尔为雅克·希拉克与米兰的Bosco Verticale（博埃

Going Vertical

In a stimulating hybrid intersection of the natural and the artificial lies the handful of visionary architectural references such as Highrise of Homes (1981) by James Wines, the pioneering vertical garden by Lina Bo Bardi for the Prefecture of San Paulo (1990, unbuilt), Emilio Ambasz' green roof of the Prefecture of Fukuoka (1993) passing through the priceless Patrick Blanc's green mask of the Parisian Musée du Quai Branly by Jean Nouvel for Jacques Chirac (2005), jointly with Milanese Bosco Verticale (Boeri, Barreca, La Varra 2009-14) – whose astronomical management costs are often criticised, rather forgetting its non-trivial alternative solution to the standard glass-mirror facade. As a common issue, all of these examples share (charming) aesthetics. That is to say, functional side effects such as capturing C02 and increasing air quality have only recently emerged to make urban green an appropriate tool among Nature-Based Solutions to environmental and health-related within metropolitan areas.

Nature-Based Solutions - a Brief Focus on

At any evidence, *GreenUP* itself is an NBS-Nature Based Solution. Then, it is worth knowing that NBS, in general, aim at being cost-effective to "provide environmental, social and economic benefits and help build resilience"[2]. Furthermore,

里、巴雷卡、拉瓦拉）共同创作的巴黎国家凯布朗利博物馆 (2009-14），并结合景观艺术家帕特里克·布兰克的大型绿色垂直装置，虽然其天文数字管理成本经常受到批评，但其代替标准玻璃幕墙的重要解决方案却不可否认。所有这些例子都具有（迷人的）美学，其附加功能性作用（例如吸收二氧化碳和提高空气质量）直到最近才引起关注，城市绿化成为大都市内，解决环境和健康相关问题的基于自然的合适工具。

基于自然的解决方案 - 简要关注点

GreenUP本身就是一个基于自然的解决方案 (NBS)，而且NBS致力于有效成本，以"提供环境、社会和经济效益并帮助建立复原力" 为目标。此外，正如欧盟声称的那样，NBS应该"通过因地制宜、资源优化和系统性的干预措施"，将自然和自然方法带入城市、景观和海景。从理论上讲，在农业方面的技术治理的替代方面，从转基因生物到大量使用的化学品和化肥（正如盖茨基金会与世界银行所倡导的那样）；相反，NBS则是理想的可持续并需广泛实施的方案。然而，例如，欧盟考虑为NBS研究提供大量经费时，提出"影响因素"仍然是一个学术为主的问题，而大量的研究产物，如网站、网络研

Fig. 3 - GreenUp concept, before and after
图例3 - GreenUp 概念，之前与之后

as European Union claims, NBS should bring nature and the natural approach into cities, landscapes and seascapes, "through locally adapted, resource-efficient and systemic interventions"[3]. Being theoretically the alternative side to technocratic approach – which, when about agriculture, spans from GMO-Genetically Modified Organisms to chemicals and fertilizers massive use, as advocated by Gates Foundation in connection with World Bank, instead – NBS might be ideally regarded as the most intrinsically sustainable approach worth being implemented almost everywhere. However, unfortunately, when considering, for instance, the significant amount of money that the European Union granted to NBS research, it turns clear that the so-called "impact factor" remains mostly an academic issue, while tons of research products such as websites and webinars, papers, e-books, guidelines and policies seldom get in touch with the real world. Lack of prototyping, and related monitoring activity, turned such a huge theoretical effort into a kind of fiasco when focusing on the applied/real outcomes.

Whenever considering worldwide known NBS actually designed and built, feedbacks are not better: for instance, the extensive hydroponic green walls installations in Sao Paulo, Brazil, after three years look mostly broken or in harmful conditions. Over there, the urban standards deal which is behind such expensive plus massive installation turned to be twice ineffective, unfortunately:[4] first because of the real CO_2 extraction and Oxygen production by hydroponic green walls, which is hardly comparable with the average outcome produced by a regular tree – that is to say: the replacement of one single tree requires an extensive amount of hydroponic green walls; second because of the maintenance, which is absolutely expensive, actually unbearable by the public administration which was supposed to take care of the infrastructure right after its construction by the Real Estate players.

Among other NBS, algae have long been a research challenge to produce biomasses, hence energy; unfortunately, a few real interventions have been implemented while still waiting for a largely announced project at Milan Expo 2015, which was a certain point silently cancelled.[5]

Lots of NBS may also pop-up easily when googling the issue from a DIY perspective: lots of bloggers and YouTubers, sadly, tend to

讨会、文献、电子书、指导方针和政策与现实世界接触非常有限。缺乏原型设计和相关的监控活动，如果只关注应用/ 实际结果时，那么在理论上投入巨大努力将变成一场空谈。

设计和建立的世界知名的NBS，其反馈也不甚理想：例如，巴西圣保罗的大规模水培绿墙装置在三年后已大多已损坏或处于不利状态。很遗憾，在昂贵且大规模装置背后违背了两个方面的城市标准：第一，水培绿墙对二氧化碳的吸收和氧气的生产，远无法与正常的乔木相比。换句话说，取代一棵树则需要更大量的水培绿墙。其次是昂贵的维护费，在房地产公司在基础设施建设完成后，负责的公共管理部门通常无法承担。

在其他的NBS中，藻类在生产生物质和能源方面的研究一直是一种挑战；一些项目的具体措施已经实施，并原本在 2015 年米兰世博会宣布，但很遗憾该项目最后被取消。从 DIY的角度检索时，会出现许多 NBS相关内容，但是许多网络博

Fig. 4 - GreenUp, an edible green infra-structure
图例4 - GreenUp 可食用的绿色基础设施

circulate some "products" we can ironically label as *Nothing Based Solutions*; that is to say, the web is plenty of not-working projects or never-tested ones, often based on naive ideas about vertical gardens – either ornamental or edible – to apparently handle an issue which is technically not banal at all.

When about Startup-developed NBS, the world "greenwashing" also fits quite well to identify the majority of them; furthermore, such sub-financial environment usually looks towards hi-tech quick+expensive solutions, rather than affordable natural strategies to be implemented. In this case, being technocracy still fashionable despite any failure, a certain number of Sci-fi solutions – even GMO-based – are constantly aiming at entering urban NBS potential market to make money out of the nothingness.

主和 YouTube 用户将有些"产品"标签和讽刺为"解决方案是无中生有"的；这些说法是没有经过验证的，无论是观赏性的还是食用性的都是不成熟的评论。

初创发展NBS，以更好的地响应了全球绿能化；但是次级金融环境通常着眼于高科技快速但昂贵的解决方案，而不是采用低成本的自然战略。在这种情况尽管有不尽人意之处，但技术官僚主义仍然很流行，一些科幻解决方案（甚至是基于转基因的）也不断瞄准进入城市 NBS 潜在市场，以从虚无中获利。

从风景园林到菜园

"去殖民主义"观点及维特鲁威经典的"实用"观点，或有助于首先强调上述"景观建筑"和"菜园"之间的差异。对比与历史上起源于欧洲中心主义或殖民主义的花园和景观建筑共有的高端形象， GreenUP属于后者范畴，符合常理且

Fig. 5 - GreenUp, an edible green infrastructure
图例5 - GreenUp 可食用绿色基础设施

Fig. 6 - GreenUP participatory projects, Dergano Community Pavillions, Milan
图例6 - GreenUp 参与性项目，德甘诺社区馆，米兰

Fig. 7 - GreenUP participatory projects, Dergano School, Milan
图例7 - GreenUp 参与性项目，德甘诺学校，米兰

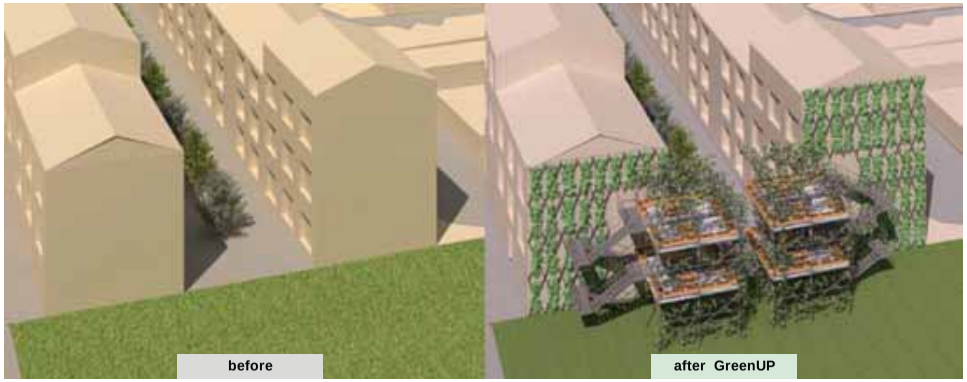

Fig. 8 - GreenUP participatory projects, Dergano Twin Houses, Milan
图例8 - GreenUp 参与性项目，德甘诺双子别墅细节，米兰

From Landscape Architecture to Vegetable Gardens

A decolonial perspective may help to underline first the very difference – whenever under the classical Vitruvian “utilitas” point of view – between above mentioned “landscape architecture” and “vegetable garden”. Belonging *GreenUP* to this second one, it sounds reasonable enough – far beyond the mythological narrative – to actually stress the *functional* focus of the vegetable garden; this, mostly when compared to the historical – then imposed, possibly Eurocentric and/or colonial, export way – upper-class profile that both garden and landscape architecture share. No doubt, they matter to rich land-owners eyes-only pleasure – just reminding the lawn as the “lasting symbol of how settlers appropriated Indigenous land and culture”[6], being kept un-productive to show stunning beauty after effective wealth coming from elsewhere (aka colonies).

Groceries are about, first and foremost, basic needs such as eating; salad and crops have less to do with aesthetics than the tragic story of the acanthus leaves written by Vitruvius about the girl who supposedly inspired the style of Corinthian architecture. Finally, about Western aesthetics and philosophy, there are plenty of coherent books about landscape architecture and gardening, rather than about edible gardens. Not to mention contemporary Western philosophy pays lots of attention to “pet plants”. Indeed, who cares about un-fashionable and un-sensitive edible plants beauty instead?

A Minor History Towards A Great Change

Finally, *GreenUP* vertical farming is about that special kind of nature called agriculture being brought back in town to deal with climate change – including handling the Heat Island effect –and food security and healthy nutrition. Instead of above-mentioned aesthetic issues typical of landscape architecture, *GreenUP* aims at re-conceptualizing references as the minor history of Middle-age convents vegetable gardens – as we did, for instance, when designing the green reconstruction of the demolished cloister colonnade in front of Filippo Brunelleschi’s Pazzi Chapel in Santa Croce sacred complex, Florence (Pirazzoli, 2020).

Other *GreenUP* references from the past include French Clos des Pêches (aka *Mur à*

强调了其菜园的实际功能。毫无疑问，他们（花园和景观建筑）对于富有的土地所有者来说很重要，因为不仅是视觉上的享受，也是传递了将草坪看作“殖民者占居土著土地和文化的持久象征”的信息，将其充分地定义为观赏性而非生产性，因为增加财富的生产可以从其他途径获得（又名殖民地）。

相反，虽然食品是满足最基本的生存需求，但蔬果和庄稼对美学的影响，远不及维特鲁威的关于科林斯建筑风格起源的悲剧故事。很多西方美学中的书籍是有关于景观建筑和园艺，而不是关于可蔬果花园。而当代西方哲学更关注与人互动的植物宠物。显然，谁会关注不时尚和不敏感的食用植物的观赏价值呢?

小历史走向大变革

最后,GreenUP垂直种植是将农业一一种特殊的自然--带回城镇以应对气候变化的影响，这包括了处理热岛效应以及粮食安全和健康营养。与上述典型的景观建筑美学问题不同，GreenUP的目标是重新定义源于历史上中世纪修道院菜园的原型；例如，位于佛罗伦萨圣十字圣地的菲利波·布鲁内莱斯基设计的帕齐教堂，我们在拆除的回廊设计绿色重建时所做的那样 (Pirazzoli, 2020)。

过去的其他有关GreenUP参考资料包括法国蒙特勒伊的Clos des Pêches（又名 Mur à Pêches）可与英国的“围墙厨房花园”相媲美，以及英国的私用菜园和德国的社区农圃传统。Ebenezer Howard的花园城市影响对GreenUP的发展也至关重要，尽管Leberecht Migge 在城市农业和粮食恢复力方面的开创性愿景， 在概念上更接近GreenUP。

更多当代参考文献主要涉及移民、当地人和“草根阶级”的城市激进主义。值得一提的是Incredible Edible Todmorden，一小波入驻英国Todmorden小镇的女性团体，决定在任意地方耕种，从周围可用的土地开始，然后组织跨文化和代际社区聚会和聚餐。同样令人振奋的是柏林公主园，从架高的种植床上采集的蔬菜（在这种情况下，水果盒）中提取果汁；或是多伦多瑞尔森大学的胡萝卜城，一个与众不同的学术倡议，类似阿拉巴马州纽伯恩著名的Rural Studio在校园中设计和建造的温室花园。

还值得一提的是 Majora Carter在纽约布朗克斯区的长期“贫民区绿化”计划的联系和以分析设计为基础的研究纽约市稳态经济（2010年），致力于纽约曼哈顿的食物和能源自给自足，由建筑师、理论家（和朋友）Michael Sorkin 与 Terreform 共同开发和制作。以及最近在巴黎 Pavillion de l’ Arsenal 举办的 Capital agricole - Chantiers pour une ville

Pêches) in Montreuil – comparable to Walled Kitchen Gardens in the UK and Allotment Gardens from the UK and Schrebergartens pivotal tradition from Germany. Ebenezer Howard's Garden City influence also has been crucial to developing GreenUP, although Leberecht Migge's pioneering vision on urban farming and food resilience sounds conceptually closer.

More contemporary references are significantly dealing with urban activism from immigrants, locals, and grassroots groups. Among those, it is worth mentioning Incredible Edible Todmorden, a handful of formidable women who invaded Todmorden town in England, to decide to farm anywhere, starting from the available relics of land around, to then organize community gatherings and dinners to enjoy food together, under a cross-culture and intergenerational perspective. Also inspiring is *Berlin* Prinzessinengarten, with the celebrated juices extracted from vegetables grown on raised beds (in this case, former fruit boxes); or Carrot City of Ryerson University in Toronto, a differently academic initiative, like the greenhouse garden in the Rural Studio well-known design & build campus in Newbern, Alabama.

Cannot skip the contact with Majora Carter's Greening the Ghetto long-time action in NYC-Bronx, nor the rightly extreme analytical-design research *New York City (Steady) State (2010)*, dedicated to food and energy self-sufficiency of Manhattan, New York, developed and produced by the extraordinary architect, theorist (and friend) Michael Sorkin together with Terreform.

Recently achieved exhibition Capital agricole - Chantiers pour une ville cultivée at Pavillion de l'Arsenal in Paris has been a valuable source of spots from the core Europe.

Two other *GreenUP* applied references are the Michigan Urban Farming Initiative, a world-renowned former-industrial case whose mission is to reclaim the city of Detroit, and Dickson Despommier's cult book *The Vertical Farm: Feeding the World in the 21st Century* – flanked by the case study Sky Greens, a global vertical farming industry based in Singapore that claims to "accommodate different means of soil or hydroponics"[7]. Paradoxical issues as the overgrown ornamental plants at Qiyi City cultivée 展览是欧洲核心资源。

另外两个 GreenUP 应用参考的文献是密歇根城市农业倡议，第一个世界是著名的前工业案例，其使命是收回底特律市，第二个是Dickson Despommier的邪教书《垂直农场: 在21世纪养活世界》。Sky Greens 是一家位于新加坡的全球垂直种植企业，声称“适应不同的土壤或水培方式”；而中国成都七一城市森林花园中观赏植物杂草丛生的矛盾问题，也是 GreenUP 批判性研究背景的一部分。

GreenUP 作为特定场景的策略
巴西和中国案例

不同于世界知名公司将全球建筑诠释为风格问题，GreenUP是一种自下而上的工具，实际上受当地条件的滋养，包括农业技术。举个例子，在巴西，我们发现了一种独特且高度可持续的农业方法，称为 agrofloresta，这是由几位著名研究人员（如 Ana Primavesi 和 Ernest Goettsch）实施本土技术和传统技术的完美结合：我们改变了 GreenUP 。再举个例子：当需要在中国实施GreenUP时，开始做中国营养金字塔是关键，特别是“五果为助，五菜为补”与当地文化密切相关，具有潜在的吸引力。关于吸引力，值得强调的是，即使是人工智能、应用程序开发和Arduino硬件等也会使整个GreenUP申请发布变得更加人性化。

GreenUP 作为研讨会学习工具

作为最后的闭环，我们把GreenUP作为研讨会学习工具，很高兴在这里分享佛罗伦萨大学建筑学院2015年iCad国际建筑设计课程（以及2021年第四学期设计课程的成果，他们都强调了GreenUP项目的长远意义。

Notes

1 **See: http://www.crossinglab.com/greenup/**
2 **See: https://ec.europa.eu/info/research-and-innovation/research-area/environment/nature-based-solutions_en**
3 ***Ibid.***
4 **A typically critical public-private deal has allowed real estate investors to replace the number of trees they have cut down for their housing business elsewhere with hydroponic green walls in certain downtown areas.**
5 **The mentioned project was by Carlo Ratti and Cesare Griffa.**
6 **See: https://www.theglobeandmail.com/canada/article-globe-climate-some-of-albertas-oil-sands-tailings-ponds-are-leaking/**
7 **See: https://www.skygreens.com/technology/**
8 **Agrofloresta may somehow be regarded as a kind of permaculture practice, although under a precisely Brazilian site-specific point of view.**
9 **Glad to thank Sao Paulo's Mackenzie University for inviting me in 2017-19; currently working on a book to present**

Fig. 9 - GreenUP participatory projects, detail of Dergano Twin Houses, Milan
图例9 - GreenUp 参与性项目，德甘诺双子别墅细节，米兰

Fig. 10 - GreenUP design strategy, Sao Paulo, Brazil
图例10 - GreenUp 设计策略，圣保罗，巴西

Forest Garden in Chengdu, China, have also been a part of *GreenUP*'s critical research background.

GreenUP as a Site-specific Strategy
A couple of examples dealing with Brazil and China

Unlike global architecture imposed by world-*renowned* firms as a stylish issue, *GreenUP* works as a bottom-up tool nourished by local issues, including farming techniques.

To mention an example, in Brazil, we found a distinctive and deeply sustainable approach to farming called *agrofloresta*,[8] a brilliant blend of indigenous and traditional techniques implemented by several notable researchers as Ana Primavesi and Ernest Goettsch: we changed *GreenUP* strategy in order to welcome that valuable knowledge.[9]

To give a further example: when required to implement *GreenUP* in China, it was pivotal to start working on the Chinese Nutrition Pyramid, in particular 五果为助, 五菜为充 (Five Fruits to Help, Five Vegetables to Fill)as powerful references deeply linked with local culture, then potentially attractive. Regarding attractiveness, it is worth to underlining that even global issues such as AI-Artificial Intelligence, App development and Arduino hardware may play a crucial role in turning even more people-friendly the whole *GreenUP* applied for release.

GreenUP as a Workshop Learning Tool

Finally, to close the circle according to this book task, let us take a look at *GreenUP* as a workshop learning tool: glad to share here the outcomes of the iCad-International Course on Architectural Design (2015)[10] as well as 4th Semester Design Studio (2021)[11] both at the School of Architecture, University of Florence, both stressing the visionary side of this effective work.

GreenUP **work done over there together with colleagues prof.Valter Caldana (director of LPP-Laboratorio Projetos e Politicas Publicas) and Prof. Maria Augusta Justi Pisani.**

10 **Multidiscipline studio coordinated by prof.Giacomo Pirazzoli with Irene Giovannetti (Architectural Design), jointly with professors Giulio Giovannoni (Urban and Regional Planning) and Antonella Valentini (Landscape Architecture).** ***GreenUP*** **participatory projects have been developed at Le Piagge neighborhood, Florence by students Fatemeh Alibolandi, Parisa Ahmadi, Parisa Bahnamnia, Ziba Bandpey, Azzurra Banti, Federica Bilotta, Ettore Catani, Lucia Chirichiello, Simone Cimadamore, Yasamin Daei, Eleonora Danesi, Niccolò De Ruvo, Sanaz Dehghani, Hengameh Daghighi, Anna Dorigoni, ParisaEmamirad, Melika Erabi, Mahdieh Farahani, Atefeh Fahrangian, Ardjana Gjinaj, Aida Ghaidarpour, Behzad Gharajanloo, Luca Guercio, Maryam Jabbar, Rna Kanynia, Shiva Khoshtinat, Sofia Lalli, Avi Hen Levi, Alessandra Marchetti, Jovana Markovic, Camilla Meciani, Karimpourfard Mahrdad, Mahmoudi Far Morvarid, Golrokh Niki, Erica Passavinti, Christina Patiniu, Ettore Petrioli, Antonio Pieralli, Parviz Polukhzada, Noel Preka, Timor Qayoomi, Giulia Rossi, Atena Sabetghadam, Arokia Gracy Sagayam, Annahita Savadjan, plus Final Degree student Fereshteh Azadi.**

11 **Undergraduate studio coordinated by prof.Giacomo Pirazzoli with Georgina Lalli and Irene Giovannetti.** *GreenUP* **participatory projects have been developed at Dergano neighbourhood, Milan by students MariannaGalardi, Marta Arrighi, Joni Dahriu, Enrico Vergari, Elisabetta Di Foggia, AliceBeconcini, SaraCorezzi, AlessiaGueli, GiacomoCardelli, ChiaraCollotti, CaterinaBettmann, ChiaraCosci, SimoneAlinari, FrancescoCiabatti, GiovanniAmaducci, AlessioChicca, AliceChiuppi, ChiaraBaggiani, TeresaCantini, LorenzoArena, MartaCappelli, ViolaCorsinovi, KevinFrancoletti, FrancescoCampolmi, ElisaGualtieri, EdoardoFinucci, ElenaAgostini, SaraCeccotti, ArturoBussani, AndreaBenocci, GaiaPucci, GaiaBartoli, DarioSantini, Lorenzo Quadrelli, Lorenzo Di Gloria, Tommaso Casarosa, Renata Rinaldi, Livia Lopomo, Caterina Tatti, Jessica Lattanzi, Lorenzo Marconi, Vanessa Mancini, Filippo Daini, Silvia Frassineti, Ilaria Razzolini, Maria Pica, Elia Orlandi, Luana Giugno, Florencia Mazzarello, Svevasofia Ubaldini, Ennio Miciluzzo, Lucrezia Menicucci, Alessia Paolini, Pietro Calabrese, Angelo Fornaciari. The projects have been edited and post-produced by ViDA LAB - Laboratorio Video per il Design e l'Architettura, then displayed at Youth4Climate International Event, Milan September 28th, 2021 organized by ILAUD-International Laboratory for Architecture and Urban Design.**

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4. How Discontinuity has been Embedded in the Collective Space Production of Contemporary China Cities in Last Two Decades

集体空间生产中的不连续性如何嵌入近二十年来当代中国城市

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Illustrations: All images are by the author

When I received the invitation from ILAUD President Paolo Ceccarelli to submit a contribution about the Putuo workshop held in Shanghai 2019, what was called to my mind is the last international seminar I attended before the global covid-19 pandemic with the topic of "Discontinuity in Contemporary City".

The memories of the workshop not only evoke the life and work in common before lockdown but also remind us of the role of space related to society which was always central in the research of professor De Carlo, the prominent Italian architect and the founder of ILAUD (International Laboratory Architecture and Urban Design) in the 1970s.

On the centenary year of the birth of De Carlo, exploring a kind of "participatory architecture" with specific attention to the geographical, social and climatic context of a region is still effective in a situation of transitional region in metropolitan areas around the world.

Which relation does the idea of "participatory architecture", proposed 50 years ago by an Italian architect, related to the short-term workshop in China city Shanghai? How can an architect in China – a so-called *totalitarian* country from stereotyped western view-sight – create a critical paradigm of research and practice a participatory design constitutes a challenging but meaningful subject.

In conventional urban design, knit connections of isolated fragments to the existing urban context in transforming regions and creating an integrative, livable, and identified place are always a hot issue discussed all-around post-modernized cities.

Nevertheless, in China, discontinuity of city space represents the sharp discrepancies of transformation of different epochs corresponding to several big leaps of society and culture just within half a century. By contrasting the situation of western countries of the same period, discontinuity is mostly the result of the transformation from an industrial society to a post-modern one. Therefore, the two kinds of discontinuity may not be the same phenomenon.

If one could accept the idea that the prototypes of space in a particular era are an intended spatial tool bearing the particular social vision, then the concept of discontinuity itself may be an inevitable consequence of reality and cannot just simply be solved by the routine architectural and aesthetic formula originating from historical and traditional conservation by spatial continuity. The more critical way is to lay the space complex into its contextual social system and acquire an understanding of its formation mechanism, then a new state of continuity of urban space could be obtained through redefining its potential and positive role in the new socio-spatial system.

The site study is a typical spatial pattern in 1900s Shanghai, which was the standard arrangement of workers' residential settlements. Its name TongyiLi derived from the name of the former textile mill *Tongyi* (统益) and the traditional settlement *linong* (里弄), which was a community centred on a lane or several interconnected lanes, the typical residential developments in the late 19th and early 20th centuries. In fact, the *linong* was the China version of the Western terraced house introduced into Shanghai to increasing density but modified by borrowing some features of the courtyard of traditional Chinese house for lightening and ventilation, which as a kind of residential pattern prevailed in Shanghai over a century.

TongyiLi, as a mediocre one of thousands of *linongs* in Shanghai, would never catch the attention until recent decades when tremendous developments have been carried out instantly, and most traditional textures were dismantled in the urban area. So TongyiLi became the rare species of these patterns and the representation

当我收到ILAUD主席Paolo Ceccarelli的邀请，就2019年在上海举行的普陀研讨会提交文稿时，我想到的是我在全球COVID-19大流行之前参加的最后一次国际研讨会，“当代城市的不连续性”。在工作室的回忆不仅唤起了了封锁前的共同生活和工作，也让我们想起了空间在社会中的角色，这一直也是著名意大利建筑师吉卡洛·德·卡洛教授1970 年代创立 ILAUD（国际建筑和城市设计实验室）的初衷和核心研究。

在德·卡洛诞辰一百周年之际，如何探索一种特别专注于地区的地理、社会和气候背景的“参与式建筑”，仍然适用于世界范围内的大都市中过渡地区。50年前意大利建筑师提出的“参与式建筑”理念与在中国上海的短期研讨会之间究竟有什么关联？建筑师在中国一一个西方国家眼中的所谓的极权国家一将如何创造一种批判性的研究范式和实践参与式设计是一个具有挑战性但意义重大的课题。

在传统的城市设计中，如何将孤立的碎片与转型区域中已有的城市文脉联系起来，同时为它们创造一个整体的、宜居的、有辨识度的场所，一直是后现代城市普遍讨论的热点问题。然而在中国，城市空间的不连续性代表了不同时代转型的巨大差异，在短短半个世纪内以社会和文化的几次大飞跃为标志。对比同期西方国家的情况，这种不连续性主要是工业社会向后现代转变的结果。所以这两种不连续可能不是同一种现象。

如果可以接受特定时代的空间原型是承载特定社会视野的空间工具，那么不连续性的概念本身可能是一种必然的现实结果，不能简单地通过常规的建筑和审美公式解决问题，因为该公式源于以空间的连续性为前提而形成对历史传统保护。更关键的方式是将空间复合体置于其社会语境系统中，并了解其形成机制，然后通过重新定义其在新的社会空间系统中的潜力和积极作用，才能获得城市空间连续性的新状态。

研究场地是1900年代上海典型的空间格局，是当时工人居住区的普遍布局。同益里的名字来源于原纺织厂“统益”和传统聚居地“里弄”的名字，里弄则是一个以一条或几条相互连接的小巷为中心的社区，是19世纪后期和20世纪初典型的住宅发展形式。里弄作为一种在上海盛行了一个世纪的居住格局，其实是中国版的西式排屋，为了增加居住密度而引入上海，同时借用了中国传统民居院落的采光通风特点。

同益里作为上海众多里弄中的一个普通里弄，直到最近几十年才引起了人们的注意，当时的发展瞬息万变，大部分的传统城市空间肌理都被拆除。于是同益里便在这些空间格局中，成为普陀区为数不多的传统遗产‘里弄’的代表。但邻近地区的大部分肌理已经被拆除，这栋旧式排屋被周围的大型高层现代建筑所包围，给人一种井底或孤岛上的隔离感。这种与周边疏离的的残骸该如何在四面环绕的房地产开发中幸存?

对于这里的以前的居民来说，他们更渴望从迁居中得到大量的补偿金，过上更体面的现代生活，并不关心历史建筑实现全面振兴之路。对于普陀区当地政府来说，更可行的方式是将场地变成一个时尚或有吸引力的地方，例如新天地的开发模式。然而，这种遗迹保留不仅无法避免高资金投入一估计16.04亿元人民币或2.3亿美元一一而且还可能成为一个仅供资产阶级或游客消费的伪历史遗迹。

通过中产阶级化的方式进行城市更新已被证明对公众来说不是理想的选择，同样，通过简单地关注建筑环境改造来营造场地与周边地区的连续性也不可能是正确的答案。因此我们需要通过‘参与式设计’来整合利益相关者的需求。但因为缺少西方国家那样的民主参与机制，在当前社会制度的基础上积极探索一种切实可行有效的‘参与式设计’模式，按照植根于社会空间生产机制的逻辑来获得连续性。

实际上，正是周边场地完全不同的类型和肌理，导致了现在与过去、周边地区与场地之间的空间不连续性问题。从该地区2000年的航拍照片中可以看出，城市开始发生剧烈的大规模更新，旧肌理被系统地清除，取而代之的是商业建筑和封闭式高层社区。一方面，我们会对这种粗暴的更新方式深感遗憾甚至愤怒，但另一方面，我们不得不承认，这可能是当时情况下的必然选择。

1998年，为应对源自东南亚的经济危机，中国政府决定通过住房市场改革扩大内陆消费，以

of traditional heritage in the Putuo district. However, at this time, most of the texture in neighbouring areas had already been pulled down, and these remained old terraced houses are besieged by surrounding big-sized high-rise modern buildings, bringing spreading awful feelings like sitting in a well or staying on an isolated island. How can this alienating wreckage be sustained in an overall real estate development?

The previous residents are more desiring to get a big amount of compensatory payment to lead a more decent and modern life instead of caring about and looking for a sound way to make the historical building achieve a comprehensive revitalization. For the local government of Putuo, the more feasible way to preserve the site may be to transform the site into a fashionable or attractive spot like the model adopted by the Xintiandi development. However, this kind of reservation not only inevitably cost big money – an estimated 1,604 million RMB or 230 million U.S. dollars –but also would become other fake *historical remains* just for consumption by the bourgeoisie or the tourists.

Urban regeneration by way of gentrification has been proved not an ideal choice for the sake of the public, and the endeavours to create the continuity of the site to surrounding areas by simply focusing on the built environment modification may not be the proper answer. Then it is necessary to integrate stakeholders' demands by participatory design.

But there is not democratic participation mechanism like western countries. Thus, the more positive way is to explore a practical, effective mode of participatory design based on the current social system to obtain continuity according to the logic rooted in the mechanism of socio-spatial production.

Actually, the surrounding site's totally different typology and texture give rise to the problem of spatial discontinuity between the present and past, between surrounding areas and the site. We can see from the aerial photography of this region, in the year 2000, that the drastic large-scale renewal of the city started to happen, and the old textures were systematically cleared out and replaced by the commercial building and gated high-rise communities. On the one side, we would deeply regret or even anger at this way of brutal renewal, but from the other sight, we had to

抵消出口下滑的影响。从此取消了政府有责任为全体公民提供住房的公共住房分配制度，允许普通民众在住房市场买卖房屋，包括之前分配给他们的公共住房。同时，个人或房地产公司可以通过房屋担保从银行获得抵押贷款。但是，1983年宪法规定，城市土地全部归政府所有，1994年税收分配财政体制改革规定，土地出让收入归地方政府所有。在房地产市场上，所有土地只有大型房地产公司能承担，因为所有的土地出售都应该遵循竞标程序，进而导致高价。

因此，住房成为中国城市的一种社会经济工具，通过创造土地财政来满足地方政府原始资本积累的需要。地方政府凭借土地财政创造的巨额资本，扮演大公司的角色，具备投资未来的能力——建设高速公路、机场等大众基础设施，提

admit that probably maybe the inevitable choice at the circumstance.

In order to fight against the economic crisis that originated from South-East Asia in 1998, China government decided to expand consumption of inner China to offset the impact of the export decline by carrying out the housing market reform. From then on, the public housing allocation system that the government has responsibilities to provide for all the citizens was cancelled, and the ordinary people were allowed to buy or sell houses from the housing market, including the public house allocated to them before the year. Meanwhile, individuals or real estate companies could get a mortgage from a bank by the guaranty of their house. However, all the lands in the urban area belong to the government according to Constitution since 1983, and the land sale revenues belong to the local government, according to the financial system reform of tax allocation of 1994. In real-estate markets, big real-estate companies can only afford all lands because all the lands sold obey the procedures of competitive bidding, which always give rise to stratospheric prices.

As a result, housing became a socio-economic tool in China cities by which land-finance are created to satisfy the needs of original capital accumulation for local governments. With the huge capital created by land-finance, local governments assume the role like big companies and have the capability to invest in the future – build mass infrastructures such as highways and airports, provide public facilities such as hospitals and schools, plan industrial development parks with low tax to appeal investors from inner China or overseas.

All these measures have pushed the rapid development of the economy and gigantic extension of urbanization, which inversely promote the soaring price of housing and lands, and at the same time, which increase much more revenues for the local governments. For the citizens, because there is no policy requiring individuals to pay the property tax of housing, purchasing a house had become the best way of individual investments. For them, housing price, like a kind of city stock, plays an indication to show the potential development of the future of a city.

When urban design is concerned, real-estate companies play important roles in

fig. 1 - Traditional *Limongs* settlements replaced by contemporary urban fabric
图例1 - 传统里弄居住片区被现代城市肌理所代替

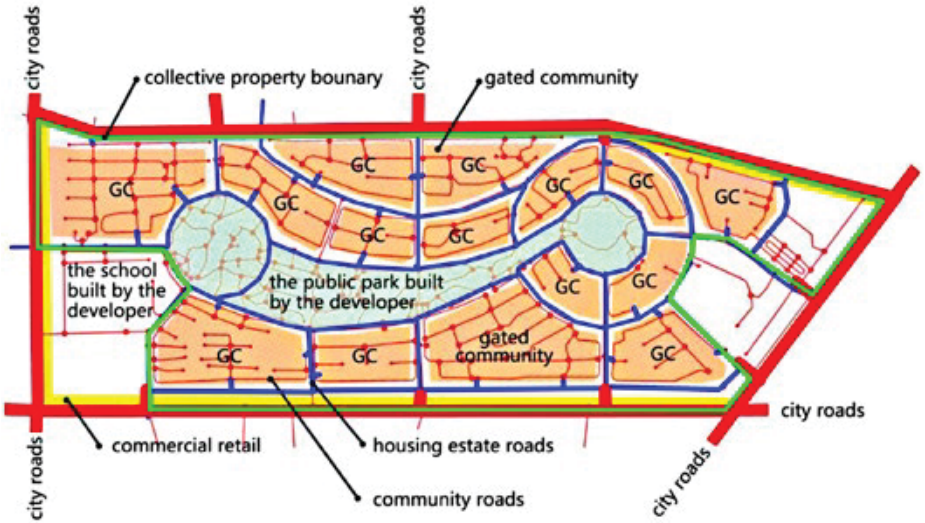

fig. 2 - The Spatial Structure of Large Scale Community, Shijicheng community in Kunming covering an area of over 250 hectares.
图例2 - 大型社区的空间结构，昆明四季城，占地面积250公顷

shaping the urban landscape and recreating new spatial prototypes of communities. Unlike the counterparts of Western countries, private companies as secondary developers purchase lands from the government in China cities. Since a land sold has often very big size – average from tens to even over hundreds of hectares, developers have the responsibility to build all the infrastructures and communal facilities, then in some occasions, they have to build schools, hospitals, public green open spaces. When communities have been built, community management companies – most of which are branch companies of the developers – would be founded to provide management for communal issues such as maintenance of public space and property, guarantee communal security, and coordinate neighbourhood relations.

In a way, the developers often assume some roles and functions from governments. But the nature of the private sectors lets the developers devise some particular spatial arrangements to ensure the public facilities and spaces are exclusive and only could be accessible or enjoyed by the residents who can afford the service. As a result, different kinds of gated communities or even large-scale or mini-cities are created – the multi-layer nesting spatial prototypes.

It is the attribute of the land property right of China that casts the mold for collective space production and carves the discontinuity into the gene of space in contemporary China cities!

Therefore, how do public sectors collaborate with private ones to integrate urban public space with private-owned public space to let more spatial resources be shared by the public and let more communities benefit from the continuity of spaces? It is an open but still pending question worth further studying by the researchers and practitioners on urban participatory design in China.

In the end, the short-term workshop in Putuo not only aroused deep reflections related to China cities but also could push forward the spatial paradigm rooted in the neo-liberalism belief that prevailed in the world to more critical thinking of a socio-spatial design for the future, which may also be a better way to pay respects to De Carlo on his memorial year.

供医院、学校等公共设施，规划工业园区以低税率吸引来自中国境内或海外的投资。

这些措施不仅推动了经济的快速发展和城市化的巨大规模，反过来又推动了房价和土地价格的飞涨，同时也为地方政府增加了更多的收入。对于市民来说，由于没有要求个人缴纳房产税的政策，购房成为了个人投资的最佳方式。对他们来说，房价就像城市股票一样，预示着一个城市未来的发展潜力。

就城市设计而言，房地产公司在塑造城市景观和重建新社区空间原型方面发挥着重要作用。与西方国家不同，私营企业作为二级开发商在中国城市中从政府购买土地。因为出售的土地往往面积很大一平均从几十公顷到几百公顷不等，开发商有责任在他们购买的土地内，建造所有基础设施和公共设施，在某些情况下，他们还必须建造公共项目，例如学校、医院、公共绿色开放空间。社区建成后，将成立社区物业管理公司一其中大部分是开发商的分公司一为社区问题提供管理服务，如维护公共空间和财产，保障社区治安，协调邻里关系。

在某种程度上，开发商往往承担政府的某些角色和职能。但私营部门的性质让开发商设计一些特定的空间布局，决定了其中公共设施和空间的专属性，只供负担得起服务的居民才能使用或享用。不同类型的封闭式社区甚至城市内部的大规模微型城市由此产生一多层嵌套的空间原型。

正是中国土地产权的属性，铸就了集体空间生产的模式，将不连续性植入当代中国城市空间基因！

那么，公共部门如何与私人部门合作，将城市公共空间与私有公共空间进行融合，让更多的空间资源被大众共享，让更多的社区受益于空间的连续性？这是一个开放但仍待解决的问题，值得研究人员和实践者在中国式‘参与式城市设计中’进一步研究。

最后，普陀研讨会不仅引发了对中国城市的深刻反思，也将植根于全球盛行的新自由主义信仰的空间范式推向了对未来社会空间设计更具批判性的思考。这也许也是在此向德 · 卡洛致敬的更好方式。

5. Industrial Heritage “in Between” the Formal City. The Case of Rome

正规的城市之间的工业遗产：罗马的案例

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In the last decades, modernization and rapid urban growth have repeatedly overlooked the livability of cities in the name of progress. Recognizing that more than half of humanity now lives in urban areas, the study of the impact of abandoned industrial sites in the city, in the environment, and on people is increasingly crucial to develop more sustainable and resilient cities. Identifying strategies and policies to address degraded industrial sites located “in between” the formal city becomes essential to obtain suitable solutions to improve the built environment and thus produce new values in critical urban areas.

Many industrial heritage areas affected by deindustrialization and delocalization are now obsolete urban sectors, isolated from their surroundings and neglected by the community. A thorough understanding of the industrial sites’ physical, historical, economic, social, and environmental conditions is one of the first stages to select the most appropriate architectural and urban planning projects.

So far, the strategies adopted to address disused industrial sites have ranged from total demolition to the partial or complete reuse of buildings. If urban sprawl and further land consumption are avoided in the latter strategies, the valorization and reuse of industrial heritage allow the exploration of new challenges and opportunities to redesign the contemporary city in an innovative way. The re-functionalization of industrial buildings with unique cultural, social, and economic activities, generating new kinds of urban experiences, encourages the recovery of historical memory, identity, and character of places, essential factors for the sustainable transformation of cities.

在过去的几十年里，现代化和快速的城市发展一再以进步的名义忽视城市的宜居性。认识到现在有超过一半的人类生活在城市地区，研究城市中废弃工业用地、环境和人类的影响对于发展更具可持续性和弹性的城市越来越重要。确定解决位于正规城市“之间”退化工业场地的战略和政策，对于寻找合适的解决方案以改善建筑环境并从而在关键城市地区产生新价值至关重要。

许多工业遗产区受去工业化和去本地化影响，与周围环境隔离并被社区忽视现在成为被淘汰的城市区域。 全面了解工业场地的物理、历史、经济、社会和环境条件是选择最合适的建筑和城市规划项目的首要阶段之一。

迄今为止，处理废弃工业场地所采用的策略包括，完全拆除、部分或完全再生建筑。 如果通过第二种策略避免城市扩张和更多的土地消耗，工业遗产的增值和再生可以探索新的挑战和机遇，以创新的方式重新设计当代城市。 对具有独特文化、社会和经济活动的工业建筑进行再生功能化，产生新的城市体验，鼓励重铸历史记忆、身份和地方特征等可持续转型的城市的重要因素。

罗马及其工业遗产

在长期关注罗马最古老的历史遗产后，公众对重要废弃工业遗产的认识促使当地政府支持一些工业遗址的振兴和再利用。 多项重建计划已被采纳，以界定和加强选定区域、重组周边城市结构以及发展相关基础设施。 尽管自上而下的方法在大多数项目中盛行，但公民参与对于满足社区需求也至关重要。 由此带来边缘化和经济压力较大的城市地区的再生以及新的文化、创意和创新活动的发展。

重建项目中，工业区得以确定，例如前中央蒙特马蒂尼，前热电厂，前马塔托约，城市历史屠宰场，由扎哈 · 哈迪德设计的MAXXI，旧军事区 军营和由Odile Decq 设计和改造的MACRO（前Peroni啤酒厂）。所有这些场地目

Rome and its industrial heritage

After a long period of focus on the oldest historical heritage in Rome, public awareness of important abandoned industrial heritage led the local government to support the revitalization and reuse of some industrial sites. Several redevelopment plans have been adopted to define and enhance selected areas, reorganize the surrounding urban fabric, and develop related infrastructures. Although a top-down approach has prevailed in most projects, citizen participation has also been essential to answer community needs. The final results are the regeneration of marginalized and economically stressed urban areas and the development of new cultural, creative, and innovative activities.

Among the redevelopments projects, it is possible to identify industrial areas such as the ex-Centrale Montemartini, a former thermoelectric power plant, the ex-Mattatoio, historic slaughterhouse of the city, the MAXXI, designed by Zaha Hadid, an area of old military barracks, and the MACRO, designed by Odile Decq, the former Peroni brewery. All these places are now significant cultural nodes, contributing to the decentralization of activities, the decongestion of the historic centre, and the creation of new public areas for the community. Moreover, the broader urban effect has been the regeneration of entire city sectors and the elimination of physical and visual discontinuities within the neighbourhoods. The revitalized industrial areas are nowadays new active and dynamic socioeconomic areas of the city.

However, many other industrial sites in Rome, such as the ex-Mercati Generali, the former general market of the city, the ex-Miralanza candle and soap factory, the ex-Gasometer, the ex-SniaViscosa textile factory, some city’s old streetcar depots, and many other sites, are still waiting for renovation. The complex design process necessary for their redevelopment still requires a specific architectural and urban analysis to identify the criticalities and potentialities of the sites. The high cost of investment also needs the involvement of both public and private stakeholders. Decision-makers still have the responsibility to endorse proper architectural and urban projects and prevent building speculation.

Over the years, industrial heritage has been a primary issue of the research and design laboratories conducted by myself and our design

前都是重要的文化节点，有助于分散活动、缓解历史中心的拥堵以及为社区创建新的公共区域。此外，更新整个城市各区域，以及消除社区内物理（空间）和视觉不连续性产生了更广泛的城市效应。振兴的工业区如今是城市里全新的、积极的和充满活力的社会经济区。

但是罗马的许多其他工业场地，例如前Mercati Generali，该市的前综合市场，前Miralanza 蜡烛和肥皂厂，前Gasometer，前SniaViscosa 纺织厂，一些城市的旧有轨电车仓库和许多其他站点仍在等待翻新。重建所需的复杂设计过程仍然需要进行特定的建筑和城市分析，以确定场地的重要性和潜力。高昂的投资成本还需要公共和私人利益相关者的参与。 决策者仍然有责任支持适当的建筑和城市项目并防止建筑投机。

多年来工业遗产是我个和设计团队（由Francesco Ciresi、Enrica Di Toppa 和Leopoldo Russo Ceccotti 组成）在世界不同地区进行的研究。目标是确定最合适的建筑和城市干预措施，并提高学生对城市重要性和工业遗产价值的认识。

特别是在罗马，为了重建位于台伯河沿岸的前 Gasometer 区和附近的前Miralanza工厂，一系列学生的作品提议重新利用现有结构并创建一个新的公共城市公园与周边城市地区相互连接。第一步是对建筑和城市进行深入的研究和分析，以了解以前工业结构的物理条件、历史和价值，以及在城市南部广泛的不同的行人、车辆、社会、经济和环境系统。创造新的文化和社会活动、开发新的步行连接和开放空间，以及确定针对现有交通问题的新解决方案，都是战略性城市愿景的一部分，旨在鼓励项目区与周围环境的融合，在城市内树立新型的协会、意义和价值。

例如，在前Gasometer 地区，现有的混凝土水箱原本用于水下储煤，通过创建一系列连接两侧结构的桥梁建筑，将其改造为社区服务区。在水箱的下层，新的下沉广场和建筑空间提供了各种商业和社会活动。垂直储煤建筑的改造旨在容纳新办公空间，而新的人行道将整个区域与周边社区连接起来。上述所有措施都是在尊重遗迹的前提下进行的。

前Miralanza工厂的重建项目提议将现有建筑用于文化和教育目的。在宽敞的内部开放空间上规划了新的地下结构，以进入较低的考古层，并创建图书馆、研究实验室和会议室等新设施。新结构的绿色屋顶旨在减少新建筑的影响，并与城市公园的其余部分建立视觉连续性。

在位于城市北部Bainsizza广场附近的一个前有轨电车仓库中，一些学生的作品一方面寻求发展一些现有的服务，例如老年中心和医疗机构，另一方面，新建社区设施例如图书馆、儿童日托

team, composed of Francesco Ciresi, Enrica Di Toppa, and Leopoldo Russo Ceccotti, in different parts of the world. The objectives have been to identify the most appropriate architectural and urban interventions and raise students' awareness of the city's importance and benefits of valorizing industrial heritage.

In Rome, in particular, for the redevelopment of the ex-Gasometer area and the nearby ex-Miralanza factory, both located along the Tiber, a series of students' works proposed the reuse of existing structures and the creation of a new public urban park interconnected with the surrounding urban areas. The first step was to make an in-depth architectural and urban study and analysis to understand both the physical conditions, history, and value of the former industrial structures and the different pedestrian, vehicular, social, economic and environmental systems prevailing on this southern part of the city. The creation of new cultural and social activities, the development of new pedestrian connections and open spaces, and the identification of new solutions to existing traffic problems were part of a strategic urban vision meant to encourage the integration of the project area with the surrounding environment and therefore to foster new types of associations, meanings and values within the city.

For example, in the former Gasometer area, the existing concrete water tank, originally used for underwater coal storage, was transformed into a community service area by creating a series of bridge buildings connecting the opposite sides of the structure. On the lower level of the tank, a new sunken plaza and building spaces provide a variety of commercial and social activities instead. The renovation of the vertical coal storage buildings was intended to house new office spaces, while new pedestrian paths were designed to connect the whole area with the surrounding neighbourhoods. All the above interventions were done respecting the traces of the past.

A redevelopment project for the ex-Miralanza factory proposed using existing buildings for cultural and educational purposes instead. New underground structures were planned on the vast internal open space to access the lower archaeological level and create new facilities such as a library, research laboratories, and a conference room. The new structures' green roofs were proposed to reduce the impact of the new

中心、运动区和一些学生宿舍。设计方案设想将两个现有场地整合起来，并通过新的人行道、广场和绿地向社区开放，以解决场地目前的交通不便问题。在一些建议中，两个地块的高度差异允许创建一个较低的步行长廊，能够将两个独立的区域统一起来。

相比之下，Monterotondo Scalo前Mariani砖厂被规划为一个先进、充满活力的综合中心，拥有初创企业、实验室和文化空间，如图书馆、会议室和展览区。 一些现有体量的扩展，由不同的轻量级结构制成，旨在容纳其他功能。规划大型开放广场和绿色空间将新建筑和现有建筑相互关联。

工业遗产和价值

综合而言，工业建筑的大尺度和宽敞空间，使建筑再生成为一项独特且具有挑战性的项目。最关键问题是确定哪些建筑物具有历史文化价值、保留多少以及不同结构的适当功能。 无论如何，对迫切的城市和领土场景以及工业场地的综合研究，有助于选择最合适的建筑干预措施，无论是维护、保护还是适应性再生。 如何在不牺牲美学、新用途和创新的情况下促进工业遗产增值，一直是主要关注点之一。

作为遗迹，工业遗产可能很快成为该领土的战略文化、经济和社会节点。当工业用地价值在当地得到充分的制定时，一个关注建筑和领土文化体系的项目是容易建立的。

在所有情况下，设计过程意味着发展战略性城市愿景，其中明确考虑建筑物和周边地区。如果项目区与社区的融合促进了整个大都市区的城市更新，那么工业遗产的保护、提升和再利用也意味着保存历史记忆，这是培养市民对地方性的认同感和附属感的重要组成部分。了解过去有助于了解现当下的丰富性和意义，从而了解我们社会未来的可能性。

仔细地重新阐释场地的特殊性和敏锐地评估建筑物价值，有助于采用弹性的解决方案具体实现大多数项，也有助于将关键区域转变为宜居和可持续的地方。通过这种方式，设计过程成为定义、连接和生成新型城市空间以及社会和经济活动的一种手段，能够与城市的全部或部分进行扩展对话。在城市尺度上建造建筑的方面，影响更

Fig. 1 - Academic work with K. Wlosowicz, Redevelopment of the ex-Gasometer and ex Miralanza Area / Illustration by K. Wlosowicz
图例1-学术作品，前 Gasometer 区和附近的前 Miralanza工厂

Fig. 2 - Academic work with A. Iacovoni, Redevelopment of the ex-Gasometer Area / Illustration by A. Iacovoni
图例2-学术作品，前 Gasometer 区改造

construction and create visual continuity with the rest of the urban park.

In a former streetcar depot situated closed to Bainsizza Square, in the northern part of the city, several students' works pursued, on one side, the development of some existing services such as a senior centre and a health facility, on the other side, the creation of new community facilities such as a library, a daycare centre for children, a sports area, and some student housing. The design program envisioned the integration of the two existing sites and their opening towards the neighbourhood with new pedestrian paths, plazas, and green spaces that could mend the site's current inaccessibility. In some proposals, the height difference of the

fig. 3 - Academic work with F.Santarelli, ex Miralanza factory / Illustration by F.Santarelli
图例3 - 学术作品，前 Miralanza 工厂改造

two lots allowed the creation of a lower pedestrian promenade able to unify the two separate areas.

The ex Mariani brick factory in Monterotondo Scalo, by contrast, was planned as an advanced, dynamic and integrated centre, with start-ups, laboratories, and cultural spaces such as a library, conference rooms, and exposition areas. The expansion of some existing volumes, made with a different lightweight structure, aimed to accommodate other functions.

Large open plazas and green spaces, in turn, were planned to interrelate new and existing buildings.

Industrial heritage and valorization

In synthesis, industrial buildings' usual large size and spaciousness make their reuse a unique and challenging architectural project. The main critical issues are identifying which buildings have historical-cultural value, how much to preserve, and the appropriate functions for the different structures. A comprehensive study of both the immediate urban and territorial context and the industrial site, in any case, helps to select the most proper architectural intervention to undertake, whether it is of conservation, preservation, or adaptive reuse. Among the main concerns constantly remains how to valorize industrial heritage without sacrificing aesthetics, new uses, and innovation.

As relics of the past, industrial heritage may quickly become strategic cultural, economic, and social nodes in the territory. When the valorization of industrial sites is adequately framed in a place, a project focused not only on the buildings but also on the cultural system of the territory is difficult not to be obtained.

In all instances, the design process implies the development of a strategic urban vision where individual buildings and surrounding areas are distinctly considered. If the integration of the project area with the neighborhood encourages the urban regeneration of entire metropolitan areas, the protection, enhancement, and reuse of industrial heritage also means preserving historical memory, an essential ingredient to foster place identity and place attachment in people. Knowing our past helps to understand the richness and meanings of the present and, therefore, the future possibilities of our society.

The attentive reinterpretation of the specificity of the site and the sensitive assessment of buildings'

大范围的城市领土。在这一点上，我们可以说，设计问题例如，工业遗产的保护和价值、建筑物和场地的研究和分析、对要实施的干预措施类型的批判性评估、战略性城市愿景的发展、场地独特性、城市互连和公共开放空间、历史记忆以及最后的社会经济活动等，是重建项目中关注的主要方面。

因为要充分理解工业遗产历史、建筑、技术和社会价值，设计步骤必须采用多学科的方法。建筑师、工程师、历史学家等须共同努力，寻找最佳设计方法。每个项目都必须应对结构重新功能化的不同程度的适应性和灵活性、建筑物及其周围环境的不同文化和历史价值、特定的当地建筑规范、独特的结构技术特征，以及多样化的社会经济和环境条件。此外，各种复杂且相互关联的问题，不应摒除以伦理和美学角度提出的解决方案。

本文简要讨论的设计步骤，旨在制定针对特定地点的独特策略。最重要的是，其目的是将一个项目设想为更广泛的综合城市系统必不可少的部分。 由于上述原因，教育工作者有责任让新一代接手废弃和有待解决的工业场地。处理工业遗产或任何其他类型的遗产，需要拓展常规设计过程之外的知识，包括项目中和建筑、城市和领土层面相关的历实。

旧工业用地的再生，在限制城市扩张的同时，仍可以创造有价值的混合用途开发、公共广场和社会活动，以提高该地区的经济价值、身份和特征。 通过这种方式，项目不仅有助于提高城市生活质量，还有助于提升城市景观的形象和美感。

由于工业遗产的增值仍然是敏感问题，在世界上许多国家并不总是得到解决，因此机构和社区的作用是致力于退化工业区的再开发。事实上越来越多的声音响应，应将这些地区视为可持续资源而不是消极的的地方。

随着去工业化和去本地化，我们观察到整个工业区的废弃、环境退化和边缘化。对这些“介于”正式城市之间的地点进行更深入的思考，对于解决城市结构内的不连续性至关重要，因此可以找到我们城市的可持续转型。

values help in most projects to achieve concrete and resilient solutions useful for the transformation of critical areas into livable and sustainable places. In this way, the design process becomes a means to define, connect, and generate new types of urban spaces and social and economic activities capable of developing an extended dialogue with all or part of the city. Aspects that may influence a larger urban territory and thus help to build an architecture at an urban scale.

At this point, we can say that design issues such as protection and valorization of industrial heritage, study and analysis of buildings and site, critical evaluation of the type of interventions to be implemented, development of a strategic urban vision, site-specificity, urban interconnections and public open spaces, historical memory, and, finally, socioeconomic activities are primary aspects to focus on during redevelopments projects.

Because it is necessary to fully comprehend industrial heritage's historical, architectural, technological, and social values, design procedures must use a multidisciplinary method. Architects, engineers, historians, among others, must work together to find the best design approaches. Each project must contend with varying degrees of adaptability and flexibility of re-functionalization of structures, different cultural and historical values of buildings and their surrounding context, specific local building codes, unique structural-technological features, and diverse socioeconomic and environmental conditions. Moreover, the variety of complex and interrelated issues should not eliminate the need to identify ethical and aesthetic solutions to the various problems.

The design procedures briefly discussed in this article are aimed to develop a unique and site-specific strategy. Above all, the intention is to conceive a project as an integrated and essential part of a more extensive urban system. For the above reasons, educators are responsible for preparing future generations to work with abandoned and unresolved industrial sites. Dealing with industrial heritage or any other type of heritage involves extending one's knowledge beyond the usual design processes to include stratified historical facts present at the project's architectural, urban, and territorial levels.

The recycling of former industrial sites, while limiting urban sprawl, still allows the creation of valuable mixed-use developments, public plazas, and social activities that improve the place's economic value, identity, and character. Projects, in this way, not only contribute to the quality of urban life but also the image and aesthetics of the urban landscape.

Since the valorization of industrial heritage remains a sensitive issue not always addressed in many countries in the world, it is the role of institutions and communities to commit themselves to the redevelopment of degraded industrial areas. There is an increasing demand, in fact, to consider these areas not as negative places to be avoided but as sustainable resources.

With deindustrialization and delocalization, we have observed the abandonment, environmental degradation, and marginalization of entire industrial areas. A deeper and further reflection on these sites "in between" the formal city is essential for resolving discontinuities within the urban fabric and therefore find a sustainable transformation of our cities.

fig. 4 - Academic work with E. Villamagna, former streetcar depot situated closed to Bainsizza Square / Illustration by E. Villamagna
图例4 - 学术作品，Bainsizza广场前有轨电车残酷改造

fig. 5 - Academic work with F. Moretti, ex Mariani brick factory in Monterotondo Scalo / Illustration by F. Moretti
图例2 - 学术作品，Monterotondo Scalo前Mariani砖厂改造

Part II

Shanghai ILAUD Workshop: New Visions for Tongyi Li
上海ILAUD研讨会：统益里的更新与展望

Discontinuity in Contemporary city

As a citizen, I live in Shanghai, and, daily, I interact with the city, experiencing several urban issues. China's Open Door Policy has led to the rapid and massive urbanisation of the country, and urban planning is not keeping pace with this situation. One of the main consequences of this process lies in a series of discontinuities in the urban fabric.

The Tongyi Li area in the Putuo district, a prototype of a traditional residential neighbourhood, reflects this issue and the need to address it to improve the contemporary city's design.

In this regard, the ILAUD workshop aimed to discuss how to deal with urban discontinuity by developing alternative design methods. Eight groups were involved, adopting different architectural and urban strategies.

1. Include new functions to make the area a mixed-use site and reactivate the public space. The area needs a meeting point for the local community where people can meet, communicate, go to the market, etc. People living in skyscrapers do not know their neighbours; they are like birds in a cage, a frequent phenomenon in China's cities.
2. Discuss the possibility of setting up an underground space. In Shanghai, the development, and expansion, of above-ground space is becoming more and more intense. Therefore, the potential for developing underground space, which to date has been used almost exclusively for subways, is enormous. Alternative models of underground space, extending beneath the buildings, reflect the designers' thinking about new trends in public space. They redefine ground elevations and the connection between the design proposals and the existing underground spaces around the site. In addition, it is a new experiential space for citizens. When people enter this unique space, their gaze shifts from the narrow lanes of the *lilongs* to the vast underground world, changing their previous spatial perception and generating a fresh and impressive experience.
3. Keep the structure of the old buildings but change its function, "open it up" to accommodate outdoor public space, or use it as a connective space between the above-ground functions and the underground level. Historic housing embodies the memory of the place, which can be transmitted by maintaining the existing structure of the buildings and the layout of the site, thus the original urban planning principle. This strategy allows for the transformation and reinterpretation of the old residential typology, making it "distinctive and playful". This is possible, as already mentioned, through the reuse of existing dwellings, which could become the "container" of new collective functions.

In essence, the workshop disclosed the problems of the contemporary Chinese city arising from high-speed development. We should start to pay attention to the challenges in developing cities and find strategies and solutions to overcome them.

Wenwen Jia
31.03.2021
Shanghai

当代城市的不连续性

作为一名长居在上海的市民，我每天都与这座城市互动，经历一些城市问题。中国的门户开放政策导致我国快速而大规模的城市化，而城市规划并没有跟上这种情况。这一过程的主要后果之一在于城市结构中的一系列不连续性。

普陀区的同益里地区是传统住宅区的原型，反映了这个问题以及解决这个问题以改善当代城市设计的必要性。

在这方面ILAUD研讨会旨在讨论如何通过开发替代设计方法来处理城市不连续性。参与的八个小组，采用了不同的建筑和城市策略。

I. 包括新功能在内，使该地区成为混合用途场地并重新激活公共空间。该地区需要一个当地社区的交汇点，人们可以在那里见面、交流、去集市等。住在摩天大楼里的人往往与邻居不熟识；他们就像笼中的鸟，这是中国城市常见的现象。
II. 讨论建立地下空间的可能性。在上海，地上空间的开发和拓展越来越激烈。 因此，开发地下空间的潜力是巨大的，迄今为止，地下空间几乎只用于地铁。延伸到建筑物下方的地下空间的替代模型，反映了设计师对公共空间新趋势的思考。 他们重新定义了地面标高以及设计方案与场地周围现有地下空间之间的联系。 此外，它是一个新的市民体验空间。当人们进入这个独特的空间时，视线从里弄狭窄的小巷转移到广阔的地下世界，改变了以往的空间感知，产生了一种耳目一新的印象。
III. 保留旧建筑的结构但改变其功能“开放”以容纳室外公共空间，或将其用作地上功能与地下层的连接空间。历史建筑体现了对地方的记忆，可以通过保持建筑物的现有结构和场地布局来传递，从而保持原有的城市规划原则。这种策略允许对旧住宅类型进行改造和重新解释，使其“与众不同且有趣”。如前所述，这是可能的，通过对现有住宅的再利用，使其成为新的集体功能的“容器”。本质上，研讨会揭示了当代中国城市因高速发展而出现的问题。我们应开始关注发展中城市面临的挑战，并找到克服这些挑战的策略和解决方案。

贾雯雯
31.03.2021
上海

Group 1

Under Lanes

Wei Chen
Yuyang Jin
Wei Lin
Giulia Montanaro
Iuliia Volkova
Liyuan Yang

In the UNDER LANES project, the designers try to find new possibilities according to the site's characteristics and the layout of Shanghai's lanes. Thus, they create an open and free underground space, which increases the height and enriches the use of space.

The new underground space maintains an adequate distance from the original buildings' structure to preserve the integrity of the previous system and design a new one within it. It also respects the existing environment and intervenes in the existing space to a limited extent.

The old and the new space are closely related. The intervention follows the historical patterns of the alleys to generate the new public spaces. In addition, the design preserves and reuses the elements of the past and converts the old housing spaces into new ones.

Beneath the envelope of the buildings, the new subterranean space shape reflects the designers' thoughts on future trends in public space development. They redefine the height of the ground and link the different underground spaces around the site, providing an experiential environment for citizens.

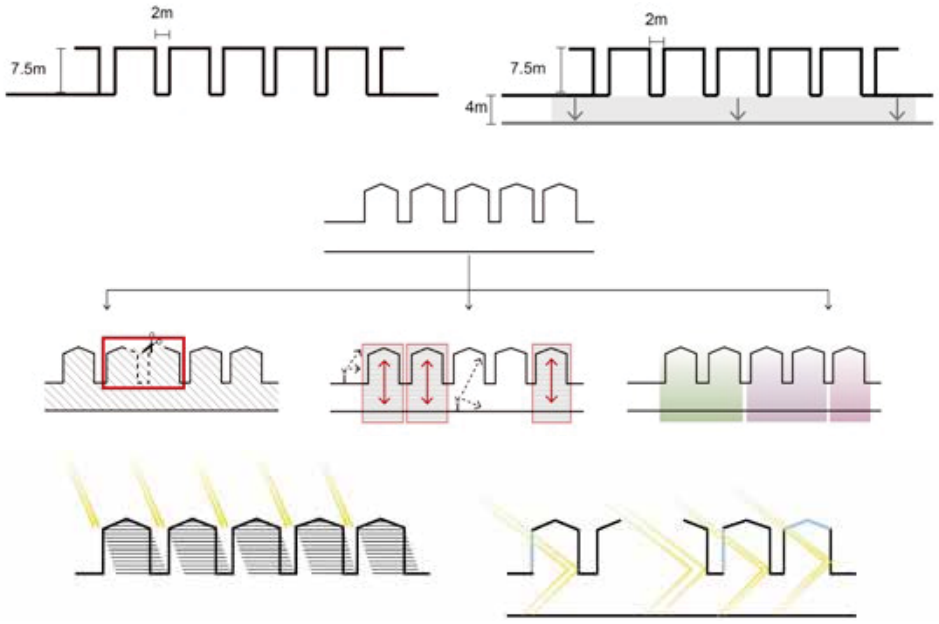
When people enter this unique space, their eyes move from the narrow alleys of the *lilong* neighbourhood to the vast underground world – different from their previous perception – and allows them to have a fresh and dramatic spatial experience. In Shanghai, the development of above-ground space is becoming more and more intense. Therefore, the potential of the new underground space is enormous.

在 UNDER LANES 项目中，设计师试图根据场地特征与原油上海城市里弄肌理，寻脉潜行，挖掘基地空间原有的价值和新的可能性。为此，设计者置入一个开放、自由的地下空间，在纵向拓宽了空间的尺度，在水平方向上丰富了空间的使用可能性和多元性。

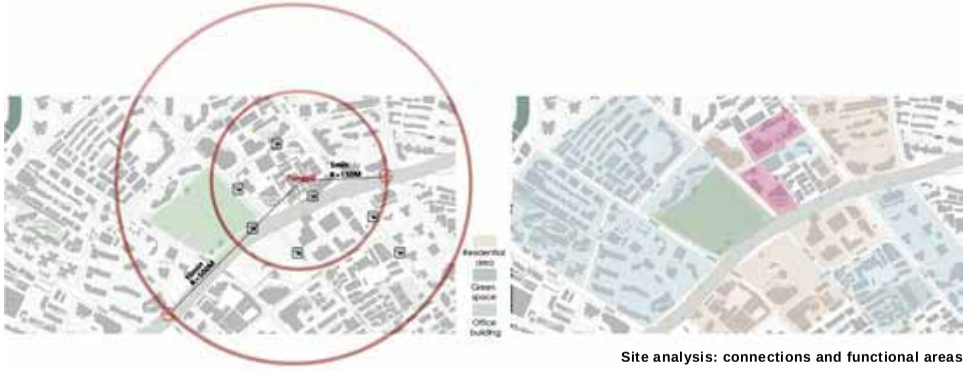
新植入的地下空间元素尽量和原有的机构保持适当的距离，维持里弄体系的完整性，在原有的体系中生长出一个新的体系。新介入的元素既保持着对既有环境的尊重，有限度的计入现存空间之中，两者关系紧密。同时，又以一种清晰可辨的方式避免和既有环境的附着与粘连，并和旧的部分形成对比行的并置关系。场所精神，既存在于锚固于场地的物质存留，又存在游离于场地的新型地下城市空间的诗意呈现。

向史而新，建筑的目的既在于包含过去，又在于将这些记忆转向未来。在原有里弄肌理包裹下，新型地下空间体现设计者对城市未来空间发展趋势的展望。设计者重新定义“地面层”高度，有机连接周边功能区块，融入多元戏剧化空间体验。在上海，地上空间升级和发展日趋紧张，因而新型地下空间的发展潜力巨大。

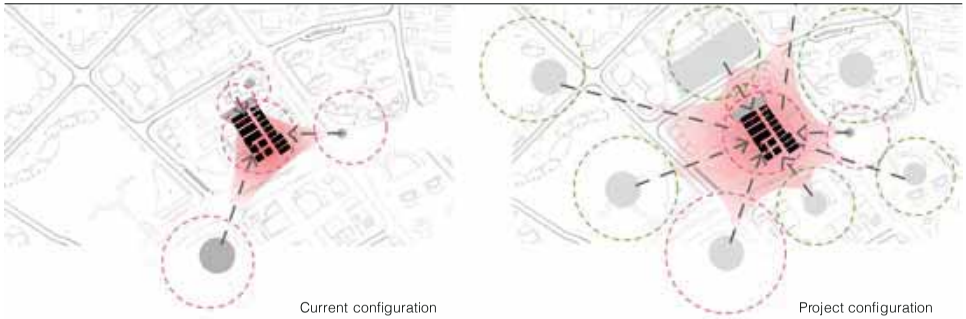
Site plan



Design strategy



Site analysis: connections and functional areas



Current configuration

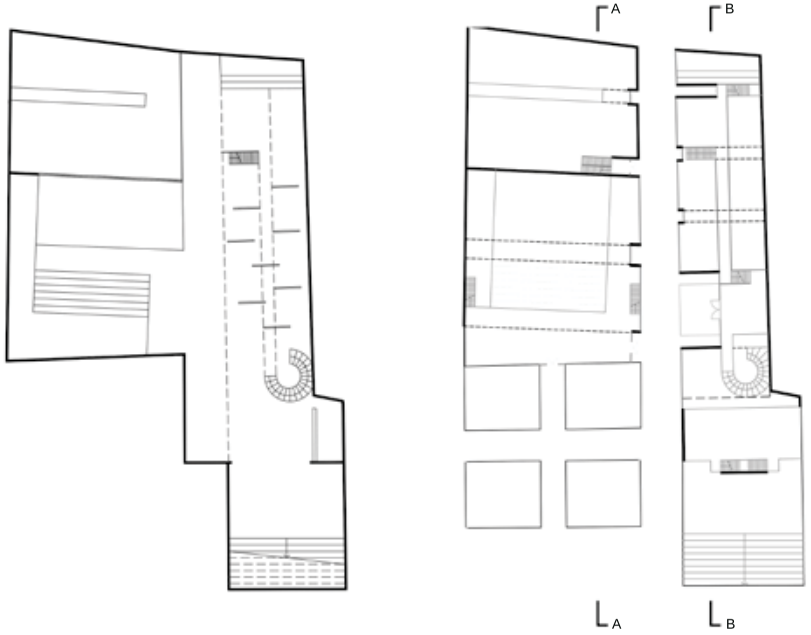
Project configuration

Range of influence of the underground system

Open spaces: lanes

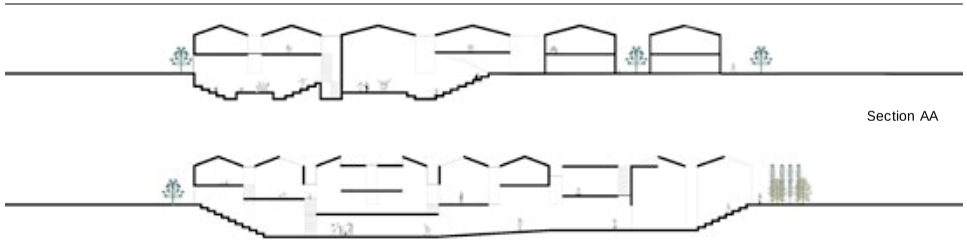
Functional program

Layout and functional program



Underground floor

Ground floor

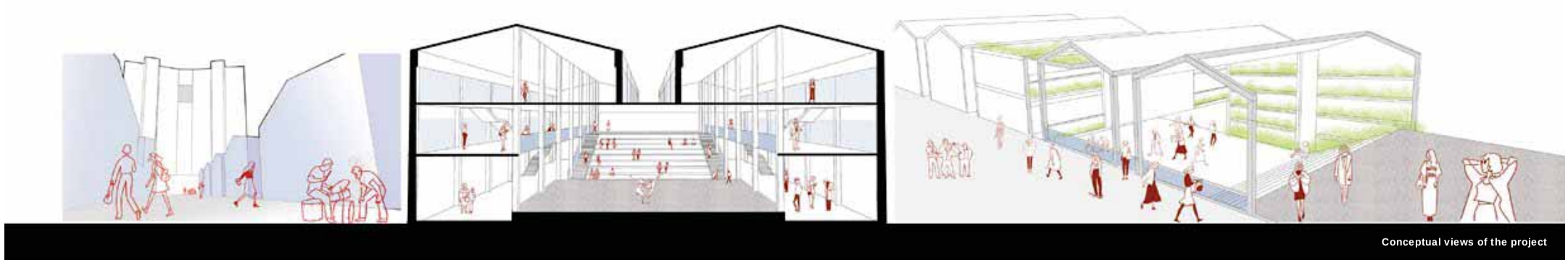


Section AA

Section BB

Diagrams of plans and sections

0 м 15 м 30 м 45 м



Conceptual views of the project

Group 2

ICH Workshop Village

Miaosen Chen
Junjie Lv
Federico Minelli
Lada Polyakova
Yingzhuo Wang

The analysis of Tongyi Li and its surroundings highlights that residents cannot self-express and relate to each other. Self-expression can be conveyed in different ways, and art is one of them.

The ICH WORKSHOP VILLAGE (Intangible Cultural Heritage Workshop) is an appropriate solution for this purpose, a space where visitors can express themselves in traditional crafts under the guidance of masters.

The concept was inspired by the original site and the historical buildings. A sequence of narrative spaces preserves the architectural essence of the place.

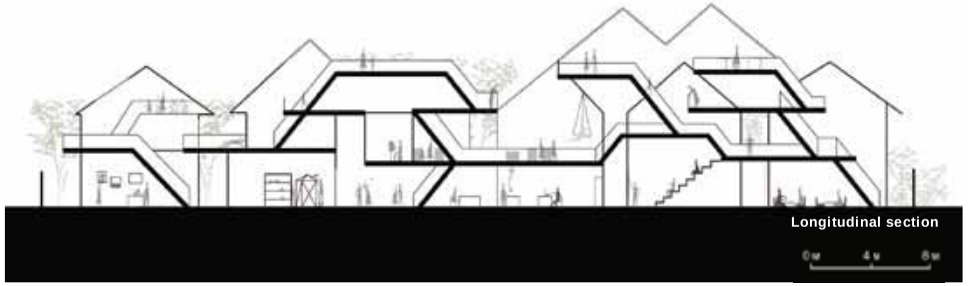
The project consists of existing buildings and a path articulated by bridges, platforms and stairs, creating interesting relationships between the interior and the open spaces.

The combination of public spaces and workshop activities provides an opportunity for individuals to express themselves. According to the analyses carried out (current and expected), the users who could benefit from the ICH WORKSHOP VILLAGE are patients from the nearby children's hospital, young people, workers and elderly people. The project aims to involve people in artistic practice and self-expression, in a place where everyone can enjoy workshops according to their interests and age.

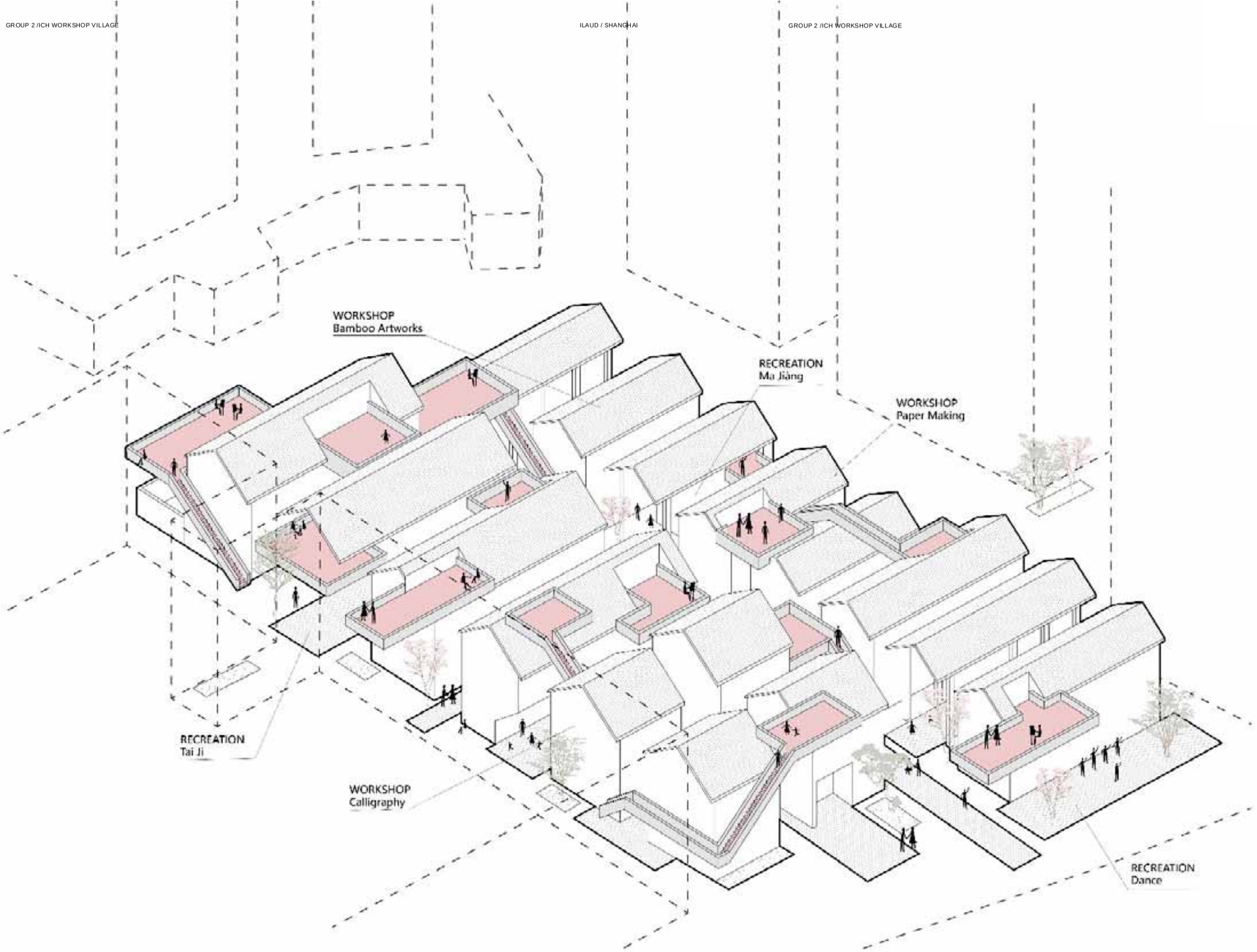
对统益里及其周边地区的分析凸显了居民缺乏自我表达的欲望与彼此交流的空间。自我表达有多种方式，艺术便是其中一种：而非物质文化遗产研讨会是月基地最契合的选择。在这里，人们可以在传统手工艺者的指导下学习制作各种手工艺作品并充分表达自我。这个概念灵感来自于基地所在位置和其中的历史建筑。

通过运用一系列相互串联的叙事空间，基地建筑群的肌理和空间关系得以保留并被重构。其主要构成元素是建筑体本身和连接它们的“通道”。这些“通道”根据需求变形为桥梁、平台和楼梯，丰富了空间与其功能间的关系。同时符合的公共空间也为个人提供了表达自己的机会。根据对基地人口分布及其发展趋势的分析，其周边生活了大量不同的群体，例如病人、儿童、工人和老龄人等；在这里的每个人不分兴趣与年龄都能享受方案中提出的社区活动， 并在重新组织的里弄空间中参与艺术创作，同时展示和表达自我。

Site plan



Longitudinal section



Axonometric view

Group 3

11Li

Francesca Alberici
Jianing Chen
Dexin Li
Dongjie Ma
Pal Pandit
Fengqin Yang

The purpose of 11LI is to bring back to Shanghai's citizens the pleasure of cooking and sharing food. Nowadays, the typical urban apartment is too tiny to cook and share food with as many people as you like.

So, 11LI creates new spaces and opportunity for this activity which is losing now in Chinese cities. Here, the pleasure of buying ingredients and preparing a meal for family, friends and colleagues mixes with curiosity and the need to learn more about what we eat and how we eat it.

In addition, we decided to create different spaces for workshops, restaurants, urban farming, and cultural leisure around the market area.

Why the *lilong*? The *lilong* neighbourhood is the perfect example of sharing space. You still can observe people in other *lilongs* living, cooking, sharing along the alleys outside their homes. So we decided to maintain the characteristic narrow space of the *Lilong* that also characterize the typical Chinese markets.

To better experience the space and to emphasize the sense of loss and density, we created a route that passes all around the area, up and down, connecting the two-floor levels and the different functions of the area.

Inside 11LI, you get lost, but you can discover a sense of intimacy and connection with the space (and the food) that nowadays it is almost impossible to recreate in chaotic, high-density cities.

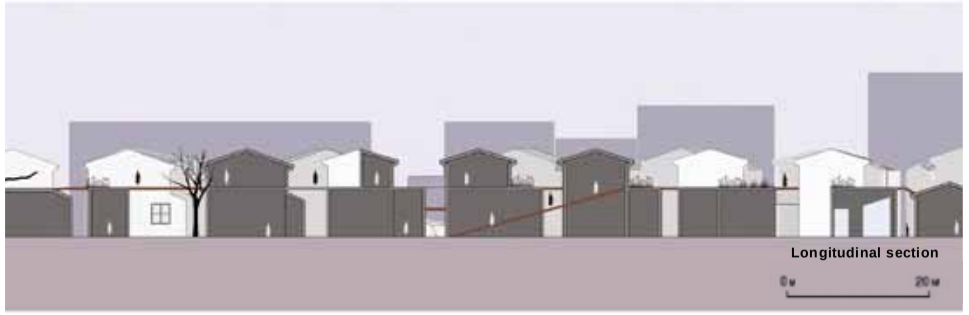
食忆里'的宗旨是让上海市民享受烹饪和分享美食的乐趣。今天，大城市的年轻一代居住的公寓都相当狭小，很多人居住的空间甚至没有厨房，即使有也很难与大群体一起分享烹饪与分享食物的乐趣。

我们想要把这一题元带回到当今的城市中。在这个地方，为您的家人、朋友和同事购买食材并准备一餐饭的过程充满乐趣，并伴随着更多学习我们日常所食的好奇心。

我们围绕中心市场区域创建了不同用途的空间，用于工作坊、餐厅、都市农场以及文化休闲。为什么选择里弄？里弄是分享空间的最佳场所。在这里可以观察到邻里们是怎样在外部狭窄的公共街道中活动、烹饪和分享。因此，我们决定维持里弄的特色狭窄空间，这也是典型的中国集市的特征。

为了更好的体验空间，特别是强调密度和方向迷失感，我们创建了一条路线，从上下左右贯穿这个区域，并将两个楼层和该区域的不同功能连接起来。在食忆里内部，你会迷失但同时会感受到该空间带来的亲近和联系，也是当今无序的高密度的城市所无法重塑的。

Site plan



Longitudinal section

Building section

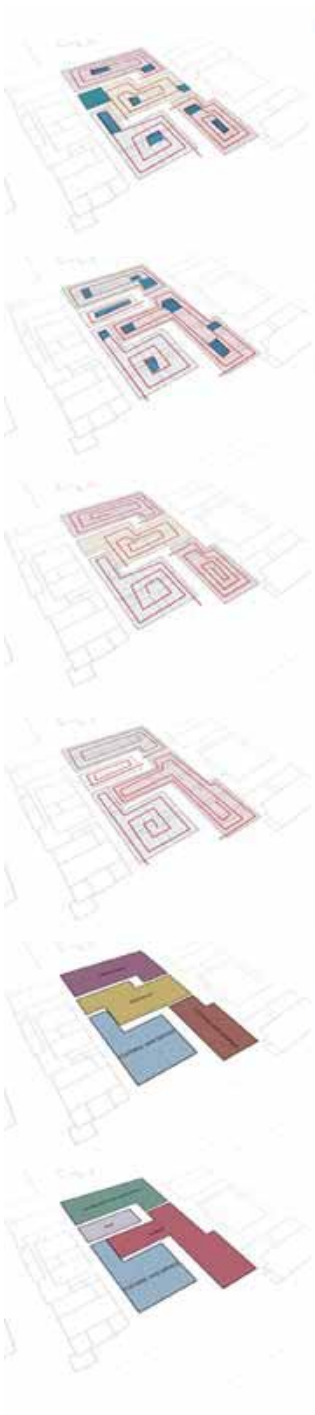
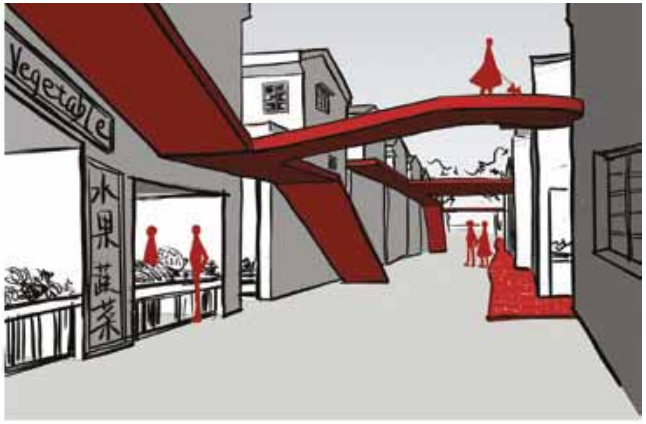
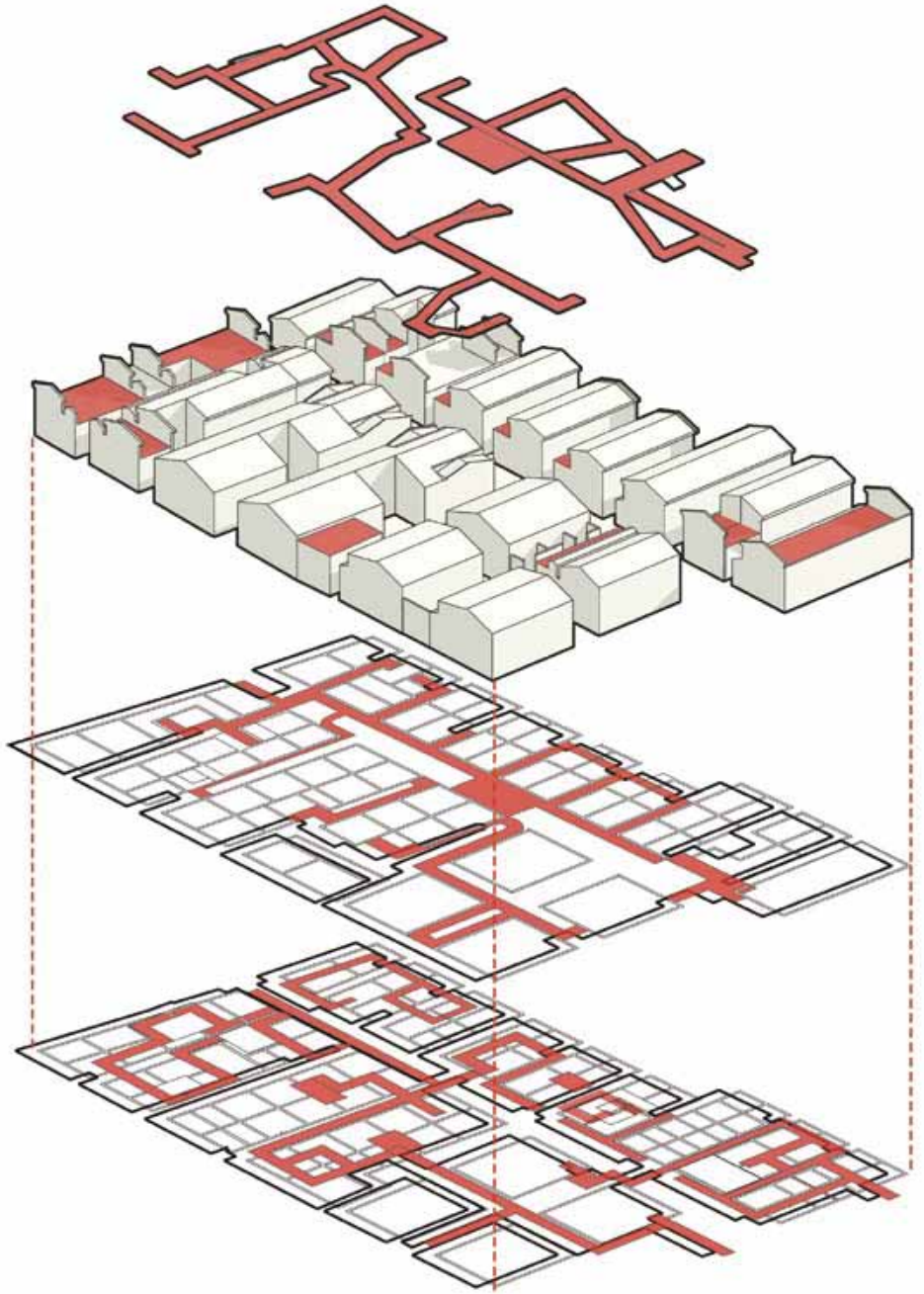


Diagram of circulation and functions



Conceptual views of the project



Exploded axonometric view

Group 4

Next Generation *Lilong*

Patricia Carrilero
Yuanyuan Lin
Yu Tang
Marco Voltolina
Wanxuan Yu

The *lilong* neighbourhoods are an essential feature of Shanghai. They are not just a material heritage: they represent a way of life, a relationship between private and public space, between individual and community. However, today most people consider them unfit for a decent life. The Shanghainese have lost their social and emotional bond with the *lilongs*.

The project introduces a new layer on top of the existing buildings dedicated to the new generation: a place for children, the only ones who can understand the value of the *lilongs* and learn from them. A new form of stratification spreads out; three layers communicate through stairs, ramps, holes, windows.

The first level, strongly connected with the city, hosts public spaces, shops and cafés. The second floor accommodates temporary residences, demonstrating that it is possible to have a comfortable life in the *lilongs*. The last level is not simply a roof but a giant playground that constitutes a new urban landscape and establishes a visual relationship with the surrounding high-rise buildings.

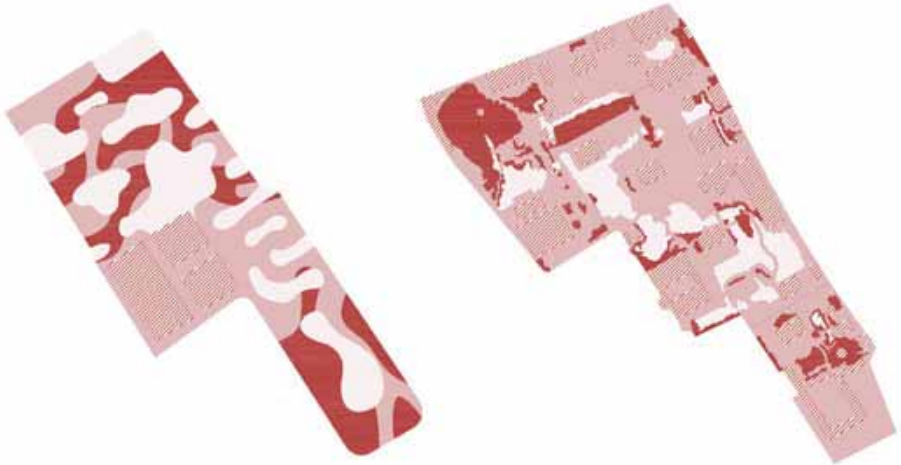
NEXT GENERATION *LILONG* is a contemporary project but deeply rooted in Chinese culture: a microcosm, far from the chaos of the metropolis, just like a classical Chinese garden.

里弄是上海的一大特色建筑。它不仅仅是物质遗产，也代表了一种生活方式，一种私人空间与公共空间之间、个人与社区之间的关系。然而，如今大多数人不习惯于这种生活。上海人已经失去了与里弄的社会和情感纽带。

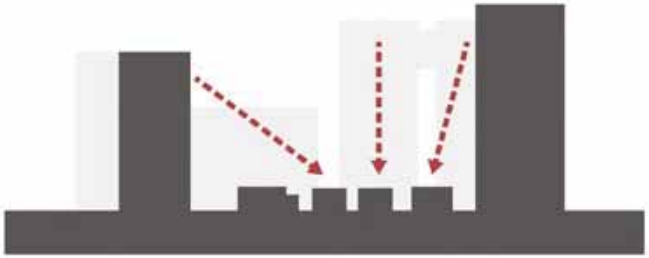
该项目在现有建筑的顶部引入了一个新的层，专门为儿童准备的地方，让他们能够理解里弄的价值并且从中学习。于是一个新的分层系统产生了，他是三个相互之间通过楼梯、坡道、洞、窗户关联起来的系统。系统的第一层与城市紧密相连，由公共空间、商店、咖啡馆、图书馆组成。二层提供临时住所，让人们他生活在里弄中并享有优越的生活品质。最上面一层不仅仅是一个屋顶，也是一个巨大的游乐场，他构成了一个新的城市景观，并且与周围的高层建筑建立视觉联系。NEXT GENERATION *LILONG*类似中国园林，远离城市纷扰，它是一个深深扎根于中国文化的现代元素的缩影。

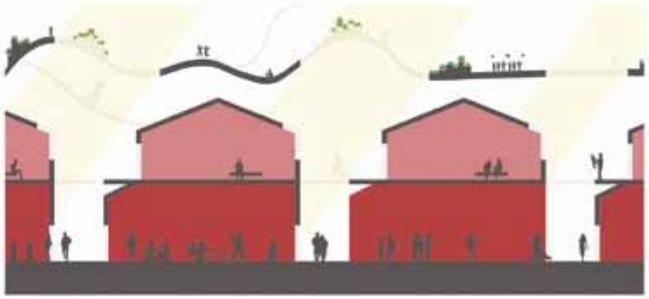
Site plan

0 m 15 m 30 m

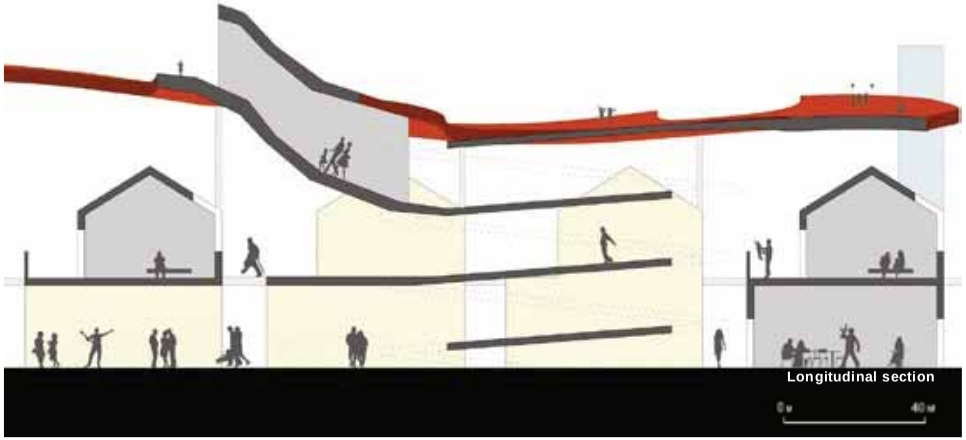


Comparison between the project and Yu Garden

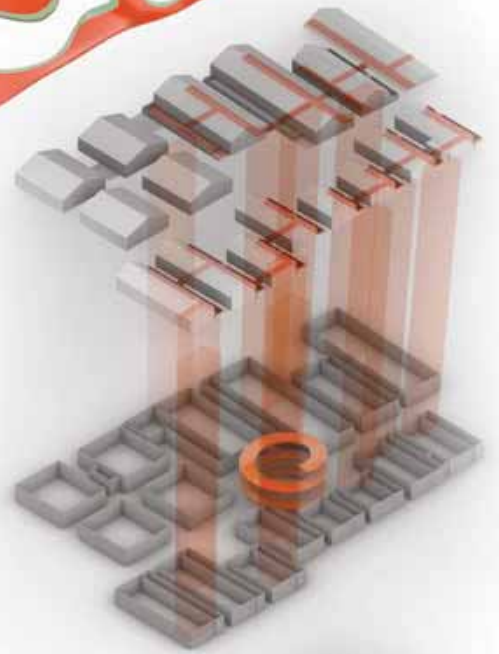




Design strategy

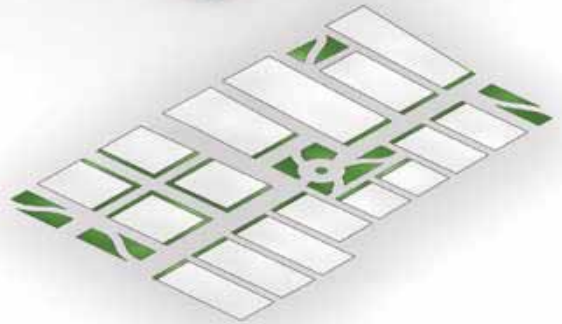


Playground
儿童活动场所



Residential Area
居住空间

Public Space
公共活动空间



Site Design
场地设计

Exploded axonometric view

Group 5

Extruded Footprint

Francesco Grugni
Nicholas Venieris
Zihan Wang
Jiaye Yang
He Yikuan

Tongyi Li is a *lilong* neighbourhood located In Putuo District. It was built in 1920 and is currently considered a settlement of high historical value. The surrounding areas accommodate offices, commercial buildings, and residential compounds populated mainly by more or less affluent inhabitants.

The project EXTRUDED FOOTPRINT aims to create a community space that attracts people through a combination of past and present. The design concept is *cave for slow pace*. People's lives have become faster and faster due to the increasingly hectic city, which has left behind the quiet life of Shanghai's old *lilongs*. How can the characteristics of the *Lilong* be maintained and combined with the modern lifestyle to turn Tongyi Li into a recreational space for local residents?

First of all, the original dilapidated buildings have been dismantled, while the alley system has been maintained. The new buildings' ground floor stands on the previous ones' footprint, while the upper levels are combined into a single floor, shaping a large perforated roof for air circulation and lighting. Various vegetation systems and water elements were added to the roof to create a garden accessible from different heights. The tallest building is a "tower" made up of green walls used for rainwater collection and irrigation.

Regarding open space, each lane is divided into two areas: one becomes a connecting path, the other public green space.

The project explores the combination of the old and the contemporary way of life in Tongyi Li, creating a community space that echoes some of the characteristics of Shanghai's *lilongs*.

统益里是位于普陀区苏州河以南的历史建筑。建于1920 年，目前是具有很高历史价值的聚居地。周边多位商务办公与住宅区。地块人群多为住区居民与白领。本次统益里里弄改造设计希望从地块人群的角度出发，创造一个结合过去与现在的社区服务空间。

本次设计概念为慢节奏生活大厅 。人们的生活节奏因日渐繁华的都是变得越来越快，已经将过去悠闲的上海老弄堂生活抛弃。如何保留里弄特色的同时，结合人们的现代生活方式，使统益里变成周围住宅区居民休闲、娱乐的游憩空间。

首先拆除原本破旧危险建筑，在底层保留原始的地基和原始的道路系统，将每个独立的里弄一分为二，部分置入走道连接彼此，部分变为绿地。将地块内所有里弄的二层全部连接起来。使其看起来像一个巨大的顶盖在原本的建筑上。在底层绿地的地方开洞，增加采光和空气流通。拉高部分建筑，使其不再像原本的老建筑一样“陷落”高大的建筑群里。在错落的屋顶加入绿植系统和水体，形成不同高度的可达的屋顶花园。屋顶最高的一座塔由绿墙组层，他是屋顶绿植系统中的重要一环，承担着收集雨水、对屋顶绿植进行灌溉的作用。

从开放性空间来看，每条走道分割成两个区域：一个行程流通和衔接的路径，另一个做为公共绿地。

整个设计试图对旧式里弄生活和现代生活的结合进行探讨，创造更具上海里弄特色的社区服务空间。

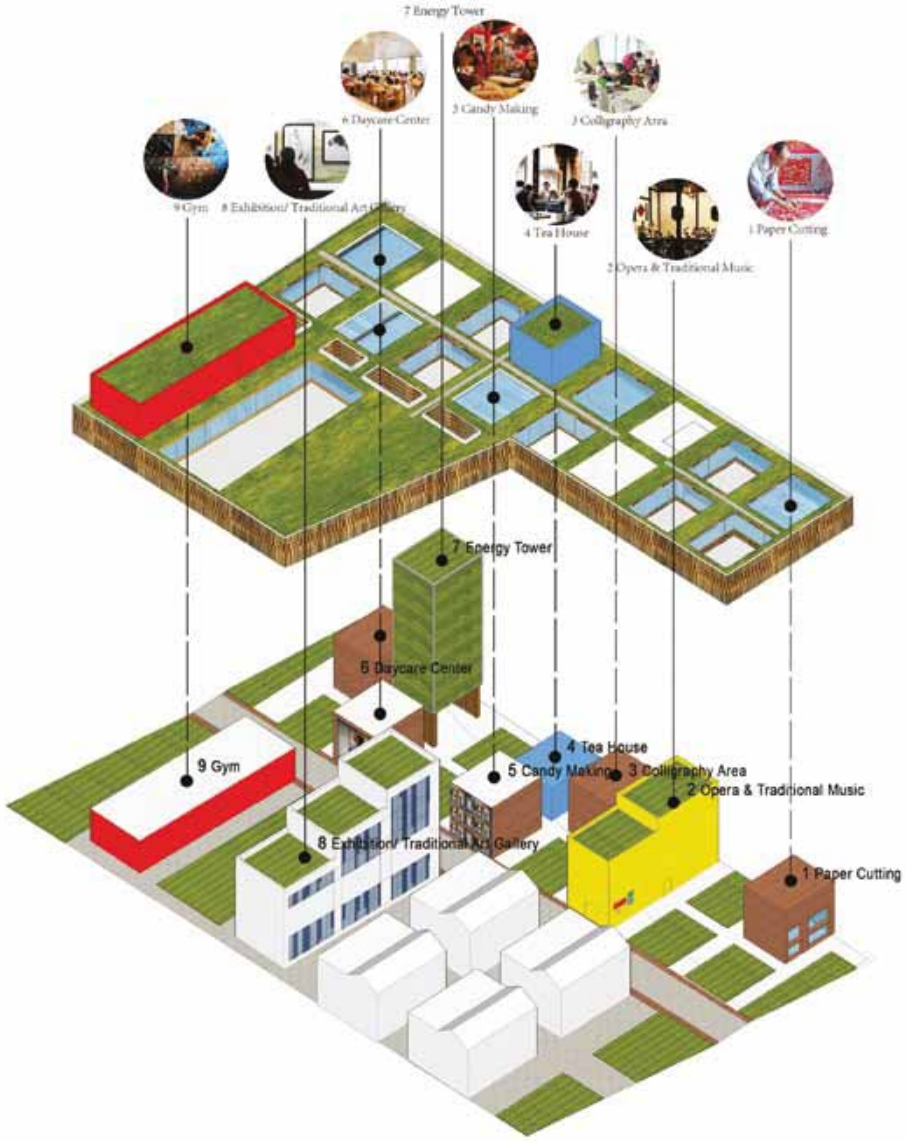
Site plan

0 M 15 M 30 M

Original layout　Project layout-Ground floor　Project layout-First floor

Original and project layout

Views of the project



Exploded axonometric view

Group 6

Lilong Urban Farm

Xue Chang
Wenyu Hou
Eunsun Lee
Yuling Wang
Ding Yue

The fast-paced lifestyle of metropolises like Shanghai deprives people of interacting with their neighbours, friends and even family. For this reason, a place of communication is always needed and required in the city.

Tongyi Li is a neighbourhood of *lilong* housing facing narrow alleys. These lanes branch off from the main path that was once a place of interaction for the community.

The idea of the *LILONG* URBAN FARM project stems from one of the *lilong* inhabitants' ways of socialising: growing plants in the residual spaces along the alleys. And the primary objective of the intervention is to create a place where farming is the catalyst for social exchange. Inhabitants, occasional visitors or patients at the nearby hospital will enjoy an environment that echoes the spirit of the old *lilong* neighbourhoods and suggests a healthy lifestyle. In other words, the city farm is a place to meet friends, family and new people through sharing a food culture.

The project preserves the layout of the neighbourhood. Existing buildings can be renovated or even rebuilt but following the original footprint. Analysing the critical aspects of Tongyi Li, the site is surrounded by buildings much taller than the *lilong* housing and is isolated from the access road. In order to reconnect the area with its surroundings and engage people, the project defines new pedestrian paths connecting the buildings with the open spaces and redesigns the street section of the existing alleys.

In addition, the functional layout of *LILONG* URBAN FARM includes a system of modules that can be repeated and installed anywhere on the site.

The planned modular blocks include seven functional programmes: an info point for visitors, an indoor farm, an outdoor farm, an open kitchen with a dining room, a lecture hall, a market, a restaurant.

Therefore, the *LILONG* URBAN FARM is a sustainable and developing production laboratory that aims to expand throughout the city.

上海这样的大都市里，快节奏生活方式阻碍了人们与邻居、朋友甚至家人的互动机会。因此，城市中总是需要一个交流互动场所。

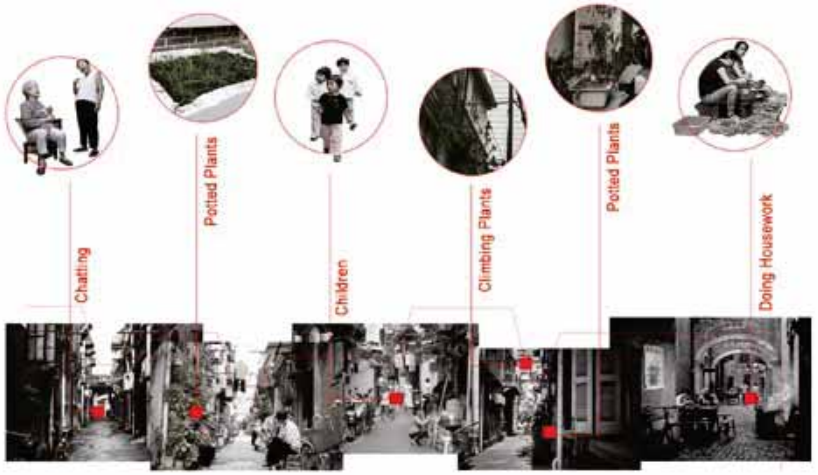
统益里是一个面向狭窄小巷的里弄住宅小区。中心街道的两边有延伸至房子的小巷，仿佛一条鱼骨。在过去这条街扮演了社区沟通交流的作用。“里弄城市农场” 项目的想法源于 *Lilong* 居民的一种社交方式：居民在小巷的剩余空间中种植攀爬植物。附近医院的居民、偶尔的访客将享受到与里弄老街区的精神相呼应并启发健康生活方式的环境。换句话说，城市农场是一个通过分享饮食文化结识朋友、家人和新朋友的地方。

该项目保留了街区的基本形态和布局。建筑物基于现状翻新甚至重建。该场地周围因为被高楼环绕，并且与通道隔离。为了重新与周围环境的连接并吸引人们，该项目设置了连接建筑物与开放空间的新人行道，并重新设计了现有小巷的街道部分。

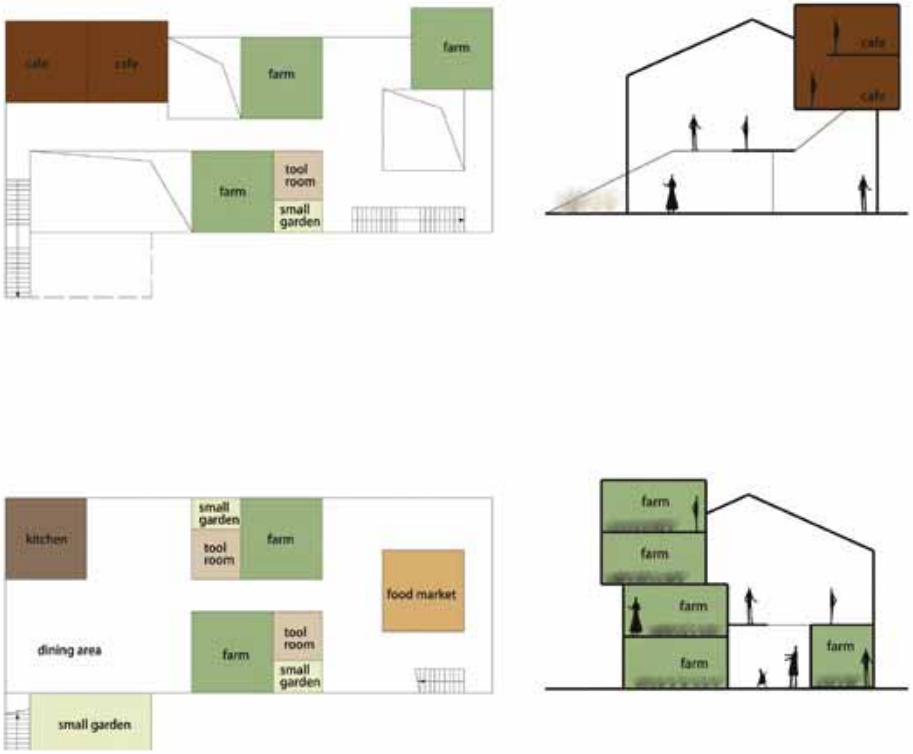
此外，“里弄城市农场”的功能布局引入一个模块系统，每个模块有不同的功能，并可以重复安装在任何地方。模块化街区包括七个功能项目：游客信息点、室内农场、室外农场、带餐厅的开放式厨房、演讲厅、市场、餐厅。

因此，“里弄城市农场”是一个可持续发展的生产实验室，并旨在扩展到整个城市。

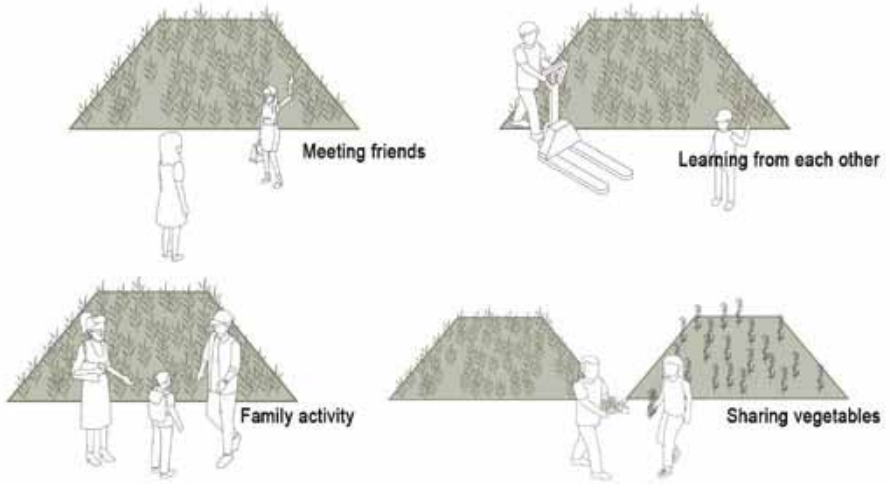
Site plan
0м 15м 30м



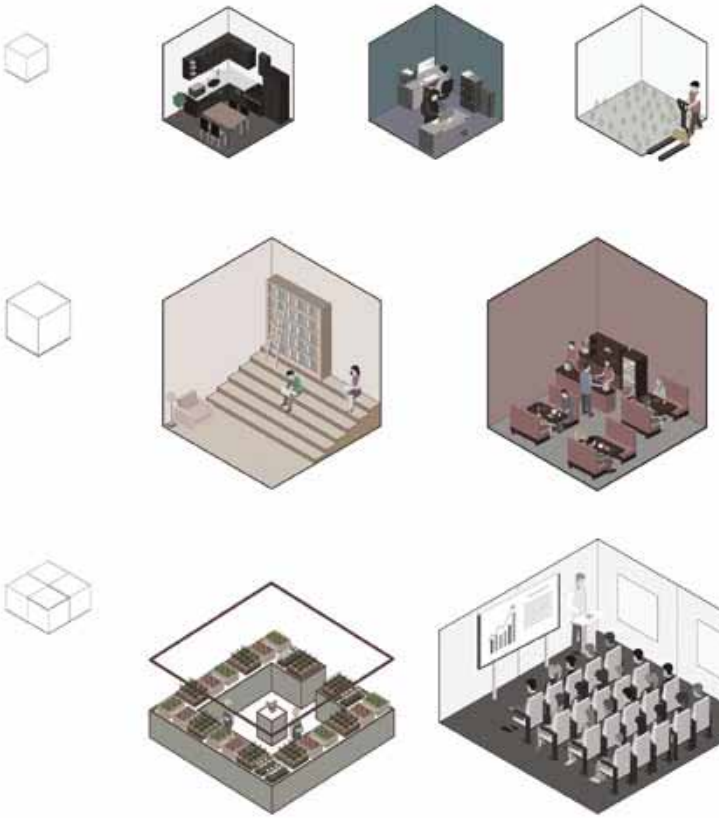
Ways of socialising in *lilong* neighbourhoods



Diagrams of plans and sections



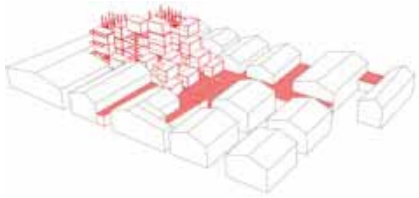
Ways of socialising in *LILONG* URBAN FARM



Modular system units

Group 7

Lilong Adding Community



Fangzhou Long
Sophie Moehrle
Shen Wang
Rui Zhao
Yining Zhen

The demolition process of the urban fabric is a common practice in Shanghai.

Skyscrapers, office towers and multiple services such as hospitals, shopping streets and malls proliferate in the Chang Shou Road area. The new urban settlements surrounding the project site provide a comfortable lifestyle but have lost the sense of community of the old neighbourhoods.

Therefore, *LILONG* ADDING COMMUNITY aims to set up a creative community centre to improve the liveability of the Putuo District. The idea is to redevelop Tongyi Li into a place where people can meet and share their culture. For this reason, it is essential to preserve existing buildings because their historical value and layout foster a sense of community. Demolition is not always the only way to urban development. Therefore, a further objective is to understand how to work on Tongyi Li's *lilong* housing.

In order to redevelop the project site, an interesting operation is the addition of new elements.

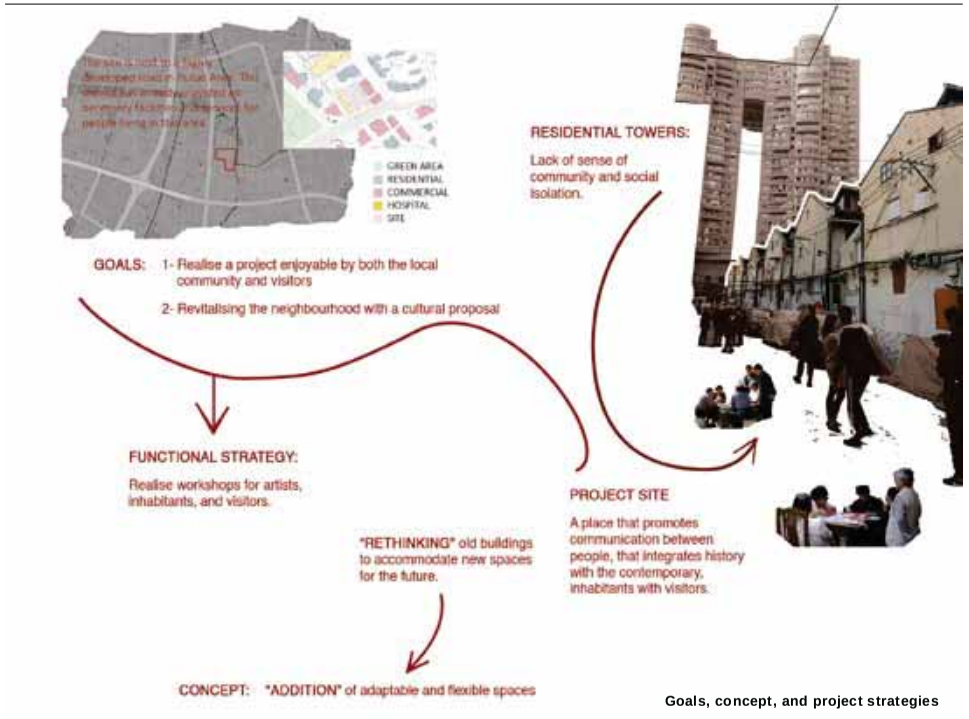
What is *added* are flexible facilities that host workshops for local artists and designers and occasional visitors, places to share ideas and experiences.

上海的城市更新进程中，建筑拆除重建是普遍的措施。在长寿路上有很多高楼大厦，同时这里是一个配备齐全，有着医院、商场、办公等功能的适宜居住的街区，但还未形成一个有着凝聚力的“社区”。我们想通过营造一个创意文化空间来改善城市，在这片区域中创造一个聚集交流的场所，同时为游客提供一个了解当地居民与文化的窗口。基于上述设想，我们认为应该将原有里弄建筑保留下来，因为里弄建筑的空间结构有助于营造邻里生活的融洽氛围，同时建筑本身也有历史价值，我们还想探讨更深层次的问题—如何对待旧建筑。直接拆除并不总是最好的解决办法，我们认为需要找到一个方式来保留旧建筑的有价值部分。

我们认为“生长”是一个很有趣的改造建筑的概念，我们可以诚实地表述不同年代人们对于建筑风格、技术的发展。所以我们认为可以在旧建筑之上加建具有现代性、灵活的建筑。

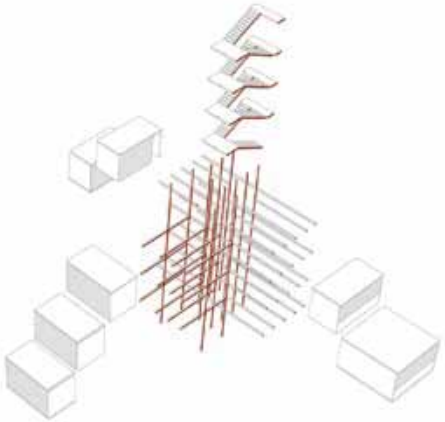
我们还通过置入使用灵活建筑吸引使用者，尤其是艺术家或设计师，同时还向游客开放工作坊，一次提供游客、当地居民和艺术家交流的平台。

Site plan

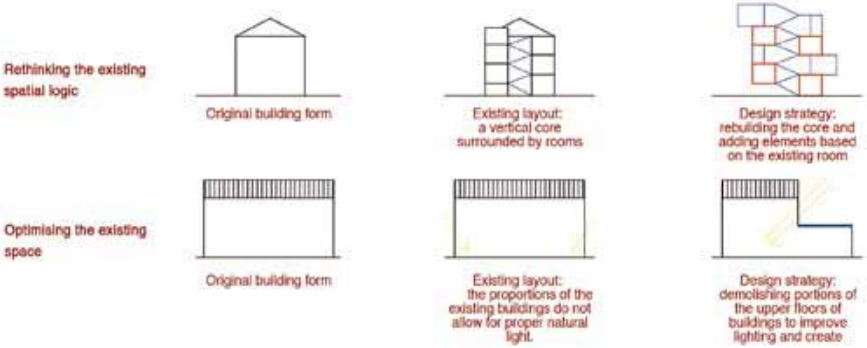


Goals, concept, and project strategies

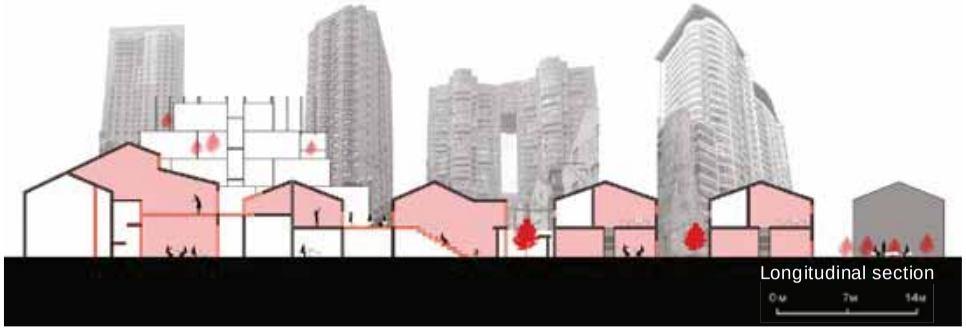
Site analysis and design strategies

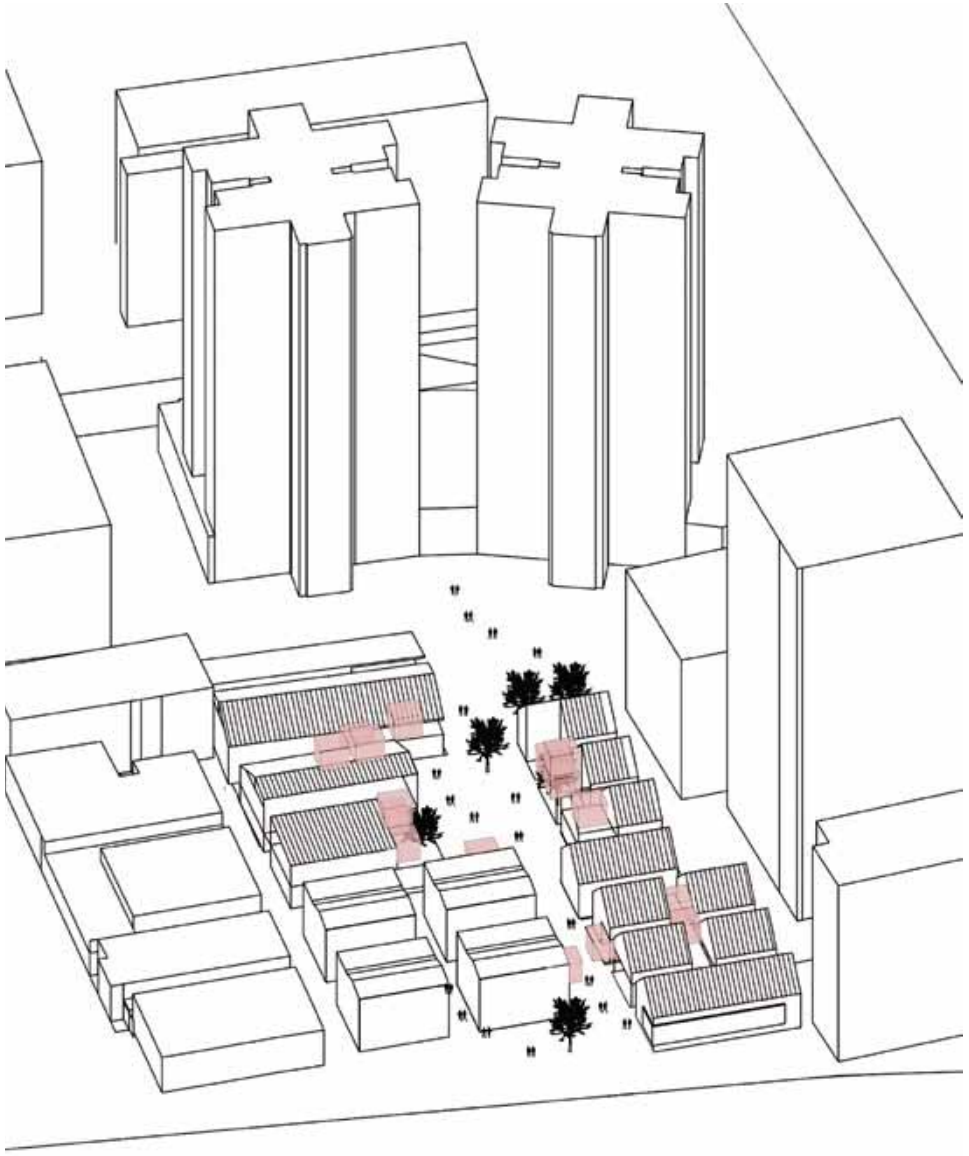


Layout of additional elements



Strategies applied to existing buildings





Axonometric view

Project sketches

Group 8

Human Life

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Francesca La Monaca
Qingxian Huang
Rui Li
Shuyu Ni
Yuhan Ye

Tongyi Li is located in the Putuo district of Shanghai, surrounded by several high-rise buildings. As the historical housing on the site cannot meet the current residential needs and expected planning in this area, the inhabitants have already moved out. In addition, analyses carried out on the site show no requirement to preserve existing artefacts except for four historical buildings.

On this basis, the project HUMAN LIFE aims to preserve the sense of community conveyed by Tongyi Li, which is disappearing due to technological and spatial transformations in the city. New residential and office buildings isolate people rather than encourage interaction. That is why the social benefits of public space become fundamental in our society.

HUMAN LIFE pursues two main objectives. On the one hand, to maintain the site's memory, and on the other, to generate a project on a human scale. At the first stage of the analysis, we identified a network of landmarks in the Putuo district to place HUMAN LIFE within this framework.

Noting the tall buildings that enclose the area, the design concept is to proceed with an opposite operation. As a result, HUMAN LIFE is characterised by empty spaces and small dimensions that contrast with the surrounding context. The only element visible from the two main roads is a tower that attracts people's interest and provides a vantage point within the project. To preserve the memory of the site, we have kept some features of the original buildings. The first is the dark brick wall that characterises the four historic buildings on the site and the urban fabric to the area's southwest.

In this sense, the memory of Tongyi Li also preserves the legacy and atmosphere of the surrounding context. Rather than a fake façade, the original walls become an integral part of the project, setting the stage for a kind of new urban theatre.

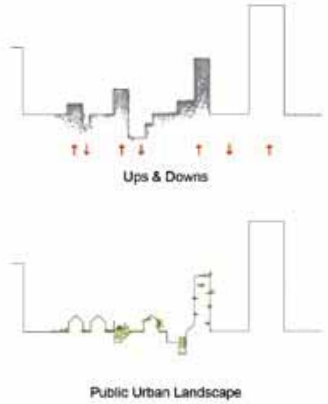
A second element we have retained is the 5m wide pathway running north-south through Tongyi Li, providing the primary access to the site. The third is the original building footprint, which will accommodate new spaces and functions.

HUMAN LIFE embodies the ruin of an old Shanghai that is reborn through the presence and interaction of people.

统益里位于上海市普陀区，周围众多高层建筑环绕，原住居民因场地原有的住所无法满足逐渐发展的居住需求，以及本区域就成改造项目的相关规划现已全部完成搬迁。场地出四座历史文化建筑需要保留之外，其余部分均不要求保留。

我们项目的主体是保持人与人之间确实的关系，这种亲密的邻里关系正渐渐因为新技术和城市空间的发展更新而消失。现代化的住宅楼和办公楼常使人感到与世隔绝，游离于社区生活之外。这就是公共空间的所能产生的社会效益在我们的社会发展中越发重要的原因，也是我们将于城市空间中寻找人的生活作为项目主体的原因。我们所思考的“人的生活”主要包括两个方面。一是对旧时记忆的保留；一是在已建成的城市大尺度中表现出人的尺度。在最初的阶段，通过解读场地，我们定义了这个地区的地标网络。对于城市规模，我们的想法是将这个项目作为一个地标，成为这个网络的一部分。考虑到周围的高楼大厦，我们决定以一种异于构建高度超越周围建筑的方式进行地标性建筑的设计。由于场地与周围环境的鲜明对比，空旷的空间和小尺度感变得更加强烈。本项目唯一高的元素是一个塔，人们可以登塔远眺，将整个场地与毗邻的古建筑尽收眼底。这座高塔也在本街区的两条主要街道上创造了一个非常明显的视觉亮点。我们选择了一些原有建筑的元素以保留场地的记忆。首先是墙。我们认为对场地的记忆不仅关于场地本身，其与周围场景的联系也是不可分割的。本场地内的神色砖墙是给人留下深刻印象的重要元素。我们保留了部分原有的墙体，是其和场地内保留的四座古建筑与场地西南侧的历史建筑间固有联系得以保留，勾起曾居住在这里的人们关于场地的种种情景。

墙壁的存在为这种新的城市剧院创造一个舞台，而不仅仅是场地周围的一个假立面，它也成为我们新项目的元素。此外，主里弄的宽度为5米，连接基地的南北，仍然是主要的通道。我们还保留了原有地块的轮廓，但填充了我们重新定义的空间形式，从而被赋予新的功能，而由于人们的到来和在新建筑中发生的活动，这一旧上海废墟也将在新生活中重生。

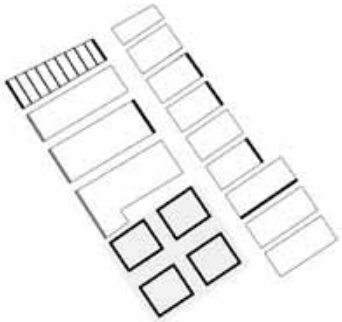


Design concept

Site plan

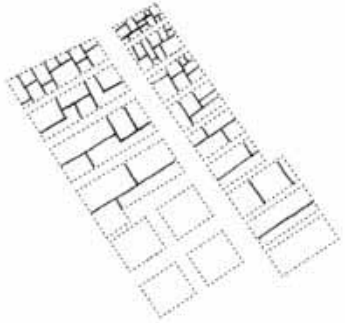
0 m 15 m 30 m

Original Layout



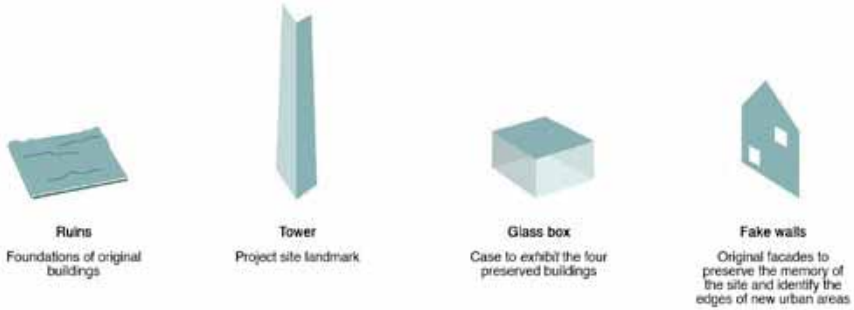
Preserved Walls

Progressive Energy & Rhythm

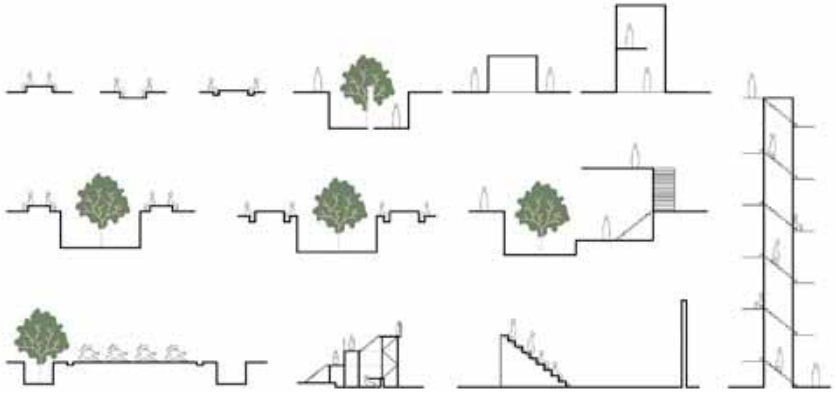


Increasing Density in H/V ways

Design strategies



Characteristic elements of the project



Diagrams of potential common activities

Axonometric view

Afterword

后序

ILAUD'S Commitment to the Crisis and Transformation of the Human Habitat

Paolo Ceccarelli

President of the association ILAUD –
International Laboratory of Architecture & Urban Planning

Pilar Guerrieri

Politecnico di Milano

Giulio Verdini

University of Westminster

Based on what was discussed and elaborated in the ILAUD Workshop in Shanghai's Putuo District, the initiatives that ILAUD had planned at the beginning of 2020 were interrupted by the pandemic's spread and resumed at the beginning of 2021 through remote activities.

These activities consisted of a series of workshops focused on the relationship between formal and informal structures in the organisation and functioning of large cities – as in the case studies of the Merkato Area in the centre of Addis Ababa and the development of new functions within informal residential fabrics in Delhi – and on the problems resulting from the climate crisis in spontaneous and marginal settlements in Rio De Janeiro, on the occasion of the UIA World Congress.

The long pause for reflection due to the pandemic and the subsequent problems that emerged on a global scale prompted a review of the initial working hypotheses. More specific aspects emerge linked to the slowdown of urban activities, the modification of social relations, the different and unexpected use of public and private spaces. This condition has led to the exploration of different situations, starting with analysing some neighbourhoods in large European cities such as Milan, London and Berlin[1].

What has happened during 2020, still ongoing in 2021, has encouraged ILAUD to redefine work directions for the next future and identify some of the problems raised by COVID 19 and the continuing worsening of the climate situation.

These are problems relating to the human habitat in its physical aspects and the resulting socio-cultural, economic, and institutional consequences. The significant aspect of the transformations generated by technological development was also considered, notably the rapid digital transition imposed by the pandemic.

This framework led to forming a working group (composed of Paolo Ceccarelli, Pilar Guerrieri, Giulio Verdini) that developed a programme of initiatives for the next future. In addition, the involvement of partners from various parts of the world (Mexico, Brazil, United States, Great Britain, Germany, Italy, South Africa, Israel, India, Japan and New Zealand) in Youth 4 Climate and the preparatory work for COP26 allowed for the elaboration of ideas and insights on sustainability and social inclusion for the so-called "green recovery"[2].

This essay, which concludes the book on the Putuo District experience, introduces these initiatives, paving the way for future ILAUD projects.

Over the past two years, two important aspects concerning the functioning of human settlement have emerged: the pandemic has raised underestimated issues such as individual and group isolation, both in public and private spaces, and a focus on the dynamics of displacement, contact, proximity within the built urban fabric and open spaces. At the same time, the worsening of negative and often unpredictable climatic phenomena has overlapped with increasingly severe consequences to the social and economic conditions of the population. Indeed, the two issues cannot be addressed separately as specific and compartmentalised answers are often difficult to provide. Epidemics themselves are an effect of climate change. Moreover, these issues require institutional innovation and effective forms of relationship with citizens to find shared and co-designed solutions.

In addition to these two facts, three profound transformation processes, underway for some time, have reached significant proportions and require urgent action.

The first is the process of social transformation occurring unevenly but also in an unstoppable way in all world regions. The role of women is growing, the contribution[3] of young people is increasing, especially in emerging countries, the population is ageing in developed countries and in others such as China, which has implemented demographic containment policies, and urban models of living and working are spreading throughout the world.

The second process profoundly modifying the human habitat is the spreading urban settlement globally, severely affecting the natural environment. Increased urbanisation has also led to ever greater globalisation of relations between settlements due to food supply and water availability problems, the proliferation of interlinked economic activities, and the growing use of communication networks. This condition has resulted, and in many cases still does, in bottlenecks and fragility in the functioning of the various territorial components and growing demand for raw materials, food, water, etc.

The third element that has both a positive and negative impact is technological development in its various aspects. The digital transition, the spread of ICT, the innovation of production processes in many sectors often using rare raw materials are causing profound changes in the environment. Evidence of this is the mounting pollution of water and the continuous mining research in remote areas with the production of vast quantities of waste, etc.

The set of these elements, often dramatically combined with the phenomena produced by climate change – for instance, the melting of ice in the Arctic regions or the increase of new viral forms or the re-emergence of old diseases connected to the increased temperature – raises the need to re-analyse many aspects of the existing human settlement based on evaluation criteria other than the established ones. In many circumstances, it is impossible to operate on what exists with minor changes or changes produced by the internal evolution of a given phenomenon, but we are faced with new phenomena, which often constitute a break with the past; basically, it is the reappearance in more severe and accentuated terms than what happened at the end of the 18th century with the affirmation of the industrial revolution and capitalism. This situation entails reading existing and developing realities in different terms and thus developing methods of analysis and identifying contents that may also be completely new and unexpected.

The combination of these processes raises, for example, the need to consider the appropriateness of profound changes to existing settlement structures, as they are unable to provide a positive response to the ongoing processes of social, economic and technological transformation on the one hand, and inadequate to cope with climate change on the other.

The combination of these processes raises, for example, the need to consider the appropriateness of profound changes to existing settlement structures, as they are unable to provide a positive response to the ongoing processes of social, economic and technological transformation on the one hand, and inadequate to cope with climate change on the other. Even if the most damaging aspects are mitigated, the ecological transition will continue for several decades, and this will involve profound changes in lifestyles as an effect of the resilience of the affected populations. Therefore, it is essential to address in a new way some critical issues of the current human habitat from the perspective of what is happening and will happen in the future.

To this end, we intend to address some of the particularly relevant and significant problems in direct terms and with an open attitude.

In particular, we consider it essential to examine the progressively altered relationship between human settlement and the natural environment.

The central issue concerns the structure of the environment built by man, in its diffusion and extension in all parts of the world, in more or less dense and compact forms, however,

such as to create extreme imbalances for nature.

There are two areas for specific research: the consolidated and dense settlement of some parts of the city, where nature has been totally erased or expelled, and the urban fringe areas or the territories of diffuse settlement, where the relationship between the built environment and nature is often precarious, seriously damaged, but still existing and recoverable.

The studies deal with the impact of the ongoing social and economic transformation processes, technological innovations, and climatic phenomena in the future. It is undeniable that the growing role of women, the opportunities for young people to engage and the living conditions of marginal groups, are elements that require a profound revision of the organisation of ways of living and using the territory.

The consequences of the pandemic have highlighted inappropriate situations in the city's physical structure that cannot persist. This condition involves a specific investigation of exemplary cases and situations that identify new forms of habitat organisation and, consequently, approaches to urban planning and spatial layout.

The risk that policies to combat climate change do not, in turn, favour new forms and levels of segregation, inequality and social and economic fragmentation must also be kept in mind. The city capable of corresponding to a more balanced relationship with nature cannot consist of islands with different levels of quality of environmental conditions and social structures.

In light of these considerations, we propose specific lines of research and proposals for the future:

1) The study of consolidated parts of cities, also characterised by historical stratifications of more or less long periods, which raise complex problems of response to climate change.

It is a question of understanding what additional interventions in terms of the organisation of public spaces and the relationship between them of private settlements can be introduced. Solutions can also be found to open up green areas in the compact urban fabric and organise services networks to improve living conditions. In particular, it is crucial to reflect, as was done in the case of the Putuo workshop, on the use of abandoned spaces or spaces or potentially building-free areas to create open public places aimed at creating inclusion among the inhabitants of a neighbourhood, including through agricultural functions. These studies can consider different situations both from the point of view of the urban structure's morphology and the social and cultural composition.

2) Another significant case study is the urban fringes and areas with widespread and low-density settlements. These are the areas where there are still relationships between built structures and natural spaces, even if contradictory and, often, harmful. Often these are fragments of nature or degraded and marginalised rural areas, but in all cases, forms of intervention are conceivable that could allow the recovery of a more correct and balanced relationship. In these areas, the connection between defence and recovery of nature and food production is particularly relevant for marginal groups who may live in urban fringes and counteract the growing deficit of agricultural products in highly urbanised regions. On a large scale, low-density urbanisation has gradually produced extreme environmental imbalances, undermining the fundamental role of natural spaces that are not attacked and degraded.

This line of research will explore the characteristics of similar forms of physical organisation in different cultural and geographical contexts. Indeed, most of the current problems of the urban condition are concentrated in such areas.

3) A third significant focus of research is on isolated settlements in predominantly natural settings, which are currently facing climate change and new forms of mining or large-scale industrial, agricultural production. These are regions where villages' old structure of human settlements is in severe crisis due to droughts, floods, rising sea levels, etc.

New problems arise in depopulated areas due to lack of work and can no longer be controlled by a continuous human presence. For example, this situation occurs in regions that have reforested following the abandonment of agricultural crops or forestry economic activity, resulting in new problems in overall land management due to abandonment. In these cases, research work is indispensable that leads to solutions in which the relative physical isolation and climatic changes can be contained and rebalanced through acceptable settlement solutions and, in some cases even attractive, to shares of the population of a territory.

Based on this approach, ILAUD is carrying out a study that will end at the beginning of winter 2022 with a workshop focusing on an area of the city of Genoa in Italy. The Cornigliano District is a settlement based on heavy industry and port activities, which is an interesting case for examining the problems of adaptation to climate change and the social and economic transformations of a very compact built environment. In parallel, the urban workshops in Berlin and London are continuing, the first in Kreuzberg, an area of conflictual urban regeneration within the consolidated city, and the second in East London, where local communities are redefining a new relationship between the built environment and the river environment.

Finally, the last case that will be addressed among the ILAUD projects of 2022 concerns another extreme range of situations: an oasis in North Africa put in crisis by the progressive scarcity of water and the temperature rise.

All these occasions are specific case studies that, in the spirit of ILAUD, are able to project us into crucial and wide-ranging global issues.

Obviously, developing the experience started in China with the Poitou Workshop would be essential, extending the study to cases from other cities and territories.

国际建筑与城市设计实验室对人类居住地所面临的危机和转变的承诺

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根据上海普陀区国际建筑与城市设计实验室研讨会（ILAUD）的讨论和阐述，ILAUD在2020年初计划的举措因新冠疫情蔓延而中断，并于2021年初才通过远程活动恢复。

这些活动包括一系列研讨会，重点关注于大城市组织和运作中正式和非正式结构之间的关系一例如亚的斯亚贝巴市中心梅尔卡托地区的案例研究，以及德里的新功能在非正式住宅区域内的开发一以及在世界建筑师大会（UIA）之际，气候危机导致的里约热内卢的自发和边缘定居点的问题。

由于新冠疫情及全球范围随之出现的问题，这一长时期的反思引发人们对最初的工作假设做了审视。更多具体的方面涌现，并与城市活动放缓、社会关系的改变、公共和私人空间的非常规使用息息相关。 这种情况引导我们对不同形势的探索，首先对欧洲大城市的一些街区展开了分析，例如米兰、伦敦和柏林等。

2020 年发生且 当前2021 年仍在继续的危机，促使ILAUD 重新定义未来的工作方向，并确定新冠疫情和气候形势持续恶化带来的一些问题。

这些问题与人类居住地的地理条件以及在此基础上产生的社会文化、经济和制度产物都具有关联。要指出的一个关键性的变革是技术发展带来的，特别是由疫情加速了数字化转型。

在该工作框架下成立的工作组由保罗 · 塞卡雷利、皮拉尔 · 圭列里和朱利奥 · 韦尔迪尼组成，为未来制定一项计划的启动。此外，来自世界各地（墨西哥、巴西、美国、英国、德国、意大利、南非、以色列、印度、日本和新西兰）的

合作伙伴共同参与了“气候变化青年行动倡议”以及第26届联合国气候大会的筹备工作，“绿色复苏”倡议阐述了关于可持续性和社会包容的建议和见解。

本文总结了普陀研讨会的经验，同时介绍了这些举措，为未来的 ILAUD 项目铺平了道路。在过去两年中，出现了两个关于人类住区功能的重要方面：疫情引出了曾被低估的问题，例如在公共和私人空间中的个人和群体隔离，以及城市肌理和开放空间内和移动、接触、接近相关的动态。与此同时，气候现象的日趋恶化与不可预测，和由于人口问题造成的社会和经济状况日益严重的后果叠加。事实上，这两个问题不能分开解决，因为答案很难细分化。疫情本身就是气候变化的产物。此外，这些问题需要通过制度创新和与有效形式的公民关系，建立共享和共同设计的解决方案。

除了这两个事实之外，一段时间以来正在进行的三个深刻的转型过程已经达到了重要的阶段，并需要采取进一步行动。

首先是世界所有地区的社会转型以不均衡不可阻挡的方式进行。 女性的作用越来越重要，年轻人的贡献越来越大，特别是在新兴国家，而发达国家和其他国家（例如实施了计划生育政策的中国）人口老龄化，城市生活和工作模式正在世界蔓延。

第二个深刻改变人类居住地的转型过程是，全球范围内蔓延的城市定居点，严重影响了自然环境。 由于粮食供应和水供应问题、相互关联的经济活动的扩大、通信网络的日益普及等原因，城市化进程的加快还导致定居点之间关系更加全球化。 这种情况已经导致，并且在许多情况下仍然导致各个领土组成部分运作的瓶颈和脆弱性，以及对原材料、食品、水等需求的不断增长。

第三个既有积极影响又有消极影响的因素是，多方面的技术发展。 数字化转型，信息通信技术普及；许多在生产流程中常使用稀有原材料的行业，所实施的创新正在引起环境的深刻变化。 这方面的证据来源于日益严重的水污染的研究，和偏远地区的持续采矿造成大量废物等的研究。

综合这些因素，与气候变化产生的现象戏剧性地结合在一起一例如，北极地区冰川融化或新病毒变异的增加或与温度升高相关的旧疾病的重新出现一提出我们需重新分析和现有人类住区有关的很多方面，并基于既定标准以外的评估标准。在很多情况下，对现存的微小变化或某一现象内部演化产生的变化进行重新分析是不现实的，但我们面临的新现象往往与过去是不连续；基本上，比较18世纪末随着工业革命和资本主义的确立，以更激烈和更显著的方式重新出现。这种情况需多角度解读现状及其和发展，从而完善分析和识别内容的方法，这些方法可能是全新的和意料之外的。

例如，这些过程的结合，引发了对现有住区结构进行深刻变革的适当性思考，因为一方面它们无法对正在进行的社会、经济和技术变革过程做出积极回应，另一方面不足以应对气候变化。即使将破坏性最小化，生态转型仍将持续数十年，因人口影响的弹性结果，这将涉及生活方式的深刻变化。 因此，必须从当下和长远的角度以新的方式解决当前人类居住地的关键问题。

为此，我们将以开放的态度直接解决一些特别相关和重要的问题。

特别是，我们认为有必要研究人类住区与自然环境之间日渐变化的关系。中心问题涉及人类建造环境的框架，它在世界各地以或多或少密集紧凑的形式扩散和拓展，然而，这造成自然极端的不平衡。

具体研究有两个领域：城市部分地区的统一密集聚落，自然被取代；以及城市边缘地区或分散聚落的领域，这里的建成环境与自然的关系往往不稳定，自然遭到严重损坏，但仍然存在并可以复原。

这些研究涉及正在进行的社会和经济转型过程、技术创新和未来气候现象的影响。 不可否认，女性日益重要的角色、年轻人参与的机会以及边缘群体的生活条件，这些因素需要结合生活和用地组织方式的深刻革新。

后疫情凸显了城市空间结构中不可持续的现状。 这种情况需要对典型案例和情况的具体调研，以确定新的居住地组织形式，进而制定城市规划和空间布局的方法。

必须牢记的是，应对气候变化的政策，具备不利于在不同形式和程度上的隔离、不平等以及社会和经济分割的风险。 能够与自然建立更平衡关系的城市不能由环境条件和社会结构不平衡的部分组成。

鉴于这些考虑，我们针对未来提出了具体研究方向和建议：

1）研究城市整合的部分，它们具有或多或少长时期的历史分层特征，这引起了应对气候变化的复杂问题。

问题在于，在公共空间的组织和私人住区之间的关系方面，理解可以引入哪些额外干预措施。在紧凑的城市结构中开辟绿地和组织服务网络以改善生活条件，这一举措可以做为解决方案。尤其是像普陀区研讨会所做的那样，反思利用废弃空间或潜在无建筑空间来创建开放的公共场所，旨在创造包容性居民社区，这一点至关重要，包括通过置入农业功能。这些研究可以从城市结构形态和社会文化构成的角度考虑不同的情况。

2）另一个重要的案例研究是城市边缘地区和广泛的低密度聚居区。在这些领域，建筑结构和自然空间之间关系依存，但相互矛盾且通常是负面的。通常这些表现为自然碎片或退化和边缘化的农村地区，但在所有情况下可以预想到，干预形式可以恢复更正确和平衡的关系。在这些地区，防御和复原自然与粮食生产之间的联系，对于生活在城乡结合地区的边缘群体，在抵消高度城市化地区日益严重的农产品短缺中尤为重要。大规模的低密度城市化逐渐产生了极端的环境失衡，破坏了未被侵入和退化的自然空间的基本作用。

这一系列研究将探索不同文化和地理背景下相似物理组织形式的特征。事实上，当前城市状况的大部分问题都集中在这些地区。

3）第三个重要研究重点是主要自然环境中的被孤立定居点，这些定居点目前正面临气候变化和新形式的采矿或大规模工业、农业生产。在这些地区，由于干旱、洪水、海平面上升等，村庄的旧居住区结构处于危机之中。由于缺乏就业，人口稀少的地区出现了新的问题，并且无法再持续控制。 例如，因放弃农作物或林业经济活动而重新造林的地区，导致土地整体管理出现新问题。在这些情况下，研究工作是必不可少的，合理的定居解决方案和对领土的人口配置，可以控制和重新平衡相对的物理性隔离和气候变化。

基于这种方法，ILAUD 正在开展一项研究，研讨会将重点关注意大利热那亚市的一个地区，并在 2022 年底结束。Cornigliano 区是一个以重工业和港口活动为基础的聚居地，这是一个有趣的案例，用于研究适应气候变化的问题以及非常紧凑的建筑环境的社会和经济转型。与此同时，柏林和伦敦的城市研讨会仍在继续，一个在克罗伊茨贝格（Kreuzberg），合并后的城市内发生冲突的城市更新区域，另一个在东伦敦，当地社区正在重新定义建筑环境与河流环境之间的新关系。

最后，将在 2022 年 ILAUD 项目中解决的最后一个案例涉及另一种极端情况：北非的一片绿洲因水资源逐渐短缺和温度升高而陷入危机。

本着 ILAUD 的精神，所有这些根据都是基于具体的案例研究，它们能够将我们引入到重要和广泛的全球问题中。

显然，利用普陀区研讨会发展在中国的经验，是将研究推广到其他城市和地区的案例的关键。

Notes

1 See: https://www.ilaud.org/ilaud-week-cities-under-shocks-stresses-2021/

2 See: https://www.ilaud.org/youth-and-communities-for-climate-change-challenges/