

Fusco Girard, L. and Gravagnuolo, A. (2017) 'Circular economy and cultural heritage/landscape regeneration. Circular business, financing and governance models for a competitive Europe', BDC. Bollettino Del Centro Calza Bini, 1/2017(1), pp. 35–52.

Haas, T. and Westlund, H. (2017) In the post-urban world: Emergent transformation of cities and regions in the innovative global economy, In *The Post-Urban World: Emergent Transformation of Cities and Regions in the Innovative Global Economy*. doi: 10.4324/9781315672168.

Nobre, G. C. and Tavares, E. (2017) 'Scientific literature analysis on big data and internet of things applications on circular economy: a bibliometric study', *Scientometrics*. Springer Netherlands, 111(1), pp. 463–492. doi: 10.1007/s11192-017-2281-6.

Ravetz, J., Fusco Girard, L. and Bornstein, L. (2012) 'A research and policy development agenda: fostering creative, equitable, and sustainable port cities', *BDC Bollettino del Dipartimento di Conservazione dei Beni Architettonici e Ambientali*, 2/2012.

Schaffers, H., Ratti, C. and Komninos, N. (2012) 'Special issue on smart applications for smart cities - new approaches to innovation: Guest editors' introduction', *Journal of Theoretical and Applied Electronic Commerce Research*. doi: 10.4067/S0718-18762012000300005.

United Nations (2015) 'Transforming our World: the 2030 Agenda for Sustainable Development'. United Nations.

United Nations (2017) 'New Urban Agenda', United Nations Conference on Housing and Sustainable Urban Development (Habitat III). United Nations.

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.

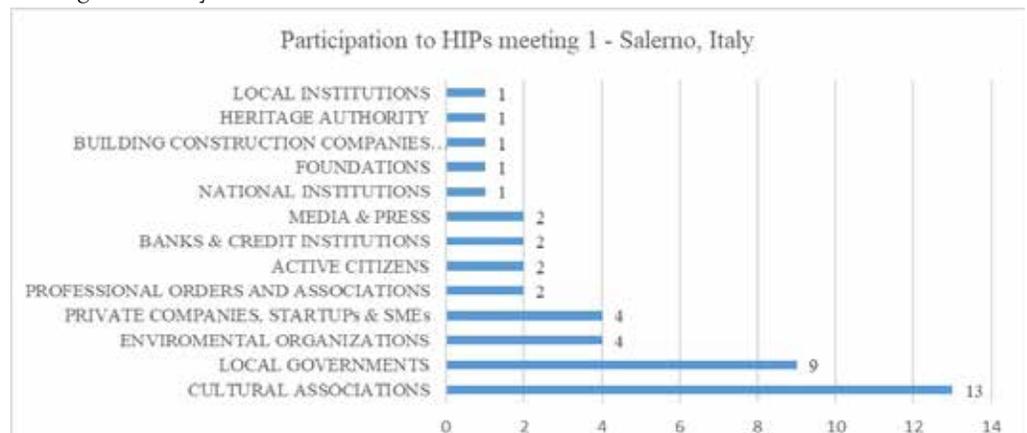


Figure 2: Number of participants to the first HIPs meeting in Salerno, Italy – overview of stakeholders’ typologies

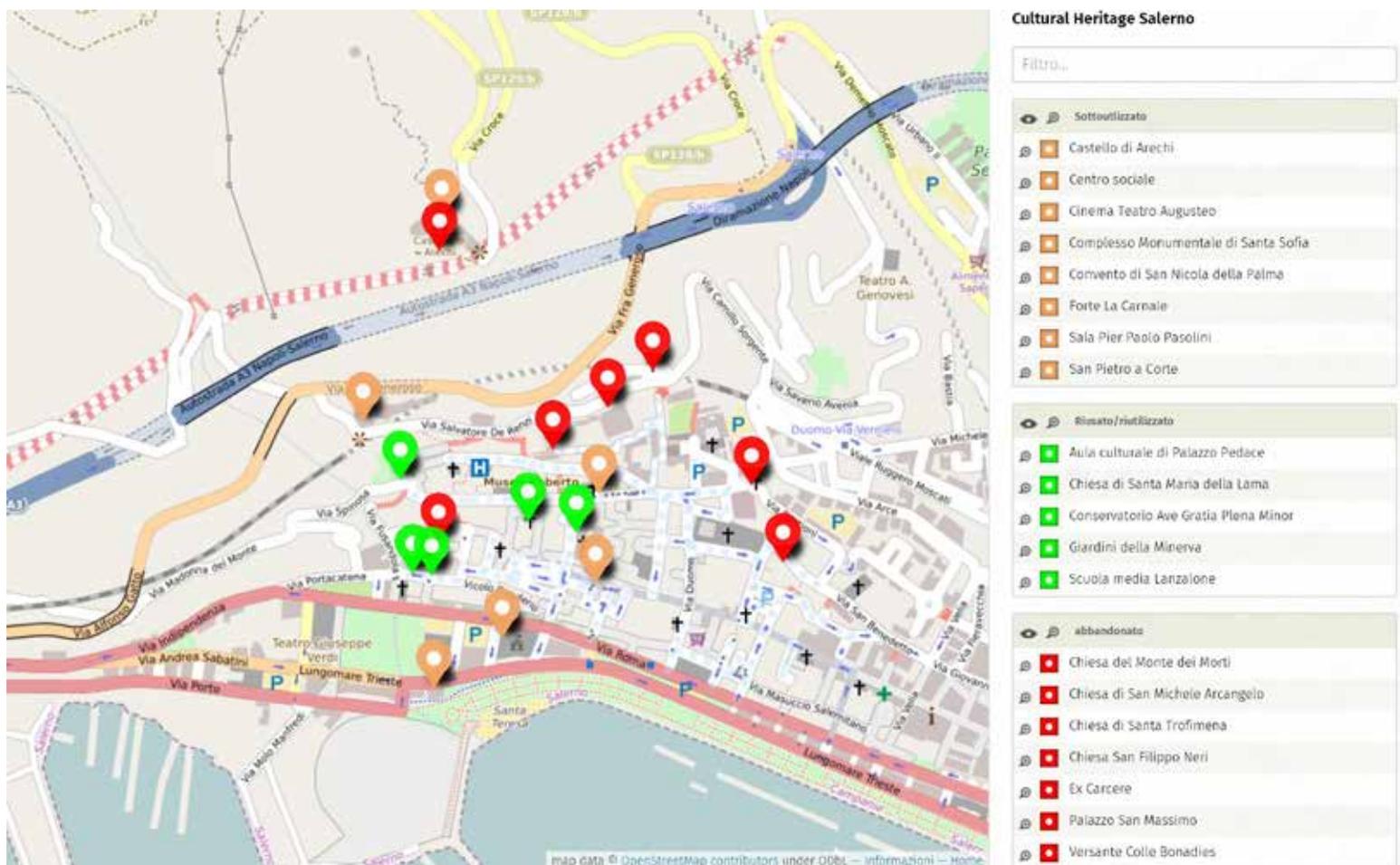


Figure 3: Map of abandoned, underused and reused cultural heritage in Salerno, Italy
 Source: CLIC project elaboration on Umap (<https://umap.openstreetmap.fr/it/>), elaboration by Amedeo Di Marco.

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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1 The Council of Europe Framework Convention on the Value of Cultural Heritage for Society, 2005

2 <https://www.clicproject.eu/>

References

Council of Europe (2005), Framework Convention on the Value of Cultural Heritage for Society, Faro Convention, 27/10/2005, CETS No.199.

Council of Europe (2014), Council Conclusions on participatory governance of cultural heritage (2014/C 463/01).

Cultural Committee for a New Narrative for Europe project (2014), Declaration on a New Narrative for Europe. Available at ec.europa.eu/debate-future-europe/new-narrative/pdf/declaration_en.pdf.

European Commission (2007), COM(2007) 242 final and Resolution of the Council of 16 November 2007 on a European Agenda for Culture. Available at https://ec.europa.eu/culture/policy/strategic-framework_en.

European Commission (2014), Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions "Towards an integrated approach to cultural heritage for Europe", COM (2014) 477 Final.

European Commission (2015), Report of the Horizon 2020 Expert Group on Cultural Heritage Getting Cultural Heritage to Work for Europe, Directorate-General for Research and Innovation.

European Commission (2018), COM(2018) 267 final on A New European Agenda for Culture. Available at https://ec.europa.eu/culture/policy/strategic-framework_en.

European Parliament (2017), Decision (EU) 2017/864 of the European Parliament and the Council of 17 May 2017 on a European Year of Cultural Heritage 2018.

European Union (2012), Consolidated versions of the Treaty on European Union and the Treaty on the Functioning of the European Union 2012/C 326/01.

UNESCO (2011), Recommendation on The Historic Urban Landscape. Available at <https://whc.unesco.org/uploads/activities/documents/activity-638-98.pdf>

<https://umap.openstreetmap.fr/it/>

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.