urbanistica paesaggio beni culturali



DIVERSEcity

Call for Papers - Biennale Spazio Pubblico 2019 - Roma

CNAPPC

Consiglio Nazionale Architetti Pianificatori Paesaggisti e Conservatori

Componenti del Consiglio

Giuseppe Cappochin - Presidente Marco Aimetti Walter Baricchi Ilaria Becco Lilia Cannarella Massimo Crusi Alessandra Ferrari Franco Frison Rino La Mendola

Paolo Malara

Alessandro Marata

Luisa Mutti

Fabrizio Pistolesi

Arturo Livio Sacchi

Diego Zoppi

A cura di

Alessandro Marata I Dipartimento Ambiente Energia e Sostenibilità - CNAPPC

Rossana Galdini I Dipartimento di Scienze Sociali ed Economiche - Sapienza Università di Roma

Dipartimento Ambiente Energia e Sostenibilità - Coordinatore: Alessandro Marata

Componenti dei Gruppi operativi : Teresa Alvino, Carlotta Cocco, Stefano Meneghini, Daniele Menichini, Carmela Palmieri, Massimo Pedone, Salvo Pitruzzella, Egidio Raimondi, Martino Roatta, Alessandra Siviero, Aurelio Zennaro

Grafica e impaginazione Marta Badiali e Maria Chiara Francavilla

E' vietata la riproduzione, anche parziale, effettuata con qualsiasi mezzo, compresa la fotocopia, anche ad uso interno o didattico. Per la legge italiana la fotocopia è lecita solo per uso personale purché non danneggi l'autore. Quindi ogni fotocopia che eviti l'acquisto di un libro è illecita e minaccia la sopravvivenza di un modo di trasmettere la conoscenza. Chi fotocopia un libro, chi mette a disposizione i mezzi per fotocopiare, chi comunque favorisce questa pratica commette un furto e opera ai danni della cultura.

Nel caso in cui fosse stato commesso qualche errore o omissione riguardo ai copyright delle illustrazioni saremo lieti di correggerli nella prossima ristampa.

ISBN 978-88-941296-4-9

Roma - 2019

INDICE

Il progetto della città contemporanea Giuseppe Cappochin	13
DIVERSEcity Alessandro Marata	15
Green urbanism: strategies for a diverse city Rossana Galdini	27
SOSTENIBILITA'	
Diversità di antropizzazioni con l'approccio ecologico integrato ^{Stefano Aragona}	41
Strategia preliminare delle aree interne in Abruzzo Il Sistema della Mobilità Teresa Ciambellini	51
Tipologie di mobilità a Roma: una cluster analysis ^{Marina Ciampi}	61
La progettazione dello spazio pubblico in un'ottica di sostenibilità multidimensionale. Una esperienza di co-programmazione partecipata per la rigenerazione territoriale sostenibile nel Lazio. Silvia De Nardis	73
La mobilità ciclistica come fattore strategico di sviluppo sostenibile e accessibilità regionale: il caso della Sardegna Elisabetta Anna Di Cesare, B. Scappini, Veronica Zucca, Italo Meloni	85
Il Contratto di Fiume, strumento per la rinaturalizzazione della Città contemporanea Sante Foresta	97
INSIDE, cartone e nanotecnologie applicate per un'abitazione temporanea e per l'emergenza off grid	109
Mobilità sostenibile in Val Tanaro Antida Gazzola	121
Diritto alla città Lucia Krasovec-Lucas, Gioia Gattamorta	131
Una città diversa per cittadini uguali Olivia Longo, Ivana Passamani	139
Dal Piano di adattamento al clima al progetto degli ecoquartieri parigini. Lo spazio pubblico come infrastruttura ambientale per la mitigazione degli impatti ecologici. Silvia Nigro	151
Biblioteca naturale Giovanna Saracino	161
Sustainable districts in Freiburg im Breisgau Sara Spanu	169

SPAZIO PUBBLICO

Verso nuove intelligenze dello spazio pubblico. Il parco Zari 2.0 a Bovisio Masciago Alessadro Ali, Chiara Nifosi, Luca Tognù	181
Educare allo Spazio Pubblico Per una lezione di Grammatica e Città Chiara Amato, Alessandro De Simone	193
La città e i nodi infrastrutturali: il progetto di rigenerazione degli spazi pubblici del quartiere aeroportuale Roissypole - Charles de Gaulle, Parigi. Arturo Becchetti, Fabrizio Felici, Alessandra Pusceddu	205
PUBLIC SPACES: resources for the city or places of conflict? Teresa Cilona	217
Tagliare alberi in città Valerio Cozzi, Erica Kusterle	229
The role of trees in public spaces in Spanish cities. Past and future. M. Rosario del Caz Enjuto	235
Un passo dopo l'altro: ricostruire lo spazio pubblico Matthew Earle (Kallipolis)	247
Agenda 2030 and its Public Space Target: from Chore to Asset Pietro Garau	257
Valorizzazione dello standard urbanistico a verde pubblico per usi temporanei e marketing territoriale. Proposte e sperimentazioni a partire dall'approccio dei Servizi Ecosistemici Vito Garramone, Elena Gissi, Francesco Musco	267
Per il rilancio del dibattito su spazi comuni e sfera pubblica : appunti da un caso emblematico Annick Magnier	279
Strategie per la qualità del verde in ambito urbano Gaetano Giovanni Daniele Manuele	291
Lo spazio pubblico tra memoria e nuovi paesaggi urbani ^{Umberto Minuta}	303
Le città (In)sensibili. Inclusione, accessibilità, percezione ambientale. Letizia Montalbano	313
Spazi verdi accessibili e inclusivi: il progetto Parco Libera Tutti a Certaldo Narrazioni Urbane - Michela Fiaschi, Caterina Fusi, Diego Cariani	325
Spazio pubblico e benessere delle persone: Design di prodotti e servizi per i contesti urbani Andreas Sicklinger, Valentina Gianfrate, Guglielmo Ori	337
Le diversità del tempo nella città di oggi Claudio Zanirato	349
BENI COMUNI	
Temporary Village: una città per tutti Erika Alessandrini, Stefano Campanozzi	361
L'antico cimitero di Querceta di Seravezza La comunità si riappropria di un bene comune Enrico Bascherini	371
Un agencity per gli anziani Francesca Cubeddu	381

Disegnare per il bene comune: le voci del silenzio Andrea Donelli	393
Mobility, Translocalisation and Transduction: The Resilience of New Urban Commons in the Era of Advanced Technospheres Manfredo Manfredini	403
A piedi nudi in città. A Grosseto, l'esperienza di un laboratorio urbano Michele Manigrasso	415
L'Aquila, frammenti di comunità Ri-costruzione e tras-mutazione sociale: uno sguardo sociologico Anna Maria Paola Toti	427
Tevere bene comune ovvero come ritrovare un rapporto fra il fiume e la città Flavio Trinca	439
RIGENERAZIONE URBANA	
Innovazione e sostenibilità nel progetto di rigenerazione di uno spazio urbano Roberta Angelini	451
Cultural heritage-led initiatives for urban regeneration. Pilot implementation actions in Bologna public spaces Andrea Boeri, Danila Longo, Valentina Gianfrate, Rossella Roversi	463
Rigenerare i beni confiscati al Nord: una sfida multidimensionale nel cuore fragile delle città	475
L'abilità di cambiare le città Valeria Brigliadori	487
Recupero di Forte Aurelia: storia e contemporaneità Bruno Buratti, Fiorenzo Meneghelli	495
Seminare "idee", da spazio diviso a spazio collettivo: il parco urbano del sedime ferroviario a Palagianello. A. Carriero, F. Maiorano, O. Milano, F. Petrera	507
Archeologia urbana e città contemporanea Un'occasione di progetto nel nucleo antico di Napoli Mattia Cocozza	513
Inventare lo spazio pubblico nell'iperdensità. La riqualificazione del sistema degli spazi intermedi del quartiere Libertà di Bari Rossella Ferorelli, Alessandro Cariello, Luigi Falbo, Vitandrea Marzano, Andrea Paone	523
Un palazzo, un vuoto, un Obiettivo. Enrico Maria Ferrari	535
L'accento sulla A - Approcci all'architettura moderna Daniele Longobardi	547
Is the public (space) real (estate)? Filippo Orsini, Luca Salmieri	557
Re-public Space: il progetto di spazio pubblico come chiave di rigenerazione urbana nel quartiere Libertà di Bari ^{Martina Ottaviano}	569
Il contemporaneo rigenera l'antico: un progetto per Chieti Alta Luca Petruccelli	581
Il recupero del complesso monumentale dei Chiostri di S. Pietro. Il "non finito" come strategia di rigenerazione	591

DIVERSEcity

RESILIENZA

Da Napoli alla Sanità: un viaggio nel Rione tra migrazione e turismo Antonella Berritto	603
L'insostenibile città del non essere Rocco Converti	615
L'Aquila – Spazio pubblico dinamico per una ricostruzione sostenibile Dunamis Architettura - Stefano Balassone, Lorenzo Cantalini, Giovanna Marchei	627
La Progettazione Urbana come Strumento di Prevenzione del Terrorismo Alessandro Rizzo	639
Lo Spazio Negato Alessia Rossi, Francesco Giancola	651
Sustainable, inclusive and safe cities: reconstructing places after catastrophes Marichela Sepe	661
Dalla SUM alla CLE: strategie di prevenzione del rischio sismico Flavia Sinisi	675
ARTE	
Operatività ambientale o 'decoro' dell'urbano? Gli interventi scultorei del 'Plateau' di Kirchberg a Lussemburgo Massimo Bignardi	687
M9, il museo del Novecento tra rigenerazione urbana e nuove tecnologie. Thomas Bisiani	699
Ars tua vita mea Angela D'Agostino, Giovangiuseppe Vannelli	709
La pelle della città: considerazioni, metodi e strumenti degli interventi sul tessuto urbano Marco Fabri	721
Agenda 2030 ART can develope DIVERSEcity? Michele Gortan	731
Public Icons on the Fringe of a Metropolis Street art in a district with strong migration flows Matteo Giuseppe Romanato	743
Big City Life ed Ecomuseo Casilino: due esempi di Participatory Cultural Iniatives nella periferia romana Maria Martina Soricaro	755

Cultural heritage-led initiatives for urban regeneration.

Pilot implementation actions in Bologna public spaces

Andrea Boeri *, Danila Longo**, Valentina Gianfrate***, Rossella Roversi ****

Abstract

This paper deals with the research experience nurtured during the "ROCK- Regeneration and Optimisation of Cultural heritage in creative and Knowledge cities" project (EU Horizon 2020 – Grant Agreement n. 730280) and with the initiatives carried out during its first two years of implementation. In particular, the contribute focuses on the use of Cultural Heritage as a catalyst for urban regeneration and on reactivation actions of public spaces in Bologna, aiming at fostering collaborative practices, social cohesion and innovation.

Parole chiave: Rigenerazione Urbana, Patrimonio Culturale, Approccio Circolare, Partecipazione, Verde Urbano

Keywords: Urban Regeneration, Cultural Heritage, Circular Approach, Participation, Greening

Introduction

According to EU and UNESCO, cities are the strategic factors to foster European economic strength, wealth, social opportunities and innovation (European Commission Directorate General, 2015; EEA, 2017, UNESCO 2016). However, at the same time, cities represent the places where conflicts, inequalities and exclusion are more evident. The growing of population is increasing year-by-year the urban density, leading to the exacerbation of challenges related to sustainability and urban management. Social exclusion, lack of identity, waste management, traffic congestion, air and water pollutions, fuel poverty, constitute some of the main problems, that need sustainable solutions in a long-term perspective (Hajer Maarten, 2014). In compliance with the recommendation of UNESCO Reports 2016 and 2017, Cultural Heritage (CH) is assumed as a fundamental resource for sustainable urban development: preserving urban quality of life, protecting urban identities, valuing local cultures, promoting cultural expressions are the pillars for making cities more inclusive and liveable.

Cultural Heritage is the main topic of the ROCK - Regeneration and Optimisation of Cultural heritage in creative and Knowledge cities project. It is a three years Research Innovation Action (RIA) project funded by the European Union's Horizon 2020 Research and Innovation Programme (call H2020-SC5-2016-2017, Grant Agreement N. 730280). This project, currently at the beginning of the third year, is coordinated by Bologna Municipality with the technicalscientific assistance of the University of Bologna. Its general objective is developing a systemic, multidisciplinary, collaborative, circular and replicable approach aiming at urban regeneration, especially in historic contexts affected by social exclusion, lack of accessibility and integration with the rest of the physical and relational space of the city. ROCK focuses on historic city centres as privileged action fields for inquiries and actions, intended as extraordinary laboratories to demonstrate how CH can be a unique and powerful engine of regeneration, sustainable development and economic growth for the whole city. CH, considered both as tangible (buildings, squares, streets, districts) and intangible (creative and artistic arts, productions and services, people skills and abilities) forms, is often underused and under known by citizens themselves: ROCK intends to provide new ways to access CH and to promote transparency and perception of shared heritage as collective property.

ROCK aims to support the transformation of three historic city centers, situated in Bologna, Lisbon and Skopje (Replicator Cities), into creative and sustainable districts, by implementing a repertoire of successful heritage-led regeneration initiatives related to 7 Role-Model selected cities (Athens, Cluj-Napoca, Eindhoven, Liverpool, Lyon, Turin and Vilnius) through a continuous knowledge/experiences exchange process. The replication potential and effectiveness of the tools and policies developed in the Role Model cities are tested in the three Replicator Cities, taking their specific historic context and local needs into account.

The quality of public spaces is the first element that marks the separation between, on the one hand, a chaotic, non-functional, socially critical settlement and, on the other hand, a well-organized, safe city with effective services and social integration. Thus, in particular, ROCK aims to test actions, strategies and tools to foster the usability of public spaces to all, improving CH functions from a user perspective, defining key policy issues, integrating emerging spatial, temporal and virtual structures of the knowledge-based society, to support cohesion and develop a sense of belonging to places.

Urban regeneration of open spaces are an opportunity to overcome spatial discontinuity, redesign and complete existing urban fabric, to include a *mixitè* of users and to enhance

environmental and cultural quality, while strengthening local identity and communities' sense of belonging. A change of paradigm, also helped by the introduction of new dynamic tools, strategies and enabling technologies are necessary to activate integrated city improvements, starting from place-making approach to foster the involvement of communities in the process of re-appropriation of the shared spaces and portions of the city.

- Approach and methodology: ROCK Urban circular system for Creative and Sustainable districts

ROCK approach is based on a circular urban model in which CH already in use for specific activities, can express other unused potentialities if framed in a less specialized and elitist idea of culture: a value-sharing process that must steer city changes both in terms of physical environment and of mindset. ROCK approach assumes the historic city, and in particular the underused hotspots, as resources that can be re-introduced into a continuous positive development cycle that preserves natural capital, optimizes resource yields, reduces system risks and regenerates existing resources, while preserving and conserving the intrinsic value of its CH. The circular urban system concept, which represents the theoretical backbone of ROCK project, is mutuated from the "circular economy" concept (Wolrd Economic Forum, 2019) and considers CH as a resource, applying the same principles of saving and reuse. "ROCK circle" (fig.1) connects and moves sub-systems of actors, processes and technologies in several domains, assuming historical centres CH transformation, adaptation and reuse into Creative and Sustainable Districts. The aim is to encourage virtuous flows within the system and to create the conditions for a shared, safer, more equal and more suitable places for the communities to live and work.

Within this framework, the project follows a Research-Action-Research approach, intended as an iterative process based on the following scheme:

- 1. Research. The first research activity is aimed at screening the initial status by identifying needs, key stakeholders, key areas and key actions and enablers, in order to properly prepare the field for the concrete action planning and implementation.
- 2. Action which is embodied by the implementation of pilot actions according to the first drafting of themes, topics and proposals emerged from the participatory inquiry. This first implementation can arise more needs, the adjust actions, revealing the presence of unforeseen barriers that need to be addressed. Therefore, the process foresees a second research activity.
- 3. Research. ROCK actions are a mix of bottom-up and top-down initiatives that involves different levels of stakeholders and communities. The complexity needs a second phase of research to define more precise and detailed scenarios, which includes not only foreseen actions and tools

application, but also considerations about new assumptions to be taken into account, new barriers and risks, new stakeholders, the connection and clustering of specific actions with new or more precisely identified target groups. The application of the methodology is meant at the urban scale, nevertheless ROCK proposes a smaller approach though pilot actions at the district/neighbourhood scale: the micro-scale experimentation ground offers an intermediate dimension useful for implementing projects and monitoring results effectively; the district is also recognisable by its citizens in term of identity and sense of belonging (Gaspari, 2017).

- The ROCK ongoing process of implementation in Bologna

Bologna is one of the three Replicator City, chosen because it is a knowledge based city thanks to the strong presence of the oldest European University, it is included in the UNIESCO creative Cities' List, and by the strong effort of the Municipality about collaborative approach. At local level, the first step of the project regards the building of a process of community involvement to create a local Ecosystem of Stakeholders, comprehensive of citizens, business and associations, University and Public Administration, in order to define a shared general framework, policy apparatus and medium-long term vision, and specific actions for the urban transformation of the demo area. The selection of the actions is the result of a co-designed process that has led to three topics, strictly related to public spaces: accessibility, sustainability and new collaborations.

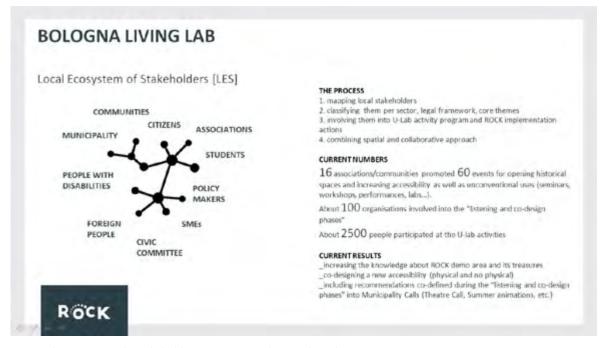


Fig. 1 Bologna Living Lab: stakeholders, process, numbers and results.

The ROCK demonstrator site is located inside the historical city centre in a highly dense artistic and cultural district. It is distributed along a major street, via Zamboni, that connects a system of public spaces whose nodes are represented by five squares: piazza Ardigò, piazza Rossini, Piazza Verdi, Piazza Scaravilli e Piazza Puntoni. The area hosts a multiplicity of university headquarters and ceremonial buildings, cultural facilities and gardens, and it is characterized by the presence of the typical Bolognese porticos. Piazza Verdi is the main geographical and social centrality of the demo site, named "Zona_U" (fig.2), deriving from the huge presence of university buildings and students.

The growth of the student population (about 80,000 students), the change in the number and composition of population in the centre, due to migration phenomena (15.000 new residents each year, of which 9.000 Italian) and the effects of the growing new tourism dynamics, have not been integrated and absorbed in the area, whose public spaces capacity is limited. These dynamics has generated phenomena of social conflict between different categories of users and triggered decay and disturb. In particular, the presence of the students, vital and positive per se, is turned into a problematic issue for the coexistence with the other actors of the area. The Zona U stands out as the main place where population (expecially students) of excluded people from urban dynamics gather and meet every day.



Fig. 2 The "Zona U" demonstration area in Bologna (in red).

In designing and implementing actions, each of the public spaces included in the demo area is intended in correlation with the others, with the purpose to create a system of places, where actions are complementary and concur to achieve integrated targets and objectives, balanced according with the vocation of the single space, the results of the participatory process, and the perceived needs. In the system of places composed by the 5 squares along Via Zamboni, different typologies of action have been carried out during the two years of ROCK project: some of them are currently ongoing and others are in the planning stage.

Below, a description of three significant initiatives already implemented, as examples extracted from the coordinated set of heritage-led regeneration initiative actions held in the Zona U public spaces: U-lab, Malerbe, New Lightscape.

- U-LAB: co-designing and implementing actions of revitalization

U-Lab is an approach based on workshops of participatory practices dedicated to Zona U. It involves the Municipality of Bologna, the University of Bologna, the Rusconi Foundation and the Opera House and is coordinated by Foundation of Urban Innovation Bologna. U-Lab is configured as a transversal activity aimed at coupling the design of the regeneration of the area, developing new ideas for the enhancement, unconventional use and creation of services and promoting some experimental actions. U-lab started in 2017 with the local stakeholders mapping and is developed through two main lines of action.

The first line is dedicated to listening, co-designing and collecting ideas and proposals during an articulated path of meetings involving the various actors (institutional and not), stakeholders and users of the area.

The second line is dedicated to experiment and implement actions involving public spaces. A call for proposals has been launched on December 2017. The groups proposed new forms of animation for the area. The proposals have been implemented during spring and summer months and contributed to revitalise and bring new audiences in the experimental site.

A third phase started at the beginning of 2019 together with a reflection on the technologies to be applied to the urban environment: lights and sounds instruments, urban green technologies and others, to respond to the necessity emerged during the previous phases. A focus on "accessibility" is included, as one of the main topics emerged during the co-design and discussion phase developed in 2018. The ambitious goal of the new phase of U-Lab is hence to make some of the stakeholders' necessities concrete and develop a new inclusive service for the Universal

fruition of CH and to attract new visitors in the area, with particular attention to people with disabilities (*U area for all*, fig.3).

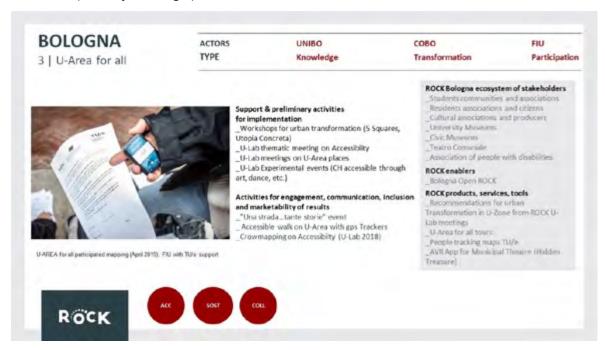


Fig. 3 U-Area for all

- Malerbe: transformation and greening of public spaces

Thanks to Malerbe initiative, Piazza Scaravilli has been transformed from a car park into a dynamic garden, where cultural activities, aggregation and entertainment can be carried out, for a continuative use of space (fig.4). Malerbe combines the pursuit of two objectives: the environmental sustainability matched with the mitigation of climatic effects through an action of urban greening, and the cultural and social use of public spaces, allowing the re-appropriation of a underused square and its reinterpretation as relational node in the Zona U system of places.

Malerbe is the result of a path started through the activation of a co-design laboratory with 18 students of Architecture, Design and Advanced Design of the University of Bologna, managed by the researchers of the Department of Architecture, BAGstudio and a local association (Centro Antartide), and aimed at the construction of a public space to support both the student and the resident population, so combining the need of the two social groups that used to exploit that space in different and often conflicting ways. Malerbe has involved some of the associations (Giardino del Guasto, Bologna Vivibile, Comitato di Piazza Verdi) already operating in the area in the planning and design phase. The participatory implementation and the light intervention composed of modular, temporary and reversible elements, resistant to possible management model, based on collaboration and dynamism, want to make "Malerbe" a real "dynamic garden"

to promote biodiversity and sociality. The Malerbe project has led to the creation of a vandalism, where the "weeds", find their place (figg. 5 and 6).

This kind of interventions can offer significant potential for regeneration of open spaces such as internal courtyards, abandoned residual micro-areas, interstitial spaces between buildings: the redesign and differentiation of paths, the inclusion in ecological networks and corridors allow to include these micro-areas in an integrated environmental system.

The choice to refer to urban micro-design seems particularly effective because it is economically sustainable in a period of scarcity of public resources that traditionally finance interventions on the public spaces of the city. As in the Malerbe case, micro-design solutions often refer to bottom-up initiatives, through collective support for the initiative or in other cases are the result of mixed approaches involving unconventional associative forms and financial schemes for implementation (Gianfrate, Longo, 2017).



Fig. 4 U- The Malerbe workshop for urban transformation and greening.



Fig. 5 e 6 Malerbe and SLAB, a temporary architecture co-design by students installed in Piazza Scaravilli.

- New lightscape: highlighting hidden treasures and increasing accessibility

New lightscape is the experimentation of an innovative lighting concept. It is a pilot project that involves Via Zamboni, to test effective lighting solutions to improve accessibility, security and valorisation of CH. The project integrates technical competences, based on the study of Viabizzuno S.r.l. (a technology partner provider of ROCK project) and on the co-design guidelines elaborated during the participatory process of U-Lab.

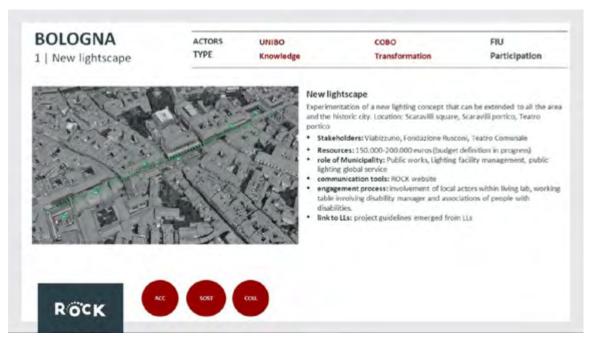


Fig. 7 New Lightscape in Via Zamboni

The lighting project intends to test the transformation of the city into an art gallery facilitating its accessibility and fruition also during the night, modulating the lighting system into: light to meet, light for break, light for architecture and art, and light for sleeping. The light is conceived as a detector of hidden treasures and points out their presence (fig. 8). The initiative includes the conservative restoration of the historical lantern and of the old notice boards, and new display-cases for art works (fig. 9).





Fig. 8 e 9 Lighting project for Piazza Rossini and the Via Zamboni porticos, with display cases for temporary exhibitions.

- Further developments

In order to develop the ROCK approach in a site-specific effective strategy, to be managed also beyond the project lifetime, the research include the building of a tool for the long-term planning, implementation and management of actions, relying on bottom-up participatory approaches and sustainable development models that are consistent with the specificities of the places and communities that inhabit them. The tool is an Integrated Management Plans (IMP), drafted on the UNESCO existing literature about management plans. The Replicator Cities analysed the UNESCO Management Plans as a repertoire of virtuous experiences to follow up with new integration/upgrades resulting from the Research-Action-Research approach that regulates the ROCK project. This tool is based on the expertise acquired thanks to the pilot actions already built up in the three Replicator Cities (Bologna, Lisbon and Skopje)

Thus, the legacy of ROCK project wants to overcome the experimental dimension of the specific actions by structuring a general methodology that can be replied, as a step-by-step approach, also in the future and in different EU cities.

The Bologna University team, together with the ecosystem of stakeholder, is testing the effectiveness of the IMP through context-based pilot interventions, focusing on CH as common good and principal resource for revitalisation actions of public spaces as places of inclusion, cohesion and social innovation.

ROCK project is funded by European Union's Horizon 2020 Research and Innovation Programme (call H2020-SC5-2016-2017, Grant Agreement N. 730280).

References

UNESCO (2016), *Culture Urban Future. Global Report on Culture for Sustainable Urban Development*. EUROPEAN COMMISSION (2015), Directorate-General for Research and Innovation, *State of the Innovation Union*, Luxembourg.

EEA (2017), Environmental Indicator Report 2017, available at: https://www.eea.europa.eu/airs/2017 (last visit 19 May 2019).

Hajer Maarten, Dassen Ton (2014), Visualizing the challenge for 21st century urbanism, naio10 publisher / PBL publishers, Amsterdam.

UNESCO (2016), Culture Urban Future. Global Report on Culture for Sustainable Urban Development, Paris UNESCO (2017), Re-Shaping cultural policies. Advancing creativity for development, Paris.

World Economic Forum (2019), *Circularity gap report 2018*, available at: https://www.circularity-gap.world/ (last visit, 19 May 2019).

Gaspari, J. et al. (2017), Multi-Layered Design Strategies To Adopt Smart Districts As Urban Regeneration Enablers, in International Journal Of Sustainable Development And Planning, 12-N°8/2016. pp. 1247 – 1259. Gianfrate, V., Longo, D. (2017), Urban micro-design. Tecnologie integrate, adattabilità e qualità degli spazi pubblici. Milano: Franco Angeli.

*Full Professor, **Associated Professor, *** Researcher, ****Research fellow