Story 1
Re-production

Manufacturing is coming back to the city, in new forms

Preview 2
Inequalities and Citizenship

Inequalities, rights, migrations are global and entangled themes
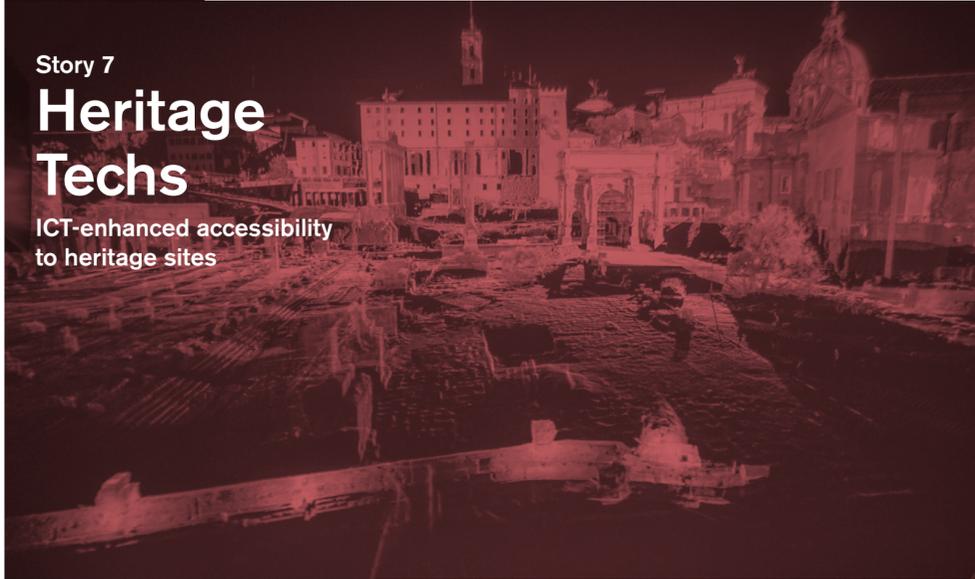
Story 3
Adaptive Remediation

Legacy can be a debt. Environmental remediation meets architectural design in abandoned industrial sites

Story 7
Heritage Techs

ICT-enhanced accessibility to heritage sites

Story 5
Energy Policies

The deep energy renovation policies for the existing building stock cannot be implemented on a large scale
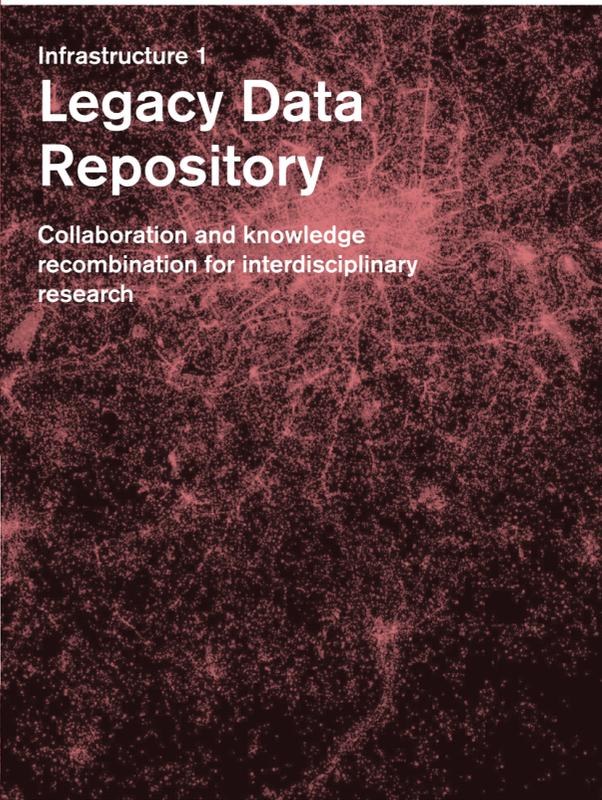
Infrastructure 2
Legacy Mobile Lab

Designing a placemaking research lab for cities' and communities' needs

Infrastructure 1
Legacy Data Repository

Collaboration and knowledge recombination for interdisciplinary research
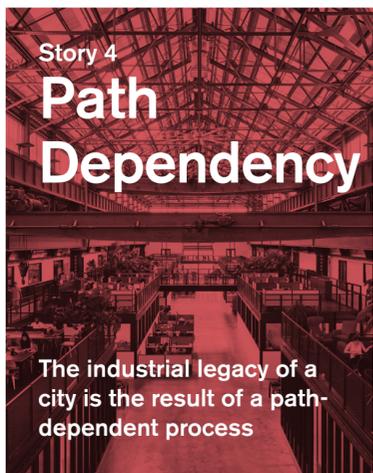
Preview 1
Urban Artificial Intelligence   The future city will talk to us
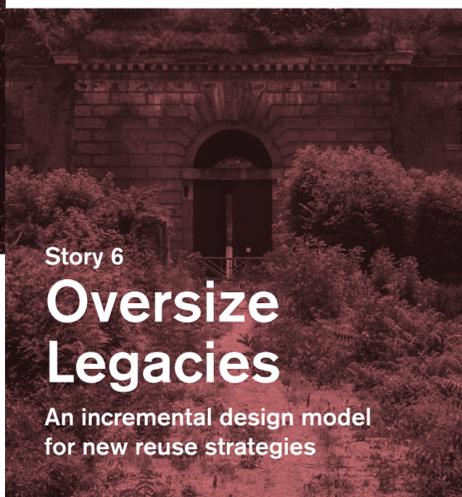
Story 4
Path Dependency

The industrial legacy of a city is the result of a path-dependent process

Story 6
Oversize Legacies

An incremental design model for new reuse strategies

Story 2
Retail City

The retail industry and its localization choices are a fundamental and complex urban legacy

Story #1
Re-production
Matteo Robiglio

Facts
• Since 1970s: 10,000,000 m² of industrial areas have been dismissed.
• 1995 – 2015: 5,000,000 m² of former industrial areas have been reused.

Research question
From the 18th century on, we expelled manufacturing from the city. In the second part of the 20th century, separating manufacturing from the city became an explicit planning goal. At the beginning of the 21st century, manufacturing is coming back to the city.
How does it work?
How big will it be?
What locations will it prefer? What spaces will it need? What role will it play in the city?
And, how many jobs – and *what* jobs – will it bring back?

Research mission
Object: Torino (IT).

Story #2
Retail City
Giulio Zotteri

Facts
• In the EU, retail accounts for 11.1% of the GDP.
• 33 million jobs (15% of total employment).
• 2/3 of jobs in SMEs.

• It is going through significant transformations (e.g., malls and demalling, e-commerce, products vs. services).

Research question
What are the driving dynamics of the localization of retail in the city? How does e-commerce affect these dynamics?
Why are commercial areas empty? What policies can re-activate these areas?
What are the relationships between the retail industry and the other urban systems?

Research mission
Object: a research observatory to examine the transformation of the retail industry within the city.
Timing: 2016 - ongoing.
Partners: Città di Torino, Auchan.

Story #3
Adaptive Remediation
Tiziana Tosco

Facts
• 2.5 million sites potentially contaminated in Europe, 350,000 identified as contaminated (EEA European Protection Agency).
• Only 15% of contaminated sites in Europe has been already remediated (EEA European Protection Agency).
• Brownfields usually cause decline of neighbourhoods and have negative impact on economic and social health (OECD).

Research question
Abandoned industrial sites are characterized by soil and subsoil contamination.
FULL is developing strategies and tools to conciliate remediation activities (which usually have a negative visual impact and impose restrictions to site availability) with architectural design and building regeneration toward a new, integrated use of industrial heritage sites and brownfields.

Research mission
Object: pilot research sites across Europe.
Timing: Sep 2017 – ongoing.
Partners: site owners, universities.

Story #4
Path Dependency
Giuseppe Scellato

Facts
• The degree of variety of the knowledge base is a distinctive property of local economic systems.
• European institutions have pushed for the definition of so-called "smart specialization strategies" in regional industrial policies.

Research question
How do cities differ in the persistence of their technological specialization over time?

What are the patterns of diversification for innovation capabilities that are more conducive to the long-term socioeconomic performance of cities?
What are the channels through which urban economic systems can expand/redefine the scope of their industrial legacy?

Research mission
Object: pool of 500 metropolitan areas in Europe and the USA, stratified on the basis of innovation and economic performance indicators.
• Cities observed since the late 80s throughout a period of technological evolution and the globalization of production and R&D.
• Mix of quantitative large-scale analyses and qualitative case histories to address the impact of specific institutional factors and past events.
Timing: 2-year project, 2017 – ongoing.
Partners: Università di Torino, Università di Roma Tre, BRICK – Collegio Carlo Alberto.

Story #5
Energy Policies
Elisa Sirombo

Facts
• The economic revenue from energy savings is often irrelevant and cannot be the only driver of the deep renovation advocated by EU policies.
• The liberalization of energy markets has not lowered prices (Eurostat).
• 9.4% of households in the EU-28 do not heat their houses properly (Eurostat).

Research question
Energy retrofitting is a typically urban and large-scale problem, which relates to the legacy of real estate stock, energy markets, users' lifestyles.
How do we rethink the theme of energy saving in the context of existing retrofit policies and economic-financial incentives?

Research mission
Object: energy poverty in Piemonte.
Timing: 2016 – ongoing.
Partners: Polito, Unito, S-Nodi, Leroy Merlin Italia.

Story #6
Oversize Legacies
Edoardo Piccoli

Facts
Fortified citadel in Alessandria (IT):
• built 1730-1830 for the most part. Abandoned by the military since the 1990s.
• one of the best-preserved fortified complexes in Europe.
• massive scale: 115,000 m² of masonry buildings on 600,000 m² of land.
• funds readily available for an estimated total of up to ~ €40,000.

Research question
Obsolescence turns oversize structures into an embarrassing heritage. Left to crumble, decay or to be demolished – at unsustainable costs – supersize legacies require specific reuse policies and strategies. The citadel of Alessandria is one such structure. How do we revive the citadel and its symbiotic relationship with the town?

Research mission
Object: Fortified citadel in Alessandria (IT).
Timing: An incremental approach.
• 2017. Group formation, pilot project and definition of priorities.
• 2018-2019. Research projects, intervention strategies.
• 2019-2020. In-depth research, adaptive reuse process, on-site actions.
Partners: MiBACT, Compagnia di San Paolo, Regione Piemonte, Città di Alessandria.

Story #7
Heritage Tech
Claudio Casetti

Facts
• Italian cultural sites on the World Heritage list: 48 (Unesco)
• 0.7% of Italian GDP allocated to culture (Eurostat).

Research question
ICT technologies will enable historical and archeological sites and assets to be seamlessly explorable and maintainable: from offline browsing to advanced ticketing; from remote monitoring to augmented-reality exploration.

Research mission
Timing: Nov 2017 – ongoing.
Partners: Solari di Udine, University of Salento.

Preview #1
Urban Artificial Intelligence
Juan Carlos De Martin

Research preview
By 2050, the United Nations predicts that around 66% of the world's population will be living in urban areas. The data produced by cities' inhabitants will be helpful to provide them with sufficient housing, energy, waste disposal, healthcare, transportation, education and employment. Artificial intelligence will help governants and citizens to analyze that data and to make decisions.

Starting in Nov 2017, FULL is delving into themes involving artificial intelligence, to understand what the best existing or developing tools are that can be applied to the analysis of data referring to the legacy of cities and to their urban and productive structures.

Preview #2
Inequalities and Citizenship
Francesca Governa

Research preview
Growing inequalities in living conditions are common concerns in cities worldwide. FULL will define research parameters and examine specific issues through a dedicated international call for research proposals and through projects and collaborations targeting local phenomena that reflect these global concerns.

A first attempt deals with housing and new inhabitants (one of four tenants in Italy is a foreign citizen). A pilot research project on Sidief housing stock started in November 2017, investigating how housing can be an enabling factor for inclusive citizenship.

Infrastructure #1
Legacy Data Repository
Antonio De Marco

Aim
FULL believes that adopting a shared digital data repository is an essential tool in order to A) favor the interaction between its research groups, B) combine or reconcile research data that is fragmented in information silos, C) integrate and exploit the complementarities of qualitative, quantitative, and narrative research approaches, D) ease collaboration with external research partners, E) create and disseminate knowledge outside its perimeters.

Infrastructure #2
Legacy Mobile Lab
Nicola Russi

Aim
The connection between the research activity and its specific context is an essential topic of any research centre.
FULL is working on a modular lab that allows researchers to work on field, close to a local issue.
FULL will provide a temporary facility for local communities, which will be involved in the design process.

Future
Urban Legacy
Lab

About FULL

Future • / ˈfjuːtʃər/ • noun
A period of time following the moment of speaking or writing; a time regarded as still to come.

Urban • / ˈɜːb(ə)n / • adjective
In, relating to, or characteristic of a town or city; e.g. 'the urban population.'

Legacy • / ˈleg.ə.si/ • noun
A situation that exists now because of events, actions, etc., that took place in the past.

Lab • / ˈlæˈb/ • noun
A room or building equipped for scientific experiments, research, or teaching, or for the manufacture of drugs or chemicals.

(Oxford Dictionaries)

Mission
FULL explores, imagines and designs the future of global and local urban legacy embodied in city form.

FULL merges and boosts established Polito research experiences into a brand new interdisciplinary approach to urban phenomena, built on the integration of morphology, economy, evidence-based design and socio-technical understanding.

Research
Studying the urban realm as a space offers the unique chance of rejoining the separate paths of human sciences, hard sciences and design sciences.

FULL assumes a complex and open definition of urban space as both a perspective to interpret the main challenges posed by a rapidly urbanizing world and a place of experimentation for projects and scenarios.

Research fields
Research activities are based on cross- and inter-disciplinary methods, collaboration and experimentation, internationalization and comparison, analysis and design, theory and practice.

FULL's main aims are:
• To bridge knowledge of the past and visions for the future in the urban realm.

• To design socio-technical innovation scenarios for relevant global urban challenges and to support decision-making processes.

Point of view
FULL is characterized by a point of view focused on:

• Understanding present global trends.
• Working in a trans-scalar and critical perspective.
• Grounding heritage discourse in present praxis.
• Exercising evidence-based design research as a socially responsible and reflective practice.

DIST
Urban planning, urban geography, urban economics, project evaluation.

DAUIN
Big data, information technologies, public data management and policies in cities.

DENERG
Urban energy networks and grids, renewable energies in urban settings.

DIGEP
Innovation economics and innovation management.

FULL structure
7 departments
20-40 researchers
public and private partners

DAD
Urban and architectural design, landscape design, construction technology, urban history, heritage preservation and restoration, geomatics.

DIATI
Environmental assessment, urban environmental quality indicators, remediation techniques for urban post-industrial sites.

DET
Digital networks in urban settings, device-to-device communications.

POLITECNICO DI TORINO

Future
Urban Legacy
Lab

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