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Models of Public Private Partnership and financial tools for the cultural heritage valorisation

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Introduction

The cultural heritage, which represents one of the classic examples of the economic category of “common good” belonging to each citizen of a certain place and very frequently constituting an identity character of a community, traditionally receives funding, primarily for the purpose of its preservation, from the public sector. Different recent societal, environmental and technological factors are changing the cultural citizen needs and we are assisting at a slow paradigm shift in the addressed industry.

Indeed, the growing economic and social progress, also in developing countries, contributes to expand the cultural needs and interests among different brackets of the population with a particular increase in the demand of cultural goods and services. At the same time, the spread of technology contributes to enjoy cultural goods in a completely new and innovative way, never imagined before.

In this context, paradoxically, the top-down public policies, often too much concentrated on preservation and not very attentive to the exploitation of cultural heritage potential and the catchment of the new trends, become inefficient. In a period of increasing pressure on public budgets, this activates the perverse spiral of increasingly inadequate investments because of scarce available re-

sources in the hands of the public decision-maker that generate insufficient allocation of funds and, as a result, the growing ineffectiveness of spending in the sector. This situation in the medium term leads to the depletion of a non-trivial part of the cultural heritage, including its immaterial values, and, too often, to the use of the private hand at a late stage and with incorrect logics that brings, not infrequently, to the disposal of the cultural heritage “for sale” or to the denial of its fruition.

The Public Private Partnership (PPP) can represent a third way between the exclusively public intervention, more and more anachronistic and inefficient given the budget constraints, and the recourse to the privatization of cultural heritage that often allows making cash but not without side effects. The latter can be both of economic nature, through a “cherry picking” approach by the private sector that leaves less interesting goods in public hands, as well as of social nature, especially those linked to the inaccessibility of privatised goods or to the high costs of use, which in the medium term impoverishes the community of powerful instruments of collective memory and identity.

After more than 30 years of use of PPP in various sectors, it has been understood that this powerful tool is not the panacea that

magically allows to solve the limits of public intervention, but an attractive and delicate tool, especially in cases where the public hand is the only or the main purchaser of services provided in PPP (as in the case of interventions on cultural heritage that represent cold investments that are not able to be financial free standing and that therefore require prevalent or significant public contributions).

In this perspective, this article suggests that an hybrid approach of different actors involvement (public, private and civil), of different models (governance, business and financial) and of different innovation tools deployment in a holistic perspective aims at becoming a concrete solution for the valorisation of the cultural heritage and, more generally, of the cultural industry itself.

The first constraints in adopting the proposed approach are linked to the twofold function public administration is obliged to accomplish, that is the physical and cultural content preservation and the valorisation of the public good. The valorisation stands for the dissemination of cultural good related knowledge and its public fruition, also through adaptive reuse – that sometimes can contrast with the preservation challenge. This dilemma, indeed, can find one or more solutions only through a holistic approach that allows to create value for all the actors involved. We can refer here to the concept of shared value “which focuses on the connections between societal and economic progress” [Porter & Kramer].

The economic and financial sustainability in the management process of the cultural heritage and its preservation represents another relevant constraint.

Public Private Partnerships

The increasing adoption of Public-Private Partnerships (PPPs) also in the cultural industry may contribute to increase the investments for the maintenance and valorisation of public assets with positive effects on the efficiency of cultural heritage management.

Public administrations can implement adaptive reuse projects of cultural interest through PPPs, with integral or partial but prevalent (to be compliant with Eurostat rules on the accounting of PPPs in public budgets) private financing, thus satisfying the twofold imposed function of preservation and

valorisation. At the same time, public administrations can benefit from the expertise and management competences of the private sector in different phases of the process: design, implementation and management of the cultural public good.

Notwithstanding some critics due to the distortive potential of PPP models, in the present economic context it becomes a strategic lever for the public administrations to satisfy the needs of qualitative infrastructures, goods and services addressing different sectors – health, welfare, education etc. – as well as cultural industry. Eurostat decision (2004), which classifies off balance “cold” PPP interventions under certain conditions, and the stringent requirements of public finance equilibrium make PPPs a “tactic” convenience for the public authorities.

PPPs, if implemented with correct logics and approaches, ensure a better risk sharing among different actors with higher efficiency in project implementation, greater mobilisation of private funds without worsening public finances, higher probability of success of the project etc. Moreover, in PPPs we expect a perfect alignment of public and private interests in deploying the best value for money (VfM).

Opposite to the undoubted advantages of PPPs linked to the convergence of interests between public and private sectors that should lead to the implementation of a higher quality project, there are several weaknesses to be considered when executing PPPs.

Information asymmetries between public and private may enable phenomena of moral hazard and adverse selection in perfect coherence with the “contract theory” [Akerlof. G. 1970]. The Bank of Italy’s analysis of 2010 (“Risk allocation and incentives for the private contractor: an analysis of project financing agreements in Italy”) highlights information asymmetries with respect to some contractual clauses analysed regarding risk sharing among parties, which resulted rather different from those theoretically foreseen.

In addition, it is possible to assist at a public administration short term distorted perspective derived from the activation of “cherry picking” selection processes where private sector select the projects with higher returns on investments. The result of these phenomena will reflect in an impoverishment of the public sector and in potential public admini-

stration financial tensions in near future due to the management of the remaining “poor” cultural heritage projects portfolio.

Knowledge gaps are also some of the main weaknesses when implementing PPPs: programming misaligned with respect to the effective needs of the public administration and the societal ones, shortcomings in the governance capacity of the public authority, partnership misaligned regarding risks sharing between public and private, difficulty in selecting the best projects, specific knowledge and competences lack.

From the private perspective, because of the “public” features of cultural heritage, the private sector may overestimate the returns of the investments and underestimate the related costs building projects that are “mission impossible” that need heroes and not entrepreneurs.

Thus, PPPs are not necessarily a magic bullet cure for the problems of scarce resources, mismanaged cultural heritage and the unique solution to the addressed challenge. However, at the same time, PPPs, if managed with more competences, innovation and transparency can be even more productive and sustainable for the valorisation of cultural heritage and industry especially in an era of scarce public resources and significant skills and management gaps on the part of the public sector. If properly designed, PPPs can provide considerable operating flexibility: for the public sector to be compliant with its own regulations and resources, for the private sector, to bring to the project different management models, know-how, financial and technical/technological inputs.

The use of PPPs in cultural sectors is relatively recent and rather limited. A key barrier is represented by the poor profitability of cultural assets that are included in the category of so-called “cold investments”, unable to generate adequate cash flow without a public intervention. The latter is essential to the viability of the PPP: the economic activity financed shall be economically and financially sustainable to assure profits able to allow the coverage of costs, the reimbursement of the debt and, at the same time, the profitable management of the activity, according to the rules of private entrepreneurship. Therefore, in the presence of a public intervention, great attention must be paid to the performance that the private sector must en-

sure during the management phase in order to avoid that instead of generating a class of entrepreneurs, the PPP generates a class of exploiters of public resources.

In this perspective, many lessons learnt from the use of PPPs in more “traditional” fields (i.e. health, infrastructures, education etc.) can be transferred to the cultural industry with innovative sector-specific adjustments in a holistic perspective, that may regard active involvement of citizenship, creation of shared value for all actors, use of innovative business models and impact financing etc. The hybridisation through the adjustment of a strategic instrument such as PPP will contribute to achieve the final goal of cultural sustainability with relevant impact not only for the economic development of a nation/geographic zone but also for the social inclusiveness and enhancement of the communities.

Public Value vs Private Value vs Cultural Shared Value

Recalling the public administration twofold function mentioned above, the realisation of PPP models in the cultural heritage field can contrast with private management because of the constitutional necessity (in particular, in the Italian context but non only) to preserve the cultural heritage and its nature of “common good”. Thus, the private management can be limited only to the valorisation of the cultural good. In this case, can be useful to reflect on value creation issues.

The potential of value creation in the domain of cultural heritage goes beyond the simple touristic exploitation of cultural goods [Sacco & Teti]. The spill over effects are

of macroeconomic type with impacts in different segments: economic growth (e.g. enhancement of new entrepreneurship and start-up ecosystem), social cohesion (e.g. inclusiveness of different kind of population), wellbeing of citizen (e.g. elderly) etc. In the medium-long term, these impacts can contribute to major efficiency and efficacy of the public spending and to the overall enhancement of the competitiveness of a nation [Sacco & Teti].

However, when analysing different models to be adopted including PPPs, the economic optimum usually diverge from the social optimum. Indeed, one optimum goes to the detriment of the other.

Nowadays, we can observe a shift towards the convergence of these two value – and this becomes crucial in order to have a fair PPP operation.

The intersection of the two values can be achieved by including specific mechanisms to align private incentives (therefore economic factors) with social objectives and cultural ones in this specific case (that leverage on different types of value, such as aesthetic, symbolic, spiritual, social, historic and scientific).

In PPP domain, the private sector can contribute to the convergence point of the two values through higher efficiency, innovation capacity, managerial competences, and risk management typical of the entrepreneurship. More specifically, the entrepreneurship is the key factor that creates relevant VfM in the PPPs for the public sector and therefore, it must be a specific element that the PPP contract should stimulate. On the one hand, VfM represents the convenience for the public actor to implement inter-

ventions through PPPs. On the other hand, the VfM represents the benchmark for the monitoring of the outcomes linked to the critical public administration issue of performance management.

Private sector creates economic value while the social value strongly depends by the role adopted by the public sector and its capacity to stimulate private innovation. The recent experiences in PPPs have demonstrated that private actors have superior competences to implement efficient complex investments in much less time than the public sector, install sophisticated technologies and manage them, preserving the quality of infrastructures and services managed.

In the absence of specific equilibrium actions, the private party tends to limit the taken on risks. Moreover, if the private party is not stimulated to adopt an entrepreneurship approach, the PPP can create even a social disvalue linked to the privatisation of profits and socialisation of losses.

Thus, instead of distinguishing between two distinct kinds of values, the embracing of cultural shared value concept by both private as well as public actors can represent a way for further valorisation and wider deployment of PPP in cultural heritage by:

- partly linking the public sector's remuneration of the private partner to the broader impacts it generates through the management of cultural heritage in a logic borrowed from “social impact investments”;
- in a very advanced hybrid logic, including in the remuneration of the private partner also the contributions that may spontaneously or not come from the civil sector and citizens not as charity or phi-

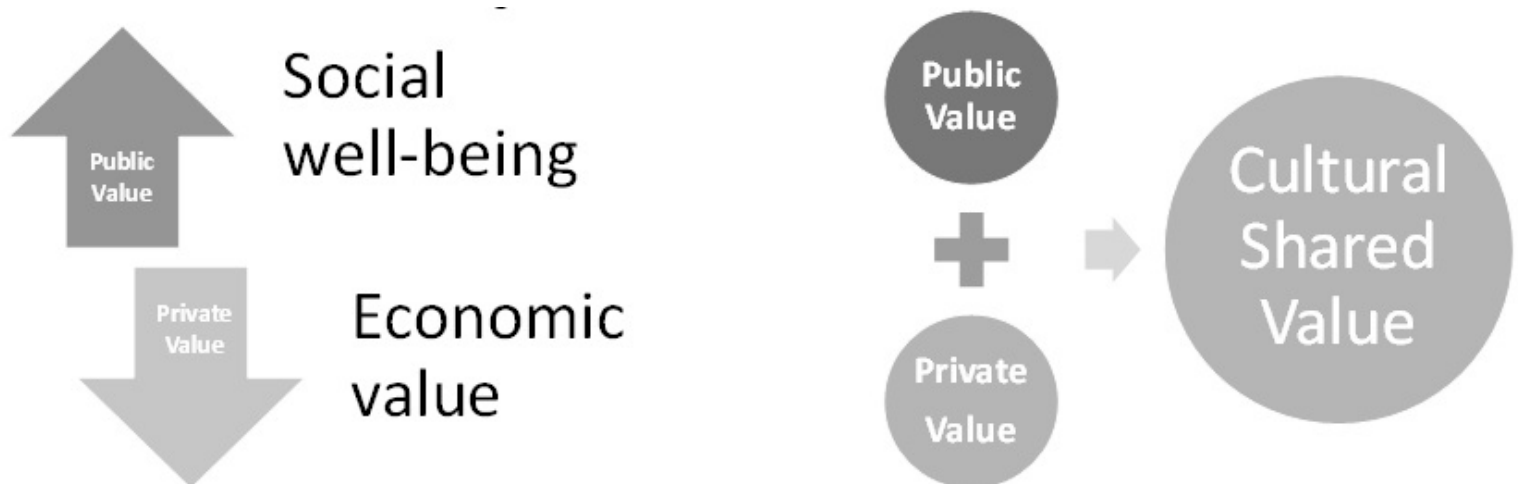


Figure 1 – Public Value vs Private Value vs Cultural Shared Value

lanthropy but in relation to the results achieved by the private partner.

Indeed, the public administrations can play a relevant role in the vision and mission change of for-profit enterprises – from profit per se versus shared value for all. The same can be applied in non-profit enterprises in the perspective of innovative hybrid enterprises. Several cases of profitable hybrid enterprise are known in social-related sectors – i.e. water, healthy food and waste. In the cultural heritage hybrid enterprises are less frequent, thus, there are new opportunities to be exploited.

The concept of cultural shared value within different types of organisation will focus on the creation of value at social as well as at economic level. There are no doubts, because of the constraints of the cultural heritage – conservation vs. valorisation – that the role of public administrations remain even more relevant in this hybrid approach affecting in a strong way the autonomy of private partner to manage investments, revenues and costs of cultural heritage initiatives.

Public Administration “willingness to innovate” and measurable “cultural shared value”

The hybridisation of enterprises and approaches require the public administration to act as a catalyst characterised by transparency within the cultural heritage industry and its actors, in order to foster projects for the benefit of the society and active citizenship. A public administration willing to innovate and able to implement, has as final aim the production and distribution of the best cultural shared value for money.

A few decades ago, the conservation and valorisation interventions (if any) tended to cover single buildings, monuments, or sites. This process has known a change recently with more emphasis today on the economic and social impact of cultural heritage projects on the district or city as a whole dimension also in order to activate economies of scale and scope capable of generating virtuous circles consistent with the theory of “circular cumulative causation” [Myrdal G. 1957]. Indeed, it seems that cross-fertilisation represents an innovative solution and approach for the valorisation of bundle of cultural heritage assets with the effect of reducing “cherry-picking” phenomena. At the same time, cross-fertilisation, synergies and

cross-cutting partnerships created for the valorisation of a set of cultural heritage assets can create cultural shared value for the same category addressed, but also for other public and/or private sectors. Thus, improving the value (also through indirect and social benefits) generated in one area gives rise to opportunities, also through spill over effects, in the others. Thus, shared value is a result of effective collaboration among all parties.

Today, especially in the European context, there is a continued need for innovations for the cultural heritage valorisation, in particular with respect to business models innovation, for building a solid and transparent pipeline of economically and socially sustainable related investment projects in order to demonstrate the attractiveness of this sector to private investors.

Public administration can introduce in the tendering processes elements for the deployment of innovative solutions for the cultural heritage valorisation. The tender proposals, also under PPPs projects, can be evaluated according innovation criteria such as organisational innovation in financial engineering (also, including impact investing, performance contracts with revenue-share formulae etc.), mobilisation of investments (bundling of different projects, different stakeholders engagement etc.).

The public administrations can have a relevant role in boosting breakthrough innovations through the demand from their side for new solutions, products and services applicable in this specific case at cultural heritage field. The deployment of instruments such as Pre-Commercial Procurement (PCP) and Public Procurement of Innovation (PPI) can fulfil specific public sector needs that cannot be satisfied by existing commercial products or services. PCPs has an incentive effect on the acquisition of R&D services for the development of new products or services. The instrument allows to public administration the demonstration and validation in a real environment alternative technological solutions or models developed by different involved players for the evaluation of costs and benefits before the procurement. This way, public administrations can both widen the participation of SMEs as well as give birth to new enterprises, also in the social field. Moreover, this process creates new markets, lower market

barriers for the adoption of innovative goods and services and time-to-market.

A systemic approach between PPPs and PCPs/PPIs can produce interesting synergies and benefits for the development and valorisation of the cultural heritage, enhance the efficiency of the deriving welfare and have a relevant role in cultural related social impact projects. Through PCPs it is possible to develop and test innovative solutions for the public administration in order to test new models, identify economic and financial indicators and added-value. PPPs can allow the deployment, transfer and replication of the innovations developed under the PCP, the management of the Intellectual Property Rights (IPR) also through cost-saving sharing or revenue-sharing with the public administration, the possibility to reinvest in R&D activities.

The transparency in the implementation of all above described models and instruments is crucial for their effective diffusion, for the economic growth and, social and cultural enhancement and inclusion. The measurement of cultural shared value that integrate economic and financial analysis with cultural, social, governance and environmental analysis creates value for all the actors involved i.e. public, private for-profit, non-profit and, citizens.

Several key characteristics of social investing can be mutualised to the cultural heritage projects and investments:

- the intention of the investor to generate cultural, social and/or environmental impacts;
- the expected return on investment by the entrepreneur.

These characteristics evidence the need for transparency in the ex-ante definition of the cultural, social and environmental expected impacts from the investments, Key Performance Indicators (KPIs), the measurement methodologies and the period of measurement, the reporting of the cultural investments impact.

The measurement of impact is becoming more and more relevant in investments with social spill overs, but at the same time it is really complex because of lack of track record and historical data. Many methodologies and tools are adopted by professionals but a few frameworks have been developed with particular focus on cultural heritage investment projects. Different stakeholders may have different interests in the measurement of the impacts:

- public administrations have interest because of lack of resources and identification of the best VfM;
- non-profit organisations need to demonstrate the impacts for further funding, for creating changes and for transparency and responsibility;
- for-profit enterprises measure impacts to improve their investments, transparency, responsibility, innovation and reputation;
- investors are looking for social impact investments.

In the literature and practice, many instruments have been developed for the measurement of the impact of a project or an organisation, e.g. B-Impact Rating System, Social Return on Investment (SROI), GRI Sustainability Reporting Framework, Impact Analysis and Assessment etc. Almost all the instruments are based on two-dimension analysis: economic-financial performance and social and/or environmental impact. Because of the peculiarities and constraints of the cultural heritage sector, further steps should be taken in the development of methodologies adjusted for the addressed field. A holistic approach should be chosen also for these methodologies and instruments in order to measure the impacts and spill over effects from cross-cutting issues regarding fertilisation and synergies with other organization categories as well as sectors.

Conclusion

In the current context of budget constraints of the public sector, investments in cultural heritage are going through a difficult season. Despite the unquestionable importance that cultural heritage has not only on the economic level but also as an element of characterization, identity and memory of a community, very often the budgets dedicated to it are reduced by the increasing pressure of chapters often perceived as more urgent (i.e. health, safety, education, climate change, emergencies, etc.).

In this context, if the privatization of cultural heritage tout court highlights many limitations, the PPP can represent a third very attractive alternative.

The use of PPP in this field, however, seems to require the use of a hybrid approach very focused on the social impact of the action of the private partner to which relate the incen-

tives that he perceives both from the public sector but also, more advanced, directly from the civil society. The concept of cultural shared value can be a guiding criterion for achieving this objective.

The cultural shared value and the impacts generated by the valorisation of cultural heritage in the medium-long term are part of a complex system that many researches call “cultural ecologies” rather than single markets or sectors.

Although the cultural heritage has advanced considerably in the last decades, there is still a lack of cultural-adjusted models and tools validated in real conditions and that can be replicated in other contexts.

The market seems to be ready and “hungry” of hybrid and holistic models, tools and methodologies to be deployed for cultural heritage projects. In this scenario, a variety of stakeholders expect from the public administration the right guidance in order to allow the exploitation of the full potential of cultural heritage sector through the orchestration and combination of all the above-mentioned elements and variables.

This represents a strong challenge to afford in the present scenario of public budget constraints and, therefore, a reason to continue the market-oriented and applied research by academics and practitioners.

In this perspective, PPP could be the “killer application” which, on the one hand, can generate a significant stimulus to the market and, on the other hand, can activate a growing experimentation capable of generating those KPIs with social impact and the related measurement tools essential to generate VFM from the partnership between the public and private sectors in cultural heritage field.



Notes

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Creative adaptive reuse of cultural heritage for urban regeneration

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1. Introduction

The paper deals with the theoretical framework in the field of adaptive reuse and decision-making in order to discuss about bottom up processes and key actors. The aim is to verify if spontaneous and creative initiatives may be able to return value to disused or underused built heritage, also producing regeneration effects in the local context.

The European cultural and scientific debate about adaptive reuse has been progressively widened with cultural, socio-economic and ecological issues. Complementing the traditional role of building conservation and enhancement, able to longer life-cycle of built heritage (Douglas, 2006), current literature considers adaptive reuse as a driver of a powerful strategy, by contrasting soil consumption and urban expansion, reducing supply of raw materials and resources (Bullen & Love, 2011; Conejos, Langston, & Smith, 2011) as well as contributing to revitalize urban areas through new functions and new socio-economic actors. This debate mainly refers to top down project and strategies that involved traditional actors of the decision-making process in adaptive reuse (Mısırlısoya & Günçe, 2016; Wang & Zeng, 2010; Yildirim, 2012).

Additionally, in recent years many bottom up initiatives demonstrated the role of adaptive reuse as strategy of collective responsibility for cultural heritage and highlighted the relationship between social capital and local cultural heritage in a spatial proximity. In the practices, local groups have been key actors in reusing abandoned buildings, by converting them into useful and vibrant spaces, often transforming them in productive and creative hubs for the regeneration of the context. These communities show an awareness of values and potentialities – cultural, symbolic, social, economic, and ecological – of their neighbour cultural heritage and an increasing willingness to practice collective responsibility to enhance these values and potentialities.

Some experiences strongly fit with the European route in the field of cultural heritage and society, first of all with the Convention on the value of cultural heritage for society (Council of Europe, 2005) that defines cultural heritage the «[...] resources inherited from the past which people identify, independently of ownership, as a reflection and expression of their constantly evolving values, beliefs, knowledge and traditions» and promotes sharing responsibilities by undertaking to «[...] respect and encourage voluntary initiatives which complement the roles of public authorities» (articles 2 and 11 of the Convention).

In this perspective, the value of cultural heritage strongly relates to the values that society attaches to it, also demonstrated by proactive initiatives focused on promoting and enhancing tangible and intangible local heritage. The relationship between cultural heritage and local community can be considered mutual and bidirectional: local community increasingly assumes an active role in enhancing cultural heritage in its own territory, as well as cultural heritage often strengthens social cohesion and sense of community.

Beyond to provide tangible links to the past and the memories, «Heritage has great capacity to promote social cohesion and integration, through regeneration of neglected areas, creation of locally-rooted jobs, and promotion of shared understanding and a sense of community» (Towards an Integrated Approach to Cultural Heritage for Europe, Brussels, 22.7.2014 (COM 477/2014)).

The creative and collaborative cultural production is a strategic focus in the European political agenda. Culture is as a pillar for sustainable development, able to generate both economic and social values (CHCfE consortium, 2015). Community, cooperation, creativity are also the key words of several bottom up experiences in which cultural and creative productions are the drivers of adaptive reuse, with impacts in terms of socio-cultural empowerment and territorial improvement.

In Italy, many cases highlight these relationships among built heritage, cultural production and social innovation, evidencing the need of a systemic approach to adaptive reuse, able to make together built, cultural, social and economic components in order

to trigger new local development. In this perspective, some reflections are necessary about the arena of decision-making processes in adaptive reuse, considering the role of local social capital for enhancing tangible and intangible heritage through a place-based approach (Barca, 2009; Huggins & Clifton, 2011; Pugalís & Bentley, 2014).

Starting from the analysis of these initiatives, the paper evidences some questions that can also represent the main challenges for success and sustainability. Have been the initiatives able to interpret and to answer to local demands for economic, cultural and social services? Have alliances, partnership and financial support transformed informal initiatives into economically viable activities? How management decisions and activities could find solutions to turn new ideas into successful services?

Finally, the paper underlines the need to discuss about what values creative and collaborative initiatives must generate, or regenerate, in reusing built heritage in order to contribute to local regeneration.

2. Creative communities and innovative services for cultural heritage

In the European scenario, several creative experiences are increasing in order to valorise local culture for urban regeneration in an international framework. These experiments – that include both tangible and intangible heritage – highlight the role of creative collaborative “design” as powerful tool in which private (profit/no profit) and public organisations are able to cooperate for a common vision.

Creative communities are generating new cultural values and social innovation in an informal and unconventional way. Their innovative “auto-organisation” approaches for searching financing and partnerships’ opportunities are overcoming institutional and local barriers within virtuous processes. Especially, creative services for cultural heritage adaptive reuse have several impacts for the regeneration of the local context and are able to innovate business and management models in order to guarantee the sustainability of the organisation and the long life cycle of building. Impact financing models, collaborative governance, new forms of physical or virtual networks are spreading within creative processes as “hidden innovation” (Izzo & Masiello, 2015) not measurable

with conventional indicators and tools.

Within urban and regional development, involving local populations, research centres, authorities, innovators, universities, movements of city-makers and new groups of citizens, systemic approaches and integrated methodologies (European Commission, 2014; Fusco Girard & Cerreta, 2001) can be developed to identify this latent capacity of innovation able to re-activate and re-generate cultural heritage for urban regeneration.

In Madrid for example, the historical buildings of “Ex Matadero of Arganzuela” include social and cultural activities that stopped the reconversion project promoted by the Municipality in which the recovery of space was managed only by a private operator. The role of citizens, not only as users (1.5 million visits in 2016) but also as actors of reuse program, induced associations to manage directly some buildings of the ex Matadero area, that was subsequently included in the urban regeneration plan of the southern part of the city. From 2006 to 2011, investments in program are about € 110,865,467 (75% of which were public investment and 25% private investment from INAEM, Comunidad de Madrid, IFEMA, Germán Sánchez Ripèrez Foundation).

This could demonstrate the strengthen of this type of initiatives especially within two key points of discussion: 1) the “bottom up” management by citizens, creative people, NGOs who know local needs; 2) the investments from both public and private actors for responding to this local demand in a collaborative way.

Another example regards the industrial archaeology of “Le Friche La Belle De Mai”, ex tobacco factory in Marseille, where a “top down” approach was applied thanks to the principal investor of the Municipality. The project includes a model of mixed activities in which performing arts are “key creative services”. The new space is now divided in: 6 recording studios (2000 square meters); 1 Bar / Restaurant (400 sq m); 1 Dance hall (1000 sq m); 3 rooms for the theater (3000 sq m); 1 gallery for art exhibitions (500 sq m); 18 workshops for artists (2000 sq m); spaces for associations (2000 sq m) and multi-use spaces (exhibitions, performances, workshops, 10,000 sq m).

Performing arts services and related complementary activities improve the sustaina-

bility of the initiative and at the same time guarantee renovating life to cultural heritage and its context, as a system and living organism (Mısırlısoya & Günçe, 2016).

Several virtuous examples include re-use projects like:

- “Officine Grandi Riparazioni” in Turin, supported by the CRT Foundation, as a new district of creativity and innovation;

- the recovery of the Ex Ansaldo area, which hosts BASE co-working and Cariplo Factory as well as the Museum of Cultures (Mudec), in order to promote the contamination between cultural enterprises, incubators and research centres;

- the project of the “Polo del 900” within the Military Districts of Turin, supported by the “Compagnia di San Paolo” banking foundation, which assumes a key role both for institutions and private organizations (profit and no-profit) that collaborate for innovative start-ups;

- Farm Cultural Park (opened in 2010) that regenerated the historic centre of Favara (dating back to 1500-1700), near Agrigento in Sicily, in which are involved 100 creatives and artists and numerous tourists (about 90.000 in 2016);

- the reuse of an ex industrial archaeology “Ex Fadda” in San Vito dei Normanni (near Brindisi in Apulia), financed by Region within the urban labs’ program “Bollenti Spiriti” and by City Council, transformed in a laboratory space in which the users’ flow is about 400 persons/month;

- Cascinet in Milan, in which about 1.600 persons are involved in creative laboratories, co-working spaces, shared gardens and social events;

- “Case di Quartiere” in Turin, that has experimented a common shared governance as network of Neighbourhoods Houses.

In this contexts, creative process is a new perspective for building innovative initiatives in which cultural value is co-created with new relationship among built heritage, persons and cultural/social production tools. These Italian experiences, as virtuous examples, are also supported by calls promoted by banking foundations such as:

- “Funder 35” of ACRI – “Associazione di Fondazioni e Casse di Risparmio” (Association of foundations and “savings banks”), aimed at under 35 persons involved in cultural and creative services;

- “Culturability” of Fondazione Unipolis, focused on the regeneration of disused spaces as commons;
- “Innovare in rete” (Innovating in network) of Banca Etica;
- “OPEN” calls of Compagnia di San Paolo and so on.

These are calls on both tangible and intangible heritage, with experiments that vary from regeneration of spaces, management of cultural assets, promotion of visual and performing arts, valorisation of traditional/innovative handicraft, and other expressive languages of contemporary culture.

The launch of numerous calls for proposals highlights the willingness of large non-profit Companies to foster and support cultural and social innovation giving new life to “empty or underused spaces”, also creating new job opportunities and new form of social inclusion. These experiments show how the lack of funds by public administration to maintain and manage cultural heritage may be overcome when private creative enterprises are able to cooperate.

Within the Italian experiences described above, the creative hub of “Case di Quartiere” (Neighbourhoods Houses) in Turin can be considered a best practice of strategic governance. European Creative Hubs Network defines these hubs as: “platforms or workplaces for artists, musicians, designers, filmmakers, app developers or start-up entrepreneurs. They are uniquely diverse in structure, sector and services, and range from collective and co-operative, to labs and incubators; and can be static, mobile or online”.

Creative hubs are able to generate new cultural values, improve cooperation through creativity and transform local demands in economic, cultural and social services within a “cultural creative chain reaction” (Cerreta, Daldanise, & Sposito, 2018).

The “Rete delle Case del Quartiere” (the network of Neighborhood Houses) is a network, composed by eight non-profit organisations. The network manages public open spaces and buildings in eight different districts, in which several collective experiences include the actions of citizens’ participation and community self-organisation. The focus is responding to social, cultural/intercultural and economic needs promoting initiatives involving formal and informal group of citizens and associations. Neighbourhoods hou-

ses are common spaces, social and cultural laboratories in which people (citizens, associations, informal groups, cultural operators) and their activities interact for organising conferences, shows, courses (theatre, art, music), workshops, “popular restaurants”, time banks, supportive buying groups, and so on. A shared governance was experimented during the early project “Di casa in casa” (from house to house), rewarded by “Che fare 2”, based on a specific Convention and an informal coordination structure.

This experiment was born in a local context, the city of Turin, already involved in participation projects with citizens and associations thanks to the engine of European institutions that pushed cities to adopt new approaches to public spaces beyond sectoral policies in order to link centres and suburbs. In 2007, the first “Casa di Quartiere” was created in a peripheral area within the program P.I.C. Urban II that financed the renovation of farmstead and the project start up: “Cascina Roccafranca”. The project is the result of a participatory planning process that involved local associations, school operators, social and health services, district offices, etc. The working group established a partnership with the City Council of Turin as atypical civic participation foundation that now counts 70 informal associations and groups, 50 volunteers, operating in 15 working teams, 90 organized courses, 40 workshops, 150 annual events.

In the following years, other urban districts developed similar experiences, through different paths but with a common vision: regeneration of spaces for public use and citizens, thanks to the collaboration between public institutions, banking foundations, social enterprises, associations and inhabitants.

A virtuous example is the “Casa del Quartiere di San Salvario”, established in 2010 in the building of the former public baths in San Salvario district. It is a project of the Local Development Agency “San Salvario onlus”, with the financing support of Compagnia di San Paolo, City Council of Turin and Vodafone Italia Foundation. San Salvario house is a public service intended as laboratory for designing and implementing social and cultural activities involving associations, citizens and cultural operators. It self-produces more than 75% of the resources necessary for its economic sustainability.

The success of “Case di Quartiere” network consists in a mixed approach for a common perspective: a top down strategic vision of the city and bottom up approach for re-using urban heritage. The strategic vision came from City Council that implemented a cultural policy for Turin where citizens are key actors of social action and neighbourhoods are the first local resources. The bottom up approach derives from “houses managers” that develop new proximity welfare models through productive relations with citizens of different ethnic groups in the neighbourhood. These organizations operate as productive clusters in a multi-sector value chain, linking cultural and social innovation for a new regenerative economy.

3. Creative adaptive reuse: some perspectives of analysis

Cultural Heritage adaptive reuse may support cultural and social innovation as well as new productive and creative network. Innovation is often strictly linked to creativity as the engine of activities producing culture, knowledge and art. So, the convergence of actors, functions and activities in open hubs facilitates cross fertilization, social capital, knowledge sharing, as well as resource sharing and cost reduction.

To produce systematic research and advancing knowledge about adaptive reuse of Cultural heritage, any step of the process has to be investigated (fig.1)

Which is the role of the local community and/or creative enterprises in promoting a vision of building reuse, designing a system of services and economic activities able to innovate functions and utilities the building offers to the local system and community. Which are the more active and creative players? How can they drive innovation process, involving new partners and gathering financial resources? How can key players manage the innovation process, creating governance structures able to coordinate stakeholders opinions and interests? Which governance structure and business model can better compound public goals, social mission and economic sustainability?

How can reuse initiatives generate positive impacts on the local context?

Researchers can try to answer these questions, detailing hypothesis and testing it through single or multiple case studies. To



Figure 1—Cultural heritage reuse: key factors to investigate (elaboration of authors)

detect communalities and site-specific dynamics is necessary to understand if and at what extent best practices are generalizable. The main goal is to understand the evolving link between cultural heritage and the owner community; aiming at this result, a dynamic perspective has to be adopted, taking into account historical as well as new uses. Furthermore, different steps are not considered as strictly sequential, or as a one-way dynamic; actors needs and role in creative services may stimulate community opinion, stakeholders decisions and financial involvement toward uses more in line with local culture and productive system; whereas exploitation and business perspectives may undelay projects designed and/or funded by external stakeholders.

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“Circular models for the city’s complexity”

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Introduction

The Circular Economy (CE) approach has been conceptualized in 114 definitions collected and analyzed by Kirchherr, Reike and Hekkert (Kirchherr et alii, 2017) and has been massively used for promoting productive initiatives based on sustainable supply chains and cooperative logistics (Ghisellini et alii, 2016). In several scientific papers the CE has been described as a “regenerative” model based on the reduction of wastes and the optimization in the use (and reuse) of natural resources. The experiences of early CE applications show that cooperative models are key to success, since they are able to create the necessary linkages and synergies to “close loops” and create new value from economic, social, cultural and environmental resources.

In the last two decades literature in the field addresses circular economy as a new business model able to encourage a transition toward a more sustainable development and a more wise and harmonious society. It has been seen as a strategy for achieving the sustainability objectives by integrating its environmental, social and economic dimensions (Pierce and Turner, 1989; Ellen MacArthur Foundation, 2013). Nevertheless, despite the flourishing of literature, industrial practices and policy-making processes in which the circular and sustainable models are intermingled, the similarities and differences between both concepts remain ambiguous (Geissdoerfer et alii, 2017).

The UN Agencies Reports, the EU documents as well as several researches developed by international bodies and foundations – since the UN Agenda 21 subscribed in Rio in 1992 – encourage to cope with environmental problems such as biodiversity loss, pollutions, resources depletions, land abuse and excessive waste production. The activities that are increasingly jeopardizing the environmental equilibria of the planet are progressively depriving the majority of the

world’s population – not only in the Global South – in terms of cultural, economic and social imbalances between the few rich and the most under the poverty threshold. Dealing with these inequalities represents one of the main societal challenges. According to literature and policies worldwide, one of the most accredited answers to this challenge is the circular economy model which dates back to the early 90s as reaction to the linear and open-ended characteristics of the production-consumption economic model (Pierce and Turner, 1989).

The origins of the model are mainly rooted in ecological and environmental economics and industrial ecology, aimed at implementing greener economy and regenerative eco-industrial development (Ghisellini et alii, 2016: 12). This loop economy with an industrial matrix oriented at waste prevention, regional job creation, resources efficiency, dematerialization as well as selling instead of ownership of services and goods for production aims at reducing environmental externalities and social risks without additional costs (Geissdoerfer et alii, 2017). Since the dawn of the new millennium, the understanding of the CE model evolved to incorporate different concepts, such as cradle-to-cradle closed loop (McDonough and Braungart, 2002), regenerative design (Lyle, 1994), industrial ecology (Graedel and Allenby, 1995) and the most popular definition by the Ellen MacArthur Foundation: “an industrial economy that is restorative or regenerative by intention and design” (2013: 14).

This means that the new model requires not only the implementation of green technologies and innovative employment solutions but mainly it refers to the re-design of the entire life cycle of the productive processes in which waste and resources are strictly intermingled. The core of this model is the circular (closed) flow of raw materials and energy managed by “slowing, closing, and narrowing resource loops” (Bocken et alii, 2016: 309). This approach has been consolidated in the sectors of waste management policies, industrial symbiosis, eco-industrial systems, zero-waste clusters and other networks of collaborative consumption (Geissdoerfer et alii, 2017). The new frontier of this model is to transfer the closed loop of materials and energy flows to territorial systems as a whole, at micro, meso and macro

scales. Cooperating and sharing resources, raw materials and strategies for reducing waste and dispersals need to be developed not only within industrial clusters, but referring to the regeneration of the built environment and the community empowerment.

Within this framework, the CLIC project - Circular models Leveraging Investments in Cultural Heritage adaptive re-use, funded within the European Research and Innovation programme Horizon 2020 and led by CNR IRISS, aims at developing and testing innovative circular governance models for the adaptive reuse of abandoned and underused cultural heritage.

This paper investigates “circular models” to be adapted to the city in order to connect the complexity of the city with its several dimensions (social, human, cultural, political and entrepreneurial) – an issue still open to the international debate.

Circular economy implementation at territorial level

What is a circular city? Can urban planning and management implement a CE model? In which way a circular city model can be conceptualized? What is the role played by the CE model within an urban regeneration process? The above open questions have guided the first phase of the ongoing research project CLIC we are reporting in this paper. The term CE has both a linguistic – as antonym of a linear economy – and a descriptive meaning which relates to the concepts of biochemical cycles and to the idea of recycling and regenerating (Murray et alii, 2017). The research focuses on both the meanings: defining a circular business model as well as slowing and managing cycles in order to stimulate the re-generation.

The climate change and its impacts on the environmental vulnerabilities, the increasing inequalities, the gentrification and its discontents are the challenges of the urban contradictions (Florida, 2017) and the recent urban Agendas, depicting the city of the future, try to merge the sustainable development goals and the CE principia. Given these issues, the CE more suitable definition could be “an economic model wherein planning, resourcing, procurement, production and reprocessing are designed and managed as both process and output, to maximize ecosystem functioning and human well-being”

(Murray et alii, 2017: 377). In this way, CE can be considered a “workable socio-technical approach” for attaining economic, social and environmental transition to sustainability (de Jesus, Mendonca, 2018). Nevertheless it remains a rather underspecified notion to be investigated at governance level in order to assess driver and barriers.

The UN 2030 Agenda for Sustainable Development and Sustainable Development Goals (2015) encourages the developing of national-level urban policies for dealing with the challenges of the rapid urbanization and the climate change issues. The New Urban Agenda, adopted at the United Nations Conference on Housing and Sustainable Urban Development (Habitat III) in Quito, Ecuador, on 20 October 2016, promotes measures for cleaner, green, safe and equal cities by encouraging the transition to a circular economy (§71) while facilitating “ecosystem conservation, regeneration, restoration and resilience in the face of new and emerging challenges”. While in China the Circular Economy Promotion Law has been “formulated for the purpose of facilitating circular economy, raising resources utilization efficiency, protecting and improving the environment and realizing sustainable development” (CCICED, 2008: art. 1) in order to deal with the increasing environmental issues related to the industrial growth, in Europe CE is considered mainly the toolbox for creating job opportunities and pushing economic development. At EU level, the Circular Economy Partnership aims to stimulate the re-use, repair, refurbishment and recycling of existing materials and products to promote new growth and job opportunities, by focusing on waste management (turning waste into resources), sharing economy and resource efficiency, in order to develop an Urban Agenda for the EU (EEA, 2016; Partnership Circular Economy, 2018). The main aim of the European Commission is “the transition to a more CE, where the value of products, materials and resources is maintained in the economy for as long as possible, and the generation of waste minimized” (European Commission, 2015). In line with the transfer of this production approach to the planning and management of urban areas, the European Green Capital Award has been established. In this context, the selection of a city awarded with the title of European Green Capital is assessed on the

basis of twelve environmental indicators: Climate Change: Mitigation, Climate Change: Adaptation, Sustainable Urban Mobility, Sustainable Land Use, Nature and Biodiversity, Air Quality, Noise, Waste, Water, Green Growth and Eco-innovation, Energy Performance, Governance.

Following a similar approach, based on concrete local and regional examples, ESPON, Interact, Interreg Europe and URBACT have produced a policy brief outlining pathways to a CE in cities and regions. The policy brief has been presented at the joint workshop “Pathways to a circular economy in cities and regions” during the European Week of Regions and Cities in Brussels on 12 October 2016 (ESPON, Interact, Interreg Europe and URBACT, 2016). The document states that “moving from a linear to a more circular economy calls for new business models, new modes of consumer behavior and new solutions for turning waste into resources”. According to this, cities and regions are encouraged to work with other stakeholders to promote sustainable sourcing of raw materials and different modes of resource circulation, such as industrial symbiosis, chemical leasing or remanufacturing. They are also involved in influencing consumption patterns of households, businesses and organizations, enhancing education and awareness campaigns, promoting sharing economy approaches, as well as encouraging reuse and repair. Maximizing the benefits of a CE at urban level is challenging, since the process involves players from the private sectors, everyday consumers and cities and regions.

As introduced in the first section, in the last two decades, the concept of CE has been associated to multiple models such as: the closed-loop economy, the industrial symbiosis, the industrial synergies, the industrial eco-parks, the natural capitalism, the cradle-to-cradle, the zero waste movement, the functional service economy (Murray et alii, 2017). It has also been included within experiences of smart specialization strategies (S3) developed throughout Europe involving high tech industries, innovative supply chains, community-led initiatives and rural-urban linkages. While applying the model at macro level, in cities, metropolitan areas and regions, CE development involves the re-design and integration of four systems: the industrial system, the infrastructure system delivering

services, the cultural framework and the social system (Ghisellini et alii, 2016). In order to understand how these systems are related and in which way these relationships could generate a circular city model, a qualitative fieldwork is needed:

- at macro-level – by addressing urban and regional policies and financial resources within regional and metropolitan strategic plans as well as rural-urban linkages
 - at meso-level – by understanding relationships between public and private players and local planning trends
 - at micro-level – by focusing on built environment, cultural heritage and place-based civic initiatives and social economics.
- Considering these premises, the urban-regional circularity can be seen as result of the combination of the following actions: reduction of land consumption; reusing the built environment; sharing spaces and places by combining function; ensuring longer life to the existing assets; retrofitting the built environment; re-creating shared tangible and intangible values; and activating a durable and self-maintained regeneration process. Nevertheless, prevailing discourses in literature, policies and practices are business oriented and the spatial and social aspects need to be further investigated. When it comes to the definition of circular city-region, substantial confusion emerges.

Circular city experiences

The lack of conceptualizations regarding the notion of urban circularity, as well as of comparable circularity interpretations by cities, invites at collecting, interpreting and categorizing experiences of circular city. Khan and Zaman (2018), trying to shape future cities by critically examining the existing urban notions, include within the circular city model categories such as Age-friendly city, Compact city, Creative city, Eco-city, Global city, Liveable city, Low-to-Zero Carbon city, Regenerative city, Resilient city, Sharing city, Smart city, Zero Waste city. In this section, the paper focuses on different experiences included in two main categories: the self-defined circular city and the spontaneous circular city. Within the first group are included experiences in which policies, strategies and planning have been officially oriented at achieving a circular dimension of the city or the region. The second group includes ex-

periences in which the drivers of a circular approach have been performed in an indirect way, without explicitly referring to CE.

Examples of circular regions and cities

The Basque Government has integrated the CE in its strategic documents, including the Basque Country Energy Strategy 2030, the Environmental Framework Programme 2020, the EcoEuskadi Strategy 2020, the Eco-efficiency Programme, as well as the Waste Prevention and Management Plan 2020. The transition towards a green resource-efficient economy have been listed as key priorities under Priority Axis 6 of the Basque Country Operational Programme, with the following measures planned: Partnerships leading to the integration of more environmentally efficient processes in the strategies of companies; Support in the development of projects focusing on the development and demonstration of new, more efficient technologies, methods and processes; Investment support to companies and industries for more efficient industrial approaches. The S3 strategy of the Basque Country which identifies three spearhead sectors (Advanced Manufacturing, Biosciences and Energy) also shows close links to the CE (EVE, 2016).

A similar approach has been followed within the Brussels Regional Programme for a CE (BPRCE, 2016). The BPRCE is an integrated strategy started as bottom-up initiative involving several public and private stakeholders (multi-stakeholder programme) through an innovative co-creation process. After several seminars, working groups and public meetings, the BRPCE was adopted in March 2016. Currently 74 measures have already started, while 37 have begun the first discussions for developing action plans. A revision mechanism will take place every 18 months, to challenge the results, amend some measures and involve more public and private stakeholders. The players involved are 3 regional ministries, 15 public administrations, regional advisory committees and almost 60 NGOs and private businesses. In order to achieve the three general goals: to transform environmental objectives into economic opportunities; to anchor economic activities within Brussels' borders, maximizing resource circularity and boosting entrepreneurship; to create new employment opportunities, four areas of action have been

established. The first one is cross-functional: creating a favorable regulatory frame work; the second is sector-based: dedicated to construction, resources and waste logistics, trade and food; the third one is territorial (integrate the CE at the local level), and the last one is related to the governance framework: support the programme by strengthening coordination between authorities.

The London Waste and Recycling Board (LWARB, 2007) is the lead facilitator of CE activity in London, not just through collaboration but by developing and investing in CE business in London. In June 2017, LWARB published the Circular Economy route map for London, which was created with stakeholders from across different sectors, to set a pathway for London to accelerate its transition towards a CE. It is based on analysis of economic impacts and residual waste streams within the city within five key sectors: the built environment, food, electricals, textiles and plastics. Besides the cooperation between stakeholders, other areas where London needs to focus were identified through eight crosscutting themes highlighted in the route map – communications, collaboration, finance, demonstration, innovation, policy, procurement and business support. One of the challenges facing London is to provide access to the housing, business premises and infrastructure that the capital's residents and workers require – but in an efficient and sustainable way. This can be substantially helped by adopting a CE approach to the built environment in London.

In 2015 Amsterdam commissioned an in-depth study on the potential of a CE. In Amsterdam, two value chains are very important: the building and construction sector and the organic and biomass industry. Amsterdam is perceived as a front-runner. This attracts companies and start-ups, which consider the city as a living lab to experiment and expand their business. Amsterdam is trying to adapt to a CE by forging new business models shifting from products to services and creating new legal and financial instruments. The city had to overcome traditional barriers in administration and think about new forms of cooperation, such as cross-sector thinking and multidisciplinary working.

It was crucial for Amsterdam to involve citizens in this transition. As consumers, they

are drivers of change, along with the private sector. One of the city's main challenges has been to translate the concept of CE into the daily lives of citizens.

The General Assembly on the Circular Economy of Greater Paris was launched in 2015 co-organized by local governments. Its purpose was to bring together a wide spectrum of players (government authorities, business, associations, NGOs, academia, research, etc.) to work on tackling the CE's challenges for the Greater Paris Metropolis. A model that is based on sharing rather than profit, collective intelligence rather than individual competition, recovery rather than waste: this is what Paris seeks in the CE. The drivers are multi-stakeholder approach, political vision and leadership, stakeholders commitment and pro-active role and the perspective is the implementation of the 65 proposals of the White Paper on the Circular Economy of Greater Paris.

An interesting indirect experience is the Sustainable public procurement for cradle-to-cradle design in Venlo City Hall (The Netherlands). The Cradle-to-Cradle (C2C) framework seeks to create production techniques that are not just efficient, but are essentially waste-free. In cradle-to-cradle production, all material inputs and outputs are seen either as technical or biological nutrients. Technical nutrients can be recycled or reused with no loss of quality and biological nutrients composted or consumed. The Municipality of Venlo used C2C principles in the design and procurement of the new Venlo City Hall. The bidders were requested to take into account the use of appropriate, safe and healthy materials that can be recycled

after their lifetime, the enhancement of air and climate quality, the production and use of only renewable energy and the enhancement of water quality (INTERREG IVC Cradle to Cradle Network project).

A quite different experience is represented by the United Arab Emirates Masdar City construction, which was the world's first "zero waste, zero carbon and fossil fuel free" city, started in 2008. Abu Dhabi's renewable energy company developed Masdar City aiming to diversify its economy beyond oil. Masdar, meaning 'resource' in Arab, is located in the desert at about 17km from Abu Dhabi. As reported by Marin and De Meulder (2018), "the city design reflects the precepts of the CE, in which industrial networks are designed to mimic the cyclical behavior of natural ecosystems (Veolia, 2008)". The city is designed by the architects' team, led by Norman Foster, as a pedestrian area, and the energy efficiency is obtained through a combination of high-end technology and vernacular building methods. The design is inspired by traditional settlement typologies, working with natural ventilation towers, shade, water features, and green spaces for cooling. "Masdar desalitates sea water and reuses waste materials and resources maximally, such as wastewater for the landscape maintenance". "At Masdar City's core lies a knowledge institute for sustainability, with a special economic zone to attract green companies and clean tech businesses". "Today, the aims of Masdar City as a model of sustainable living have been partially abandoned. Only 300 people effectively live in the city that has only been completed for 5% of the original plan. The autonomous vehicle system was abandoned

after two of the planned hundred stops were built because new automotive technologies made it obsolete. Bike sharing systems were put in place, but are underused because of the absence of bicycle paths between Masdar City and Abu Dhabi" (Marin, De Meulder, 2018).

Conclusions and ways forward

Circular economy principia may have a different aspect in cities and regions, depending on geographic, environmental, economic or social factors. The industrial profile of a city or region, service and resource-intensive sectors, accessibility, sharing economy, large concentrations of inhabitants could play a role in facilitating or challenging circularity goals. The diversity of territorial contexts translates into different needs and opportunities to be addressed by circular economic approaches. Regarding this aspect, "the transition towards a CE can take valuable lessons from the efforts made by regions and cities to make the economy greener" (ESPON, Interact, Interreg Europe and URBACT, 2016). The green economic performance of a region could provide more insight on what a shift towards a CE might imply as well as of the needs for encouraging the transition to a CE. "Since a CE may look different in every region depending on local needs and resources, copy-pasting solutions from elsewhere will not be effective. Every city or region should start with their own challenges to determine what the transition towards CE could look like. A good way to start is with small, experimental projects that can then be scaled up and translated into policy" (ESPON, Interact, Interreg Europe and URBACT, 2016).



Figura 1 – Circular action plans in London, Brussels and Paris

Nevertheless, going through literature, policies and practices, is possible to undertake drivers to be tested during the research fieldwork. Among the others, is possible to recognize as driver the possibility of:

- working closely together with the private sector and research institutes;
- involving the entire city administration from the very beginning;
- using existing strategies, such as green procurements;
- developing multi-stakeholder approach with pro-active role;
- encouraging bottom-up approach and co-creative and iterative process;
- sharing knowledge, resources, costs and opportunities;
- building community awareness and empowerment;
- cooperating for social innovation and social economics;
- closing the loops.

In this context, the reuse of abandoned historic buildings and areas as proposed in the Horizon 2020 CLIC project can be seen as a strategic area of interest for next “circular cities”, turning “urban wastes” into resources for sustainable, safe, inclusive and resilient cities (Fusco Girard and Gravagnuolo, 2017).

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Cultural Heritage Adaptive Reuse: the role of connective civic infrastructures

Luigi Fusco Girard*, Antonia Gravagnuolo** and Gabriella Esposito De Vita***

Sustainable development challenges in a “new urban world”

The world population is – despite structural ageing processes in many developed countries – rapidly increasing in size. Rapid urbanization processes are linked to increasing migration flows, which threaten the identities of historic cities worldwide and the conservation of historic rural landscapes in abandonment. Cities are becoming centres of agglomeration dis-economies where soil consumption, pollution, social inequalities and unemployment are increasing. On the other side, cities are the places where the most urgent challenges of the “new urban world” can be addressed and where ‘smart citizens’ experiment innovative solutions to enhance quality of life for all (Fusco Girard, Baycan and Nijkamp, 2012; Schaffers, Ratti and Komninos, 2012; Esposito De Vita and Oppido, 2016; Haas and Westlund, 2017).

In this critical scenario, which city future is going to be built? How can we reshape this future in a more desirable vision? Which choices to orient/manage development towards an improvement of the city quality of life, of the sense of wellbeing?

This urban transition will pose enormous problems to the capacity of the cities to face ancient and new needs: to guarantee the economic growth, to reduce the increasing social poverty and the ecological crisis. These are the most important challenges of our time.

Cities have a great potential to reduce social divides and ecological crisis, and to enhance the economic development, if they become able in particular to improve existing approaches to planning, managing, governing the city systems, adopting new strategies, approaches, tools. New concepts of “smart as circular city” are emerging (Ravetz, Fusco Girard and Bornstein, 2012; Nobre and Tavares, 2017).

The future of cities/metropolitan cities is in their creative choices and in their creative

capacity to identify cooperative win-win solutions, characterized by synergies and symbioses, able to increase the metropolitan productivity through the scale economies, the agglomeration economies, the “synergy economies” (Fusco Girard, Baycan and Nijkamp, 2012).

The New Urban Agenda and the “humanization” of cities

In October 2016 the New Urban Agenda (NUA) was adopted in the UN Habitat General Assembly in Quito, Ecuador, as a call for actions to “fight against” poverty in all dimensions: in social, ecological, economic dimension, in coherence with the Agenda 2030 strategic goals and targets.

The NUA promotes a paradigm shift based on the “Science of cities” (United Nations, 2017). This paradigm shift addresses the way we plan, govern, manage cities towards a sustainable development (§15), strengthening (inter alia) urban governance and long term integrated (urban/territorial) planning tools. Many challenges are evoked for implementing the sustainable/desirable city. In particular:

- The challenge of health/well-being
 - The image of the “smart city” is evoked in § 66.
 - The notion of “circular economy” is included in many paragraphs (§§ 71,73,74 and also 122, 132,137,152).
 - The “climate change” and impacts and measures to face it are underlined many times (see § 79 etc.).
 - The availability of effective governance tools
 - The need of new evaluation processes is evoked in different paragraphs (§§ 92, 104, 110, 115, 138, 147, 158, 161).
- All these require the production of new knowledge to be effectively implemented: the science is the heart of sustainability. Key challenges for improving development city strategies can be identified:
- Urban quality of life, well-being, liveability (as the general goal of sustainability);
 - Climate change (as the most urgent challenge to be faced);
 - Smart/intelligent city (as the city of new digital technologies);
 - Circular economy/city (as the new model for development);

• Material and immaterial connectivity (social values/community for the development...);

• Big data management systems (as the city capacity to use in a structured way all the most of formal and informal data that city produces).

The final goal of this process is to “humanize” the city (see §26 of the NUA) towards a new model of “Human Sustainable Development”, enhancing the “connective infrastructure” of cities: their natural, cultural and social capital linked in a synergic systemic approach to urban development.

The HUMAN SCALE of city development is the challenge of our times, in which the de-humanization is growing in our cities and territories. Planning can contribute to this human scale of local development.

Culture and cultural heritage as connective infrastructure

This Humanization process is linked to culture.

This is the real challenge of our time. It means in particular to become able to contribute to:

- Regenerate the “connective infrastructure” of our city/society, going beyond the hyper-individualism and embracing interdependencies
- Regenerate community bonds, through regenerating the collective memory
- Helping subjects to move from I to US: to cooperate each other

The circular economy depends on the capacity to overcome the growing hyper-individualistic culture.

The Circular Economy is the co-evolutionary economy, the economy of synergies, cooperation, collaboration, which is put in relationship with the circular city model and with cultural heritage, that have not been put in relationship before.

All the challenges of our time, from the implementation of the circular economy for sustainability, to the realization of the circular city, to new production and consumption models, to new rules/norms etc. are linked to this cultural challenge: to the capacity to produce and share not only a scientific/technological innovations but also a CIVIC CULTURE, that is the base of the “civic responsibility” (see §156 of the NUA).

We need a real capacity to use the new pro-

duced knowledge in the good direction: this is THE CULTURAL CHALLENGE.

Certainly, many other new and specific challenges are incorporated in the UN Agenda 2030 for Sustainable Development (United Nations, 2015) and in the NUA, and in particular in the Sustainable Development Goal 11 (resilient, inclusive, sustainable, safe cities) and the related targets.

The notion of “resilient infrastructure” to “support the human well-being” is introduced in the SDG 9.

Civic connective infrastructures are here considered critical to face these emerging challenges: growing diseconomies of agglomeration, high density, lack of community sense (social capital), climate change impacts, threats to local identity (to cultural heritage/landscape), reduction of self-organization capacity of systems.

The Horizon 2020 CLIC project

The 2020 CLIC project (Circular models Leveraging Investment in Cultural heritage adaptive reuse) is focused on the relationship between the adaptive reuse of cultural heritage and the processes of local sustainable development. This project has been funded by the European Commission under the Horizon 2020 Framework for Research and Innovation, in coherence with the priority themes of the Urban Agenda for the EU (the circular economy) and the place-based planning (and thus on the people-based approach). A key place-based resource is the cultural heritage. In which way is it possible to create the above relationships?

“Through the elaboration of innovative business, financing and governance models able to put together, in a reciprocal and circular flow of benefit, the three main players:

- The private sector, both the entrepreneurs and the owners
- The public sector
- The local community

So, the CLIC project is focused on the interdependence of these three elements for the identification of:

- new business models
- new financing models
- new governance tools

for implementing the adaptive reuse of cultural heritage” (Fusco Girard, 2018).

In this perspective, cultural heritage is a key cultural connective infrastructure, the

memory itself of the city system (European Commission, 2014, 2015; European Parliament, 2017). Through processes of Adaptive Reuse of Cultural Heritage, local communities can become active players of city regeneration. New creative uses for “old” buildings, sites and landscapes are able to promote in the best way the “connective infrastructure” of our cities, taking into account the coherence of use values with the “intrinsic” value of cultural heritage (Fusco Girard, 1987; Fusco Girard and Gravagnuolo, 2017; Fusco Girard et al., 2018) within the circular city model.

Key elements for governance choices, financial and business decisions, and for the achievement of SDGs, are the integrated evaluation tools. New improved evaluation tools are required, able to incorporate all the multidimensional impacts: from socio-economic impacts, to environmental, to visual, to cultural, etc. impacts.

The objective of this CLIC session is to identify tools and experiences that contribute to the regeneration of the European “connective infrastructure” in economic, social and environmental dimension, also through the creation of “heritage communities” (Council of Europe, 2005) that directly and indirectly contribute to places attractiveness.

Note

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Circular governance models for cultural heritage adaptive reuse: the experimentation of Heritage Innovation Partnerships

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Introduction

The multilevel governance of cultural heritage refers to cooperation, dialogue and interaction in which public as well as private actors participate, ranging from supra-national to national and sub-national levels.

Nowadays the density of actors and interests involved in cultural policy-making and governance represents a great challenge, due to the risks of fragmentation. National governments, through their different branches and organisations (e.g. culture ministries), need to interact with local governments, civil society actors, cultural associations and foundations, international organisations, professionals and experts, private companies and communities.

In many European countries, the definition of "what counts as heritage" has traditionally been centralised and expert-based. In the last decades, experts have become less powerful and decentralisation is a widespread trend. This evolution has been supported by the adoption of new policy instruments, such as the Faro convention¹, which establishes the concept of bottom-up 'heritage communities' and emphasises the value and potential of cultural heritage wisely used as a resource for sustainable development and quality of life in a constantly evolving society.

A heritage community consists of people who value specific aspects of cultural heritage which they wish, within the framework of public action, to sustain and transmit to future generations (The Council of Europe Framework Convention on the Value of Cultural Heritage for Society, 2005)

Local governments face an additional layer of complexity, as they are increasingly being called to play a more central role in the protection and conservation of cultural heritage and have the responsibility to stimulate innovation and creativity in a changing urban

context. Interrelation and integration with culture is not located solely in the cultural department, but also in education, business innovation, tourism, mobility, planning, inclusion, and housing among others. According to the specific needs, local governments through different departments can also contribute to the promotion of cultural heritage and apply for labels, funds and programmes put in place at other levels. Recognition, such as the UNESCO World Heritage list, the European Heritage Label and the European Capital of Culture, has been shown to increase the attractiveness of urban areas.

In reality, cultural national ministries, local governments and experts, more often than not operate in isolation or at a disconnect, and communication between the groups is weak. State interventions often takes longer to permeate and it is not always communicated in an accessible way (i.e. highly technical or discussion intensive); the feedback of the conservation-oriented experts and researchers does not answer the questions communities have (i.e. abstract theoretical questions), does not respect what communities feel is their shared heritage (in terms of promotion of citizenship), and does not consider a proper degree of autonomy and self-sustainability.

On the other side, local governments might not draw upon scientifically derived knowledge, expertise, methods or tools when identifying and solving certain challenges. They can also be heavily informed by pressing political or cultural trends.

As a further complication, when practical projects are forced to compete for resources (both financial and human) and balance the priorities of various actors, both public and private, the additional interest and input of the heritage conservation experts/intellectuals may not provide practical or realistic outcomes.

To advance and accelerate effective multilevel governance, the tensions and synergies across levels need to be further explored to identify mutually beneficial opportunities. While there does already exist some overlap between the different public and private actors, their continued dialogue and exchange is important and should be further strengthened. This is important because improved interaction between diverse objectives and priorities can lead to better results in both creative practices and strategies to implement them.

In this context, international and European organisations are becoming increasingly important and often local governments may cooperate directly with international experts, bypassing national governments. Such organisations play a key role in triggering new ideas, practices and models of heritage policies, as well as providing resources.

Yet, it is more difficult nowadays for the heritage conservation sector to influence communities in their behaviour related to cultural and environmental heritage. In addition, intellectuals/experts are losing control over the protection of heritage and feel they are unable to stop communities and administrators from partially degrading or misusing their sites according to what they define as ‘the lesser evil’ working method. Ideally, to generate positive impacts for cities and landscapes, the academic sphere and the heritage conservation sector need to be in a productive dialogue with public and private actors at all levels with no top-down approach. However, administrators at city level act at least partially in response to political stimuli and influences and need to mediate between conflicting interests without forcing projects upon people.

This leads to our question: what is the role of cities in this phase of greater recognition by European institutions and counselling bodies of the importance of cultural and natural heritage?

The Horizon 2020 project named CLIC² (Circular models Leveraging Investments in Cultural heritage adaptive reuse) focuses on governance, local regulation and management and identifies evaluation tools to test, implement, validate and share innovative “circular” financing, business and governance models for the systemic adaptive reuse of cultural heritage in the context of (historical) urban landscapes.

Firstly, CLIC sees heritage communities as a crucial building block for successful cultural heritage policies, following the approach pioneered by the Faro Convention on the Value of Cultural Heritage for the Society mentioned above.

The second key concept is the idea of cultural heritage as a common good, e.g. hybrid between public and private. The nature of cultural heritage therefore implies the need for certain governance models, which are able to manage our heritage commons. This

in turn calls for collaborative approaches that offer a pro-active role to all types of users, including civil society organizations, social enterprise, civic foundations, and community hubs and is in line with the Council conclusions on participatory governance of cultural heritage (2014/C 463/01):

“the increased recognition at international level of a people-centred and culture-based approach to foster sustainable development and the importance of transparent, participatory and informed systems of governance for culture in order to address the needs of all members of society” and “the importance of activating synergies across different stakeholders to safeguard, develop and transmit cultural heritage to future generation.”

In this perspective, CLIC established four Heritage Innovation Partnerships (HIPs), described in the section below, each convened by a tandem of local partners, one academic and the other from the city-region ecosystem (either the local authority in the cases of Salerno and Rijeka, the regional authority in that of Västra Götaland, and an NGO in that of Amsterdam).

The HIPs: A User Manual

The Heritage Innovation Partnerships (HIPs) are multi-actor partnerships, which are convened by four city/region partners and four research partners (see Table 1 and Figure 1) and led by ICLEI – the CLIC partner responsible for this process. Both have an equal part to play in the partnerships and the success of each HIP largely depends on their commitment and collaboration. ICLEI will also remain present throughout the process and aim to support the HIP partners in effectively communicating within and across the HIPs.

Objectives

The HIPs aim to gather stakeholders to co-create and test adaptive reuse blueprints for culturally, socially and economically inclusive societies in selected cities across Europe. This flexible and context-based model will contribute to the development of a coherent

framework of reference for existing adaptive reuse initiatives and together create new knowledge and tools to establish a basis for better, more effective adaptive reuse of cultural heritage as well as decision-making processes that make it possible to implement them. In particular, the HIPs represent the primary forum for embedding findings at the local level and ensuring their applicability. Both the work of the HIPs and the CLIC findings as a whole should support policy-makers and practitioners in anticipating the social, economic, environmental and cultural implications of adaptive reuse (whether positive or negative) in their decisions.

Methodology

Throughout the project CLIC, each HIP should involve actors that have a stake in planning, implementing and/or are affected (positively and negatively) by the adaptive reuse of cultural heritage. Together they will seek to identify challenges encountered in developing adaptive reuse at local level and test out the knowledge and tools from CLIC that could help to support the development of it on the ground. The stakeholders participating in the HIPs should represent different forms of expertise, as well as the diversity of urban society and the purposes for which adaptive reuse can be used. Participants could include utilities, urban developers and planners, conservation organisations, community groups, schools/education departments and businesses as well as the local research team, and the group should bring together approximately 10-15 participants. Ideally, stakeholders would participate in all (or most) HIP dialogues. However, this may be difficult in reality, due to the frequency and length of the meetings and the need for organisations to send different individuals due to conflicting commitments. This issue is particularly salient for civil society stakeholders who are often engaged on a voluntary basis and need to juggle with other commitments (e.g. paid employment). ICLEI therefore advises to seek to establish a core group of regular participants, to invi-

	City-region HIP leader	Academic HIP leader
HIP 1	City of Salerno (Italy)	Italian National Research Council
HIP 2	Västra Götalandregion (Sweden)	Uppsala University
HIP 3	City of Rijeka (Croatia)	University of Nova Gorica
HIP 4	Pakhuis de Zwijger (Amsterdam, The Netherlands)	Technical University of Eindhoven

Table 1: City-regions and academic leaders of the HIPs



Figure 1: The Four Heritage Innovation Partnerships (HIPs)

te additional participants depending on the theme and/or discussion points and encourage additional “spontaneous” meetings, if needed, to guarantee the respect of CLIC’s principles and criteria.

Other participants with a less obvious stake in adaptive reuse should also be invited (e.g. socio-economically marginal residents from neighbourhood in which adaptive reuse is planned; migrants and/or representatives from their communities with little knowledge of the local language but with high demand for open spaces). Local actors opposing cultural heritage generally or on a site specifically researched for CLIC should not be disregarded in the discussion.

The process is designed in such a way that the HIPs will at once provide input into the CLIC research programme, and draw on the knowledge and expertise of the CLIC consortium to address more localized challenges. By embedding the project’s work locally, the aim is to produce outcomes that are effective and adapted to the particularities of the different pilot areas.

There will be six HIP dialogues, four Peer Review visits and four Open Days during

the project timeframe. They will take place in each pilot area. The HIP dialogues will be important occasions to create and strengthen local multi-actors’ partnerships, co-create local action plans, and enhance local knowledge, ideas, capacities and co-operation. The Peer Review visits will provide the HIP leaders with opportunities to exchanging experiences among peers, which will be facilitated by ICLEI, with the aim of exchanging local experiences, gathering inspiration from others, and engaging in a review of what worked, what did not work, what could be done differently. Finally, the HIP Open Days will showcase HIP results at public events in September 2020.

Role and responsibilities

Each HIP is steered by two local partners: a representative from a municipal/regional or non-governmental organization and a representative from a local research institute. The responsible local organization is referred to as the city-region HIP leader, whilst the research staff member is the academic HIP leader. Though each plays an equal part in convening the HIPs, the city-region leader

organizes, hosts and facilitates the meetings, whereas the academic leader helps to broker the knowledge generated by the project, and records and keeps track of the meetings’ outcomes and agreements in a summary report. ICLEI will be responsible for the overall coordination of all implementation and review activities and will furthermore act as an “external coach” for the partnership as a whole. Each HIP will need to sit down and clearly allocate responsibilities at the outset of the process and reflect on them on a regular basis to ensure it works.

The detailed tasks of each partner are presented in the Table 2:

The HIPs will be able to receive support from the organised Advisory Board, which is a valued group of experts that will provide input, feedback and recommendations throughout the project. This will enable the HIP dialogues to address the adaptive reuse of cultural heritage in a more strategic and comprehensive way. The Advisory Board is composed of high-level international experts, many of them members or collaborators of the Laboratory of Research on Creative and Sustainable City, Lead Partner of the World Urban Campaign, based in Naples, which will be actively involved in the implementation of the CLIC project. The World Urban Campaign (WUC), a global partnership platform acting to promote sustainable urbanisation, will also be informed by the CLIC results and feed the project with important insights from its global partners.

Preliminary insights from the first HIPs Dialogue in Salerno

The first HIPs meeting was held in Salerno on October 8th, 2018, with the aims of:

- presenting the CLIC project: objectives, approach, methodology, expected results;
- presenting the HIPs process: objectives, approach, steps, roles and responsibility, expected results;
- presenting the stakeholder organizations: their mission, experience and expertise, their point of view regarding the adaptive reuse of cultural heritage in Salerno, highlighting strengths and barriers in their particular experience;
- mapping of cultural heritage resources through a collaborative effort: a questionnaire has been designed and proposed to stakeholders to map the reused cultural

City-region HIP leader	Academic HIP leader	ICLEI
<ul style="list-style-type: none"> - Organizing and hosting the HIP meetings - Clarifying roles and expectations among stakeholders - Formulating goals together with the academic leader - Guiding the development of locally relevant content that tackles issues or challenges raised by the HIP participants 	<ul style="list-style-type: none"> - Supporting the HIP city-region leader in conducting and organising the HIP meetings (e.g. through co-facilitation) - Writing a summary report at the end of each meeting - Informing ICLEI of emerging issues related to the practice or connection to the work programme - Discussing with ICLEI and local partners how to strategically embed the HIPs locally (e.g. by linking to existing activities or processes) and to develop locally-relevant communication strategies 	<ul style="list-style-type: none"> - Setting up the HIP process, developing appropriate guidance materials - Coordinating the HIP process, both ensuring its smooth progression and ensuring that relevant material are accessible and available (i.e. knowledge brokerage) - Facilitating the Peer Review process among the four partnerships - Producing a final report on the value added of the HIPs for the adaptive reuse of cultural heritage - Compiling a Report on Local Action Plans for adaptive reuse of heritage and landscapes comparing findings from the four partnerships

Table 2: Responsibilities of each partner

heritage in Salerno, as well as the underused and abandoned cultural heritage, highlighting strengths and barriers of the adaptive reuse at local level;

- assess the perceptions of stakeholders on the historic center of Salerno and its tangible and intangible cultural heritage, through the five senses – the perceptions mapping workshop was designed and implemented by ICHEC Brussels.

A rich set of participants was involved including institutions, private bodies, social/cultural/environmental associations, local journalists and opinion leaders. The common willingness of two partners was to “give space” to participants in order to share experiences, competencies and feedbacks.

The preliminary discussion highlighted the lack of participation of stakeholders in previous questionnaires launched by the municipality, linked to EU / regional funded programmes for heritage regeneration (P.I.C.S.). A set of specific priorities emerged from the discussion:

1 – The need to adopt a systemic perspective able to address cultural heritage through the landscape dimension, at macro and micro level;

2 - The need to create new relationships between public, private owners, private investors and local community that could reach a positive sum strategy gaining reciprocal benefits, through win-win-win partnerships, agreements, pacts in which the tangible impacts are integrated with intangible ones (symbolic, cultural, spiritual), and through which it would be possible to imple-

ment medium- and long-term adaptive reuse processes;

3 - The need of identifying new uses/functions taking into account the coherence of new use values with the “intrinsic” value of cultural heritage.

A total of 43 stakeholders participated in the first HIPs meeting in Salerno. The composition of the stakeholder is shown in Figure 2. The questionnaire on the mapping of cultural heritage resources in Salerno was made of the following sections:

1. Introduction explaining briefly the objectives of the questionnaire and why stakeholders’ engagement is important;

2. Personal data (optional): organization name and role of respondent in the organization;

3. Specific role of respondent in the reuse of cultural heritage:

- Politician
- Public administrator
- Expert in heritage conservation or heritage authority officer

- Researcher
- Heritage manager
- Private investor
- Entrepreneur
- Social entrepreneur
- Startupper
- Active member of civic associations / NGOs
- Member of Foundations (private or public)
- Representative of ecclesiastical bodies
- Journalist
- Student
- Active citizen interested in the adaptive reuse of cultural heritage
- Other (specify)

4. Mapping Section, made of 4 questions:

- Name and address of abandoned, underused or reused heritage
- State of use: abandoned, underused or reused
- Strength factors: financial, management, social, cultural, political, administrative, regulations, morphological (accessibility and use of spaces), other – with open description field

- Barriers & Bottlenecks factors: financial, management, social, cultural, political, administrative, regulations, morphological (accessibility and use of spaces), other – with open description field

The questionnaire was filled in by 16 people in the first week, highlighting 20 cultural heritage assets (abandoned, underused and reused) in the city of Salerno.

A resulting map was obtained, linking the locations on the Umap webtool (<https://umap.openstreetmap.fr/it/>) based on OpenStreet-Map technology (Figure 3). The map is dynamic and can be integrated over time, even by citizens directly.

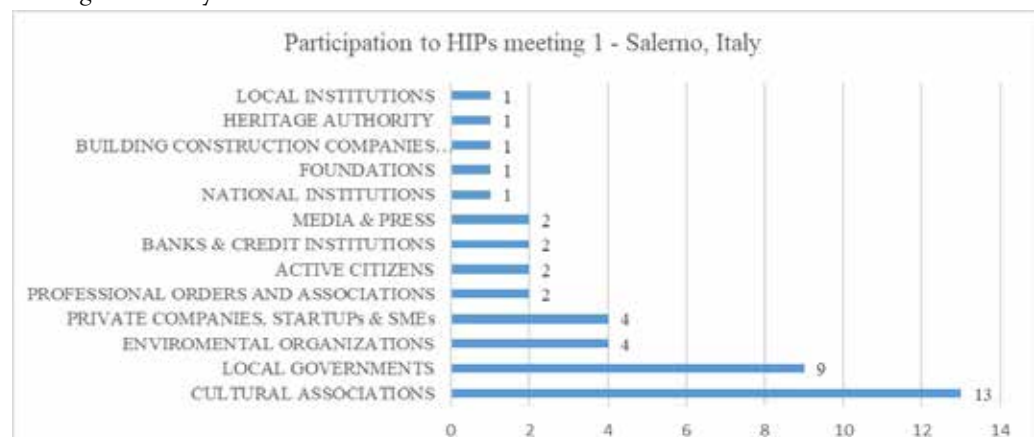


Figure 2: Number of participants to the first HIPs meeting in Salerno, Italy – overview of stakeholders’ typologies

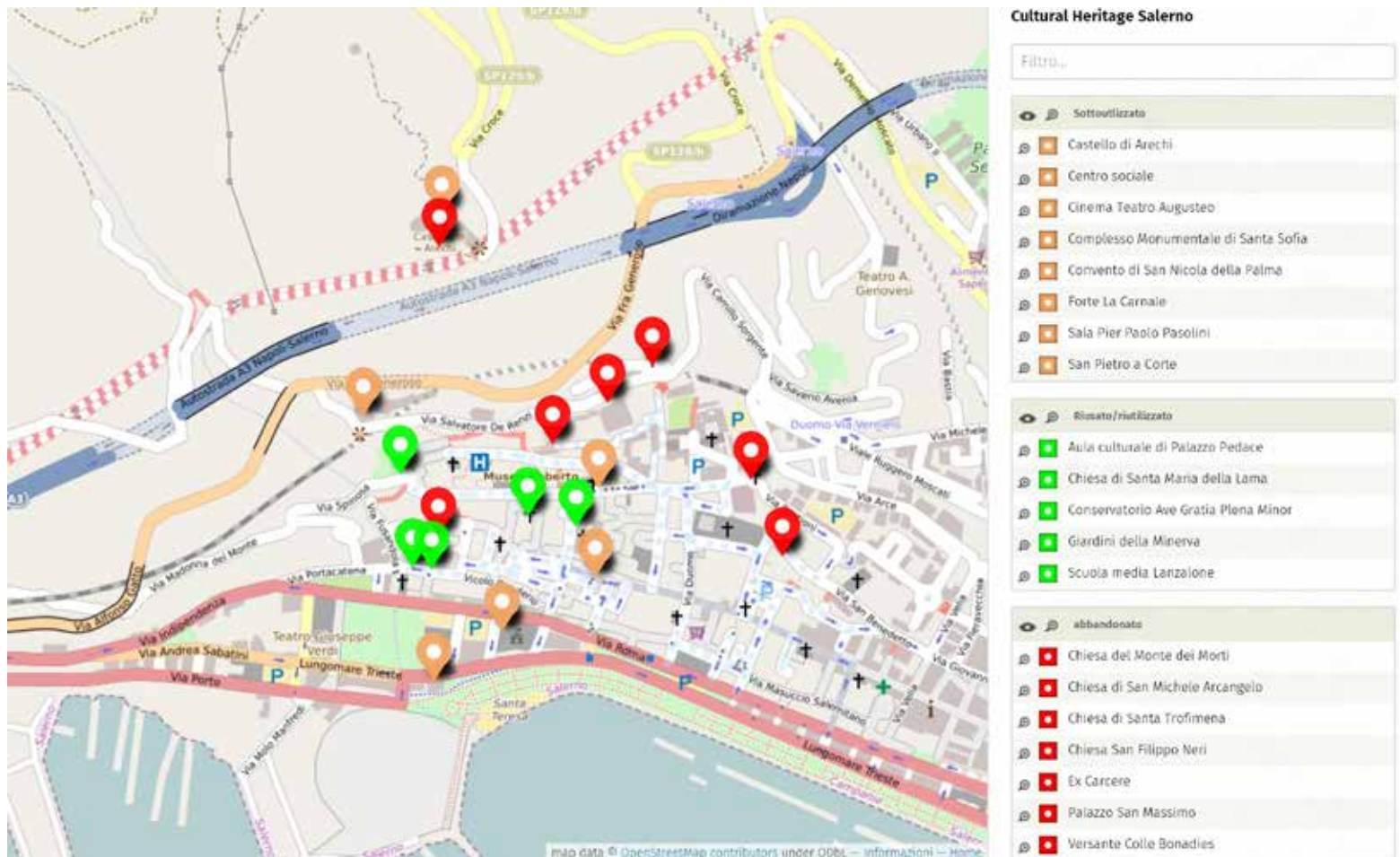


Figure 3: Map of abandoned, underused and reused cultural heritage in Salerno, Italy
 Source: CLIC project elaboration on Umap (<https://umap.openstreetmap.fr/it/>), elaboration by Amedeo Di Marco.

During the stakeholders' presentation session, the main key points regarding strengths and obstacles were discussed.

Strengths and potentialities:

- Positive collaborative processes and successful cross-sectorial partnership;
- Reciprocity between bottom-up and top-down actions maximising the efforts;
- High quality communication and involvement to capture the most of people involved or interested or make interested new categories of people that could give important instances to the process;
- Resilience and autonomy with regard to political and financial instability;
- Attractiveness of cultural heritage that could have an impact on a larger scale intervention.

Obstacles and critical points:

- Lack of fundings
- Regulatory gaps
- Scarse interest of administrations
- Bureocratic iters too long and complex
- Lack of interest and participation of the local community

- High level of decay of the cultural heritage
- Uncertainty of politics
- Lack of communication

The follow-up with stakeholders was an important step of the process. All invited and active participants were contacted again after the meeting and a follow-up questionnaire was proposed to understand what was interesting for them, what can be enhanced, what they expect from the HIPs, which collaborations are possible, who/which organization should be still contacted.

Conclusions

There is no single 'recipe' for securing that a research project – which does always imply a partly structured, and partly 'unstructured' process of interaction among participants – evolves and delivers consistently while adhering to transdisciplinarity. It is helpful to have handful criteria to refer to in making decisions to shape the HIP process – and to reflect on the outcomes from these choices made regularly. The criteria are set out in a series of questions that provide 'food-for-thought' for

the HIP leaders, ultimately helping to generate insights into how processes of knowledge co-creation work in the context of each HIP. These same criteria will be used by ICLEI to observe and reflect on the HIP activities and lessons – and the relevant outcomes regarding the knowledge on adaptive reuse. Questions regard four group of themes and are:

1. Inclusiveness & diversity: Are heterogeneous scientific, professional and experiential perspectives on adaptive reuse involved in the HIP? Do the stakeholders, participants and the extended HIP network represent different cultural, social and gender perspectives on adaptive reuse? Are any measures taken to secure contributions by diverse stakeholders along the project?
2. Equity & fair opportunities: Are participants in the HIPs encouraged to contribute equally? Are there 'predominant' actors and/or views that risk excluding or inhibiting participation of some? Are all inputs and feedbacks taken into account equally by the HIP leaders, and reflected in the strategy deployed for setting up and in the findings generated by the HIP meetings?

3. Flexibility & openness: Are the HIPs open to new participants and contributions? Are original and creative activities encouraged? Are HIP members resilient to changes, feedbacks and new learnings? Can HIP members interact in informal and 'unplanned' way? Are stakeholders able to influence the type and course of activities promoted according to their views and priorities?

4. Consistency & reliability: Are HIP activities and the relevant outcomes conducted and reported in a consistent way with the adopted transdisciplinary practice? Are periodic reflections on the knowledge co-creation process promoted and shared among HIPs leaders and their participants? Are some of them acting in ways that undermine or are contrary to the achievement of ICLEI's objectives? Is reflection on these possible obstacles and on the learning's derivable from them encouraged and documented by HIP leaders?

Steering a transdisciplinary process as part of a complex European project can be challenging at times, particularly for the HIP leaders. Based on ICLEI's experience, the following is a list of potential challenges and suggestions to overcome them:

Difficulty in discerning the role and influence of the partnership and its interaction with other partnerships ("Who are we and who do we want to be?"):

- Get inspired by similar projects, meeting involved partners and looking for advice. Meetings to facilitate knowledge exchange may be useful.
- Discuss expectation of HIP process with all HIP participants and reflect regularly whether they are being achieved and/or whether another round of reflections is needed.
- Together with the core HIP participants – and preferably at an early stage – clearly define the outcomes of the process, including the stakeholder engagement approach. This will give legitimacy to the process and guide all actions towards common goals.

Difficulty in engaging stakeholders and keeping them "connected" throughout the whole project:

- Identify suitable stakeholders by carefully studying their background and including in the process i) those who could be directly affected by adaptive reuse of cul-

tural heritage, ii) those who are attempting to help and iii) those who could help but are unaware of their role. Do not disregard stakeholders that may oppose adaptive reuse activities.

- Establish a solid core of participants that provide constant support throughout the process, yet allow for some degree of flexibility. Select other stakeholders according to their interest, expertise and/or background in the theme of the meeting.
- Give all participants the opportunity to express their concerns and share their ideas. Do not neglect any of them or exclude those from the process who do not have a big influence despite showing high levels of interest.
- Use a language that is accessible and easily understood by all the participants and stakeholders.
- Do not expect the same level and type of engagement from all the HIP participants. Offer suggestions, but let them decide how they want to contribute.
- Assess whether linking up to already ongoing local activities/initiatives/programmes on adaptive reuse and cultural heritage regeneration may make sense. Often this promotes uptake and is in the long run more sustainable.
- Communicate the date for the next meeting already at the end of the current HIP meeting and delegate tasks to participants.

Very limited inclusion of diverse representatives at meetings:

- Make good use of the peer-to-peer learning processes (cities and stakeholders are generally interested in them). Search for common goals to maximize their impact and enhance key motivation factors for collaboration.
- Invite representatives from every organization (i.e. one or two), otherwise some smaller organizations could feel intimidated and powerless. Small working groups ensure a better communication.
- Make sure that place, date, hour and agenda of the event communicated well in advance and using the right communication channels and formats. Take some time deciding which option is more suitable for the majority and at a time that is inclusive and open to everyone.
- Propose to host the HIP meetings at different participants each time.

Difficulty in identifying knowledge gaps and joint exploration of approaches to address them:

- A good communication channel between the local and academic leaders should be established by being open and flexible to each other's differences. Together, come up with an approachable language to address complicated technical expertise.
- Stakeholders are valuable: involve them in the identification of knowledge gaps and motivate them to think about solutions in the HIP meetings. These dialogues are an excellent opportunity to co-design and co-implement adaptive reuse measures.

Limited link to other policy processes ("What are the next steps?") and difficulty in promoting actions beyond conventional meetings ("Why" questions not followed-up by "So what" and "How to do it" initiatives):

- Undertake envisioning exercises to translate complex concepts and sophisticated tools into a set of practical and visual steps.
- Use the support offered by ICLEI (through involvement in meetings or via calls).
- Develop tangible questions for the participants and establish a clear workflow with milestones to be agreed by all stakeholders. Provide networking opportunities; promote active involvement of participants in working groups and brainstorming activities.

All HIP leaders will work with ICLEI to monitor and evaluate the local processes, distilling 'lessons learnt' from them, and building the project's transdisciplinary capacities. Clear lines of communication with and amongst these HIP leaders, participants and other stakeholders are essential to create trust for which the HIP leaders are responsible. Inclusiveness, equity, flexibility and consistency will be reflected on by the academic HIP leader after each meeting and will help to promote this process. These four criteria or principles are described in more detail in the next section.

Notes

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A decision support system for preservation and reuse of the cultural heritage

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Introduction

The present work regards the development of a decision support system for aiding municipalities in making decisions on complex urban regeneration policies such as the reuse of cultural sites (historical building or urban spaces).

For most European cities, with a centuries-long history, this issue is very important but also extremely complex. Indeed, on one hand, the urban needs and uses change over time, on the other hand, in order to preserve the city's identity, the cultural sites can only be transformed within an eligibility threshold. In addition, today, many other factors, such as climate change or the globalization, can have a strong impact on the cultural heritage and its preservation. Furthermore, although the European Union has identified the cultural heritage as a key economic resource, the available financial resources are rather limited.

In this perspective, it is very important to support the decision makers that have increasingly limited resources for a non-renewable heritage (as the cultural sites), clarifying opportunities and reducing risks of the transformations.

In this short paper, we will present a methodology for the selection of sustainable uses or projects by considering both the constraints of cultural heritage and the preferences of stakeholders.

Issues and proposal

Today the reuse of cultural heritage takes on new meaning related to the sustainable city paradigm. Indeed, the compatible reuse of the cultural sites has always helped the preservation of the cultural heritage over time, but now the interest in reuse focus also on the possibility to foster the urban sustainability. One of the recommendations for sustainability is the reuse of the buildings and spa-

ces because contributes in making better use of what we already have without increasing land or energy consumption.

Therefore, actions for adaptive re-use has potential positive economic/ environmental effects, and when they involve local communities, by activating processes of social innovation, can have a very positive social impact. When actions for adaptive re-use regard the cultural heritage (monuments or historical buildings, complex of buildings or entire neighborhoods such as historical centers, open spaces or historical gardens, etc.) their potentials are to be considered in terms of cultural and identity values too. It is necessary to consider tangible and intangible aspects, compatible uses or activities (arts and crafts, etc.), a sense of belonging, constraints, and limitations etc. The adaptive reuse of cultural heritage should have minimal impact on its historical significance and its setting.

For this reason, the reuse of cultural heritage has seemed, sometimes, more difficult to realize; however, in the last years it has appeared a renewed attention for the preservation of the cultural heritage, due to the identification of economic (e.g., Tuan and Navrud, 2008) and not economic advantages (Blake, 2000).

While the recognition of the impact of cultural heritage on tourism is well established, also by governmental organizations (e.g., McKercher et al., 2005), other effects and influences are also acknowledged as creating social inclusion (Vasile et al., 2015) or community engagement (Waterton, 2015) or improvement of the environment and the urban landscape (Veldpaus et al., 2013). It can also help to revitalize areas as, for example, the rural ones (Briedenhann and Wickens, 2004). For these regions, the local and international agencies promote the restoration of historic buildings, but also encourage the public awareness of cultural heritage, motivating governmental institutions to act for the preservation of local and national heritage. For example, the UK government has recently created a council for the management of the English heritage. Furthermore, also developing countries are increasing the investment in the sector. The involvement of the communities has massively increased with several initiatives as the search for additional sources of funding through the crowd-funding has been very much encouraged even.

However, in the current contest, a serious decrease in investments is leading the authorities to attempt to involve diverse organizations, groups, and actors interested in re-using abandoned properties.

The involvement of private sector along with other kinds of stakeholders seems to be needed, both because public funds are nowadays more difficult to obtain, and because it is unlikely that the Municipalities would be able to manage these sites alone.

In this way, cultural heritage, involving a variety of values, can trigger either top-down or bottom-up actions and can lead the urban regeneration.

However specific approaches are needed to support the local authorities in an interactive decision-making procedure that aims at finding the available resources and steering them in the right direction. Therefore, we needed methodologies capable of:

- considering different points of views and objectives (multi-objective approach)

- involving different stakeholder in the whole process supporting the identification of shared decision (interactive approach)

- considering each action as a part of a unique program, since the expenses must be rationalized and some constraints taken into account (portfolio decision analysis approach)

- defining the priority among many actions (prioritization approach)

Therefore, it is essential to integrate different approaches to support the decision-makers in the selection of the better portfolio of actions to be implemented. In this paper, we propose a methodology that can support the policymakers in this direction. In particular, our methodology consist of these phases (Barbati et al., 2018):

- Identification of the decision problem: identification of stakeholders and their points of view, criteria, actions and their performance for each criteria, and constraints;

- Prioritization of the actions defined by means of a multicriteria sorting method;

- Selection of a portfolio of actions, through an optimization process that identifies the maximum number of the actions that have the highest priority and do not violate any constraints;

- Robustness analysis to test the stability of the results with respect to the variability of parameters in the model.

The procedure we are proposing is strongly interactive in order to take adequately into account the heterogeneous objectives pursued by the plurality of actors (policy makers, stakeholders, analysts) involved, in the decision process

In particular, after prioritizing the feasible actions through a sorting method (e.g. ELECTRE TRI NC), a multiple objective optimization problem can be formulated in order to identify the most adequate portfolio of actions taking into account on one hand priorities, and on the other hand the different points of view and the specific constraints related to the policy makers and the stakeholders involved in the decision process. Along all the process a specific care is taken to permit all the actors to contribute at the design of the most appropriate urban policy.

The whole procedure permits also to formulate justifications and argumentations useful to the involved actors for acknowledging the goodness of the proposed solution, as well as to support the adopted decisions in communication towards a third party and public opinion.

Conclusion

The methodology proposed aims at:

- better directing the scarce resources available in the selection of the projects to be achieved;

- improving the transparency of the choices aimed at transforming the natural, built and historic environment and the cultural assets.

Through the interaction with different actors, it is possible to analyze the reuse of cultural heritage in terms of benefits for the city, the citizens and the stakeholders, in a process that involves a multiplicity of cultural, economic, environmental and social features.

Notes

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The influence of values on the composition of well-being indexes from the perspective of cultural heritage and circular models

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Introduction

Adaptive reuse of built heritage affects people in many different ways. Besides the obvious transformation in aesthetics it changes the local economy, environment, and social life. To understand the impact of adaptive reuse it is important to analyze the socio-economic situation of the community in which the built heritage is located before and after the realization of the project. Any analysis of potential effects should begin as soon as possible, ideally already at the early phase of preparation to the adaptation process. The essential element in this undertaking is the selection of a the right measure – the well-being index – that can be used to capture the changes induced by the adaptive reuse in the domains seen as the most important to the individual members of the local community.

There is a plethora of indexes which may be considered adequate - from those that measure subjective well-being by asking people directly how satisfied they are with their life (see Kahneman & Krueger, 2006, for a review of subjective measures of well-being) to those that are built from more objective measures derived from data related to health, education, safety, or environment. For example the Organization for Economic Co-operation and Development (OECD) has based its Better Life Index on 11 indicators: Housing, Income, Jobs, Community, Education, Environment, Civic Engagement, Health, Life Satisfaction, Safety, Work-Life Balance. These indicators have been classified as essential in the area of material living conditions and quality of life.

Sagiv and Schwartz (2000) presented a somewhat different approach to the issue of well-being. They argue that well-being depends on people's possibility of enacting personal values because values are in general

considered to be one of the key drivers of human performance. Values motivate actions and set standards for evaluation of own and others behavior (Schwartz, 2012; Schwartz & Bilsky, 1990), therefore, the environment in which people can embody the values which they cherish is conducive to positive well-being, while the environment promoting the values that are incongruent with personal values of its inhabitants can lead to their well-being becoming negative.

The focus on values corresponds with the ample research on the location-based notion of well-being, in which special recognition is given to "... cultural and environmental specificity of well-being for specific populations in a given setting." (Panelli & Tipa, 2007, p. 445). Consideration of place specificity maximizes the chances that the index embraces the complexity of mechanisms that affect the sense of wellbeing shared by the local population. However, it also means that the measures of well-being "cannot simply be transported to another culture without the risk of serious misrepresentation and misunderstanding." (Christopher, 1999, p. 149). In case of measuring of the impacts of adaptive reuse, it would mean that the effect of adaptive reuse that is considered to be positive in one location, might be evaluated as negative in another, therefore, geographical approach justifies tailoring of a the well-being index to each location separately.

Many well-being measures have already been created in accordance with the location-based approach (see Panelli & Tipa, 2007, for examples). For instance, the composition of the Canadian Index of Wellbeing was determined by the values identified by Canadians as those of highest importance for their quality of life. From the beginning, the formation of the index was conducted in collaboration with citizens. The process was concluded by extraction of nine core values: fairness, diversity, equity, inclusion, health, safety, economic security, democracy, and sustainability. The indicators chosen to compose the index had to reflect these values. Altogether the index was formed from eight domains: community vitality, democratic engagement, environment, education, health of the population, leisure and culture, living standards, time use.

Unfortunately, the geographic approach that enhances the validity of a measure for

the considered community, has one important flaw – it makes the comparison between countries, or even cities within the same country, much more difficult, if not impossible at all, because the list of possible values can be "endless" and each index can reflect another set of values. Here, we propose another approach to the composition of the well-being index. The well-being index should be driven by values, but unlike the place-centric approach it should capture the whole spectrum of values that may motivate people's actions no matter the geographical location. If we consider diversity as an asset, including the diversity of values that the community might act on, the well-being index shouldn't concentrate only on the values that are the most typical for the given location, but also encompass those that are cherished by minorities.

Theory of basic values

The theory of basic values offers a good understanding of values and their impact on behavior (Schwartz & Bilsky, 1990). Values, in general, have been the subject of research in many different social disciplines, from psychology to economics, but so far no other conceptualization of values has been backed by more abundant cross-cultural studies as the mentioned theory of basic human values. Research shows that the seemingly countless list of values that people may refer to in their behavior can be reduced to just ten basic personal values: self-direction, stimulation, hedonism, achievement, power, security, conformity, tradition, benevolence, and universalism, which afterwards can be grouped along two bipolar dimensions: (1) 'openness to change' – 'conservatism' and (2) 'self-enhancement' – 'self-transcendence' (Schwartz, 2012; Schwartz & Boehnke, 2004). Schwartz placed the values on the circle revealing their potential of compatibility (Figure 1). In the circular structure, each value has two close neighbors, i.e. compatible values, and far neighbors that are situated on the opposite side of the circle, i.e. conflicting values. Such arrangement of values is very informative because it depicts that specific behavior can be motivated by more than one value and that there are values that are almost impossible to be reconciled in one behavior. For example, fight against invigilation that is motivated by the value of

self-direction can be motivated also by such values as stimulation or universalism (i.e. compatible values) but not by such values as national security or conformity (i.e. conflicting values).

Schwartz extracted two bipolar dimensions based on where the values are located. The first dimension is called 'openness to change' – 'conservation' which represents the conflict between individual freedom, the inner desire of change or exploration and the values that refer to the preservation of social norms and order. The 'openness to change' is composed of three sets of values: self-direction, stimulation, and hedonism. The first one, self-direction, embraces the values which motivate self-improvement, excellence, creativity, or independence. Stimulation refers to the need of exploration, novelty, and variety that ensures the optimal level of activation. Hedonism originates from the need for experiencing pleasure and self-indulgence. 'Conservation' – the opposite side of the dimension – is also formed by a set of three values. They are tradition, conformity, and security. The first one, tradition, refers to group solidarity, humility, and acceptance which ensures the group's survival. Conformity is responsible for smooth functioning of groups; it emphasizes self-restraint, politeness, and obedience in interactions with others. The final set of values – security – addresses the need for harmony, safety and security at individual as well as national level.

Security is understood quite broadly here; it encompasses different aspects of security, such as health, social order or the sense of belonging.

The second dimension 'self-enhancement' – 'self-transcendence' echoes the conflict between collective and individual success and prosperity. On one end of the dimension, Schwartz puts 'self-enhancement' that represents the rather individualistically oriented values like power, achievement and partially hedonism. In this set, power represents the need for obtaining a dominant position, prestige, and control over others, while achievement refers to the need for ensuring personal success by demonstrating skills and competencies. Achievement values emphasize ambition, capability and intelligence. On the other pole of the dimension there is 'self-transcendence'. It is composed of only two sets of values: universalism and benevolence. Universalism is formed by such values as social justice, equality, tolerance, protection of the environment, and wisdom. It emphasizes the importance of the welfare of nature and other people, strangers. Benevolent values, such as helpfulness, honesty, or forgiveness, regulate the behavior toward close ones. They respond to the need for preserving and enhancing the well-being of the in-group members.

Each person possesses an individual system of values that is composed of the values that are most important to them (Schwartz &

Bilsky, 1987). The system is relatively stable, meaning that it does not change much over time. People living in a same location and sharing common beliefs and history, most often tend to develop systems of values which are similar to some extent. Evolution of the system is possible, but it needs time and appropriate conditions.

Values in well-being index

We argue that adaptive reuse of built heritage interacts with people's systems of values mostly by its functions and affordances. Moreover, a new approach to adaptive reuse that is inspired by the models of a circular city activates the characteristic set of values including creativity, openness, protection of the environment which might be more congruent with values of some communities than others. The rationale for the adaptive reuse of the unique piece of history is often fueled by the value of tradition, while the process of adaptive reuse often requires implementation of modern solutions and procedures that are not traditional for a local community and require activation of such values as openness to change and exploration. Not all communities can equally easy act on these opposite values. For example, some nations declare to follow customs and tradition more often than others (Figure 2). But does it mean that the well-being index for these communities should focus on indicators reflecting the value of tradition more than other values?

It is a fair question, because beside the dominant value that is shared by the majority of the community the detailed structure of values of individual members of the community can be quite diverse: some people may cherish other values more than the majority, e.g., universalism and benevolence over power and achievement, tradition over stimulation and self-direction, and vice versa. Preferably, the index of well-being should reflect the diversity of values as acting on own values motivate people most and contributes to their real well-being, while suppression of values might contribute to discomfort and development of negative inner states.

We believe that the theory of basic human values might be used as a framework for creation of a well-being index. Following Sagiv's and Schwartz's (Sagiv & Schwartz, 2000) findings about the effect of congruency between

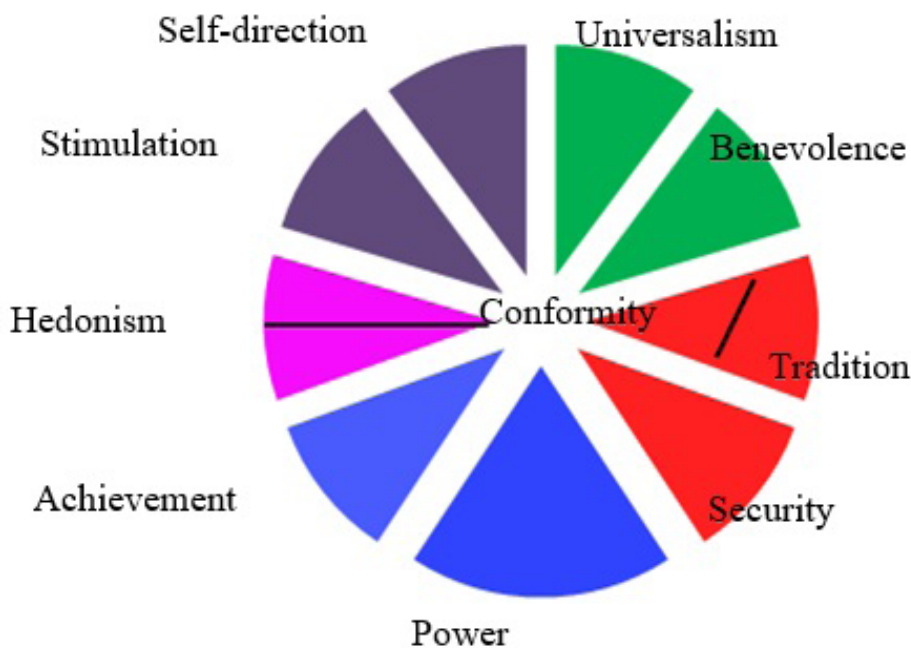


Figure 1. Theory of Human Basic Values

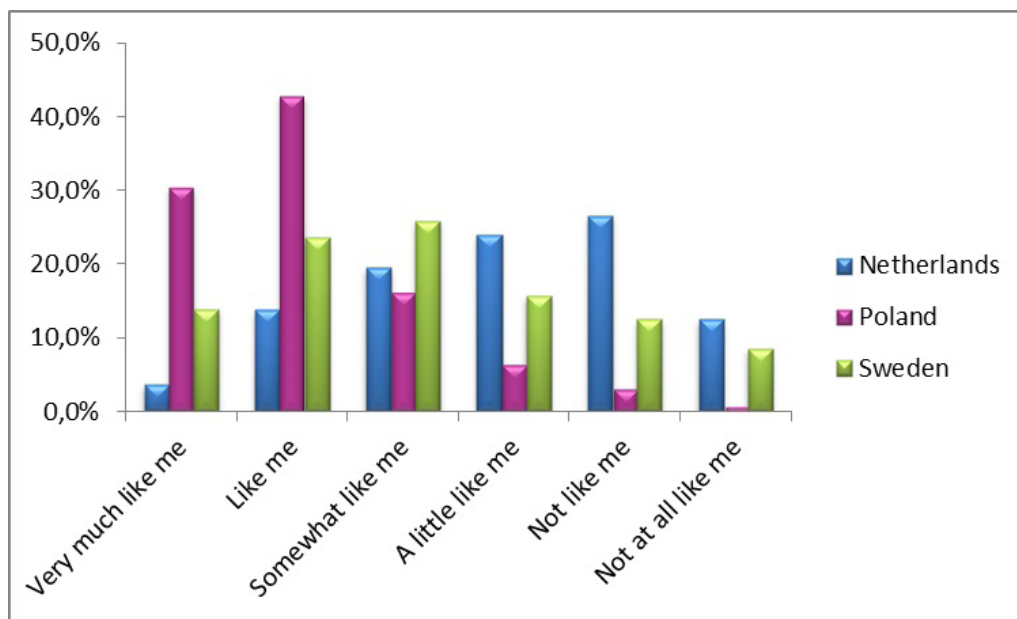


Figure 2. Frequencies of responses to the question about the similarity of the respondent to the person who follows the customs inherited from one's religion or family (value of tradition) in division by country. The data was derived from the World Value Survey (Inglehart et al., 2014).

en individual values and values promoted by the environment on well-being, we propose to go beyond geographical approach which suggests concentration on the values that are dominant in a given community, because such index reflects the vision of 'majority' well-being, however, at the cost of omission of the values that are important to the minorities and individuals. The more inclusive approach to the creation of the index would mean the selection of indicators that would correspond to each basic human value. Only than the well-being index could reflect the well-being of individuals and not the hypothetical majority.

Notes

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Towards an evaluation framework to assess Cultural Heritage Adaptive Reuse impacts in the perspective of the Circular Economy

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Introduction

The evaluation key role in cultural heritage adaptive reuse choices for identifying the best relationship between the “intrinsic value” and new use values.

This paper investigates the relationships between Circular Economy, Circular City and Cultural Heritage Adaptive Reuse through evaluation tools based on criteria and indicators of circularity.

The Horizon 2020 CLIC project (Circular models Leveraging Investments in Cultural heritage adaptive reuse) develops integrated evaluation tools to support choices for cultural heritage adaptive reuse, taking into account the “intrinsic value” and thus the Social Complex Value of heritage in the perspective of the Circular Economy (Fusco Girard et al., 2018). The Circular Economy is the economy of relationships and efficiency (Ellen MacArthur Foundation, 2013, 2015; Wijkman and Skånberg, 2015; Ghisellini, Cialani and Ulgiati, 2016; Kirzherr, Reike and Hekkert, 2017), which conserves the “intrinsic value” over time, through new use values / functions (Fusco Girard and Gravagnuolo, 2017; Fusco Girard et al., 2018). The Social Complex Value (Fusco Girard, 1987; Fusco Girard and Nijkamp, 1997) of cultural heritage can orient evaluation processes to identify good practices.

Objectives

This work is focused on the structuring of a systemic evaluation framework based on criteria to assess Cultural Heritage Adaptive Reuse impacts in the perspective of the Circular Economy. Pilot applications in Belgian and Italian case studies are presented.

Circularity assessment for cultural heritage adaptive reuse practices

Circularity of cultural heritage has always been on the agenda, since adaptive reuse practices are fundamentally related to heritage conservation. Cultural heritage can be defined as an amount of resources (cultural capital) that provides over time a range of cultural, social, economic, and environmental output. Even before sustainability became mainstreamed in the world agenda, practices of conservation were characterized by keeping existing resources, and trying to adapt such resources to changing needs and uses for the local communities (Labadi and Logan, 2016; Larsen and Logan, 2018). Hence, the process of circular economy has always been, and still is embedded in any decision of protecting and conserving cultural heritage. What has changed today is for adaptive reuse of cultural heritage not to be justified by cultural values only, but by the sustainable development paradigm. Today we acknowledge that adaptive reuse provides social, economic, and environmental values, together with cultural values (CHCfE Consortium, 2015). Hence, the circularity assessment for cultural heritage adaptive reuse practices must take into consideration all categories of values together, as a combined result of conservation practices (Gravagnuolo et al, 2017).

In order to identify evaluation criteria in the perspective of circularity, it is necessary to define the key concepts:

- *Circular economy* is the economy of natural bio eco/system that reduces entropy, increases resilience and stimulates cooperation between components (it starts from the search of efficiency, but it is based and it stimulates cooperation / synergies). It is the economy of co-evolution, co-operation, coordination of actions for a common interest.
- *Circular city* is the concept of city as a living complex dynamic circular system: cities able to self-organize, self-manage, self-govern themselves.
- *Cultural Heritage* is the memory itself of the urban living system; it is the heart of the city, its identity conserved over the centuries.

The methodology for assessing circularity of decisions for adaptive reuse of cultural heritage must address five perspectives attached to the conservation decision: conservation

as circular transmission of heritage values, conservation works as circular environmental process, conservation works as circular intangible process (arts and crafts), conservation works as circular business, governance, and financing models, and conservation as circular provider of new, innovative, creative uses on site and across the area.

Conservation as circular transmission of heritage values:

Decisions for adaptive reuse contributes to preserve, maintain and enhance heritage values (artistic, historic, architectural, social, economic, aesthetic, scientific, etc). Authenticity and integrity of cultural heritage are key-factors for such decisions.

Conservation works as circular intangible value generation process:

Decisions for adaptive reuse implement local skills, techniques and knowledge, and preserve an important link between tangible and intangible values of the place.

Conservation works as circular environmental process:

Decisions for adaptive reuse implement sustainable energy systems, water storage and reuse systems, with the utilization of local traditional materials, bio-materials or reused materials. It also contributes to:

- 1- reducing land and resources consumption
- 2- diminishing construction waste and landfill
- 3- preserving the ecosystems, and
- 4- halting/reversing biodiversity loss

Circular business, governance, and financing models:

Decisions for adaptive reuse implement the use of circular business models (balancing cultural and economic values), the use of circular governance model (public, private and social stakeholders in cooperation and/or partnerships, top-down and bottom-up approaches), and the use of circular financing models (crowdfunding, investment at local level through local banks, ethical banks, Foundations, and involvement of the third sector, NGOs, Foundations, Social Enterprises, Associations).

Conservation as circular provider of positive net impacts through new, innovative, creative uses:

Decisions for adaptive reuse contributes to new, innovative, creative uses that connect the project to the broader area. Impacts in the area includes economic spill-overs (direct and indirect jobs creation, output, and expenditures, real estate, attractiveness for cultural and creative industries, new businesses, new residents, new visitors), social spill-overs (social cohesion, social inclusion, heritage community creation). Decisions must also mitigate negative spill-overs (gentrification, mass tourism, loss of local jobs).

An evaluation proposal: two cultural heritage adaptive reuse practices in Belgium and Italy

A case study in Belgium, Tour à Plomb, Brussels
The industrial complex of Tour à Plomb, alias Brussels shot tower, was built in 1832 as a gunpowder factory (poudrière). Subsequently, a foundry and a workshop were established and in 1898 the shot tower was constructed. In 1873, the industrial site became the property of the company Pelgrim and Bombeeck and in the 1930s it became part of the Hoboken Overpelt Metallurgry (Mardaga, 1975). In 1962 the site was abandoned. Since 1975, it was partially used by the Arts and Crafts institute and the Bischoffsheim Institute (high school) and successfully by the Demot-Couvreur Institute (high school). Since the 2000s, the complex was unused.

Intrinsic value and new use values. The shot tower became a distinct element of Brussels urban landscape. This 55 meters' height tower witnesses the last industrial activity of this kind in Belgium and one of the last few prototypes in Western Europe. It was listed as a monument in 1984 and it is an integral part of Brussels heritage. By dropping from the top of the tower drops of the mixed lead it was brought to its melting point while significant cooling and shaping processes occurred during the fall in the chimney. The technological advancement at the end of the 20th century, led to requiring less height and eventually to the demolition of most of the shot towers. The new use value is related to neighborhood events, associations activities, sports hall, theatre, multifunctional space and school classrooms. It embodies the strong linkage of citizens with the heritage building

as a symbol of local identities, open to existing and new residents – a place where new community relationships can be built, giving new sense and meaning to the old fabric.

Adaptive reuse of Tour à Plomb. This industrial vestige is situated in rue des Fabriques, in the popular neighborhood of Jardin aux Fleurs in the heart of Brussels. The project was the result of a Contrat de Quartier (2011 - 2015), a sustainable neighborhood contract. An action plan between the Brussels-Capital Region and the City of Brussels aimed at improving the living environment of a precarious neighborhood. The City received a fixed budget and it had four years to implement its action plan and additional two and a half years were dedicated to the construction phase. The Contrat de Quartier is normally financed by the Brussels-Capital Region; BELIRIS¹; the municipality, and regional or para-regional bodies and/or private operators. The restoration works amounted to 6.8 million euros. The Brussels-Capital Region and the City of Brussels contributed each by 1.823.587 thus, their total contribution amounted to: 3.647.174 Euros. The renovation works started on 11 April 2016 and the site was inaugurated on 24 June 2018.

Impact of new uses. The adaptive reuse restituted to the neighborhood a part of its industrial heritage. This socio-cultural, and educational center is completely dedicated to the neighborhood activities. The current site is composed of a theater and gymnasium hall open to neighborhood initiatives on the ground floor, a hall with a bar in the basement, offices and a mezzanine linked to the theatre on the first floor, and on the third floor a multipurpose hall/library. On the 2nd floor five classrooms and a teachers' room were added for the use of the high school next door, Demot-Couvreur Institute, while the school's courtyard was refurbished with repurposed materials reused from the site. The multipurpose spaces for the school and the neighborhood's associations strengthened the neighborhood's social cohesion and created a hub for community activities and cultural exchange. The tower is visitable once a year during the annual heritage day in Brussels.

Circular economy. The project was the winner of Be Circular 2017, the annual call for projects of Brussels Regional Program of Circular Economy (PREC). In terms of conservation works, the materials reused in this

project came from the site itself. According to entrepreneur Arnaud Dawans², Jacques Delens enterprise has developed a circular approach in order to minimize waste construction and use of new materials. In this regard, 60 m³ of old bricks were dismantled, cleaned and reused in situ; nine old beams and an old floor of almost 500 m² were conserved and reinforced to preserve the old shape; old wooden beams 9.5 m long were refurbished into urban furniture as benches; old small granite stones were repurposed into urban furniture at the entrance and in the courtyard; the existing wooden beams were conserved and reinforced; the old logs (used for formwork) were repurposed and reused as big wooden doors. Moreover, the project developed a synergy of thermal and acoustic insulation in respect of the authenticity of the place tailored to each room and its reuse destination. Finally, a peculiar aspect was the innovative construction method based on in-situ training. Workers were trained in selective deconstruction and repurposing techniques. The availability of skilled human capital and in-situ reuse workshop, facilitated an in-situ decision-making process and shortened the loops.

A case study in Italy: Palazzo Innovazione, Salerno

The Benedictine monastery of St. Sophie in Salerno was realized in the X Century AD and has a great long history of uses and reuses over centuries. In 1309 it become seat for Benedictine nuns, which use lasted until 1589, when they moved to another monastery. The building passed to Jesuits until 1778 and after this date it was given to Carmelitan fathers of Pope Clemente IX. In 1807 a Napoleonic decree suppressed the religious use and the building become a Civil Courthouse. In 1938 the use value was linked to education (public school).

Intrinsic value and new use values. The intrinsic value is the “essential” value that is rooted in history and culture. It is here linked to the Benedictine Regula, and in particular to some specific aspects:

- The value of the circuit of human relationships that generates a collaborative / cooperative community
- The value of relationships with the natural environment / territory to ensure a systemic harmony

• The value of hearing and communication, as condition to stimulate the promotion of culture and thus of creative acting. The intrinsic value of religious cultural heritage has always oriented the design and management of religious architecture, giving physical-spatial form to the cultural heritage, as well as offering a direction to local urban development.

The intrinsic value still represents the fundament that should orient any adaptive reuse perspective of disused cultural heritage. A “rational” choice is that aiming at the compatibility between possible use values and intrinsic value.

Adaptive reuse of St. Sophie Benedictine monastery. After a long period of abandonment, the monumental complex was recovered by the Municipality within the URBAN programme in Salerno (1994-1999) and it was used as place of public events and exhibitions. In 2016 a renovation and reuse project was proposed to the Municipality to use the former monastery as Innovation Palace hosting a co-working space for start-ups, incubator and venture capital services, meetings and events rooms. The private company Healthware s.r.l. invested more than 700.000€ to recover the internal areas and adapt them to the new functions. The investment in technology was important, since the 30 Km of new cables required a specific design. The renovation works were closely supervised by the local Heritage Authority, the building having a heritage protected status by national law (Law 1939). The Municipality restored 10% of the investment as contribution. The adaptive reuse was realized through the cooperation of public and private actors, which built a synergic win-win model in which all parties recognize benefits. A monthly rent for the use of the building is paid to the Municipality by the private company, which has moved its EU headquarters to the city of Salerno and manages the coworking space and other services through a spin-off start-up.

The reuse appears to reflect the circular virtuous process between intrinsic and use values.

Impacts of new uses. “Palazzo Innovazione” started its activity in April 2018. The building currently hosts 10 start-ups and about 100 coworkers who find a peaceful and creative atmosphere in the monastery. The major

ity of users work in the creative and cultural industry. The brand of Palazzo Innovazione is strictly linked to the heritage value of the place, which represents its specific added value to attract businesses. Although scarcely perceived in the surrounding area, the adaptive reuse as innovation hub is slowly generating positive impacts. Commercial activities as bars and restaurants, once open only in the evening, are starting to open for lunch to capture the opportunities of about 100 new workers in the area. Local Hotels and B&b, as well as Taxis, served the 1100 people hosted since April 2018 for the events and business meetings of Palazzo Innovazione. Commercial activities are starting to contact the managers to propose commercial partnerships. The surrounding area is becoming cleaner and thus more attractive, due to the synergic efforts of Palazzo Innovazione and locals.

Circular economy. The renovation project includes for the moment the substitution of the entire halogen lighting system with a led lighting system, ensuring the reduction of energy consumption and cut of costs. Energy efficiency is combined with an internal awareness raising campaign (M’illumino di meno) targeting the users of Palazzo Innovazione to optimize the use of artificial light. Green procurement has been adopted to choose the furniture of the building: most stuff is made of reused and recycled materials. The ancient windows have been recovered, using more efficient glasses where possible. The building is “plastic free”: users bring their own water dispensers and a water tank is available for all to avoid plastics need. The building has a precise “car-free” and health policy targeting users to stimulate healthy lifestyles: partner parking lots have been chosen at a minimum distance of 1.500 steps, allowing a 20 minutes’ walk or quick bike tour to reach the working space.

Conclusions

The discussed projects in Salerno and Brussels demonstrate that circularity of decisions are possible and capable of challenging existing mind-sets.

In the Brussels case, the importance of the investment in the human capital and its active engagement in the decision making process was key to preserving the authenticity of the place, reducing the construction waste and

energy dispersion related to transportation and CO2 emissions. Moreover, it was perceived by the entrepreneur as a capitalisation for future projects. In the meantime, the financial model of the Capital Region of Brussels for a sustainable construction project, based on the design (conception phase), circular construction site and the impact is an interesting incentive mechanism which triggered creativity.

The Brussels case also indicate that economic and cultural values are well connected, because of a comprehensive project that exemplifies both heritage values (the last shot tower in Belgium) and urban values (spillovers in terms of visitors and of new facilities erected in the neighbourhood). The adaptive reuse enhanced the attractiveness of the area and in September 2018 during Brussels Comics Festival, a fresco was created by Turk and realised by Urbana. This 56th comic book mural, is the in Brussels to represent a screenwriter. The case-study highlights that adaptive reuse of cultural heritage can have circular processes both in terms of cultural than traditional sustainable values.

In Salerno, the heritage value of the ancient monastery acted as catalyst for private investment, in synergy with the municipality. While a circular strategy for building construction works has not been clearly expressed, the reuse of materials, spaces and furniture was implemented spontaneously in a sustainability perspective.

The adaptive reuse enhanced the attractiveness of the city of Salerno for start-ups and creative entrepreneurs, who started moving from other locations to Salerno, generating positive economic impacts in the city and new flows of people and local commercial activities. Currently, the managers established stronger direct connections with businesses outside the city, since the services developed are highly digitalized and can be self-sustainable exploiting virtualization strategies. However, the administration is starting strengthening the relationships with local stakeholders, also thanks to the participatory process started in Salerno through the CLIC project to co-create a Local Action Plan for heritage reuse in the perspective of the circular economy and circular city.

The case-studies demonstrate that conservation decision are interconnected and the fulfilment of the circularity of decisions depend

on the well and commitment of the authorities, the local community and the private sector to the sustainable development paradigm, a common vision towards a “humanized city” as stated in the Habitat III New Urban Agenda 2030 (United Nations, 2016), the most relevant international agenda to guide urban sustainable development strategies.

Notes

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1 Beliris is a collaboration between the Federal State and the Brussels-Capital Region.

2 site visit on 24/10/2018 under the framework of the annual meeting: Brussels pioneer region in circular economy

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