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Generating impact and producing a domino effect

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(Article begins on next page)

12 October 2024

the Future *Urban Legacy* Lab

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a report 2017-2021

HOW TO: read this book

TONE OF VOICE

Hello! This is the RED BOX, the voice that will guide you through all this publication. There will be different red boxes visibile all around the book as a guide to the topics. They are the narrative voice accompaining the reading.

The voice can function as an introduction, or describe quantities and facts of a given subject.

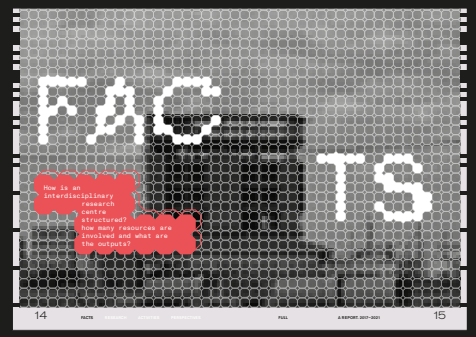
As the red box suggests, there will be a guidance in all the book based on hints, little stories and numeric informations. This first part in black background is an introduction to all the different elements you will find in the book.

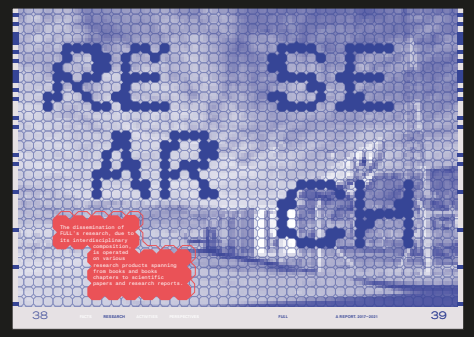
HOW TO: read this book

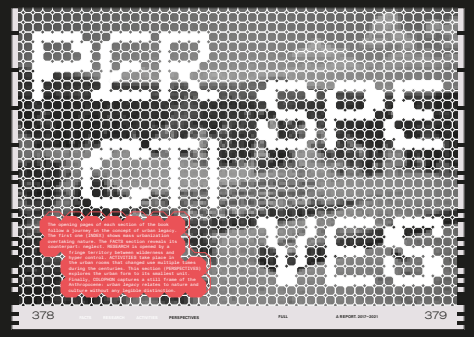
BOOK STRUCTURE

The book is divided in 4 main chapters which are:
FACTS, RESEARCH, ACTIVITIES, PERSPECTIVES.

Every chapter is guided through it's specific color and contains various formats of text, subchapters, deepening on the topics and explanations of specific projects.







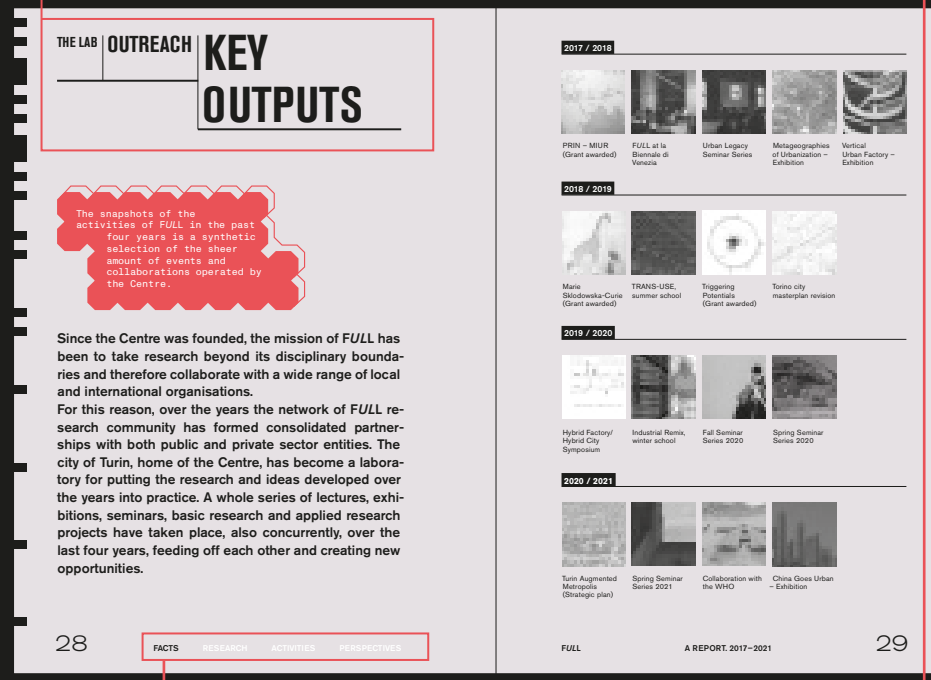
HOW TO: read this book

PAGES STRUCTURE

Every page has guidance tools to help the navigation of the book:

The lateral color, which draws on the fore edge of the book a pattern representing F*UL*L's logo, can help in the navigation through the chapters (colors refer to different chapters).

The chapters and sub chapters are guided also through little crumb threads.



Here you can find the position of the chapters and in which chapter you are.

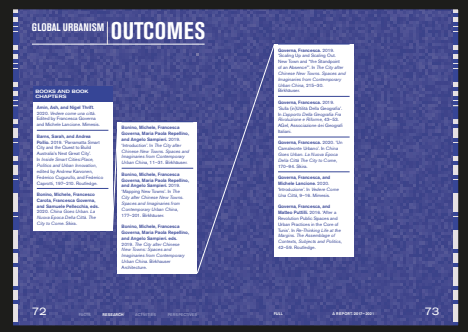
HOW TO: read this book

CHAPTERS CONTENTS | some advices referred to the Research chapter

Please, pay attention to the higher complexity of structure of the RESEARCH ISSUES: you will find eight sub-parts refering to eight ISSUES.

Please also note that every issue will have a specific code to follow that you can check on page 40.

Every issue contains a certain number of researches explained. Each research has a shorter or longer description, depending on the author's preference.



Every issue has an ending annex page called OUTCOMES. The subchapter has diverse typologies of bibliographic content.

In addition to the chapters, positioned at the end of every ISSUE of the RESEARCH chapter there will be green background pages containing a glossary.

You will see KEYWORDS appearing as taken from quotes during lectures and seminars hosted by *FULL*. They are linked to the issues but they can be considered as an interlinked glossary.

The keywords are the following:

INTERDISCIPLINARITY, REPRESENTATION, SQUATTING, HERITAGE, EFFICACY, CULTURE, TRADITION, TOOLS, TECHNOLOGY, LEGACY, MORPHOLOGY, HYBRID, SPECIFICITY, PRODUCTIVITY, ARTIFICIAL INTELLIGENCE, PLATFORM ECONOMY, RENOVATION, RIGHTS, INNOVATION, REAL ESTATE, CULTURAL HERITAGE, PLANETARISM, CARTOGRAPHY, UNESCO, NOSTALGIA.

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One of the main challenges of *FULL* is to combine consistent research with a rich program of talks, lectures, and teaching. In this table of contents the activities of the Centre are separated by the research section for clarity, but in reality are mutually interconnected.

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During the past four years *FULL* hosted numerous events and talks. We invited guests from the most diverse disciplinary fields. These kind of activities unfolded in different media and can be found on our Vimeo channel and our Podcast channel.

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RESEARCH

The dissemination of *FULL*'s research, due to its interdisciplinary composition, is operated on various research products spanning from books and books chapters to scientific papers and research reports.

RESEARCH ISSUES

We grouped our vast research production in eight main issues. Each issue aims to provide answers to global research issues related to the environment, territories and the city.

GU = acronym of the research issue

GU GLOBAL URBANISM

50

KEYWORDS
LEGACY
REAL ESTATE
CARTOGRAPHY
NOSTALGIA

- SURGE. Chinese Financialisation and Urban Change in East Africa (Marie Skłodowska-Curie Action)
- Rescaling the Belt and Road Initiative: urbanisation processes, innovation patterns and global investments in urban China
- Hinterlands of the green transition. Atacama, lithium and the extended geographies of the zero-emission city
- Infrastructure scripts. History and futures of urbanisation along the Ethio-Djibouti Railway

NPL NON-PERFORMING LEGACIES

80

KEYWORDS
CULTURAL HERITAGE
HERITAGE
UNESCO
TRADITION

- Adaptive reuse scenarios
- The buildings inside the Cittadella of Alessandria
- Geophysical surveys and preventive archaeology. Ground-penetrating radar survey of pre-existing structures in the Bergoglio district (AL) under the Piazza D'Armi (Parade Ground)
- Reactivation of non-performing cultural heritage
- Manufacturing Technology and Compentence Center Turin
- Adative Remediation
- Loft Working
- The Potential of form. Assessing the transformative potential of existing buildings in post-functional Europe
- The Workspace [R]evolution. The comeback of Incubator and its role in the New Urban Economies

EOU ECONOMIC ORGANIZATION AND URBAN SPACE

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KEYWORDS
PLATFORM ECONOMY
HYBRID

Italy is the Air(bnb). The The uneven diffusion of short-term rental markets between urban locations and selective tourism destinations

Seizing local entrepreneurial opportunities in the platform-based era. Airbnb, gig entrepreneurs and middlemen

Impact of Covid-19 on the strategic choices and performance of hosts. An empirical investigation on peer-to-peer accomodation platforms

Urban retail

Agglomeration and the Italian North-South divide

Shifting the triangle

University research funding, patenting and technological impact, European Patent Office (Academic Research Programme)

Airbnb in the real estate financial chain. Housing and policies in Southern Europe post-crisis territories

Retail, Agglomeration and urban Morphology

TUL TRANSFORMATIVE URBAN DESIGN AND LANDSCAPE

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KEYWORDS
MORPHOLOGY
SPECIFICITY
PRODUCTIVITY
RIGHTS

Re-coding. Rethinking the rules of cities

Turin Augmented Metropolis

A new regional regeneration model in Lombardy

Reconstructions. Design tools after emergencies. Seismic transitions, from temporariness to permanence

Servitude of form. Comparative urban property and building rules

NHI NEW HOUSING ISSUES

200

KEYWORDS
CULTURE
SQUATTING

Contemporary rentscapes

New Domestic Rentscape. A Critical Insight into Middle-class Housing

Community-led housing development. A key ingredient for a new housing architecture and policy

Tailor—made housing. How to improve housing affordability and adequacy through innovation of the cohousing model

DT — DIGITAL TECHNOLOGIES AND DATA SCIENCE FOR CITIES

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- Urban mobility
- Digital Open Urban Twin / 3D city model
- Augmented reality heritage
- Triggering Potentials. The enhancement of urban cultural heritage as a strategy to reactivate city regeneration processes.
- 5G USE CASE. Smart Tourism. The potential of the 5G infrastructure to enable micro-localized content for tourism
- 5GAA demo
- City Twin. Digital urban models between description and abstraction
- Mobility applications for a smart city environment

KEYWORDS
TECHNOLOGY
TOOLS
ARTIFICIAL INTELLIGENCE
INNOVATION

UC — URBAN CLIMATE ACTIONS

266

- Design Management Dynamic Tool (DMDT)
- Urban Agriculture
- Holistic approach for large PV plants design and operation
- Architecture for urban agriculture
- Smart Energy Solutions for Sustainable Cities and Policies

KEYWORDS
INTERDISCIPLINARITY
RENOVATION

PPC — POST-PANDEMIC CITY

292

- Severe Acute Respiratory Infections Treatment Centre
- Re-school. Rethinking the school, starting with spaces
- Real Estate Innovation Manifesto
- Next Generation Urban River Park

KEYWORDS
REPRESENTATION
PLANETARISM

ISSUES | INTER-DISCIPLINARY MAP

GLOBAL URBANISM	SM AD UDP BME EPG
NON-PERFORMING LEGACIES	CRA HA RA AD UDP BME EPG AG
ECONOMIC ORGANIZATION AND URBAN SPACE	SM AD UDP BME EPG
TRANSFORMATIVE URBANISM AND LANDSCAPE	SM AD AT UDP EPG BPS SEE
NEW HOUSING ISSUES	CRA AD BME
DIGITAL TECHNOLOGY AND DATA SCIENCE FOR CITIES	SM AD AT UDP BME EPG NA IPS TC
URBAN CLIMATE ACTIONS	SM AD AT UDP BME BPS
POST-PANDEMIC CITY	SM AD AT EPG

DEPARTMENT OF ARCHITECTURE AND DESIGN

- CRA Conservation and restoration of architecture
- HA History of architecture
- RA Representation of architecture
- SM Surveying and mapping
- AD Architectural design
- AT Architectural technology
- UDP Urban design planning

DEPARTMENT OF CONTROL AND COMPUTER ENGINEERING

- NA Numerical analysis
- IPS Information processing systems
- TC Telecommunications

INTERUNIVERSITY DEPARTMENT OF REGIONAL AND URBAN STUDIES AND PLANNING

- UDP Urban design planning
- BME Business and management engineering
- EPG Economic and political geography

DEPARTMENT OF ENVIRONMENT, LAND AND INFRASTRUCTURE ENGINEERING

- AG Applied geophysics
- SEE Sanitary and environmental engineering

Every research issue requires a variety of disciplinary expertises borrowed from each of the seven departments.

DEPARTMENT OF ENERGY "GALILEO FERRARIS"

- TIS Thermal engineering and industrial energy systems
- BPS Building physics and building energy systems

DEPARTMENT OF MANAGEMENT AND PRODUCTION ENGINEERING

- BME Business and management engineering

DEPARTMENT OF ELECTRONICS AND TELECOMMUNICATIONS

- IPS Information processing systems
- TC Telecommunications

ISSUES MAP

The following map shows the connections and intersections of *FULL*'s research. In most of the cases a single project responds to multiple issues.

URBAN CLIMATE ACTION

PhD: Architecture for Urban Agriculture

Holistic approach for large PV plant design and operation

NON-PERFORMIG LEGACIES

Adaptive Remediation

Adaptive reuse scenarios

The buildings inside the Cittadella of Alessandria

Reactivation of non-performing cultural heritage

Manufacturing Technology and Competence Center

PhD: The Workspace [R]evolution

PhD: The potential of form

PhD: Loft Working

Geophysical surveys and preventive archaeology

Augmented Reality Heritage

Urban Mobility

DOUT 3D City Model

PhD: City twins

PhD: Mobility applications for Smart city enviroment

5G USE CASE. Smart tourism

5G AA Demo

TRANSFORMATIVE URBANISM AND LANDSCAPE

PhD: Smart Energy Solutions for Sustainable Cities and Policies

ECONOMIC ORGANIZATION AND URBAN SPACE

Urban Agriculture

DIGITAL TECHNOLOGY AND DATA SCIENCE FOR CITIES

DMDT

Cities and innovation

Triggering potentials

Re-coding

PhD: Reconstruction design tools after emergencies

PhD: Servitude of form

POST-PANDEMIC CITY

Re-school

Real Estate Innovation Manifesto

Severe Acute Respiratory Infections Treatment Centre

Turin Augmented Metropolis

Next Generation Urban River Park

5G EVE

A new regional regeneration model in Lombardy

GLOBAL URBANISM

PhD: Hinterlands of the green transition

PhD: Infrastructure space

Rescaling the Belt and Road Initiative

SURGE

Urban Retail

PhD: Retail, Agglomeration and urban morphology

Shifting the triangle

Italy is in the Air(bnb)

Agglomeration and the Italian North-South divide

NEW HOUSING ISSUES

PhD: Airbnb in the real estate financial chain

Housing platforms

Contemporary Rentscapes

PhD: New Domestic Rentscape

PhD: Community-led housing development

PhD: Tailor-made housing

POST - PANDEMIC CITY

UCA

Which architectural and urban strategies should be applied to face COVID19 emergency?

During the initial outbreak of the pandemic, F*UL*L researchers gathered to understand how they could proactively contribute to the ongoing emergency through their research. The role of schools was and is central to the debate on the reaction to the pandemic. Collaborating with Fondazione Agnelli, a team of F*UL*L researchers provided evidence that Italian schools have many unused spaces that could be open to the city surroundings. *Re-school* produced a set of strategies to implement the urban role of Italian schools that envisions futures well beyond the post-pandemic period.

In Italy, one of the main political challenges for the future is how to renovate efficiently the decaying public stock of school buildings. These buildings are often rich of unused or underused spaces, that could serve for the involvement of local communities especially in hardly accessible areas.

With the same ethos, a team of researchers embraced the challenge to design and measure the feasibility of healthcare structures for the treatment of acute respiratory illnesses (like COVID-19) in the Global South. The World Health Organization directly commissioned the ongoing research.
The *Next Generation Urban River Park* focuses on the revitalization of the major urban park in Torino. The *Real Estate Innovation Manifesto* seeks for alternative ways to develop the city also taking into account wellbeing and healthcare issues.

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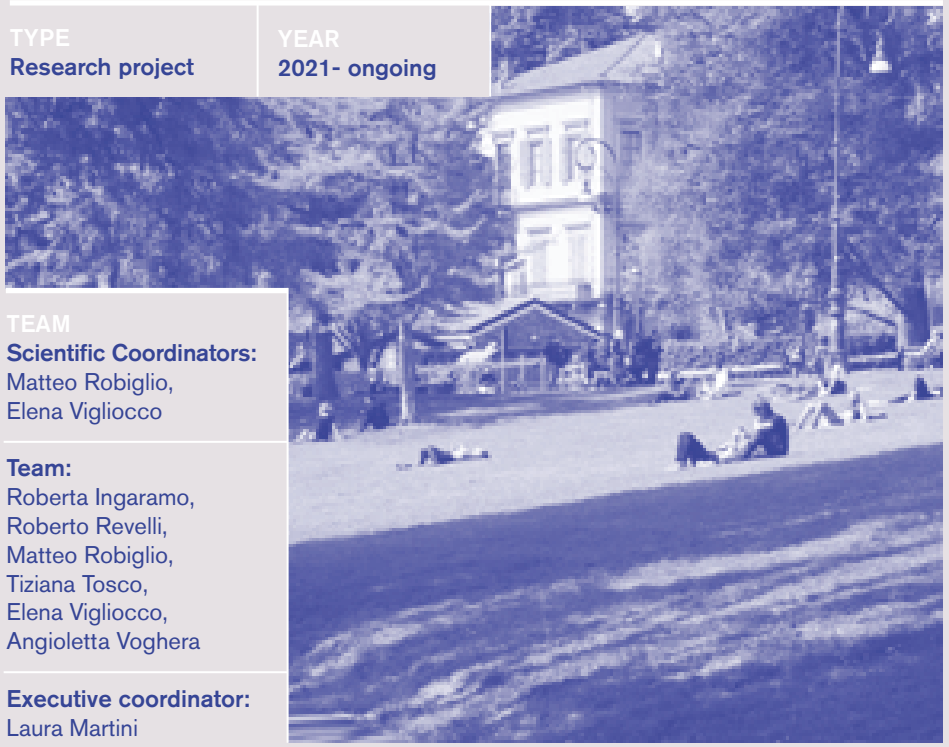
Next Generation Urban River Park

TYPE
Research project

YEAR
2021- ongoing



TEAM
Scientific Coordinators:
Matteo Robiglio,
Elena Vigliocco

Team:
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Roberto Revelli,
Matteo Robiglio,
Tiziana Tosco,
Elena Vigliocco,
Angioletta Voghera

Executive coordinator:
Laura Martini

Parco del Valentino is one of the city's best-loved parks and a place where the city's collective memory is condensed. This is the place where Christine of France chose to build her royal residence in the 17th century, enlarging and transforming a river villa overlooking the Po. It is also where the International Exhibitions of the late 19th and early 20th centuries were held, as well as the Valentino Grand Prix motor races. Today, the park, which is the centre of gravity of the Po river system, is an important place for the people of Turin, both because it is enjoyed by many on a daily basis and because it contains tangible evidence of its history that is still visible to this day. Some examples include the Castello del Valentino and the Borgo Medievale, but also architectural structures with a more recent history, such as Torino Esposizioni. As part of the Next Generation EU funding, the Italian Ministry of Culture has identified the enhancement of Parco del Valentino as one of the 14 cultural attractions located in Italy to be rehabilitated through ad hoc funding and planning. Of the €1,460 billion programmed for the 14 strategic sites, the funding set aside for enhancing Parco del Valentino is €103 million.
The aim of the master plan is to enable the City of Turin to identify the most effective spending strategy aimed at maximising the effect of investments related to the expected structural funds in order to produce positive socio-economic impacts and lasting domino effects.

The Parco del Valentino is the major urban park of Torino. The EU Recovery Fund aims to regenerate it as a strategic site for the post-pandemic city.

Generating impact and producing a domino effect
Elena Vigliocco

From the point of view of assessing the impact of cultural heritage investments on local and non-local economies, research and studies conducted at European level clearly show how cultural heritage generates positive economic, social, cultural and environmental impacts. The mapping developed by the European

project Cultural Heritage Counts for Europe (2015) highlights the potential of cultural heritage as a key factor for sustainable and inclusive development. The data collected and presented shows that preserving cultural heritage functions as a 'multiplier' through which investments can have positive impacts beyond those initially foreseen, thus increasing the level of benefits and sustainability of the initial investment.
From the perspective of having to use collective resources to conserve heritage of cultural interest, the allocation of resources becomes a central issue in relation to the exceptional number of properties identified as such. The ICOMOS document entitled European Quality Principles for EU-Funded Interventions with Potential Impact upon Cultural Heritage (2019) introduces seven assessment criteria through which to measure ex ante the resulting potential economic value of cultural heritage. The seven criteria are: (1) knowledge-based: research and knowledge of the asset; (2) public benefit: remembering the responsibility towards future generations; (3) compatibility: maintaining the 'spirit of the place'; (4) proportionality: doing what is necessary but as little as possible; (5) discernment: calling on previous knowledge and experience; (6) sustainability: making sure the intervention lasts; (7) good governance: controlling the process as part of the intervention. These criteria represent the interpretative grid through which the master plan for enhancing Parco del Valentino is planned and constructed.

Dimensional data:

Overall area	**421.000 m²**
Areas of the buildings on which intervention is taking place	**54.094 m²**
Surfaces made more permeable	**20.000 m²**

The aim of enhancing Parco del Valentino is to increase the appeal of the park and the axis of the Po through a blend of actions woven into the site to generate positive socio-economic impact and trigger a domino effect. The ultimate aim is both to renew the attention of residents and to encourage the new interest of users interested in cultural and sustainable forms of tourism.

In order to pursue these aims, the City of Turin intends to act along two lines of action:

1. Environmental redevelopment of the park as a tourist attraction and centre for higher education.
2. Redevelopment of municipally-owned buildings, including those currently used for entertainment activities, which are a key element in the perception and use of the park as a place of leisure.
3. The aim of the master plan is to enable the city to identify the most effective strategy to maximise the effect of investments related to structural funds in order to produce socio-economic impacts and a lasting domino effect.

The aims of the master plan are:

1. Define the destination hypothesis/hypotheses of the different structures present with the aim of providing the city with a mix of compatible and sustainable uses (alternative hypotheses).
2. Define one or more hypotheses for the distribution of funding (rules and stakeholders).
3. Compare different ways of managing projects and related contracts (variety of contract types).
4. In relation to the different design and procurement methods, establish the timeframe for completion and testing of the works.
5. Identify a project management and governance model (direction).
6. Identify any synergies of the project with other funds related to digitalisation and communication. In order to maximise the effectiveness of the master plan, a multidisciplinary and systemic approach is proposed to reconnect the preliminary and indispensable interpretative aspects with the project scenarios that will be identified.

The master plan is divided into two closely interconnected macro sections. The aim of the first section is to assess the residual and unexpressed potential of the area under investigation.

The drafting of the study subdivides the observation into two levels of detail: the micro-scale, in which the intrinsic potential of the Valentino park system is assessed (open and closed spaces, types of users, stakeholders involved, etc.); the macro-scale, in which the park is interpreted as a piece of two urban interpretative systems: the ecological system connected to the river stretches that interconnect the large urban parks; and the cultural and leisure system that expands above all in relation to the city's cultural centre, but then has clear ramifications throughout the city. The aim of the second section is to construct alternative intervention scenarios enabling the City of Turin to orientate (or reorientate) the renewal and enhancement process in order to maximise the socio-economic impact of the planned investments. In this second section, we intend to develop alternative, perhaps more 'adventurous' scenarios to suggest options that could intercept the progressive identification of the spending 'rules' that at the moment are not completely defined. Each scenario will be developed from the point of view of identifying the layout of uses, the necessary investments, the timeframe of expenditure and, finally, the related opportunities and critical issues. The idea is that the master plan may be an open, but not undefined instrument, capable of suggesting options that might be activated depending on the conditions that may arise.

POST-PANDEMIC CITY | OUTCOMES

SCIENTIFIC PAPERS

Nigra, Marianna, Simonetti, Marco, Galleano, Luca, Robiglio, Matteo. 2021. Natural ventilation in support of health structure in context of scarcity during pandemic. Architectural Engineering and Design Management (submitted).

Nigra, Marianna, Simonetti, Marco, Galleano, Luca, Robiglio, Matteo. 2021. Sustainable Innovation for Emergency. Sustainability (submitted).

Nigra, Marianna, Simonetti, Marco, Galleano, Luca, Robiglio, Matteo. 2021.Designing Innovation with Nature – The Burkina Faso Experience. Architectural Engineering and Design Management (submitted).

Nigra, Marianna, Simonetti, Marco, Galleano, Luca, Robiglio, Matteo. 2021.Climate and Pandemic: Two Key-Factors for Sustainable Innovation Design. Architectural Engineering and Design Management (submitted).

Barioglio, Caterina and Daniele Campobenedetto (edited by). 2021. Re-school. Ripensare la scuola, a partire dagli spazi, DAD – Politecnico di Torino.

REPORTS

Gavosto, Andrea, Marco Gioannini, Stefano Molina, Raffaella Valente, Matteo Robiglio, Caterina Barioglio, Chiara Iacovone, et al. 2020. 'Fare Spazio. Idee Progettuali per Riaprire Le Scuole in Sicurezza'. Future Urban Legacy Lab - Politecnico di Torino.

Robiglio, Matteo, Caterina Barioglio, Daniele Campobenedetto, Marco Cappellazzo, Giulia Sammartano, Andrea Gavosto, Raffaella Valente, Martino Bernardi. 2021. Analisi sui dati dell'Anagrafe Regionale dell'Edilizia Scolastica in Lombardia.

CONFERENCE PROCEEDINGS

Nigra, Marianna, Simonetti, Marco, Galleano, Luca, and Serale, Gianluca. 2021. 'The Role of Natural Ventilation in Designing an Airborne Disease Treatment Centre in Burkina Faso', Plea Conference: *"Will cities survive? The future of sustainable buildings and urbanism in the age of emergency."*

Nigra, Marianna, Simonetti, Marco, Galleano, Luca, and Serale, Gianluca. 2021. Sustainable Innovation for Emergency: The Design of the UNICEF High Performance Tents. *ICED 23: 'Design in a Complex World'*