# An advanced design approach to support urban transformations through multi-stakeholder collaborations

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## ABSTRACT

Urban transformations depend on the uses of the city by old and new citizens and on their relation within spaces and resources, triggering regenerative opportunities, networking and empowerment processes. Considering the city and its heritage as a common good, in which each citizen could access and play for the knowledge, management, conservation and transformation of urban contexts, the contribute illustrates the results of experimental actions in Bologna (IT) finalized to test new stakeholder engagement processes and to develop new tools for participatory practices and new productions for the reactivation of the city. In the last years Bologna represents a field of experimentation for different forms of collaborative approaches with the aim to test and innovate tools and policies for the public space. The paper presents the results of projects linked to EU funding schemes (ROCK project) and local multi-stakeholder initiatives (Bologna Design Week) which are part of the research and experimentation carried out by the research unit team. This article illustrates a model to improve the regenerative capacities of the city, recognizing and matching the different roles, influences and knowledge of actors and relevant stakeholders, to strengthen communities' sense of belonging, cultural and creative power, and improving territorial identity.

*Keywords:* Advanced Design, Collaborative Approach, Cultural Heritage, Temporary Transformation

## INTRODUCTION: URBAN COMPLEXITY AND CITIZEN PARTICIPATION

The perception of the complexity of urban space is inevitably affected by the time-related stratification of historical meanings and archetypes that have been developed over the centuries by society (Marot, 2003). In the contemporary city, interpretative processes vary during time, enriching and questioning the consolidated balance of urban spaces and their life with new cultures, unexpected practices and different ways to experience and transform the city. These transformations depend on the uses of the city by recognized citizens and new citizens (residents, workers, migrants, refugees, students, seasonal, homeless individuals, tourists, city-users, commuters), and on their relation within urban spaces and

resources, triggering regenerative opportunities, networking and empowerment processes (Holston, 1999; Borghi *et al*., 2018). Considering the city and its heritage as a common good, in which each citizen (recognized and new) could access and play for the knowledge, management, conservation and transformation of urban contexts, this article illustrates the results of experimental actions in Bologna (IT) finalized to test new stakeholder engagement processes and to develop new tools for participatory practices and new productions for the reactivation of the city. One of the most pressing challenge for policy makers is to increase the capacity to define and follow a systemic approach to manage variables and enhance relations (Cooper *et al.* 1971), able to overpass the silos structure between different sectors, create value, collecting communities' intelligence through collaborative practices and to support the innovation processes in the social, environmental and organizational domains of public realm (Boeri *et al.,* 2019). The involvement of citizens and other stakeholders in the different phases of the policymaking process is witnessed by a multitude of examples across the world (Figuereido *et al.,* 2016), showing the growing commitment of local authorities in engaging with their communities in shaping the future of their cities together (i.e. Decidim Barcelona, Empatia in Milan, Participatory Budget in Puerto Alegre, ChangeMakerSpace in Singapore, etc), based on the belief that open and participatory governance is the key for making cities livelier, more inclusive and sustainable, while boosting urban innovation and competitiveness (Bobbio, 2019; Omar *et al.*, 2018). Citizens, each with their own background, knowledge and expertise, represent a collective intelligence and are those that daily live and experience the city, representing valuable on-the-ground antennas providing both input in terms of evolving needs and unique insights of urban dynamics and trends (Tinati *et al.*, 2014). This article illustrates a model to improve the regenerative capacities of the city, recognizing and matching the different roles, influences and knowledge of local actors and relevant stakeholders, to strengthen communities' sense of belonging, cultural and creative power, and improving territorial identity.

## 1. THE INTEGRATED DESIGN APPROACH

The ability to define and follow a systemic approach, able to create value on an urban scale, involves the definition of new and flexible processes, with the aim of integrating the intelligence of communities through collaborative methods. To support innovation paths in the social, environmental and organizational sphere of the public realm, it's crucial to consider different fields that potentially affect every aspect of human life (Bertuglia & Vaio, 2019). Collaborative methods are increasingly adopted, evolving and intensifying over the years the degree of involvement of citizens, as well as the tools put in place to support these processes. In most cases, they consist of a combination of more traditional participatory

methods, such as focus groups and workshops, and new and online methods, such as web-based cooperation platforms, riding the opportunities offered by social media diffusion. These new practices also pose new challenges in terms of skills, methodological approaches and organizational assets needed to manage these processes, which have moved from simple moments of sharing and consultation to the creation of structured paths of co-design and prototyping of services (Tomkova, 2009; Bentivegna, 2002). The Research Unit of the Department of Architecture of the University of Bologna, is developing and testing new design approach to urban transition based on a combination between spatial and collaborative approach, for the definition of a circular urban system concept, in which different elements are interconnected with the aim of comparing the effects of each decision and framing multiple scenarios of regeneration. (Boeri *et al.,* 2019). The transfer of a circular economic model to the urban environment begins by considering the spaces and places of the city as a resource to which the principles of saving and reuse can be applied. The traditional forms of the urban value chains are therefore rethought in order to adapt/create new services and products that can improve the quality of life of citizens. Through the connection of initially separate "systems" and through technical, organizational and institutional solutions and changes (Boeri *et al.,* 2019) ("multiple innovation processes"), new paths are created to rethink the functioning of the city economy, while the built environment is redesigned to increase the usability and sustainability of urban spaces. This focus on cities, as distinct from conventional sustainable urban design and planning which focuses on urban form, urban growth, liveability, walkability, energy reduction and place-making separately and sustainable architecture which focuses on individual buildings, finds its ground in theoretical framings of cities as complex adaptive systems (Bettencourt, 2010). Framing cities as complex adaptive systems requires understanding and taking into account the interrelationships between technologies, ecosystems, social and cultural practice and city governance in design decisions (Ceschin, 2016).

## 2. BOLOGNA AS A FIELD OF EXPERIMENTATION: THE POTENTIAL OF TEMPORALITY

The speed of environmental, social and economic changes and the increase in factors of unpredictability (linked not only to socio-economic issues but also to climate change), the trend towards interconnection between actors active on the ground tends to characterize the evolution of urban contexts. Time becomes one of the materials of urban projects, responding to the rhythms and time cycles of people who populate the open space; working punctually at different scales and replicating successful experiences in other contexts, exploiting "suspended spaces", designing the unfinished, intervening in the voids, creating

interruptions (Bocchi, 2013). Multipurpose and temporary uses facilitate multiple forms of accessibility, inviting its citizens to the knowledge and exploration, encouraging renewals and co-designed transformations, to a more responsible behaviour towards the environment, taking advantage from the educational potential of the landscape, culture and society (Frerks 2011). In the last years Bologna represents a field of experimentation for different  forms of collaborative approaches with the aim  to test and innovate tools and policies for the public space, also thanks to ROCK EU project. ROCK – *Regeneration and Optimisation of Cultural heritage in creative and Knowledge cities* – is a project funded by the European Union under the Horizon 2020 programme, Work Programme 2016-2017 Climate action, environments, resource efficiency and raw materials, topic Cultural Heritage as a driver for sustainable growth, call Greening the Economy (Grant Agreement no. 730280). The project, lasting three years, has received financial support of 10 million euros and currently involves 32 partners from 13 European countries and 10 cities of the Union coordinated by the Municipality of Bologna in close scientific collaboration with the Alma Mater Studiorum - University of Bologna (Boeri *et al,* 2019). ROCK develops innovation in the field of cultural heritage: through an integrated, collaborative and systemic approach, it experiments strategies for the regeneration of historical centres starting from tangible and intangible heritage. In the ROCK vision, cultural heritage goes from being an inactive and burdensome factor to a vector of continuity and progress, a catalyst for new processes of sustainable urban development and forms of economy focused on culture and creativity. The experimentation is based on a circular methodology of research-action that marks the essential role of research in processes centered on heritage. The implementation of the pilot actions revolves around three main domains: accessibility, sustainability and new collaborations for productions. Sustainability, competitiveness, social cohesion and creativity are crucial issues for the contemporary transformations of existing urban environment. To bridge the gap between the existing urban environment and contemporary issues, the ROCK project is the occasion to test on field a cross-disciplinary spatial perspective, in which the methodological approach is based on horizontal integration among top-down planned elements and policies, and emergent, self-organized activities, and their promoters (institutions, associations, cultural operators) to define new models of local development (Gaspari *et al.,* 2017), comprehensive of new businesses, services and facilities, innovative co-production for urban promotion, accessibility, monitoring and CH experiences . The cross-disciplinary spatial perspective take into account not only the physical dimension of a city, but also the economic and social ones, to carried out new regeneration pathways. The project started with a mapping of the ecosystem of stakeholders and actors (baon

competences, role, communication, resources, etc.) and of the most effective socio-economic drivers at territorial level, to define a community of practices linked to the Cultural Heritage promotion, conservation and valorization. To explore, experiment, and support the scaling-up of grassroots social innovations (Gaspari *et al.,* 2017), ROCK project supported the creation of a Living Lab (U-Lab) which involved students, communities, artists, cultural entrepreneurs, and vulnerable groups of people, to adopt a co-design approach for the development of solutions, events, collaborations, services, in a sustainable perspective for the historic city of Bologna.

U-Lab acts as a social infrastructure, that, starting from shared needs, is able to co-produce innovation in terms of new governance, new uses of enabling technologies, new collaborative tools and services grounded in the development of a shared multi-stakeholders city vision combining heritage-led regeneration, sustainable economic development, city promotion and knowledge sharing

The co-design activities for the planned urban transformations concern illustrative interventions that have as objective the increasing of the social use, the guarantee of a full accessibility and usability of the cultural heritage, the improvement of the environmental conditions of the spaces of public use, allowing to redesign of open spaces as an integrated system of interconnected elements, thus bringing the theme of connection back to the centre (Giovannoni, 2013), through a system of punctual, "parasitic" additions, contamination and regeneration of the existing or through the use of the existing sediment to implant a totally renewed organism with functions totally different from the origin (Bocchi, 2013). The research-action carried out in Bologna activates a range of site-specific actions in relation to the three project domains - accessibility, sustainability and new collaborations - with the aim of promoting:

- the mapping and enhancement of the so-called "hidden treasures", forgotten or little-known places set in the consolidated historical fabric, to be discovered/rediscovered through urban micro-design interventions capable of grasping the still untapped potential (Fig.1);

**Fig. 1. ROCK participatory meeting in the Historic University Library in 2018. (Ph. Margherita Caprilli)**

- the unconventional use of heritage to be encouraged through the identification of alternative solutions for access, use and fruition of historical urban spaces inside and outside, private and public. Such operations help to promote the diffusion of knowledge, strengthen local identity and encourage forms of inclusiveness and sociality whose success is largely due to the proactive involvement of the community in co-designed and co-built initiatives that greatly broaden the basis of participation in urban dynamics (U-Area for All, Portici Aperti);

- the temporary transformation of urban spaces, adopting a research action approach, to test, experiment, assess and validate/adjust new functions, aesthetics, elements in the historic city, more adherent to city users needs and expectations (Malerbe Project, Green. Unexpected Grass Square project, etc.), (Fig.2).

**Fig. 2. Green. Unexpected grass square (Ph. Margherita Caprilli)**

The second example linked to Bologna temporary transformations is about the Bologna Design Week (BDW). Since 2015, it is an annual event that maps out and unites the cultural, educational, productive and retail excellences of the territory in an integrated communication project. The mapping process takes place using the principles of co-design and participatory design: all the data collected is open-source, published on the website bolognadesignweek.com, from where it is possible to download the BDW app with an interactive map and the day by day program, that this year listed more than 150 events spread on 15 major venues. Created and organized also in collaboration with the Design Research Unit, Bologna Design Week is a festival running throughout the city among the wonders of its creative and architectural tangible and intangible heritage. It transforms the city for six days into a theatre of wonder, experimenting the creativity of designers in site-specific, immersive, participatory events, reflecting on the plural and potential identities of Bologna (Montalto *et al.,* 2019), for promoting the design culture in Emilia-Romagna Region. In its fifth edition, during September 2019, three-day previews, 15 exhibitions, 30 design talks, 5 workshops, 3 film showings and several guided tours have changed the perception of the city center and have animated theatres, museums, historical buildings, showrooms, unique locations, squares, deconsecrated and active churches, art galleries and private homes. Creative and cultural industries, associations together with public institutions but also private citizens have been the plural actors that actually are designing the contemporary city, considering the temporality of this manifestation as a value to test, for six days and six nights, the design of new uses, new languages, new behaviors, new experiences, new

relations between people and places filled with original contents. In 2019, reinforcing widespread involvement in actions that potentially can influence new productions at urban scale, a series of preview events have given the idea of the relational design approach adopted. A fundraising campaign was launched in May to support the production of the "Immutea 1919" project, a performance of music, theater and dance designed to celebrate the centenary of the birth of the Bauhaus. Further strengthening the widespread involvement, the Architects' Association of Bologna and the Goethe Zentrum in Bologna, in cooperation with the Goethe Institut Italia, promoted the travelling photography exhibition titled "Bauhaus Reloaded 1919 – 2019: Architettura Bauhaus" by German photographer Hans Engels. The fifth edition packed with creative design ideas, based increasing on a participatory and co-design project which have involved private and public institutions, design studios and companies. One of the most complex had been the installation "Questa volta in Teatro" which has reinterpreted the settings of the Respighi foyer at the Municipal Theatre in Bologna, which for the whole week had hosted the rich program of talks, workshops and presentations. Curated by Stile Bottega architettura, the site-specific image project was developed together with Studio Associato Marchingegno and Baustudio, with the partnership of the Municipal Theatre Foundation in Bologna and Bologna Design Week, with the cooperation of the private companies Leonardo Srl, Artefatto by Mirco Lotierzo, Consorzio Cires, Viabizzuno and Galletti SpA, who have transformed their ideas into a show of wonders, adding structure and body to the fabric vaults, the morning light making them vibrate and the space cooled to ensure their full enjoyment (Fig. 3).



**Fig. 3. "Questa volta in Teatro" ephemeral installation during Bologna Design Week 2019 (Ph. Francesco Lombardo)**

The guiding thread joining the various players behind the project is the city as a theatre of meetings, the city that comes into the theatre: a poetical re-interpretation of the public space *par excellence*, the porticoes, as a stage setting for new relations. During this last edition ROCK and BDW collaborated together with the Advanced Design  Courses of  the University of Bologna to create a site-specific program to re-activate and temporary transform the historic University area, through the direct involvement of students, associations, designers and artists, institutions. The program foresaw three contemporary workshops  and a series of collateral events (a community and sustainable pic-nic; concerts, exhibitions) especially connected to the temporary transformation of a parking area (Piazza Rossini) in an urban lawn. This action was coordinated by Foundation for Urban Innovation (FIU), partner of ROCK project,  This cultural initiative triggers the interest among citizens to rethink different uses in the historic experimental area, and among the institution. For example, thanks to the success and liking of the audiences, the Municipality of Bologna decided to replace the parking area with a pedestrian square, creating a new public space inside this historic context.

## 3. MULTI STAKEHOLDER COLLABORATIONS: ROLES, SPACES OF DIALOGUE, MELTING KNOWLEDGE

In the newly emerging urban conditions, the demand of citizens to be an active part in the management of the city and its cultural heritage, considered as a common good, is always increasing. In the last decade, the conscious participation of citizens has been manifested above all into temporary practices and themed events with the aim of redesigning small portions of the city's identities, enhancing cultural heritage, local roots and experimenting with new jobs. The two experiences show how a multi-stakeholder collaboration could be a driver to change the use, the perceptions and the access to the city cultural contents among citizens and visitors.  From BDW point of view, "designing an event serving city-users is helpful to promote and share design cultures continuously experimenting new models, to seek new forms of communication of the evolving city identity. In the past few editions we have reaped the harvests of our work, seeing the birth of creative realities which came to BDW with a specific project, designed specifically for the design week, without which much of this creativity could not have been expressed and many of these events would not have been put on. To ensure the city-users' involvement, a cross-channel communication strategy – using all supports, from the many active social channels, to the website, and the free app – had guided visitors through a discovery of the fifth edition celebrating Bologna as the city of design and wonder." With the aim, shared by all BDW collaborators, of continuing to support the role of advanced design as an instrument and strategy for innovation in the participatory,

sustainable cultural transformation of the city, in which creativity, experimentation, training, hospitality and the production world come together once more in a week full with unique and multi-stakeholder events (Vai, 2017). Starting from new models of collaboration (Iaione, 2013), the objective is to increase the relationships between the growing flow of city-users, citizens and tourists, and the public historical heritage to give new life to spaces through new models of generation of culture and creativity. Space becomes an instrument, a place where data and technologies can be accessed in an innovative way, where new generations can be trained with new skills, adaptable to contexts and needs, at the service of citizens, schools and businesses. The experimental processes implemented through ROCK and BDW have the aim of transforming collected data, experiences, exchanges and relationships into knowledge. A knowledge accessible to the actors and users of the city, emphasizing the right to use the content that the city itself produces in a continuous creative flow. This flow is necessary to support citizens' collaboration in the processes of social and economic development on an urban scale, creating fertile ground for networking their talents (as declared by the UNESCO Institute for Lifelong Learning). ROCK and BDW work in different ways on communication between different categories of users and between different knowledge of the city, to stimulate exchange, consolidate and enhance skills, overcoming fragmentation between sectors, typical of local governments. In this way it is possible to stimulate the dynamics of exchange between data, people and places: the city of knowledge thus becomes the context for citizens of knowledge (Carrillo, 2005). The intention is therefore "to forge connections between cultural heritage as things and spaces on the one hand, and as ideas and people on the other" as stated in the Creative Heritage's manifesto (Schröder *et al.,* 2018), comparing the hybrid range of practices and process, overall temporary uses and events, set by a wide range of formal and informal actors. These experiments have become prototypes of scalable, sustainable, high-widespread projects and have become the test bench for innovative methodologies and different design-driven processes of rehabilitation of the contemporary city starting from its tangible and intangible heritage. The partnerships between cultural institutions and other sectors (education, training, business, management, research, social sector, etc.) are strategic in terms of "contaminated" knowledge alliances, to understand in which way the cultural domain of innovation could be combined to the technological and social ones, to produce new services and solutions able to face the contemporary societal challenges. These partnerships can help to brigde the funding gap of public entities and provide interesting investment opportunities for the private sector (UNESCO, 2013) bringing economic resources, create job opportunities and display innovative approaches to the development of new cultural and creative

processes and products. The adoption of this innovative approach can combine, on one hand, the public interest by institutions, and the attention to local communities rights and quality of life, and, on the other hand, the business priorities guiding private players. Agreements on facilities and benefits are powerful leverage tools for local development, but needs the development of national legal, institutional, policy and administrative enabling environments (UNESCO 2013), to influence the productions of new capacities, new entrepreneurial forms, new knowledge and opportunities.

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