ROCK

TECHNOLOGIES AND TOOLS FOR BETTER ACCESS TO CULTURAL HERITAGE

VILNIUS

LYON

BOLOGNA

TURIN

LISBON

Table of contents

ROCK

Regeneration and Optimisation of Cultural heritage in creative and Knowledge cities

Introduction

How is it possible to convert historical cities into intelligent, i.e. resilient, sustainable, creative and knowledge cities?
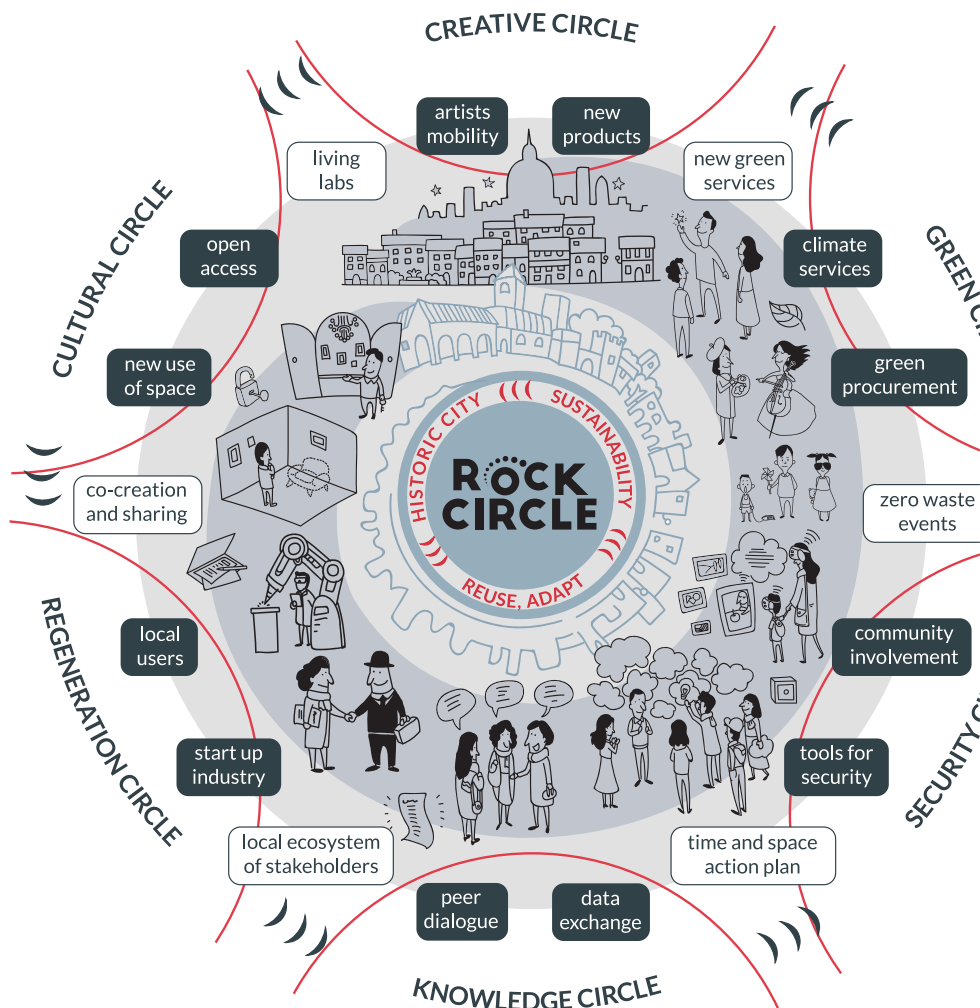
Over the course of its three years, the EU-funded ROCK project has been finding innovative answers to this question.

ROCK understands that cultural heritage is not static, a vestige of the past only to be preserved, but is rather a driving force that brings new creative energy to cities. In ROCK, the past is a tool for building the urban future. ROCK demonstrates how cultural, historical, European city centres in 10 cities can become laboratories to test new models of urban regeneration and lead the urban transition. ROCK is developing a new approach, combining technical, organisational and social innovations to prove that cultural heritage is a powerful engine of transformation for cities.

The project's integrated circular model is based on six connected pillars, circles of creativity, culture, regeneration, knowledge, security and sustainability, that draw strength from each other to determine the future of cities.

This circular model is a continuous effort to recognise the city's heritage and its transformations as a common good involving everyone. A common cultural past unites communities and empowers people to imagine a shared future.

A concrete method emerges from ROCK's central concept: the co-design of actions to create the city's future in a collaborative way. Local actors, associations, students and businesses get together to share visions, knowledge and skills. The objective is to give new values, meanings and functions to public spaces and structures. The ROCK approach is being implemented at the moment in the 10 ROCK cities: Athens, Bologna, Cluj, Eindhoven, Lisbon, Liverpool, Lyon, Skopje, Turin and Vilnius.

CREATIVE CIRCLE
CULTURAL CIRCLE
GREEN CIRCLE
REGENERATION CIRCLE
SECURITY CIRCLE
KNOWLEDGE CIRCLE

artists mobility · new products · living labs · new green services · open access · climate services · new use of space · green procurement · co-creation and sharing · zero waste events · local users · community involvement · start up industry · tools for security · local ecosystem of stakeholders · time and space action plan · peer dialogue · data exchange

HISTORIC CITY · SUSTAINABILITY · REUSE, ADAPT

ROCK CIRCLE

Technologies and tools for better access to cultural heritage

In this third booklet of case studies from the ROCK cities, we discuss how to enhance accessibility and experience of cultural heritage using various tools and technologies at our disposal. In ROCK, accessibility is connected to all the aspects that determine the possibility to fully participate in urban life: overcoming physical and economic barriers, perception of safety, equal access to institutions, cultural productions, participation and empowerment of citizens, information and opportunities.

It is still difficult to agree on a common definition of urban accessibility. Urban accessibility is understood by research as the possibility to easily access places, making life in the city more fluid. Urban accessibility is also the continuous access to experiences able to connect different cultures and ways of thinking, the variety and the knock-on effects of these experiences improve the possibility of creating new cultural and unforeseen synthesis. In this sense, accessibility must be considered not only in relation to places but also in relation with people. It is crucial that people can reach places and services, but there is an experiential dimension of the topic that must be taken into account.

According to this reflection, people must also be able to access immaterial services provided by the city such as: information, cultural experiences (including cultural events, happenings, sub-cultures, meetings with other people, etc.) and nowadays digital services

and digitally shared content. Accessibility thus becomes a way to fully live in the city and also to fully understand and experiment with it.

The ROCK project chose to work in line with the principles included in the 2006 UN Convention on the Rights of Persons with Disabilities (CRPD). According to the Convention, it is necessary to guarantee accessibility not only to physical spaces, but also to communication systems, transport and services. In particular, there is a need to implement a universal design approach in order to carry out public programming and develop services and spaces that can be used by all people, without necessarily adapting or modifying spaces.

The ROCK project aims to apply and integrate this definition in real environments and to develop pilot practices to be tested in historic districts. The main focus of the project is to understand and test actions that make cities' perception and experience open to everybody, in a universal way. ROCK wants to demonstrate how urban accessibility in its wider definition needs to be discussed and co-designed within communities and not only inside the traditional institutions, in order to make it really universal. The ROCK cities have developed various approaches and examples to improve accessibility in urban districts with concentrations of cultural heritage. In this booklet we present five of them.

REFERENCES
Roversi R., Boeri A., Longo D., Gianfrate V., Boulanger S.O., Co-designing the Urban Accessibility, An inclusive fruition service in the Bologna university area, in Baratta A.F.L., Conti C., Tatano V. (edited by) INCLUSIVE LIVING Design for an autonomous and independent living, Arteferma Edizioni Srl, Treviso, 2019
UN Convention on the Rights of Persons with Disabilities (CRPD): https://bit.ly/2R8FsHu

BOLOGNA ITALY

U-Area for All
Cultural heritage for all five senses

Within U-Lab, the local Living Lab inaugurated in Bologna in 2017 thanks to the ROCK project, 'U-Area for All' started in March 2019. This co-design process will create and experiment with a service in the form of guided tours inclusive and accessible to both tourists and people who live in the area. The service considers accessibility as autonomy and empowerment over information about the use of public space.

To guarantee the widest base of users and stakeholders to be involved in the co-design process of the accessibility service, a call for proposals was launched by the Foundation for Urban Innovation, Bologna's urban centre. The call for proposal should be considered not just as a method to collect ideas but as a concrete tool to guarantee inclusiveness from the very beginning: associations, single proponents, informal groups and entrepreneurs responded to the call opened on March 2019.

The winning team was a consortium led by Accaparlante Centro di Documentazione Handicap, with La Girobussola Onlus, Fondazione Gualandi, Istituto Cavazza and MUVet ASD. The team took part in a co-design process, concluded in October 2019, that involved institutions and local stakeholders, together with students, members of associations of blind and deaf people, and people with reduced mobility, all of whom are residents or city users.

The process highlighted the urgency of intervention on a wider scale than the local sights, specifically on the relation with institutions, on communication tools, on more transversal topics, and specific necessities related to auditory and visual disabilities.

Discover the University Area in an inclusive way

The main goal is not only to ease the access to the U-area for people with disabilities but to design innovative and inclusive ways to discover the U-area and its vast amount of cultural heritage. This requires designing new innovative and inclusive ways to discover, through the use of all the senses, the university area, one of Italy's richest areas of history and cultural heritage.

The long-term objective is to physically intervene on the architectural barriers widespread in the city. The event was useful to map them and create a consistent tourist route.

During the process, a Design Thinking tool named 'PERSONAS' was used to increase participation, allowing the attendees to first of all prioritise their needs and, in a second phase, to transfer these needs to an imaginary person who virtually became the

The final aim was to increase the physical perception of the area and the surrounding environment using all five senses.

spokesman of these requests. The idea was to create imaginary people able to reflect concrete needs.

Some of the preoccupations from users with disabilities when visiting the area:

▷ The area is like an obstacle course: full of architectural barriers, not only steps but, for example, pushing a wheelchair is an undertaking even if only because of the cracks and potholes in the pavement;

▷ Outside seating for bars that is located on the street makes paths difficult to navigate for the visually impaired;

▷ Inclusion of the theme of accessibility in public tenders for the management of summer events - the subject is not so much listened to and transposed into political and urban agendas.

The co-design phase was followed by a participatory mapping experience of the area to highlight the existing paths, points of interest, architectural barriers and issues, thanks to a specific device prototyped by the Technical University of Eindhoven (TU/e). The device tracked the routes and geolocalised the feedback of those involved in the mapping experience with regards to the places visited.

A total of 36 people participated in the event, responding to an open call published on the website of Fondazione Innovazione Urbana and promoted over multiple communication and social media channels, including those of the City of Bologna.

According to a report provided by TU/e, the geo-survey gave information about gender (female 47%, male 53%), age (18-30 56%, 31-50 17%, 50+ 27%), employment (student 44%, employed 33%, retired 23%).

In total 273 experiences were registered: 75% were positive (curiosity/interest, fun, joy, inspiration, relax, surprise), 25% negative (confusion, disgust, irritation/anger, boredom, fear) experiences. The most experiences were registered in Via Zamboni (21), Piazza Verdi (16) and Piazza Scaravilli (13).

Technologies to investigate and address the theme of accessibility were just one of the many instruments employed to increase the usability of the U-Area with
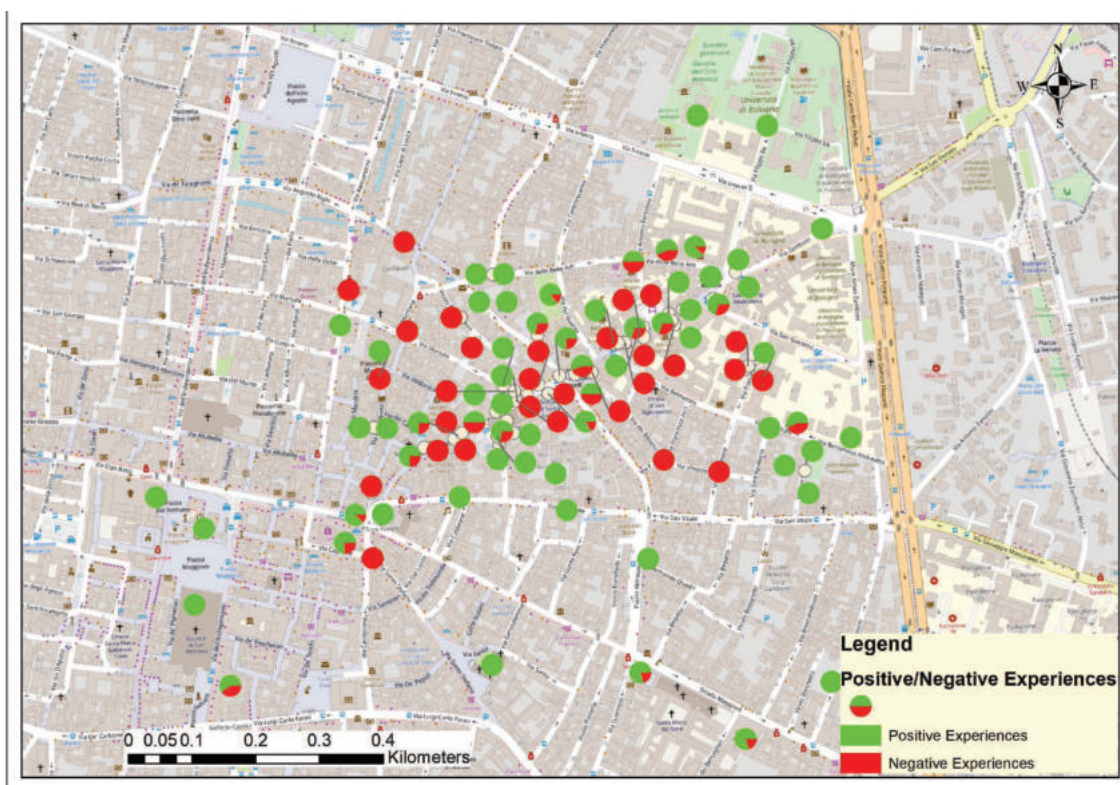
Ratio of positive/negative experiences in Points of Interest

'design thinking' methodologies. The intervention also used participatory experiences, and leaflets with writing and illustration to support guided tours in a wide range of languages. The final aim was to increase the physical perception of the area and the surrounding environment using all five senses.

The experimentation phase included training for the official tour guides to allow them to properly manage the accessibility of the tour for people with disabilities, and to make the guides aware of the different languages and methods for communicating with deaf or blind people.

Impact and results

The outcome of the co-design process includes guidelines that the ROCK project team will follow in defining and finalising the guided tours service. On the basis of testing in November 2019, Bologna has created two thematic routes that wind along Via Zamboni: one dedicated to historical, artistic and religious heritage, the other dedicated to the scientific heritage. The routes are designed to be followed by the visitor either independently, thanks to the creation of an informative map of support, or accompanied by the specially trained tourist guides of Confguide Bologna.

On 15 November 2019, Bologna tested the new offer of guided tours in the university area. Accompanied by guides, participants discovered the cultural heritage that characterises the area around Via Zamboni, dividing into three groups that tested the route tailored to the needs of people with hearing, visual

> The tour lasted about two hours and included Italian Sign Language translation.

and motor difficulties. The tour lasted about two hours and included Italian Sign Language translation. This visit represented the culmination of the 'U-Area for all' initiative.

After the experimentation in November, the service will come into operation thanks to collaboration with Bologna Welcome, which will promote it through its communication channels, thus enriching the offer for tourists arriving in Bologna.

Planning and sustainability

The accessibility process coordinated by the Foundation for Urban Innovation with the continuous support of the City of Bologna and the University of Bologna, involved the local Bologna tourism agency (Bologna Welcome) and a wide system of key stakeholders. This choice guaranteed on the one side the necessary scientific knowledge, provided by University experts, and a deep understanding of the local context, brought by the Municipality, while on the other side guaranteed as well the financial sustainability of the service at the end of the experimentation phase and the ROCK project. Increasing the accessibility of the city is a specific commitment undertaken by the municipality and the evaluation of a specific accessibility process is currently underway with the final aim to promote the candidature of Bologna to the European Access City Award.

Transferability

▷ Don't limit yourself. It is always possible to enlarge the area made accessible through this process. Think about how you could open up different areas and focus on different themes;

▷ Study the process according to different types of disability (cognitive disability, etc.);

▷ There are many tools to choose from. Carefully evaluate the range of available tools.

Budget and financing

The intervention was financed by the ROCK project. The financial resources to be used once ROCK finishes are still to be found. There are some options, but they are still under discussion.

Management level and partners

▷ Foundation for Urban Innovation;

▷ Municipality of Bologna, and in particular the Disability Manager who participated to the co-design phases of the process;

▷ University of Bologna;

▷ Municipal Theatre of Bologna;

▷ Pinacoteca Nazionale Bologna;

▷ Bologna Welcome: official city tourist agency of Bologna;

▷ Accaparlante Centro di Documentazione Handicap: increases knowledge about disability and to enhance the access to different types of arts to people with disabilities;

▷ Girobussola Onlus: the association promotes the mobility of blind people by easing their access to different experiences such as cultural trips and meetings;

▷ Fondazione Gualandi: increases the quality of life of deaf people;

▷ Istituto Cavazza: promotes the independence of blind people by giving them access to the best training and work opportunities;

▷ MUVet ASD: promotes the diffusion of modern dance and artistic disciplines connected to body movement.

All the above partners took part in a co-design process, concluded on October 2019, that involved institutions and local stakeholders, together with students, members of associations of blind and deaf people and people with reduced mobility who are residents or city users. The participation of disabled groups was fundamental as the Foundation knows how to manage a project but lacks knowledge on the theme of disability.

Contact person

Chiara Sponza
chiara.sponza@fondazioneinnovazioneurbana.it
info@fondazioneinnovazioneurbana.it

Useful links

The full report of the process is available here:
https://bit.ly/2NXWJ4j (in Italian)
Links to the U-Lab website:
https://bit.ly/2sGyOPj
https://bit.ly/3aqDjyv

Marvila and Beato Interpretive Centre

Citizen engagement for cultural heritage in distant neighbourhoods

**LISBON
PORTUGAL
504,718 INHABITANTS
(2016)**

Through the ROCK project, the Lisbon municipality is working on the social transformation of a remote neighbourhood (Marvila/Beato) with a strong identity linked to its industrial and rural heritage. The mix between rural and industrial heritage created a complex set of cultural traditions and societal behaviours in Marvila and Beato. These traditions still resonate today.

Some parts of the ROCK area between the neighbourhoods of Marvila and Beato are classified as priority for public intervention by the municipality of Lisbon, which has opened several initiatives for greater socio-territorial cohesion developed through participatory approaches with local communities. The coexistence of rural and industrial heritage, together with the presence of vast parts of this territory with social housing, vacant (green) spaces and multiple barriers have been considered for the implementation of ROCK activities. More pointedly, the territory is divided by geographical barriers - such as the rail tracks and other discontinuities in the urban landscape including with urban voids and abandoned buildings - and social and economic barriers, with evident cleavages among the resident population. Nevertheless, the territory presents a strong identity, and the population is attached to the territory and to their regions of origin (population of migrants with roots in the countryside).

The challenge is to understand and respect this identity and the different needs and profiles of the local communities, considering also the high proportion of NEET (not in education, employment or training) population. Special attention should be paid to some disappointment emerging towards the multiplication of initiatives in the territory with little impact on the daily life of the inhabitants and within a growing process of regeneration and gentrification at the riverfront, which brings new opportunities and challenges for the local population.

ROCK LISBOA_MARVILA-BEATO   ÁREA/PLANO GERAL (FEV 2018)
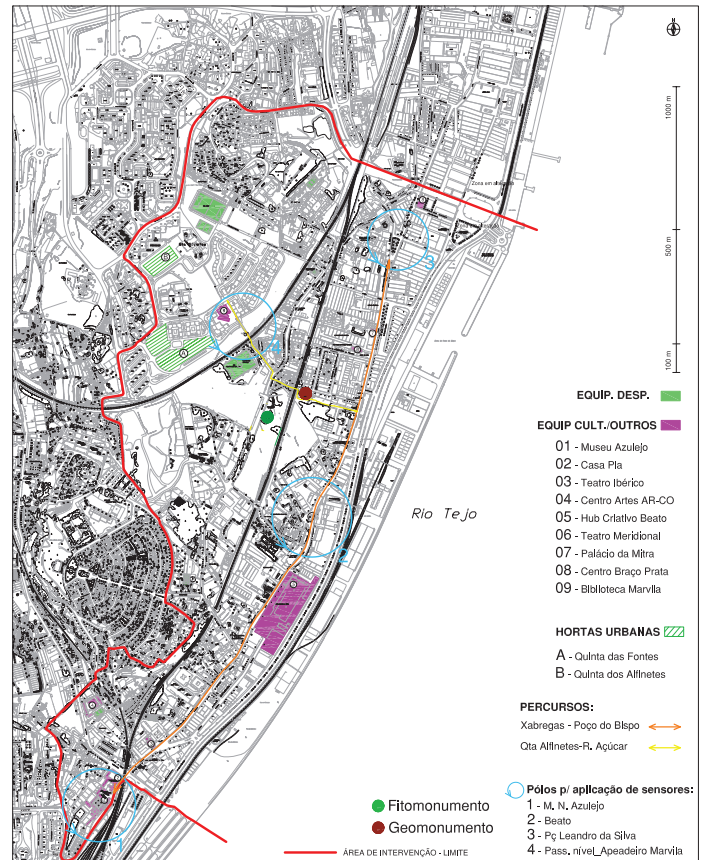
Challenges in the neighbourhood:

▷ Remote from city centre and difficult to access with public transport

▷ Divided territory (social between riverfront and north and geographical with train tracks creating a physical barrier)

▷ High proportion of NEET population and social housing (heritage of years of social programmes)

▷ Fast gentrification with risk of increasing the divide (new Brooklyn with craft breweries, creative spaces and redevelopment projects)

▷ Important tangible cultural heritage at risk of abandonment/dereliction and relevant intangible cultural heritage that is urgent to preserve (memories of another city life - of factory workers and residents of slums, of the occupation of houses after the 1974 revolution; of extreme poverty and poor living conditions)

The Interpretive Centre of Marvila and Beato

Historically, the rural and industrial neighbourhoods of Marvila and Beato have been isolated from the rest of Lisbon. The Lisbon city centre is now expanding and slowly reconnecting with its outskirts. If the geographical barrier is less present despite the limited public transport connections between the area and the rest of the city, social barriers remain, relying on the different historical phases of occupation and construction. The feeling of segregation and abandonment expressed by people that live on the upper side of the area is coupled with the desertion of the riverside, which has been the target of massive service and market-oriented investment in the last few years.

The external and internal mobility issues in Marvila and Beato are linked with the issues of participation and cultural heritage. To what extent can Lisbon promote meaningful participation with the local communities of the area, and lessen this historical disconnection with the rest of the city? The Interpretive Centre of Marvila and Beato has been set up to answer this question and find actionable solutions to engage the communities. Accordingly, the ROCK project has mainly focused on the upper side of the area, working with the most

disadvantaged communities. The presence of exclusive cultural heritage, including the old quintas and mansions of the upper class of Lisbon in contrast to the more ex-industrial character of the riverside, has given the opportunity to think of cultural heritage as a driver for a wider citizen participation. Several actions have been promoted and are taking place in order to engage local communities around tangible and intangible elements of the cultural heritage.

Direct participation of the community

The Interpretive Centre identifies and maps both built environment and life stories in the area using a participatory method. The local community (residents, local institutions, entities with local interventions) is called to participate actively and help the municipality gather knowledge about the cultural, material and immaterial heritage of the neighbourhood, making it available to the public in an appealing, playful and innovative way,

> The Interpretive Centre identifies and maps both built environment and life stories in the area using a participatory method.

therefore providing better access to this local cultural heritage. Lisbon's methodology is based on a bottom-up safeguard strategy, encouraging the direct participation of communities. A participatory and open inventory offers the communities an opportunity to highlight and present their own tangible and intangible cultural heritage.

It is being developed through a process in which the surrounding community assumes a central role in the recognition, dynamization and legitimation of the local identity axes. Thanks to the active involvement of the community, a set of oral testimonies about the territory in different historical periods and the diverse forms of appropriation of the local cultural heritage have been recollected and disseminated. The method combines tools, such as participatory mapping, geo-referencing and cartography to represent the knowledge of local communities and to include information that is now excluded from mainstream or official maps. Innovative digital tools are used to promote knowledge about the tangible and intangible cultural heritage of the territory.

The methodology of the participatory inventory

Invitations were sent to residents that know very well the territory and to relevant stakeholders – to integrate the Interpretive Centre Organising Committee (OC). The OC meets twice a month and includes historians, sociologists, social service technicians and residents. Four groups have been set up to gather information on the cultural heritage of each area and to identify people who can give a privileged testimony of events, practices and experiences related to the history and cultural heritage of these territories. The committee divides into four teams each concerned with one part of the neighbourhood, being responsible for validating and completing the tangible and intangible cultural heritage municipal inventory. They gather information on the cultural heritage of each area and identify people who can give a privileged testimony of events, practices and experiences related to the history and cultural heritage of these territories. For each cultural heritage item, each team collects textual information, photos, films, and identify witnesses who have experienced situations and who have stories to tell. All content is later integrated in the interactive multimedia equipment of the Interpretive Centre. The resources gathered by residents are also used to update the municipal and national inventories. The municipal inventory focuses on the classification of municipal tangible cultural heritage. The National Inventory of Intangible Cultural Heritage is a resource for the dissemination of good practices and the enhancement of intangible cultural heritage in Portugal.

A 7 step method:

1) Division of the territory into areas and the Organizing Committee into groups – by the OC (4 sections/groups)

2) Mapping of the cultural heritage elements – by each of the OC groups

3) Recollection of information about each of the cultural heritage elements - by each of the OC groups

4) Creation of a database – by the Interpretive Centre (IC) team with the information given by the OC groups

5) Conducting exploratory interviews – by the IC team with the support and orientation of each OC group

6) Conducting the final structured interviews - by the IC Team with the technical support of the municipal video library 'Videoteca Municipal'.'

7) The interviews and other gathered content will be uploaded onto interactive multimedia equipment in the Marvila library, where locals and visitors can experience it. It will also be available online, and it will serve to update the Municipal Inventory and the National Inventory of Intangible Cultural Heritage.

Management level and partners

▷ Lisbon Municipality, and more precisely the cultural department is leading the implementation process in cooperation with a set of selected stakeholders who were already present and active in the territory.

▷ Marvila Library is a crucial partner in the implementation of Marvila and Beato Interpretive Centre.

▷ ICSUL is the academic institution engaged in action and research in the ROCK area and support within the Lisbon Living Lab for the design and implementation of the ROCK actions. ICSUL co-manages the Marvila and Beato Interpretive Centre with the Municipality of Lisbon.

▷ Grupo Comunitário 4Crescente. The ROCK Living Lab activities are presented at the monthly meetings held by the Community group. Several members of the Community Group participate in the Interpretive Centre of Marvila / Beato.

▷ GEBALIS (who runs the social housing in Lisbon) Santa Casa da Misericórdia in Lisbon/PRODAC, Casa do Concelho de Castro d'Aire (a local association), Marvila and Beato Civil Parishes and University of Lisbon Education Institute are the other stakeholders of the IC.

Impact and results

Dissemination of knowledge of Marvila's cultural heritage;

Improved open access to data / information about local cultural heritage;

Valorisation, transfer and sharing of community knowledge on local cultural heritage;

Improved collection of historical and recent data on local cultural heritage;

Collective management and production of cultural heritage;

Creation of enjoyable informal learning;

Improved sharing of knowledge about local cultural heritage to wider audience;

Engagement of residents in talking about their cultural heritage.

Budget and financing

The interpretive centre is financed through ROCK. People on the committee are all volunteers, and the library offers the space for free. Most of the budget is dedicated to library staff and technical equipment for recording stories and uploading the content on the multimedia equipment in the library.

Once cultural heritage stories are gathered by the interpretive centre, they can be exploited in multiple ways. It will also be available online and referenced through a metadata system in order to be searchable by researchers or by anyone who is interested and curious about Marvila and Beato territory and history. But Lisbon found another way to use residents' cultural heritage stories and memories of Marvila. Bibliogamers was a week-long event last March 2019 when 9 teams of players brainstormed and created video games about the past, present, and future of Marvila. The two winning teams are exploring ways to produce their game and commercialise it using the incubation programme of the ROCK project.

Contact people

Alexandra Aníbal (DMC)
alexandra.anibal@cm-lisboa.pt
Roberto Falanga (ICSUL)
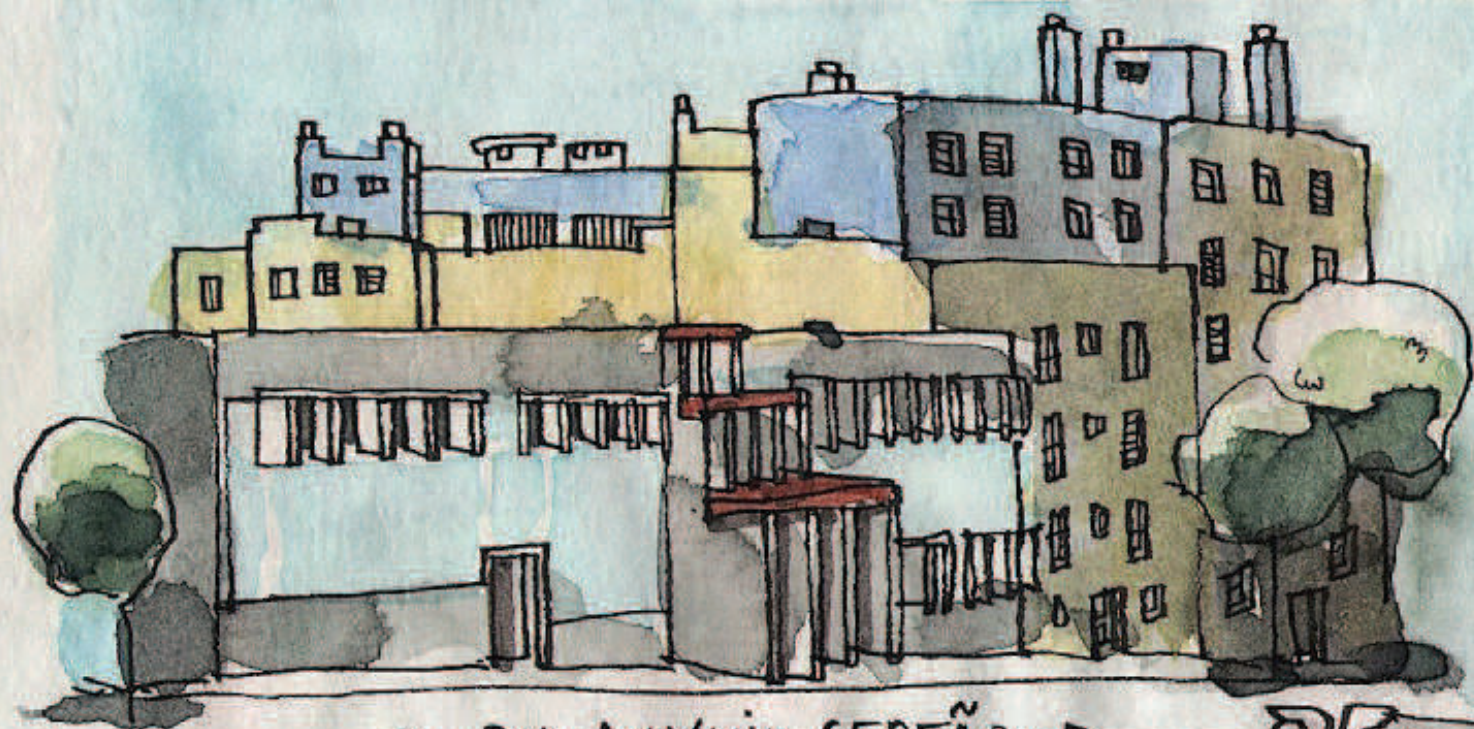roberto.falanga@ics.ulisboa.pt

Useful links
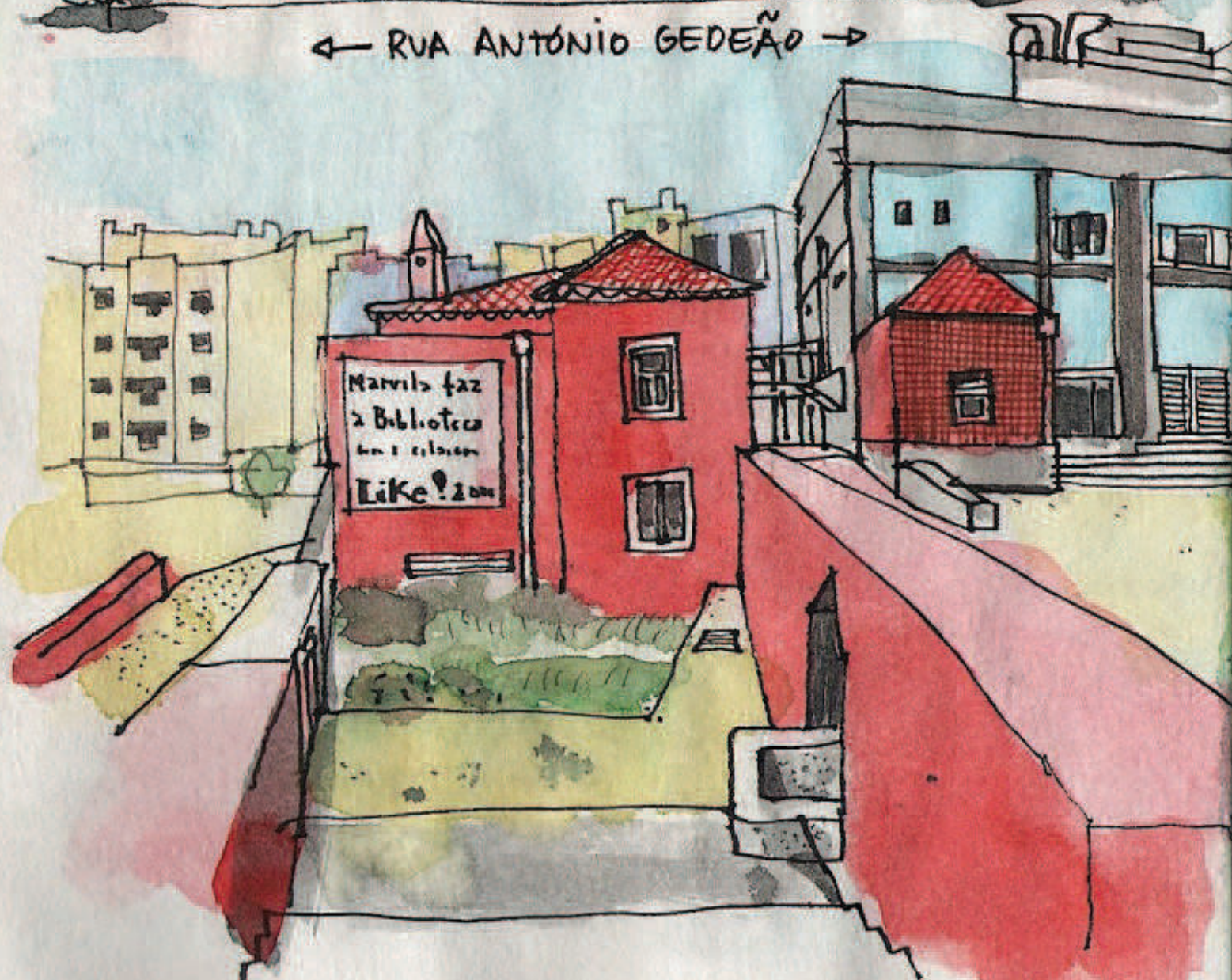
The interpretive centre in Marvila library:
https://www.facebook.com/watch/?v=347412375908007

Memories of the neighbourhood from residents:
https://www.youtube.com/watch?v=UnHEJeRiy4o

O EDIFICIO DA BIBLIOTECA CONFUNDE-SE COM OS
VOLUMES E CORES DOS OUTROS EDIFICIOS DO BAIRRO

← RUA ANTÓNIO GEDEÃO →
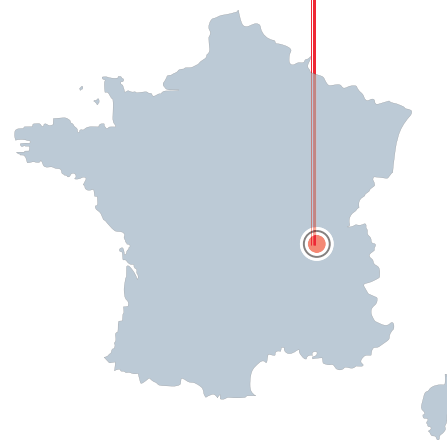

Marvila faz
a Biblioteca
em 1 ciclocia
LiKe !2021

LYON FRANCE

Let there be light!
Cultural heritage and light management

**LYON
FRANCE
530,715 INHABITANTS
(2018)**

Lyon has for a long time an outstanding relationship with light as an urban issue and tool. The city of Lyon realised in the early 1990s that it could amplify its cultural and heritage offer by working with the medium that brings that culture to people, and since then Lyon has been at the forefront of cities experimenting with light. Light has changed the image of the city, increased its attractiveness and transformed its nocturnal landscape over the years.

From light to highlight

It resonates with a long tradition with light which began in 1643 when the people of Lyon, to thank the Virgin Mary for having protecting the city from the plague, started the tradition of placing candles on their windowsills every year on 8 December. Everybody knows as well the 'Festival of Light', which has become a major international event, and has also prompted the city to engage in a broad reflection on urban lightning. Lyon has built over the years a strong expertise on permanent lighting, which is the design of lighting that is visible every day and defined to last for several years.

The first lighting plan was released in 1989 and changed its image of a foggy and black city. Before the light management plan, light was perceived as a solely functional tool. Light has modified the image that the city portrayed of itself and has transformed Lyon's night life, increasing the city's attractivity at the same time. To develop its lightscape, Lyon can count on many positive natural elements such as the two rivers (the blue Rhone and the brown Saone), two hills offering singular points of view (Fourvière and Croix Rousse), and an outstanding built heritage whose facades have been enhanced with a colour masterplan.

Cultural heritage can be valorised thanks to a specific lighting scenography.

The impact of the first lighting plan has contributed to extending the very perception of public lighting, and in 2003, Lyon second lighting plan overcame the traditional approach of lighting (like lighting buildings), considering the new challenges arising with technologies such as LED lighting, and giving a larger place to human beings and human activities. The plan also engaged a reflection on the place of light in the cultural heritage of a city. Light shows the reality of the city in its complexity and heterogeneity. Cultural heritage can be valorised thanks to a specific lighting scenography. Today, light has become an integral part of public action and landscape, urban and architectural development projects through the now familiar notion of "nocturnal landscape". Light is an integral part of Lyon's cityscape and has been integrated in all urban planning projects, with a lighting designer present in each project team.

ROCK in Lyon has sparked a fire anew

Within the EU-funded ROCK project, Lyon engaged a reflection on an overall governance and regulatory framework to tackle light scattering (also known as light cacophony) and preserve the cityscape in terms of cultural heritage. Light scattering can be defined as the inconsistency created by the abuse of light in commercial spaces (shops, windows, bars and restaurants) and by private light in general on the carefully created light scenography on facades and streets of the city. Private and commercial light have their virtue: you need to be able to see this pharmacy opened 24/7; bars and restaurants need to attract their clientele, and people feel safer in a lit street. But it can also make the visitor dizzy and prevent inhabitants from sleeping at night, including our feathery and furry neighbours. Cities need to better understand private light to engage a dialogue with the producers of such lights.

This is the reason why the dialogue between public and private lighting and the use of commercial lighting is the focus of a series of discussions with inhabitants and visitors organised by the Lyon urban agency as part of the ROCK project.

Different target groups are questioned, for the city to better understand inhabitants and visitors' perception of commercial light. Based on these exchanges, the city is working on a booklet of recommendations on how to properly enlighten a terrace or a building, and how public authorities should respond to it. To this end, the city is also forming a group of actors of private lighting involving different departments of the city administration as well as shopkeepers and neighbourhood associations.

The work around light in ROCK responds to a local regulation void (the contradictions resulting from light scattering on the nightscape and the absence of regulatory framework at municipal level at the moment) and specific needs of stakeholders, inhabitants and visitors. This work already provides some leads and an identity for a revision of the 2003 lighting plan taking into account new challenges and recent developments.

Apart from discussions with specific target groups, a series of tools and actions have been developed to raise awareness around the topic of permanent light, nocturnal landscape and light scattering:

▷ Research tools: evaluation of the lighting plan by Master's students; development of tools to analyse the different layers constituting a night landscape developed by students from the local engineering school;

▷ Citizen tools such as a leaflet explaining the lighting plan in a didactic way; development of urban walks to introduce the lighting plan together with museums of history of the city and official tourism guides; preparation of a conference on the subject, etc.

▷ Political tool: formation of a steering committee with the elected representatives of the current municipal team.

Impact and results

A strong local partnership now exists on the topic of light

Most of these actions are underway, but some lessons and impacts from the ROCK project in Lyon can be drawn already. A strong local partnership now exists on the topic of light, with the university, various city departments (culture, lighting, urban planning), LUCI network, city museums, city archives and the urban planning agency working together to develop various actions. This transversal working method has become common practice. Commercial light has also become a local strategic issue: elected officials have become aware of the importance of permanent light as a tool for enhancing heritage (night landscape) and this converges nicely with the planned updating of the lighting plan. Thanks to the work carried out by LUCI (publication based on a study 'exploring urban landscapes' carried out with 12 European cities), light is also becoming a subject at European level.

© Michel Djaoui

How to sustain these results?

The urban lighting department is convinced by the importance of the subject and its value, and policy makers and elected officials now need to fully embrace the topic to make it go further. Lyon will continue to work on the subject through the many tools developed under ROCK and the entry into office of a new municipal team after the March 2020 elections is certainly an opportunity to bring the issue to the political level.

Lyon is still for many pioneers on the subjects of permanent light, commercial light and light scattering. We are witnessing the first signs of an opportunity for collaboration at European level on the subject. As part of ROCK activities and with the support of LUCI, Lyon organised two workshops to exchange with other cities on the subject and share views on permanent light, commercial light and light scattering. The future will hold more opportunities for collaboration at European level on the subject.

Enlightening other cities

Some recommendations:

▷ Working cross-sectorally: integrate all the elements of the chain on a concrete subject, with the possibility for each of the partners to contribute with its own means and to develop a series of different tools with multiple focuses.

▷ The mandate must be double: political and technical. In the case of light, March 2020 represents an opportunity for political representatives to take hold of the subject, well prepared by the technical services.

▷ The opportunity offered by European projects should not be overlooked: projects funded by the European Union allow local actors to take up strategic issues while having the luxury of a budget, staff and working time entirely dedicated for this purpose.

© Muriel Chaulet

Management level and partners

The work on permanent lighting is led by the cultural affairs department together with the urban lighting department and a strong involvement from the urban planning department. The city has gathered a large and solid network of local partners in the different strands of activities: research partners like the university and the urban agency, cultural partners such as the city museums and archives, dissemination partners for the European link (LUCI network, based in Lyon).

Contact people

Céline Lyoën, ROCK project officer, cultural affairs department
Celine.LYOEN@mairie-lyon.fr
Thierry Marsick, director, urban lighting department
Thierry.MARSICK@mairie-lyon.fr

Useful links

Lyon light management plan (FR):
https://www.lyon.fr/projets-urbains/plan-lumiere

Abbonamento Musei
Heritage in everyone's hands

Turin was deeply affected by the 1980s industrial crisis, which left 10 million square meters of abandoned industrial areas and a population decrease from 1 million to 900,000 in its wake. Heavy investment in culture and knowledge, including universities, research and training, has turned Turin into one of the most dynamic Italian cities. Today the region's economy remains mainly industrial, agricultural and touristic.

Turin has become a good example of how culture can change the profile of a city. Contemporary art, design and art in the public space have become key features of the city's landscape. If you happen to travel to Turin in November, there is a high chance that you will cross paths with designers and contemporary art lovers, as the Piedmont capital hosts seven art fairs at the same time.

Turin's cultural heritage at your fingertips

First developed back in 1995 by the city administration, the Abbonamento Musei is a single card with a low annual payment for accessing the city and surrounding region's cultural offer. The card is valid for one year and the full price is €52, with some lower and higher options. Certain organisations, such as the Slow Food Movement, have a discount allowing their members to buy the card for €48; for senior citizens the cost is €45; young people, between 15 and 26 pay €32; and children up to 14 pay only €20. There is also an 'Extra formula,' also tiered but with a basic rate of €87 that not only includes Turin and its surrounding Piedmont region, but also Milan and its surrounding Lombardy region, and the nearby Valle d'Aosta.

Cardholders have free entrance to around 200 cultural and cultural heritage sites, including museums, royal residences, castles, gardens, permanent collections and temporary exhibitions, as well as theatre seasons, cinema, and local festivals. As well as free entrance to this core offer, subscribers are offered discounts to an even wider range of places and events. Aimed at supporting the cultural demand of locals, the card brings together the historic-artistic wealth of the territory in a single network. Museums adhering to the project are reimbursed for a reduced-price ticket for each cardholding visitor. The card is particularly aimed at residents of the city and region, but it is also available for purchase by those living in other parts of Italy, or tourists of any nationality whatsoever.

The idea is that the card functions like a loyalty card in a shop or restaurant, encouraging people to take more frequent advantage of the local cultural offer. This means creating more foot-traffic at cultural locations, both by encouraging regular culture-goers to get out more and encouraging people who would not usually choose to engage with the cultural offer to do so. Further, by making a wide range of venues available under one payment, the city incentivises people to expand their cultural circuit, not just taking advantage of the closest or biggest institutions but adventuring out to the peripheries to enjoy alternative cultural offers.

Another function of the Abbonamento Musei is to serve as an integrated communication system – including an app, a newsletter, a magazine, a website, social media pages and special events – to inform and engage the audience (cardholders and non). It increases cultural engagement by notifying people about current and upcoming events and exhibitions, helping the culture-curious to keep their finger on the pulse of the city. The app lets you keep track of your bookings, the places you have visited and what remains to be seen. It also helps you plan your route with a map showing all the museum locations. Meanwhile, social media functions not just as a location to share interesting images and videos promoting culture, but also to create culturally active online communities.

> Cardholders have free entrance to around 200 cultural and cultural heritage sites

The card also gives the municipality data on user preferences that can be used to work together with cultural institutions to develop the cultural offer. With data submitted by the card's applicants, it is possible to identify categories like the gender and age range of culture-goers, their personal preferences and the scope and frequency of their visits to cultural institutions and events. This information can then be used to correct imbalances by making sure that the cultural offer is inclusive and meets the needs of less represented groups. Data from the Abbonamento Musei is constantly analysed by Politecnico Torino and the Piemonte Cultural Observatory to help the local institutions improve their cultural offer according to the registered trends.

Using this data and exploiting the communication channel that the mechanism of the card opens up between the city and the local cultural institutions, it is possible to systematise the local cultural offer and avoid duplication within the network. It also helps to create a unitary cultural branding for the whole territory.

Since its inception in 1995, the card has grown to encompass more and more cultural institutions over a wider and wider territory – and it shows no signs of slowing down!

Impact and results

Subscription has grown steadily year on year, now with over 118,000 cardholders making 748,000 visits to cultural spots annually, that's 6.3 visits per cardholder. About 55% of visitors renew their card year on year, and many do so even when they haven't made enough visits to make an overall financial saving on the card, suggesting that the card's other facets, such as the newsletter, app and other information are seen as valuable by users. This is borne out by the figures, which show that this communication material has an audience of over 300,000.

The number of visits per year for cardholders is well above the average number of museum visits per capita in Italy. Although this may preselect for people already interested in cultural activity, it is taken as an indication of the success of the card.

A 2015 study by the Fondazione Fitzcarraldo found that, contrary to their initial hypothesis, the subscription did not lead to 'specialist use clusters', that is, specialists in a certain topic frequently visiting the same or same sorts of museums. In fact, the opposite behaviour emerged, in which people displayed eclectic tendencies, expanding their horizons by visiting many different types of museums.

Thus the tool can be seen as enabling the reopening of exploration for specialists, at the same time as it provides new opportunities for non-specialists. Until 2013, most of the subscribers were art-lovers who already visited museums pretty often. In recent years, the subscriber group has become much wider and includes many people who would did not previously participate regularly in cultural activity. Surveys also show that the card pushes visitors to go to the same museum several times in a year, more than they would otherwise do, and to go to smaller scale exhibitions that they would not otherwise have visited.

In order to make the Abbonamento work, a new network of professionals needed to be built, which led to the creation of new jobs opportunities for several people. The Abbonamento challenged the different museums to work on a programme coordinated by every single museum, so that each one could profit from it. This enabled museum professionals to create a network, to get to know each other and to start collaborations that did not exist before.

With over 118,000 cardholders making 748,000 visits to cultural spots annually, that's 6.3 visits per cardholder

Planning and sustainability

Abbonamento Musei will certainly be carried on in Turin and Piedmont where the concept has become rather entrenched in the local audience's way of approaching culture. The new partnership with Milan and the Lombardy Region has extended the scope of the project. The main challenge now is to continue expanding by involving neighbouring cities and regions.

Transferability

▷ In 2014, the association signed an agreement with the Lombardy Region for the creation and development of Abbonamento Musei Lombardia Milano. The Lombardy Region is driven by the same vision of promoting the museum network, simplifying access to its venues, and thus fostering the residents' consumption of culture. Aspects of the project of potential interest for other European cities and regions include:

▷ • Enhanced cooperation among different public authorities and cultural institutions

▷ • Easy access to cultural heritage for every strata of population

▷ • Creation of fidelity schemes that encourage a long-term affiliation

▷ • Collection of interesting data for better targeting the cultural offer

▷ Since the inception of Turin's card in the mid-90s, dozens of other European cities have created their own versions of the card.

Budget and financing

The card is 75% self-financing and generates a turnover of around €5 million annually, most of which is redistributed to the participating cultural institutions. In the interest of transparency, detailed annual budget information is made available to the public at https://www.abbonamentomusei.it/Associazione-trasparente/Bilanci .

Management level and partners

The Abbonamento Musei is managed by the Abbonamentomusei.it association, formerly the Torino Città Capitale European association, which was founded by the city of Turin, the Piemonte region, and the Fondazione CRT bank foundation in 1995. The latter is the only private partner, which has among its aims to goal of supporting cultural activities at local level. Abbonamento Musei was registered as a trademark in 2013.

Contact person

Simona Ricci, director
direzione@abbonamentomusei.it

Useful links

https://www.abbonamentomusei.it
https://bit.ly/38qssT8

The colour of data

Using open data and neuroanalytics to strengthen cultural heritage

**VILNIUS
LITHUANIA
544,386 INHABITANTS
(2016)**

Vilnius it is the capital of Lithuania and its largest city, with 560,000 inhabitants. The city is revitalising its Old Town area, a UNESCO cultural heritage site, by using cultural heritage as a driver for sustainable growth, turning underused cultural heritage into a resource to be taken advantage of.

To achieve this, Vilnius is using open data and tools including video neuroanalytics, which measures the emotional and psychological states of residents and visitors. This information is used to improve the city's cultural offer, by showing how happy people are at cultural heritage locations and activities.

Better data for better culture

The municipality has long focused on the rehabilitation of public cultural heritage spaces. Many public activities, from entertainment, to recreation, to health-centred, are hosted in these vibrant spaces, all aimed at helping the city achieve the sustainable development goals. The city's great ambition on this front is clear from documents like the Vilnius Strategic Plan, Master Plan and Sustainable Mobility Plan. Vilnius is implementing many new projects for the renewal of its public spaces, from Vingriai springs square, to the Neris and Vilnia riverfront, to the Japanese gardens. However, despite the fact that more than one third of the municipal territory is made up of green spaces, attractively refurbished public spaces are still somewhat lacking.

Vilnius does not see its cultural policy in isolation, but embraces the holistic connections with other areas, such as sustainable mobility. The city plans to pedestrianise much of the old town, improving the sense of place through cultural and mobility measures. However, pedestrianisation can meet with resistance from locals, including business owners. Gathering and presenting data on the positive effects of such measures is essential, and the tools described in this case study are an excellent way to achieve this.

While implementing placemaking projects in open spaces, the city needs to know whether users enjoy them or not. Traditionally, this has been achieved with surveys, but the smart technologies implemented with ROCK provide much more useful real-time data on people's affective attitudes, emotional and psychological states.

> Residents are also empowered as data gatherers, with mobile apps like Tvarkau Miesta, which lets them report issues such as overflowing bins in public spaces.

Open data and open innovation

Vilnius's radical open data policy gives anyone real-time access to anonymised data generated by the municipality and by the private sector and other organisations that elect to join the movement. All the data is available at http://api.vilnius.lt.

This means that data is freely available to the public. As well as increasing transparency and trust between residents and the municipality, this data policy can be exploited by entrepreneurs to innovate and come up with novel solutions to local challenges. Residents are also empowered as data gatherers, with mobile apps like Tvarkau Miesta ("manage the city" in Lithuanian), which lets them report issues such as overflowing bins in public spaces and other issues to be managed. This creates a direct line of communication between the residents of Vilnius and the municipality.

The open data policy was initially sparked by a practical concern; a huge number of public requests for data consumed a lot of the time and energy of municipal staff. The city saw little value in its position as gatekeeper, and believed that more information in the hands of stakeholders would produce more local efficiency and innovation. The data relates to everything in the city, from energy consumption of the kindergartens, to traffic and public transport data, to data generated through theoretical models.

Through portals such as API.vilnius.lt people can access any information relevant to citizens, such as waste collection or parking information, while apps like Vilnius Alert bring all the information about cultural activities, such as concerts and exhibitions, straight to your mobile phone.

With all municipal data on finances, public procurement, real estate and public transport readily available to the public, Vilnius has been actively engaging local tech talent to help create smart solutions to continuously provide new benefits to its citizens, raising its profile as an open data capital. At present, Vilnius has over 290 ongoing open data projects.

Sharing information is vital, not only for transparency, but also in order to inspire actors in the private sector to come up with ideas that will solve real life problems. Allowing businesses to solve issues is a more efficient solution that allows the city to reduce bureaucracy.

Open data is also used to get a clearer overview of traffic and transportation options, to promote car sharing and public transport and decrease the likelihood of traffic jams. One of the startups making use of available city data is Vilnius-based mobility startup Trafi, whose technology allows the mapping of the real-time position of buses, traffic jams, construction sites, and areas affected by adverse weather conditions, enabling travellers to make smarter decisions. Trafi's success in Lithuania has led it to work with the cities of Rio de Janeiro and Berlin, as well as companies such as Lyft, Volkswagen and Google.

Thanks to the enormous benefits brought about, open data and transparency have become more than a policy; this is now a philosophy that spans all city departments and is catching on amongst other local actors whom the city directly invites to share their data. The city council in Vilnius no longer sees itself as one local institution among many, but as an embodiment of the city itself, without needless divisions between itself and the citizens, businesses and organisations that operate within the territory.

New technology for Vilnius cultural heritage

One of the new technologies being piloted in Vilnius through ROCK is video neuroanalytics, developed by Vilnius Gediminas Technical University (VGTU) and Vilnius Municipality. Put simply, this means cameras around the city that record people's facial expressions and assess their affective attitudes, emotional and psychological states. With this information, the city runs a live 'happiness index.' Perhaps the first thing to clear up is that this index does not just measure happiness. Rather, it takes stock of 12 different emotions, as well as physical health and even career and educational opportunities, to construct an understanding of the all-round wellbeing of people in the city. The happiness index is one of three key performance indicators used by Vilnius that give the overall picture of an intelligently sustainable and creative city.

For ROCK, different public spaces were selected for the installation of sensors and cameras: the Old Town, the heavily polluted industrial grey zone, the vibrant city centre, and the recreational green areas. Planners are hoping to find out what factors are the most important in creating public spaces. It is important to receive scientific and knowledge-based recommendations on attracting people to public

spaces and create positive emotions that serve their health. According to various surveys (Eurostat, UN,) Vilnius residents are among the happiest people in the world and in Europe. The city believes that high quality public spaces increase the satisfaction index, and this is the focus of short and long-term municipal planning.

The Vilnius happiness index is just the latest of many smart city projects run by the municipality using the 'Internet of Things' (IoT), which include projects on smart lighting, traffic control, air pollution reduction, agriculture, healthcare, and retail and logistics.

The happiness index was born right after launching ROCK, when the municipality laid down its city strategy. The index can be tracked live at https://api.vilnius.lt/happiness-index. A live happiness index may seem like a bit of fun, but it makes a serious point: this tech-savvy city is not concerned with technology for its own sake, but only as a means to improve the lives of its residents. This human-first approach requires that the city not lurch forward mechanically to the latest and greatest innovations. Just as the proliferation of bridges in the 19th century put a lot of ferrymen out of work, new technology always comes with a negative side. The city always evaluates new measures, weighing potential losses against the alternatives and the gains that this technology can open up.

Technologies and applications designed in ROCK are not only intended to be innovative but also accessible and simple to use. They are designed for everyone. It is also very important that ongoing scientific projects provide tangible benefit to citizens and city guests, even now, during the research and data collection.

Using this technology to enliven people's interaction with cultural heritage, Vilnius has integrated it with the Three Crosses Monument during the light festival, one of the main symbols of the city. Now people on the street can log their mood to change the colour of the Three Crosses Monument accordingly. This is an example of how neuroanalytics can be exploited to create unique user experiences of common heritage sites and cultural programming.

The technology has also been employed in the Old Town, a UNESCO world heritage site, where it assesses rates and length of attendance, as well as how much the local cultural offer relates to the wellbeing of visitors and residents. The technology was able to establish that, overall, people are much happier

walking around in the cultural heritage site than in other areas of the city, people are also happier when they are attending cultural activities, like festivals or celebrations.

This is also a way to better exploit the region's natural heritage. A city initiative measures the wellbeing of IT workers, and then gives them the opportunity to work remotely for a week in a nearby area of lakes and forests. Further wellbeing analysis then determines whether this exposure to local natural heritage has improved the employees state of mind and productivity.

They city is also using 'opinion analytics,' developed by VGTU and Vilnius Municipality. This technology analyses sources such as online reviews and social media to tailor the cultural heritage offer to individual users, personalise the texts they are presented with, and even condense information based on the level of detail the user desires. This technology was developed using Microsoft Visual Studio 2010, 'C#' programming language and the MS SQL Server 2012 database platform.

Impact and results

Municipal companies using open data and other good governance practices increased their output capacities and reduced their costs

The Vilnius open data policy has generated some startling economic results. The budget of the city has dramatically increased from €400 million to nearly €700 million. Just as the quantity of the budget has increased, so too has the transparency of its allocation. Municipal companies using open data and other good governance practices increased their output capacities and reduced their costs, which were weighed down by bad management practices, corruption and waste. Municipal road construction company Grinda alone has increased its production rate by 40%, lowering the costs for customers by 20%.

Planning and sustainability

Vilnius is keen to keep up this work. The open data policy is generating great returns for the city and can sustain itself into the future. The video neuroanalytics, on the other hand, is very expensive to run. If the price is not driven down by demand in other cities, Vilnius will be forced to find alternative ways of collecting this data. A potential solution could be convincing users to use the cameras on their phones or personal computers to log their moods and emotions with a central database.

Vilnius aims to monetise the results of the ROCK project, for example by linking technology to human resource and mental health. The city also plans to create a standard for measuring the quality of municipal services through IoT neurosensors and algorithms.

Transferability

This use of open data and neuroanalytic technology for cultural innovation is highly transferrable. While particular solutions reached are generally specific to Vilnius, the creation of an innovation environment where entrepreneurs and cultural actors are empowered to enrich the city is bound to produce results for any municipality that embraces it. Currently, the municipalities of Bologna and Lisbon are introducing this video neuroanalytics technology to their museums.

Management level and partners

▷ Vilnius municipality

▷ Vilnius Gediminas Technical University

Budget and financing

The devices and systems that make up this technological toolkit are extremely expensive to run. Equipment costs of the video neuroanalytics were about €70,000. The cost of software developed for it by VGTU and Vilnius Municipality, was even higher. The running costs of the video neuroanalytics are about €3,000 per month. All the overhead expenses are covered by Horizon 2020, municipal funds, and European Regional Development Funds. Vilnius hopes that a bigger buy-in from other cities will help to drive down the cost, as the system is not sustainable at this level of expense.

Contact person

Dr. Dalia Bardauskienė, advisor to the mayor

dalia.bardauskiene@vilnius.lt

Useful links

http://www.vilnius.lt

SISTER CASE STUDIES

Inspiring practices from other cultural heritage projects

FORGET HERITAGE

Most cities are characterised by the presence of unused historical buildings that have marked the history of the local community. Neglected, their historical memory is being forgotten and they turn surrounding areas into 'urban voids'. Forget Heritage helps public and private sector find innovative and sustainable solutions for the protection and valorisation of abandoned Central European cultural heritage.

The project develops a set of tools addressed to administration, policy makers and CCIs to help them enhance the hidden potential of the cultural heritage. One of those is a digital tool to raise awareness of the potential of historical buildings for social and economic wellness. The Progressive Web App 'OffSpaces' (off-spaces.eu) maps the abandoned historical assets and involves stakeholders and citizens in pointing out and designing possible future uses for underused heritage spaces. It connects culture and creative industries, public administrations and citizens at local and transnational level on the issue of underused cultural heritage within the nine Forget Heritage cities.

BYDGOSZCZ

WARSAW

USTI NAD LABEM

NUREMBERG

LOMBARDY REGION

LJUBLJANA REGION

GENOA

PÉCS

RIJEKA

More info & contact:

https://bit.ly/2uZ99lw

Partners

For more information contact

Cécile Houpert
EUROCITIES project officer
cecile.houpert@eurocities.eu

+32 2 552 0848
www.rockproject.eu