Future *Urban Legacy* Lab

Research Call #1

Industrial *legacy* and the future of cities

Opening date: 24 November 2017
Deadline: 31 December 2017

full@polito.it

POLITECNICO DI TORINO

FULL | Toolbox
Via Agostino da Montefeltro 2

Legacy industriale e futuro delle città

Two initial hypotheses are the basis for this call:
1.   Production activity – which includes every industry in our conceptualization, both manufacturing and services – is a significant mechanism in the transformation of today's city;
2.   Path dependence mechanisms link the current relationship between city and production with the industrial legacy of the past; legacy has to be intended as «a situation that exists now because of events, actions, etc. that took place in the past» (Oxford Dictionary).

Whether this two general hypotheses are accepted, further assumptions follow.

i.   The first assumption is that the relationship between city and production is in itself a defining urban element (for instance, in terms of the role agglomeration processes have played as the city's founding principle and in its most recent changes). Since the two terms in this relationship between them.
ii.   The second assumption is that the relationship between production and the city is not limited to or simply defined by the "industrial city" paradigm, which indeed frequently indulges in longing for the past and neglects controversies that have characterized the minor part of the world where industrialization has unevenly unfolded amidst political, social, environmental and explicitly spatial conflicts. Following on from that, the de-industrialization processes that have characterized the end of the 20th century have not driven production away from the city.
iii. Since the relationship between city and production is intended as the foundation of discourses revolving around the city, the third assumption is that the interpretation of the current relationship between city and production has to come to terms with what existed before and has filtered to the present conditions in various forms. That is to say, current conditions have to come to terms with the industrial legacies – intended as a set of skills, know-how, knowledges, etc. – that are: entrusted in both the materiality of the city (such as buildings, urban forms, infrastructural organizations, technologies, and the like) and the characteristics of its economic and regulatory institutions; not movable or replicable elsewhere; able to generate collective effects and spillovers, either positive or negative.

With these premises, the goal of the open research call is to establish interactions and synergies among research programmes that aim at understanding:

— how the relationships between production processes and cities have changed;
— what the industrial legacy role is in redefining such relationships;
— what kind of city is defined by current production processes;
— what political, technical, and design-driven tools are instrumental in redefining the relationships between city and production, their effects and effectiveness.

These general aims foster research proposals addressing the following objectives:
— to develop methodologies that measure, visualize and analyse the features and transformations of production in the urban realm;
— to develop methodologies that identify the layering of digital legacy in the city and in city's production processes (in terms of databases and software, primarily), its strengths and weaknesses;
— to understand how production has been transformed and what the current characteristics of the relationship between production and city are (what is produced, how it is produced, where it is produced, who produces, etc.);
— to identify the characteristics of the relationship between production processes and cities, in terms of both morphological aspects and socio-economic variables;
— to detect the spatial transformations induced by the transformation of production activities, adopting a comprehensive notion of space that incorporates different research paths and the FULL multidisciplinary community;
— to define the role of industrial legacy in innovating production and its relationships with urban transformations at different dimensions (from buildings to city-regions).

These objectives are pursued by intertwining theoretical and methodological research threads with empirical research work aimed at:
— Identifying local factors of competitiveness based on industrial legacy, either using consistent quantitative indicators in line with state-of-the-art international literature, or testing qualitative-quantitative indicators and case study approaches that incorporate socio-spatial features in relational terms;
— identifying the potential of existing or foreseeable applications of artificial intelligence to specific contexts of industrial legacy in the city;
— documenting, through a review of international case studies, the redefinition of the relationship between city and production with specific reference to cities that: (i) have had an industrial past; (ii) have dealt with past industrial legacy adapting the city to economic transformations by means of urban transformation strategies (i.e. enhancing local know-how and skills, managing environmental risks and pollution associated with the legacies of hazardous production, etc.);
— testing, in different dimensions, transformative design strategies, technical and infrastructural solutions – such as, but not limited to, reclamation of vacant industrial sites, transport infrastructures, telecommunication networks, energy infrastructures – yet with the common goal of supporting new forms of urban production;
— developing techniques of remote monitoring and valorization of infrastructural

legacy that exploit the Internet of Things (IoT) paradigms and ecosystems, as well as the potential of new communication technologies (5G networks).

This indicative list can be further specified by the research proposals.

How does a FULL CALL work?
FULL is intended as an interdisciplinary research platform that serves the polytechnic community.
This mission is made real by open research calls for application on topics defined by the FULL board (indicatively, two calls per year). FULL welcomes proposals that span over a limited and designated amount of time, which can range from minimum 4 months to maximum 1 year.
Anyone can apply, either individually or in team; principal proponents and team members may also be independent scholars or affiliated to institutions other than Politecnico di Torino. The notification of interest is formalized by submitting a research proposal to: full@polito.it.

The proposal must state:
— How the proposed research addresses the general objectives outlined in the call;
— Research background of the proponent(s);
— Resources to be mobilized (people, tools, time-frame, funding); co-financing parity is mandatory between resources mobilized by the approved proponent and those made available by FULL;
— Expected research outputs, including both scientific outputs (academic publications and new research opportunities in which FULL is operating) and implications for possible policies and transformative actions. In case the research proposal is selected, research output details will be later redefined, in order to incorporate synergies and integrations recommended during the evaluation phase.

The FULL Board will evaluate research proposals, possibly with the assistance of the international research board, based on the following criteria: methodological consistency, originality and relevance to the FULL mission.
The FULL Board is committed to announce the results of the evaluation phase by the end of the month following the call deadline. Proposals that have been positively evaluated require to be adjusted, in order to facilitate interactions and synergies with the FULL community.
All selected research activities will be mostly based at the FULL premises, where research proponents and FULL researchers are expected to work in strict compliance with academic cooperation rules. The scientific coordination of the research projects is entrusted to the proponents; operational management is instead the responsibility of FULL. Research outputs have to mention the FULL research frame, as well as any other affiliation of the associated researchers.