CLIC

Circular models Leveraging Investments in Cultural heritage adaptive reuse

D6.19
Final Conference
set of documents / video

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 776758

2018 EUROPEAN YEAR OF CULTURAL HERITAGE #EuropeForCulture

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Deliverable 6.19

Final Conference set of documents / video

Version 1.0

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Dissemination Level

☒	**PU:**	Public
☐	**PP:**	Restricted to other programme participants (including the Commission
☐	**RE:**	Restricted to a group specified by the consortium (including the Commission
☐	**CO:**	Confidential, only for members of the consortium (including the Commission Services)

Abstract

The deliverable D6.19 Final Conference set of documents/video falls within the project work package dedicated to Dissemination, Exploitation and Communication (WP6) and, precisely, within the Task 6.3, Implementation of communication and dissemination activities envisaged (M1 - M45).

This report provides a collection of material and video related to the final event organized and attended by CLIC Consortium representatives for dissemination purposes to present project activities and share the main findings from February 2021 to September-October 2021.

In this regards it is worth noting that, with specific reference to the achievement of the Objective 11 of the Project (To contribute to the monitoring and implementation of SDGs - especially Target 11.4 - and the New Urban Agenda, creating operational synergies with global initiatives of UNHabitat, UNESCO/ICOMOS and the World Urban Campaign), CLIC Partners have also activated synergies with international associations and organizations that have been invited to contribute to the CLIC Final Conference, with respect to the key role of cultural heritage in addressing sustainability through the circular economy approach. In addition, also CLIC Partners participated to initiatives organized at European and International level.

Partners involved in the document

Participant No	Participant organisation name	Short Name	Check if involved
1 Coordinator	CONSIGLIO NAZIONALE DELLE RICERCHE	IRISS CNR	X
2	UPPSALA UNIVERSITET	UU	
3	HAUTE ÉCOLE ICHEC - ECAM - ISFSC	ICHEC	
5	TECHNISCHE UNIVERSITEIT EINDHOVEN	TU/e	
6	UNIVERSITY OF PORTSMOUTH HIGHER EDUCATION CORPORATION	UOP	
7	UNIVERZA V NOVI GORICI	ETCAEH	
8	WIRTSCHAFTSUNIVERSITAT WIEN	WU	
9	UNIWERSYTET WARSZAWSKI	UNIWARSAW	
10	ICLEI EUROPEAN SECRETARIAT GMBH	ICLEI	
11	FACILITYLIVE OPCO SRL	FacilityLive	
12	VASTRA GOTALANDS LANS LANDSTING	VGR	
13	GRAD RIJEKA-GRADSKO VIJECE	RIJ	
14	COMUNE DI SALERNO	SA	
15	STICHTING PAKHUIS DE ZWIJGER	PAK	
16	INIZIATIVA CUBE	INI	
17	TECHNOLOGICAL UNIVERSITY DUBLIN	TU Dublin	

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1 Description of the Project

The overarching goal of CLIC trans-disciplinary research project is to identify evaluation tools to test, implement, validate and share innovative "circular" financing, business and governance models for systemic adaptive reuse of cultural heritage and landscape, demonstrating the economic, social, environmental convenience, in terms of long lasting economic, cultural and environmental wealth.

The characteristics of cultural heritage and landscape pose significant challenges for its governance. Cultural heritage is a “common good”, which enjoyment cannot be denied to citizens, although many buildings and landscape structures are privately owned. Furthermore, the large economic resources needed for recovery and maintenance of heritage goods are rarely available to the private owner, often charged of the additional cost of non-use due to limited degree of transformation allowed. The existing governance arrangements currently involve limited stakeholders concerning for the historic, aesthetic or religious sociocultural values, severely restricting the use of the heritage properties, and charge the central government of conservation costs. The approach of regulatory and planning tools throughout European countries has been to preserve cultural heritage by preventing transformation of buildings or areas having historic-cultural significance.

“The current monument-based, full protection, and government-financed approach that restricts the use of protected properties and relies almost entirely on public funds is incapable of tackling the vast urban heritage of most communities and of sustaining conservation efforts in the long term” (Rojas, 2016). To turn cultural heritage and landscape into a resource, instead of a cost for the community, the structures of authority, institutions and financial arrangements should be adjusted to ensure larger stakeholders’ involvement in decision-making, attract private investments and facilitate cooperation between community actors, public institutions, property owners, informal users and producers (Rojas, 2016). The risk is that without financing channels the decay of European heritage and landscape will increase, until its irreversible loss.

Flexible, transparent and inclusive tools to manage change are required to leverage the potential of cultural heritage for Europe, fostering adaptive reuse of cultural heritage / landscape. Tools for management of change should consider costs and benefits at the local level and for all stakeholders, including future generations, and should take into account the cultural, social, environmental and economic costs of disrepair through neglect, compared to the benefits obtained through diverse scenarios of transformation / integrated conservation.

Costs and values of cultural heritage adaptive reuse (CHAR) have to be compared in a multidimensional space: the relationship between costs and “complex values” influences the willingness to invest in the functional recovery of cultural heritage and landscape. Therefore, it is necessary to clarify what is intended for the value of cultural heritage. The higher the perceived value for potential actors, the higher the willingness to take the risk of investment. This “complex value” of cultural heritage depends on the intrinsic characteristics, but also from extrinsic (context) characters.

Investment costs are related to the materials, technologies and techniques to be used to preserve the cultural value of the heritage / landscape, and to maintenance / management / operating costs. The willingness to invest, the same value done, increases with the reduction of costs. Then, the social cost of abandonment – and eventual irreversible loss of heritage – must be included in the investment choice.

The investment gap in cultural heritage and landscape regeneration can be addressed through careful evaluation of costs, complex values and impacts of adaptive reuse, providing critical evidence of the wealth of jobs, social, cultural, environmental and economic returns on the investment in cultural heritage.

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CLIC Specific objectives

The scopes of CLIC project will be achieved through a set of specific, measurable, achievable, realistic and time-constrained (SMART) specific objectives:

Objective 1 - To synthesize existing knowledge on best practices of cultural heritage adaptive reuse making it accessible to researchers, policy makers, entrepreneurs and civil society organizations, also with direct dialogue with their promoters;

Objective 2 - To provide a holistic ex-post evaluation of the economic, social, cultural and environmental impacts of cultural heritage adaptive reuse, stressing on the importance of appropriate conservation and maintenance approaches able to highlight the integrity and authenticity of heritage;

Objective 3 - To provide EU-wide participated policy guidelines to overcome existing cultural, social, economic, institutional, legal, regulatory and administrative barriers and bottlenecks for cultural heritage systemic adaptive reuse;

Objective 4 - To develop and test innovative governance models and a set of evidence-based, participative, usable, scalable and replicable decision support evaluation tools to improve policy and management options/choices on cultural heritage systemic adaptive reuse, in the perspective of the circular economy;

Objective 5 - To analyse hybrid financing and business models that promote circularity through shared value creation, and assess their feasibility, bankability and robustness for cultural heritage adaptive reuse;

Objective 6 - To validate the CLIC circular financing, business and governance practical tools in 4 European cities / territories representative of different geographic, historic, cultural and political contexts;

Objective 7 - To contribute to operationalise the management change of the cultural landscape also in implementing the UNESCO Recommendation on Historic Urban Landscape;

Objective 8 - To re-connect fragmented landscapes, through functions, infrastructures, visual relations at macro and micro scale;

Objective 9 - To design and implement a stakeholders-oriented Knowledge and Information Hub to make tools and information accessible, useful and usable and test them with policy-makers, entrepreneurs, investment funds and civil society organizations;

Objective 10 - To contribute to the creation of new jobs and skills in the circular economy through cultural heritage adaptive reuse, boosting startups and sustainable hybrid businesses and empowering local communities and stakeholders through public-private-social cooperation models.

Objective 11 - To contribute to the monitoring and implementation of SDGs (especially Target 11.4) and the New Urban Agenda, creating operational synergies with global initiatives of UN-Habitat, UNESCO/ICOMOS and the World Urban Campaign.

All partners have wide experience in developing and testing CLIC proposed tools, ensuring the effective and time-constrained achievement of all the above-mentioned specific goals. The integration of sectorial knowledge, tools and methods will be achieved through a trans-disciplinary approach promoting partners and stakeholders' cooperation, co-creation of knowledge and co-delivery of outcomes.

The expected impacts of the project are the following:

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- Validation of integrated approaches and strategies for cultural heritage adaptive re-use, comprising innovative finance with high leverage capacity, business models and institutional and governance arrangements that foster multi-stakeholder involvement, citizens' and communities' engagement and empowerment;

- New investments and market opportunities in adaptive re-use of cultural heritage, also stimulating the creation of start-ups;

- An enabling context for the development and wide deployment of new technologies, techniques and expertise enhancing industrial competitiveness and contributing to economic growth, new skills and jobs;

- Innovative adaptive re-use models that are culturally, socially and economically inclusive;

- Contribution to implementing the Sustainable Development Goals (SDGs) (Goals 1, 15, 11 particularly) and the United Nations New Urban Agenda.

2 Introduction

According to the Work Plan and CLIC detailed communication, dissemination and exploitation plan, the CLIC Final Conference was held at the end of the Horizon 2020 CLIC project. The document aims to provide a report on the Final Conference.

Moreover, CLIC Partners participated in other conferences, workshops and initiatives during the last months of the project in order to communicate, promote and disseminate the activities and results of the CLIC research.

Thus, this document reports the main dissemination activities carried out by the CLIC Consortium in the last part of the project.

Document structure

The document is structured as follows:

- Section 1 included a description of the CLIC project;
- Section 2 presents an introduction to the deliverable, detailing the document structure;
- Section 3 reports the results and communication campaign of the CLIC Final Conference;
- Section 4 describes the other initiatives linked to the CLIC topics organized by international associations / organizations to which CLIC Partners participated, creating operational synergies.
- The Annexes provide additional information and documentation related the CLIC Final Conference.

Detailed information, dissemination material and video related to the events organized and attended by CLIC Partners are accessible also through the web links provided in this report.

3 CLIC Final Conference - 22-23 September 2021, online event

The final conference of the Horizon 2020 project CLIC has been held online the 22-23 September 2021, on the Zoom platform. It was organised by the CNR-IRISS, Institute for Research on Innovation and Services for Development, Coordinator of the project, together with other 15 European Partners from academia, local government, social and business sector. More than 40 speakers[1] participated during the 2 days of the Final Conference.

The CLIC Final Conference presented the outcomes of the CLIC research on the "human-centred" circular model for circular cities and regions, encouraging new investments economically and financially sustainable for the adaptive reuse of abandoned or underused cultural and landscape heritage, able to produce positive impacts at the social and environmental level and to contribute to create new jobs (in particular among young), increase people wellbeing and revitalize the urban and social fabric. The "human-centred" model can promote memory, identity, collaboration and participation, in a society threatened by individualism, inequality and fragmentation. The cultural contribution of the CLIC project was based on the paradigm shift from "I" to "us", where circularity does not only concern material resources but also immaterial resources, promoting a "new humanism" through cultural heritage. In this perspective, the project contributes to the European Recovery and Resilience strategies, including the European Green Deal and the New European Bauhaus, in particular with the research results on new evaluation tools, circular governance models, circular business models and innovative financing instruments for cultural heritage adaptive reuse.

The results of the project have been discussed together with international speakers from all sectors of society: researchers, institutions, international heritage organisations, businesses, and civil society. The debate has been enriched by the contribution of European Commission representatives and international experts in the field of cultural heritage reuse and valorisation, circular economy, social innovation and sustainable finance. Among others, members of UNESCO, ICOMOS, OECD, CHIFA, and members of the advisory board of the Italian Ministry for Culture were involved.

They provided valuable insights into the topics discussed; in particular, on 22nd September the theoretical-conceptual model of CLIC and the results of the experimentation on new circular governance models and tools was discussed in depth. The 23rd September, instead, was dedicated to an in-depth study of innovative circular business and financing models and entrepreneurship in the sector of reuse and enhancement of cultural heritage.

Recordings of the Final Conference are available on CLIC YouTube Channel at the following links:

- 22nd September 2021: https://youtu.be/HaQMKvnqw9Q

[1] www.clicproject.eu/final-conference/#speakers

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Figure 1. Presentation of the event - 22 September 2021

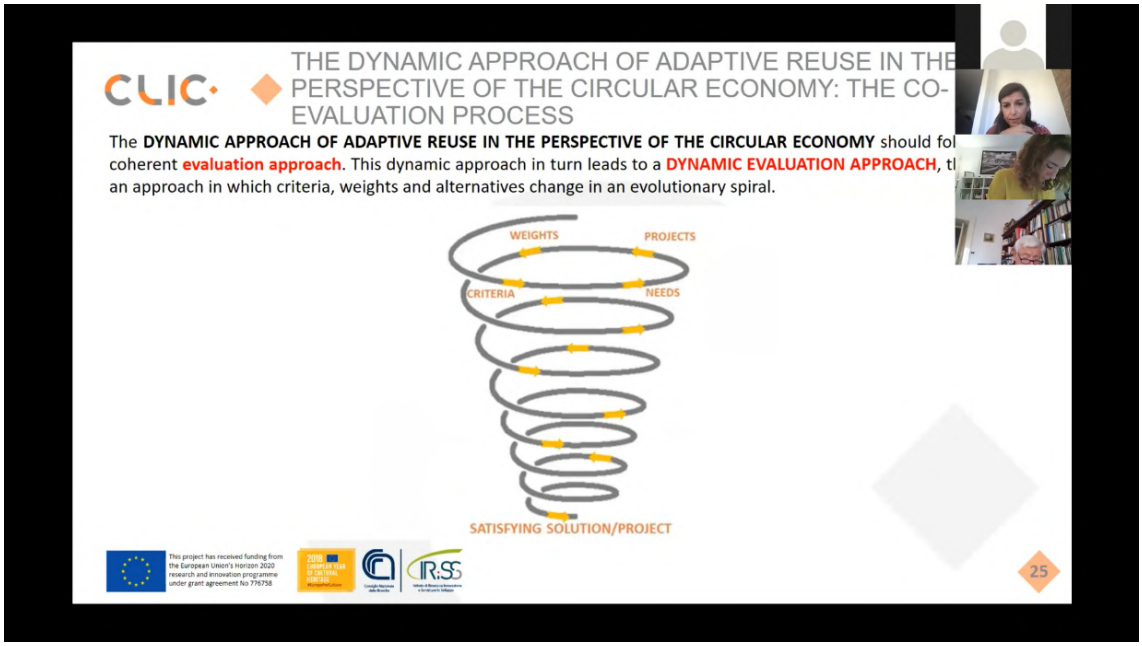

Figure 2. Session 1 - Presentation of Luigi Fuso Girard - 22 September 2021

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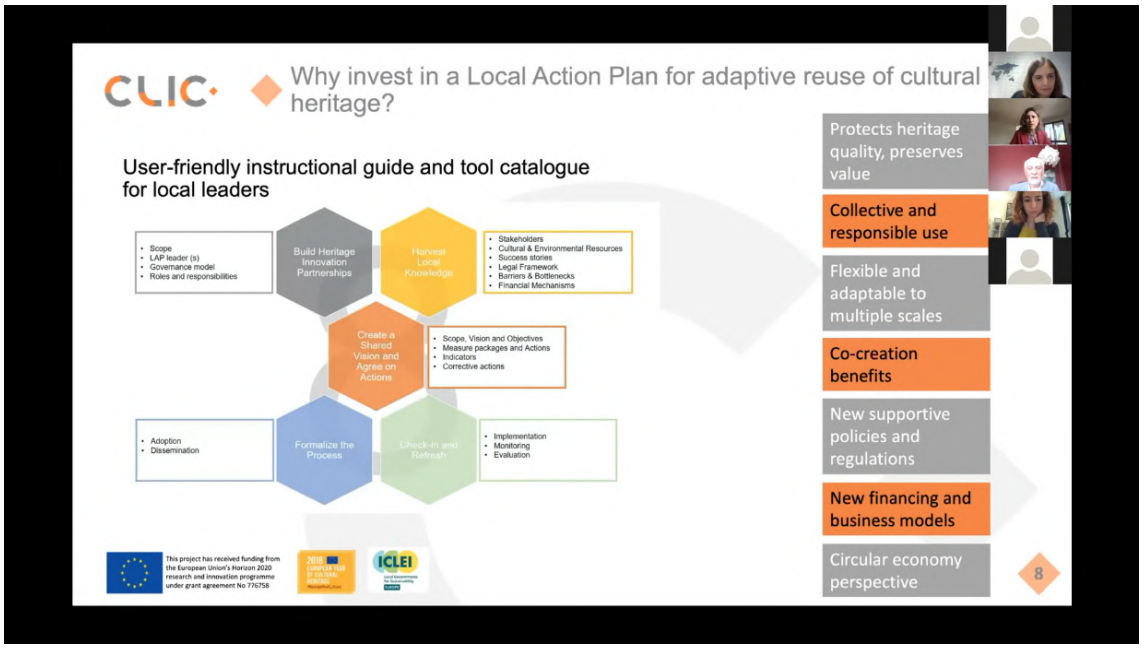

Figure 3. Session 2 - Presentation of Cristina Garzillo - 22 September 2021

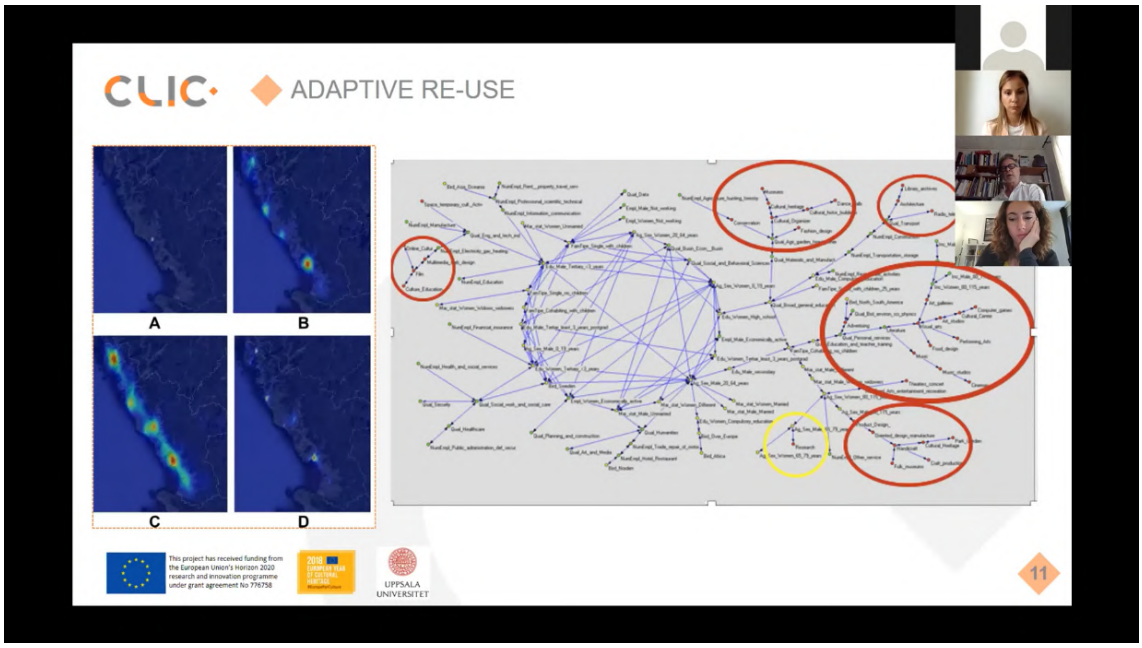

Figure 4. Session 3 - Presentation of Christer Gustaffson - 22 September 2021

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- 23rd September 2021: https://youtu.be/u_yqcCbtsUY

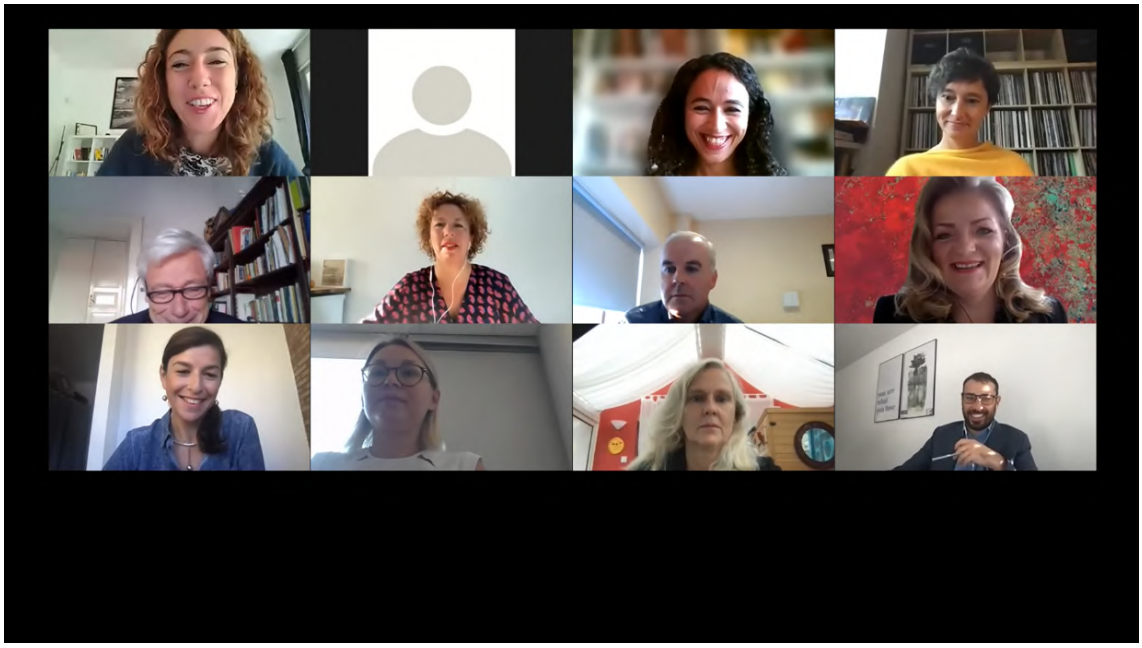

Figure 5. Presentation of the event - 23 September 2021

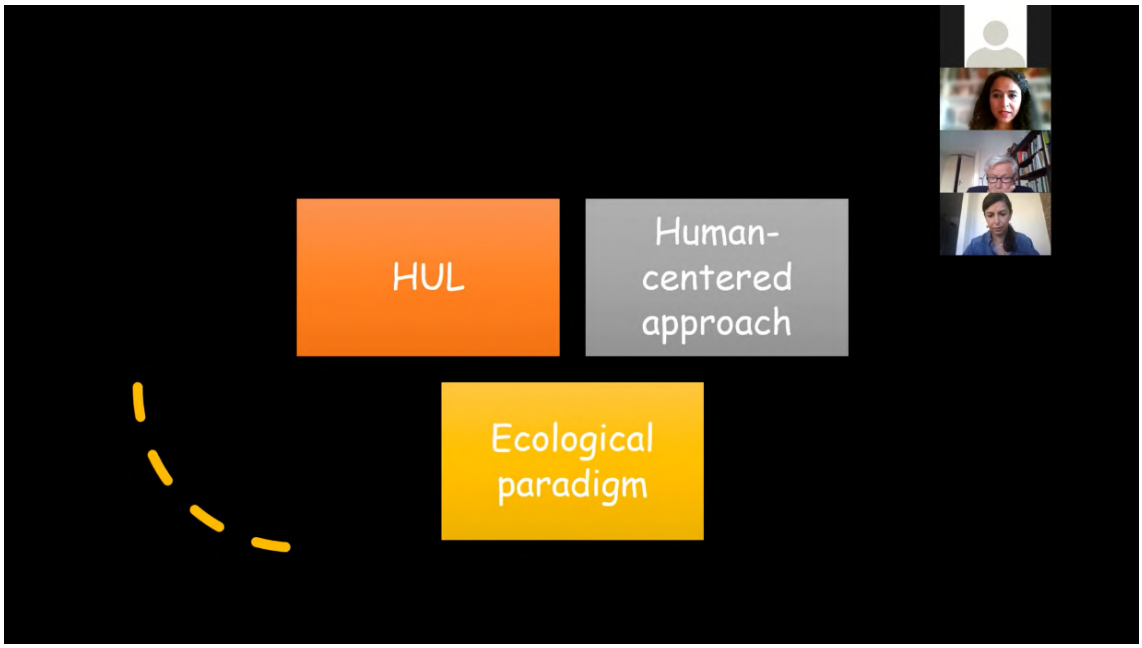

Figure 6. Session 1 - Presentation of Ruba Saleh - 23 September 2021

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Figure 7. Session 2 - Presentation of Aliona Lupu - 23 September 2021

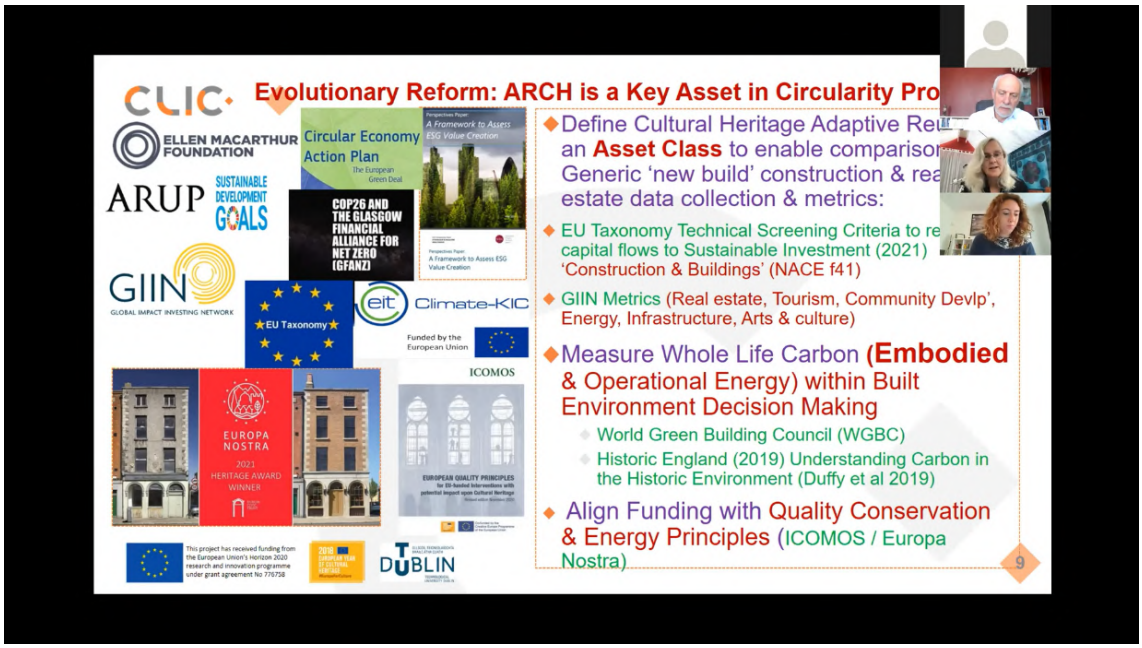

Figure 8. Session 3 - Presentation of Tracy Pickerill - 23 September 2021

All information about the event is also available at the CLIC website, in the specific section, at the link www.clicproject.eu/final-conference/

The two-day event was divided into several sessions, which included keynote speeches, panel discussions and roundtables.

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22 September: The CLIC framework for circular human-centred adaptive reuse of cultural heritage

Session 1 | The CLIC framework for circular human-centred adaptive reuse of cultural heritage

The first session welcomed the event with institutional greetings by the Director of CNR-IRISS, **Massimo Clemente**, and introduced the main themes of the CLIC project and a summary of the results achieved and the new challenges by Professor **Luigi Fusco Girard**. Participants included project partner speakers such as Prof. **Christian Ost**, but also external experts as follows:

- **Jyoti Hosagrahar**, Deputy Director for the **World Heritage Centre at UNESCO** responsible for, among other things, the implementation of the Historic Urban Landscape Recommendation, the Cities Programme, policies for cultural and natural heritage for the 2030 Agenda and the New Urban Agenda, the Earthen Architecture Program, and the World Heritage Fund as well as the development and implementation of Thematic Indicators for Culture in the Sustainable Development Goals across the Culture Sector.
- **Ugo Guarnacci**, Project Adviser at the **European Research Executive Agency**, European Commission, managing Horizon 2020 projects on smart and sustainable cities, social and cultural innovation, nature-based solutions.
- **Giampaolo D'Andrea**, Member of the **Advisor Board for the Italian Ministry of Culture**. As a politician, he was Member of the Camera dei Deputati, of the Senato and of the European Parliament. He was appointed as Undersecretary of State for Cultural Heritage and for the Presidency of the Council of Ministers for Relations with Parliament, Institutional Reforms and the Implementation of the Government Programme. He has been Advisor for the Coordination of Government Activities and Head of Cabinet of the Minister of Heritage, Cultural Activities and Tourism Dario Franceschini.
- **Teresa Patrício, ICOMOS President**. Expert on management and conservation of archaeological sites. She has worked for international institutions as EU and UNESCO. Former President of ICOMOS Belgium and of ICOMOS Wallonia-Brussels, expert member of the ICOMOS International scientific committee on Training (CIF), member of the working group for the safeguarding of the cultural heritage in Syria and Iraq.

Session 2 | Innovative circular governance models and Local Action Plans for Cultural Heritage Adaptive Reuse

The second session focused on innovative circular governance and the design of the Local Action Guide by the partner ICLEI, presented by **Cristina Garzillo**. The debate then focused on the Local Action Plans elaborated in the 4 pilot areas of the project, with the intervention of the administrators of **Västra Götaland** Circular region, **Salerno** Circular city, **Rijeka** Circular city, and **Pakhuis de Zwijger** foundation (Amsterdam Circular City).

During the session was presented the CLIC Knowowledge and Information Hub, an innovative digital platform (https://clicplatform.eu) for intelligent data management, developed by the project's technological partner, **FacilityLive**, including more than 100 best practices on adaptive reuse of cultural heritage collected during the research in the pilot areas, across Europe and beyond. Recent implementations were described highlighting how the collaborative platform enables a city/region to showcase local reuse practices presenting the abandoned heritage as assets and opportunities for

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adaptive reuse investments towards the implementation of the circular city, facilitating stakeholders' cooperation, access to information and adaptive reuse strategic projects.

The round table chaired by **Emanuela De Menna**, Project Adviser at the European Research Executive Agency (REA), was attended by researchers working on Horizon2020 projects:

- **Hanna Szemző**, Metropolitan Research Institute, **H2020 Open Heritage project**[2] coordinator with experience in research and consultancy in the fields of urban renewal, social inclusion, demography, welfare, and governance analysis.
- **Eva Wascher**, TUDO University, **H2020 T-Factor project**[3] partner, researcher at the division of Transformative Governance in Cities and Regions, Social Research Centre (sfs), TU Dortmund University.
- **Vera GregórioH2020 HUB-IN project**[4] coordinator - Hubs of Innovation and Entrepreneurship for the Transformation of Historic Urban Areas.
- **Isabel Ferreira**, University of Coimbra, **H2020 URBiNAT project**[5] scientific co-coordinator, researcher at the Centre for Social Studies of the University of Coimbra, Portugal, she currently integrates the co-coordination team of the European URBiNAT project - Healthy corridors and drivers of social housing neighbourhoods for the coordination of social, environmental and marketable Nature Based Solutions.

Session 3 | Tools for circular governance: impacts assessment for CHAR

The third session moderated by **Jermina Stanojev (UU)**, presented the results of CLIC's research on tools for circular governance, with particular reference to impacts assessment for cultural heritage adaptive reuse on local and regional area and to the impact on the territory of investments in conservation of cultural heritage, focusing on indicators for spillover effects and tools for the assessment of spillover effects. In particular, from **Uppsala University Christer Gustafsson** intervened about Smart Specialisation Strategies and spillover effects of CHAR in the circular economy perspective; **Sigrid Stagl and Gillian Foster from Vienna University of Economics and Business** showed research results on the future of circular environmental impact indicators for cultural heritage buildings in Europe; **Antonia Gravagnuolo from CNR-IRISS** presented Evaluation framework for circular CHAR: from best practices to better project. Further speeches:

- **Cristiana Parisi**, Assistant professor at Copenaghen Business School, Department of Operations Management. **H2020 Reflow project**[6] coordinator. Her work explores circular cities development strategies focusing on multidimensional values within the circular economy model.
- **Marco Acri**, Conservation architect and researcher at the university of Nova Gorica, and professor at the **doctoral programme in Cultural Heritage Studies**. He holds experiences as professional architect and cultural heritage consultant in different contexts including UNESCO, World Monuments Fund and Mediterranean Institute.
- **Magdalena Roszczynska**, Assistant professor at the **University of Warsaw**, Institute for Social Science. Her primary interest is in understanding of human behaviour in social contexts, psychology of decision making, experimental economic psychology, the role of trust in interpersonal relations, policy modelling.

[2] https://openheritage.eu/
[3] https://www.t-factor.eu/
[4] https://hubin-project.eu/
[5] https://urbinat.eu/
[6] https://reflowproject.eu/

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- **Salvatore Greco**, Visiting Professor at the **University of Portsmouth** and Full Professor at the Faculty of Economics of the University of Catania, Italy, where he has been a researcher since 1994. He has been teaching since decades for Decision Theory, General Mathematics and Financial Mathematics. His research regards Multiple Criteria Decision Aiding (MCDA).

23rd September: Innovative circular business & financing models for Cultural Heritage Adaptive Reuse

Session 1 | Innovative circular business & financing models for Cultural Heritage Adaptive Reuse

The second day of the event opened with an in-depth discussion on innovative circular business & financing models for cultural heritage adaptive reuse, in which **Ruba Saleh from ICHEC** and **Anna Domaradzka from UNIWASAW** – moderated by **Gillian Foster (WU)** – presented the results of the project, respectively on Circular business model and Grassroots circularity, essentialism, social entrepreneurship and social impacts assessment for cultural heritage adaptive reuse.

A panel discussion was also attended by:

- **Pietro L. Verga**, Municipality of Milano and **H2020 CENTRINNO project**[7] coordinator, international expert and advisor in local development and nature-based solutions with a decade of educational and professional experiences in Italy, Romania, Germany, Belgium and the USA. He holds Ph.D. in Urban Studies from Gran Sasso Science Institute and Scuola Superiore Sant'Anna di Pisa.
- **James Donlon**, WESTBIC, **H2020 Ruritage project**[8]. He is MBA-qualified, Unit Manager and Senior Business Expert, with 25 years of experience supporting high-growth enterprise and business innovation, through creative business modelling, robust financial planning and investor-grade business planning, delivered through hands-on support to innovative private enterprises and community-based initiatives, assisting them along their development path to accelerate and scale their activities to achieve their growth potential.
- **Sandra Piesik**, **UN-Habitat territorial integration initiative**, with a focus on urban-rural linkages at the Global Solutions Division, and a former Policy Support Consultant on Rural-Urban Dynamics to UNCCD. Award-winning architect, author, and researcher specialising in the implementation of global sustainable legislation, nature-based solutions, and traditional knowledge adaptation. She is the founder of 3 ideas B.V. Amsterdam-based consultancy.

Session 2 | Heritage-led entrepreneurial ecosystems

The second session moderated by **Ruba Saleh (ICHEC)** included the presentation of some of the most representative awarded startups of the international startup-competition: **Nice Visions**, **ExtrArtis**, **Taste of Terraces** and **Marte** and the presentation of the CLIC Startups Mentoring Programme by **Aliona Lupu** from **INIZIATIVA Cube** CLIC Partner. **Antonia Gravagnuolo, CNR IRISS,** presented outcomes and future perspectives related to the CLIC Startup competition. Discussing skills and entrepreneurship in cultural heritage:

[7] https://centrinno.eu/
[8] www.ruritage.eu/

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- **Gianluca Gaggiotti**, **European Venture Philanthropy Association** – Research Manager at EVPA, where he is directly involved in several research activities, with a specific focus on data analysis and content development of several research-related initiatives.
- **Joke Quintens**, founder of "**Wetopia, Making Cities Together**" and "Living Lab Moving Marseille", a social designer and facilitator of co-creation in cities, a regenerative practitioner, and a field expert in participatory policymaking.
- **Igor Zacek**, **Nice Visions startup**– an award-winning company with the mission to create a better and sustainable future. He is currently focusing on the seamless integration of the renewable energy sources to the urban environment.

Session 3 | Innovative circular financing models for Cultural Heritage Adaptive Reuse

The third and last session moderated by **Christian Ost (ICHEC)** has involved **Tracy Pickerill from TUDublin** and **Ivo Allegro** and **Aliona Lupu from INIZIATIVA Cube** to show the project results related to Circular and Hybrid Financial Instruments for cultural heritage adaptive reuse. Finally, the debate was concluded with two very relevant interventions of:

- **Pierluigi Sacco**, Head of Venice Office and Senior Advisor at **OECD Centre for Entrepreneurship, SMEs, Regions & Cities**, Professor of Economy of Culture at IULM University in Milan. He is a consultant to public administrations, institutions, and private companies at international level; he studies and describes the value of culture in various industries, starting from the business sector, focusing on the relevance it has in contemporary corporate processes and in terms of social accountability.
- **Bonnie Burnham**, President Emerita of the World Monuments Fund (WMF) and President of **Cultural Heritage Finance Alliance – CHiFA** – an organization that promotes financing strategies for heritage preservation in the context of sustainable development.

Final Conference communication campaign

The communication campaign of the CLIC Final Conference was officially launched on 9th July 2021 on social media and project website (www.clicproject.eu/final-conference/) and through the promotional video of the initiative, launched the 13th of September 2021.

Led by the IRISS CNR as Project Coordinator in close collaboration with the CLIC partners, it run for 10 weeks and was structured in two stages: the first stage (July, 9th - September 13th) was aimed at spreading the news of the event and informing the audience on the initiative; the second one (September 13th - September 21th) was meant to encourage the broadest participation through the sponsorship of the CLIC Final Conference video and the presentation of Speakers.

The communication campaign was built on the following concept: “because next generation is today!”. CLIC developed a cultural thesis founded on the shift from “I” to “Us” through cultural heritage: the adaptive reuse of cultural heritage has a great potential to build communities and recover the collective memory of places enhancing their “intrinsic value”, linking past and future, acting as the connective infrastructure of the city and territory, starting from now.

Final Conference Video was developed by the communication agency subcontracted by the Project Coordinator, **Estrogeni Srl** (https://estrogeni.net/), for the maximization of communication and dissemination activities. Specific communication and promotional materials were developed by CNR-IRISS.

The communication campaign was carried out with successful results thanks to the collaboration of all the project partners and some supporters of the initiative, including research institutes, universities and twin projects, in particular from speakers participating at the event. CLIC partners were provided with visual material (images, promo video, banners, newsletters, etc.) and guidelines for communication and acted as multipliers, contributing to promote the event and spread the call at the international level.

Social media campaign: activities and results

A massive communication campaign was carried out through CLIC social media: Facebook (www.facebook.com/clicprojecth2020); Twitter (https://twitter.com/CLIC_EU); Instagram (www.instagram.com/clic_h2020/) and YouTube (www.youtube.com/channel/UC9Alqja1Dblv-aS_veGUGdw). Advertising campaigns were realized on Facebook, paying particular attention to the geographical areas targeted. By creating different public groups on Facebook ads, it was possible to cover EU and beyond.

The following hashtags were used for the initiative: #SaveTheDate #CLICFinalConference #InvestEUresearch #EuropeForCulture #CulturalIdentity #CircularisBetter

Table 1. Increase rate of CLIC social media followers

CLIC social media	N. Followers before the Final Conference	N. Followers after the Final Conference
Facebook	1974	2015
Instagram	315	389
Twitter	473	508
Youtube	49	57

Several social media contents were created by the CNR-IRISS communication team and shared with all partners describing different aspects of the initiative. The partners acted as multipliers, helping to promoting the initiative among their communities. The following table shows the results of the communication campaign, in terms of growth of the CLIC community.

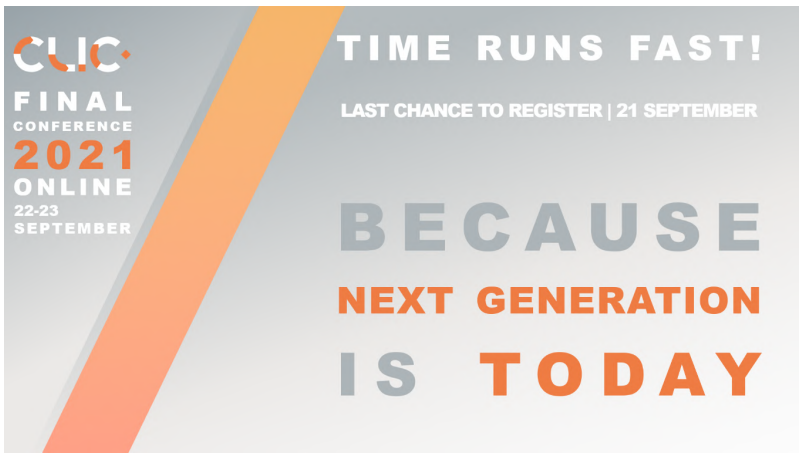

Figure 9. Post composition

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A graphic format for social media was designed in order to allow each partner to create different contents, being consistent with the CLIC Final Conference visual identity.

The impact of the Final Conference on social media has been particularly relevant, reaching more than 303.300 people and recording 41.200 interactions

Final Conference Video

In order to inform the audience, in particular the general public, on CLIC project outputs, a final project video[9] has been developed at the end of the project explaining that circular economy, cultural heritage, adaptive reuse are the three principles leading to the humanization of cities, on which CLIC results, experiences, and best practices have been built.

The promotional video was realized by Estrogeni Srl communication agency to maximize the impact of the initiative. The aim of the video was to tell the project in a simple and non-technical language, accessible to a non-specialist audience, explaining why the circular economy approach is relevant for cultural heritage adaptive reuse, the positive impacts on community at the environmental, social, economic and cultural heritage, paying special attention on the results achieved by the project.

The video is characterized by animated mechanisms which exploit all the elements of CLIC visual identity to help the audience with project recognition; using the same intro, the same dynamic elements and the same transition mode of the scenes of the first video made, the scenes are constructed by inserting the new clips and ideally closing the cycle of videos started with this type of format. The video has been designed as follows.

Figure 10. CLIC Final Conference screenshots

The letter 'C' of the CLIC logo together with its flashing rhombus appears in the centre of the screen while the orange arrow slides in a rapid circular motion, simulating the "loading" wheel of websites. The CLIC logo appears. A movement of the orange flashing activates the input of the first text "CLIC welcomes you in a new idea of city". After completion of the text, the orange rhombus

[9] www.youtube.com/watch?v=y14Xy6YGXLM&t=2s

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opens dynamically and quickly introduces a window with the same shape which reveals an underlying image.

Figure 11. CLIC Final Conference screenshots

A slow movement of the camera to the left shows two girls performing a game of circularly rotated torches in a circle. The text appears: “grounded in collective memory”. Then, a girl dancing inside a disused building introduces the theme of abandoned heritage. The text appears: “through cultural heritage adaptive reuse”.

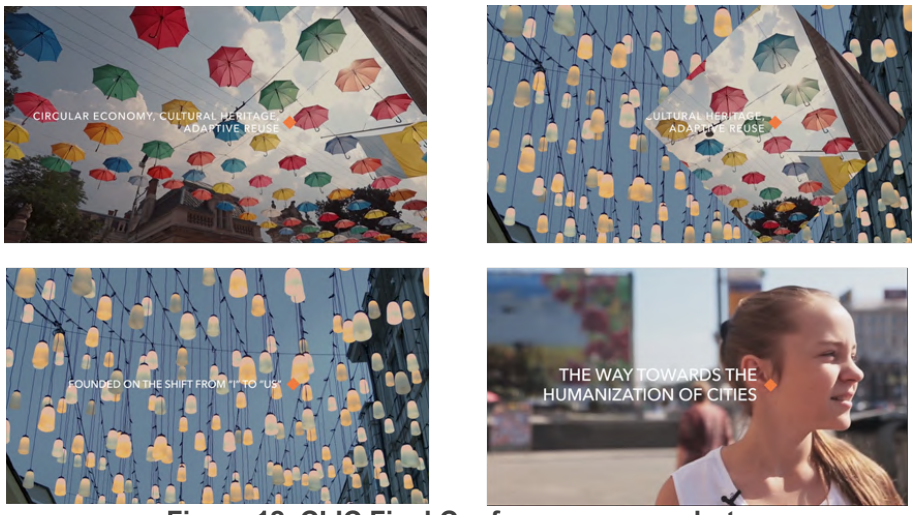

Figure 12. CLIC Final Conference screenshots

A girl looks at the city around her. The text appears: “the way towards the humanization of cities”. The scene changes on colleagues discussing around a table while the text appears: “innovative circular business, financing and governance models to create shared value of cultural heritage”. Then, the protagonists are colleagues in an urban external environment, the text appears: “as the city connective infrastructure to strengthen communities”. Frame of a corner of the city “to recover the collective memory of places enhancing their "intrinsic value".

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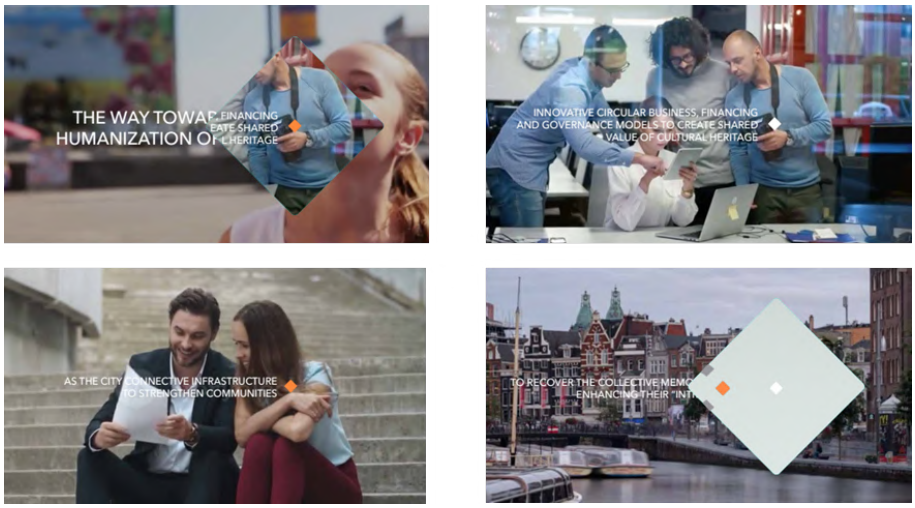

Figure 13. CLIC Final Conference screenshots

5 icons are successively displayed within the CLIC logo, from which some CLIC results appear, among which the enhancement of skills and knowledge (below all results are described).

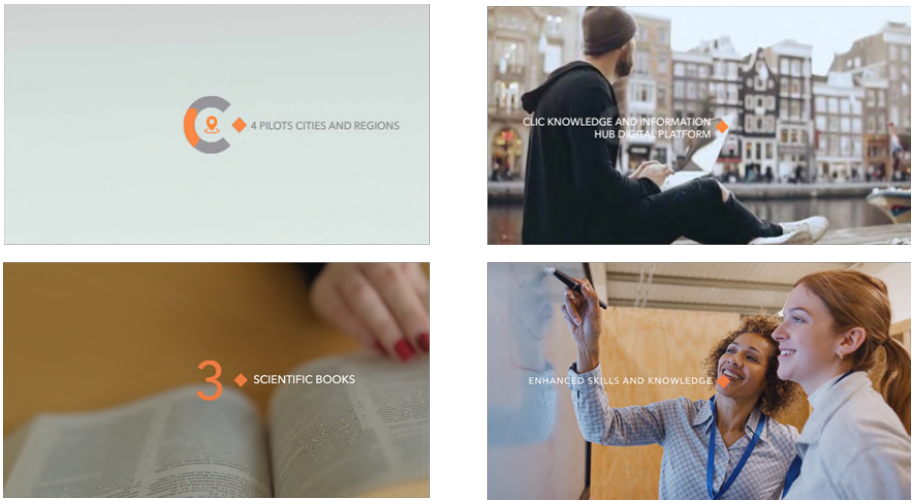

Figure 14. CLIC Final Conference screenshots

6 icons appear in sequence within the logo, from which the results of the International Startup Competition appear. Then, discovering a shower of colourful papers, lighting, and festive background. “Discover all the project results. Join the CLIC Final Conference”. The call to action is completed with the conference data.

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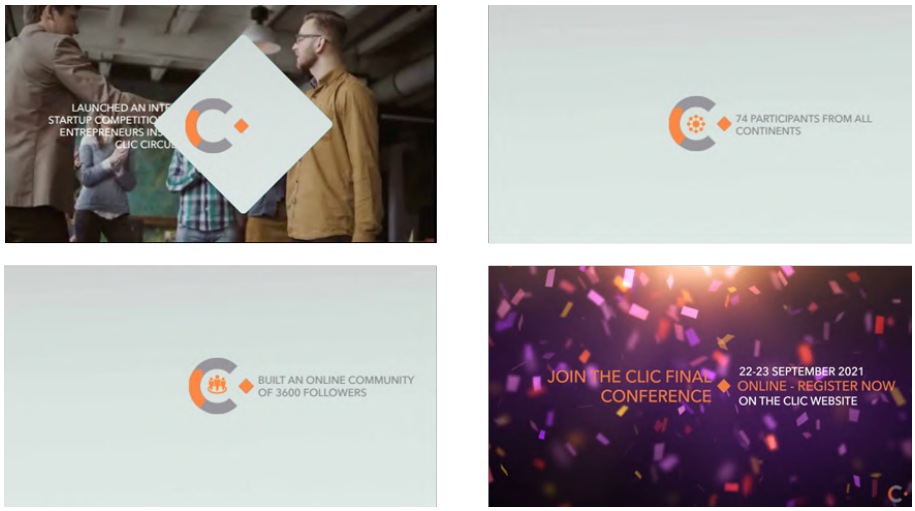

Figure 15. CLIC Final Conference screenshots

The video adopted an emotional style to describe the main results achieved by the project:

- 4 Pilot areas;
- More than 30 participatory activities;
- More than 100 stakeholders engaged;
- 4 Local Action Plans;
- More than 100 best practices analysed;
- More than 300 among students and professionals trained;
- The CLIC Knowledge and Information Hub platform;
- Contribution to advance scientific knowledge
    - More than 50 scientific publications;
    - 3 scientific books;
    - 5 international conferences;
    - 3 taskforce meetings;
- 1 International Startup Competition;
    - A network of 40 organisations;
    - 74 participants from all continents;
    - 25 finalists;
    - 15 special prizes;
    - 6 winners;
    - An online community of 3600 followers.

The CLIC Final Conference promotional video has been shared on CLIC social media reaching more than 30.800 people and about 37.000 views.

Website

The CLIC website hosted a dedicated page to the CLIC Final Conference, included under the Section *News&Events*. Available at www.clicproject.eu/final-conference page, it was aimed at providing extensive and updated information about the initiative.

The new page was launched on 29th June and it has been regularly updated over the months and enriched with news contents: program of the event, keynote speakers, and a link to the results of the project.

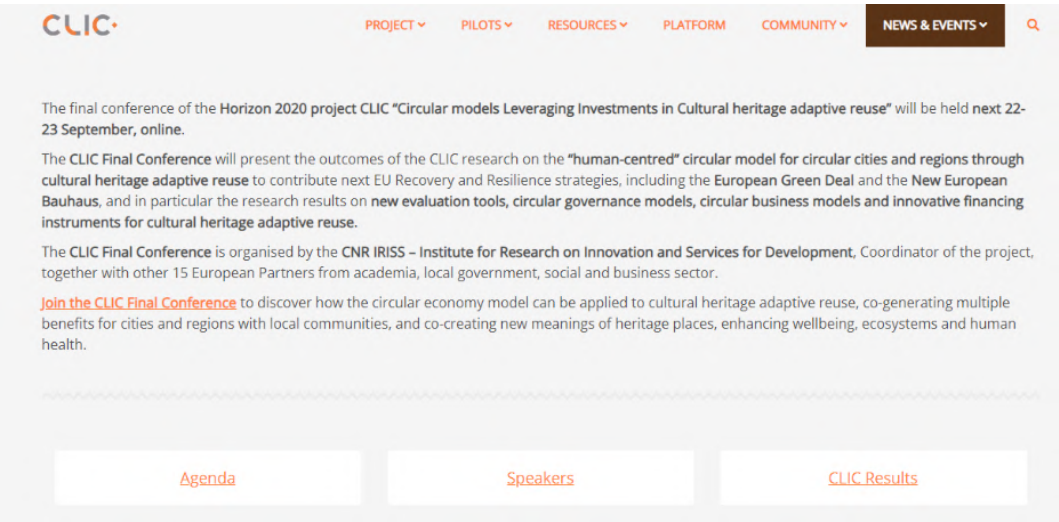

Figure 16. Screenshot of CLIC Final Conference webpage

The webpage has been implemented until the end of the event, also with recordings of the event in streaming, with an upgrade of 434 hits on the website. It should be considered that only the views of people who have given their consent by accepting the Google Analytics tracking cookies have been recorded.

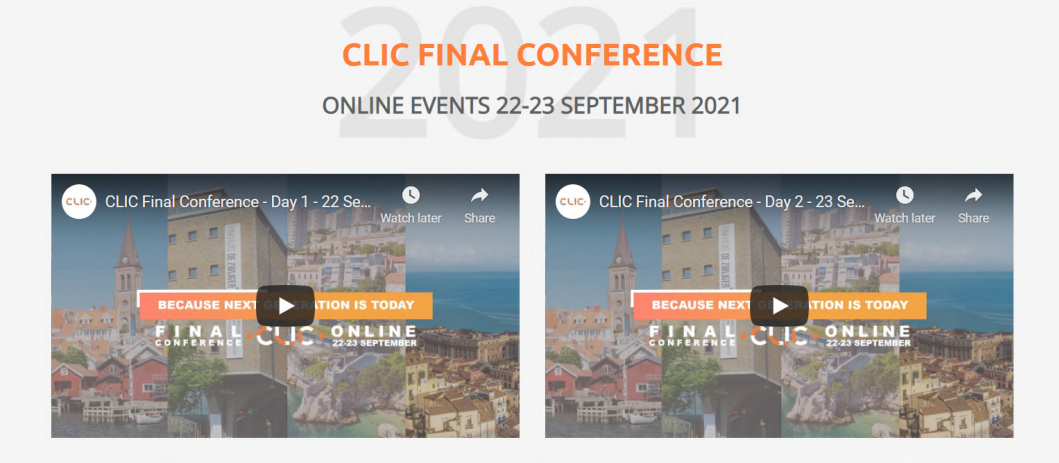

Figure 17. Screenshot of CLIC Final Conference webpage – Streaming video

The architecture is characterized by a user-friendly structure so participants could easily find the information they were looking for. The webpage gives an overview of the essential elements of the event, enabling users to access more detailed information by opening a drop-down menu (for example, to know more about the agenda) or clicking on buttons linking to pdf files or to other

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webpage without obliging people to scroll too much the page, in order to grant the best possible user experience. The top of the page hosted the promo video of the Final Conference.

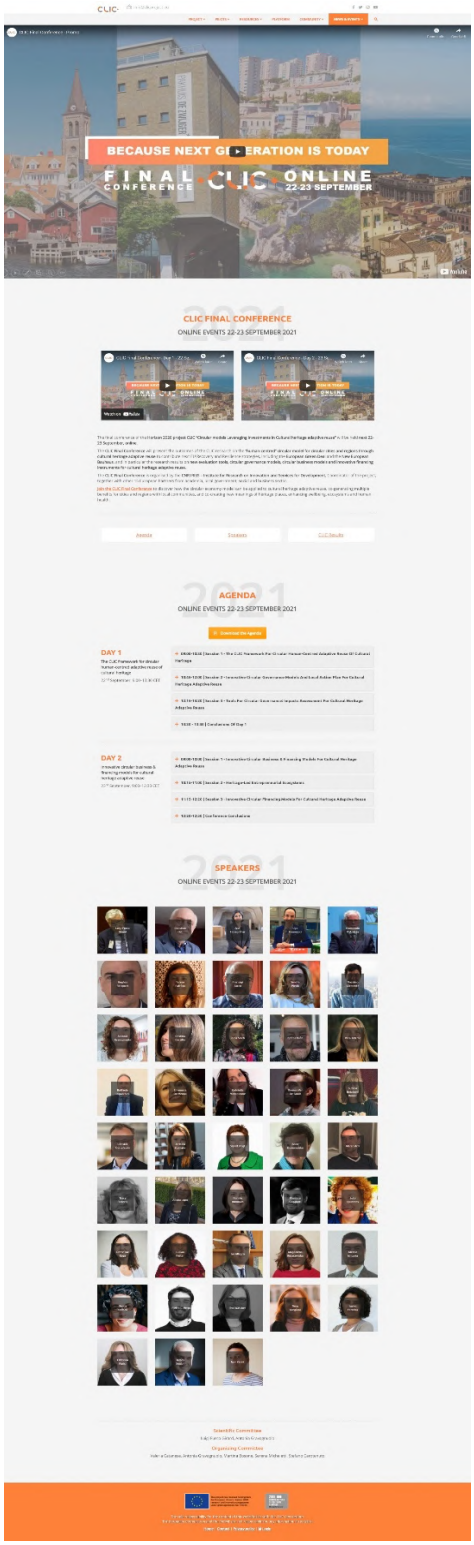

Figure 18. CLIC Final Conference landing page design

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Registration

Participation in the event was free under registration collected through the Typeform platform.

The registration link was published on the project webpage, social media, in the Final video and through infographics. In order to reach the broadest audience, some Facebook posts including the link to the registration were sponsored.

The registration form was active from 26 June to 21 September and 289 people registered from all continents. See Table 2 and Figure 19.

Table 2. Country registration

Country registration	
Albania	2
Algeria	1
Austria	7
Belgium	10
Bulgaria	2
Canada	3
Chile	1
China	3
Croatia	9
Cyprus	4
Denmark	1
Egypt	2
Finland	2
France	7
Germany	6
Greece	19
Hungary	2
India	2
Ireland	8
Italy	104
Korea South	1
Latvia	1
Libya	1
Lithuania	1
Luxembourg	1
Nepal	1
Netherlands	8
Nigeria	1
Norway	1
Paraguay	2
Philippines	3
Poland	5
Portugal	5
Romania	10
Singapore	1
Slovenia	8
Spain	5
Sweden	9
Switzerland	1
Taiwan	1
Turkey	10
UK	7
USA	11
TOTAL	**289**

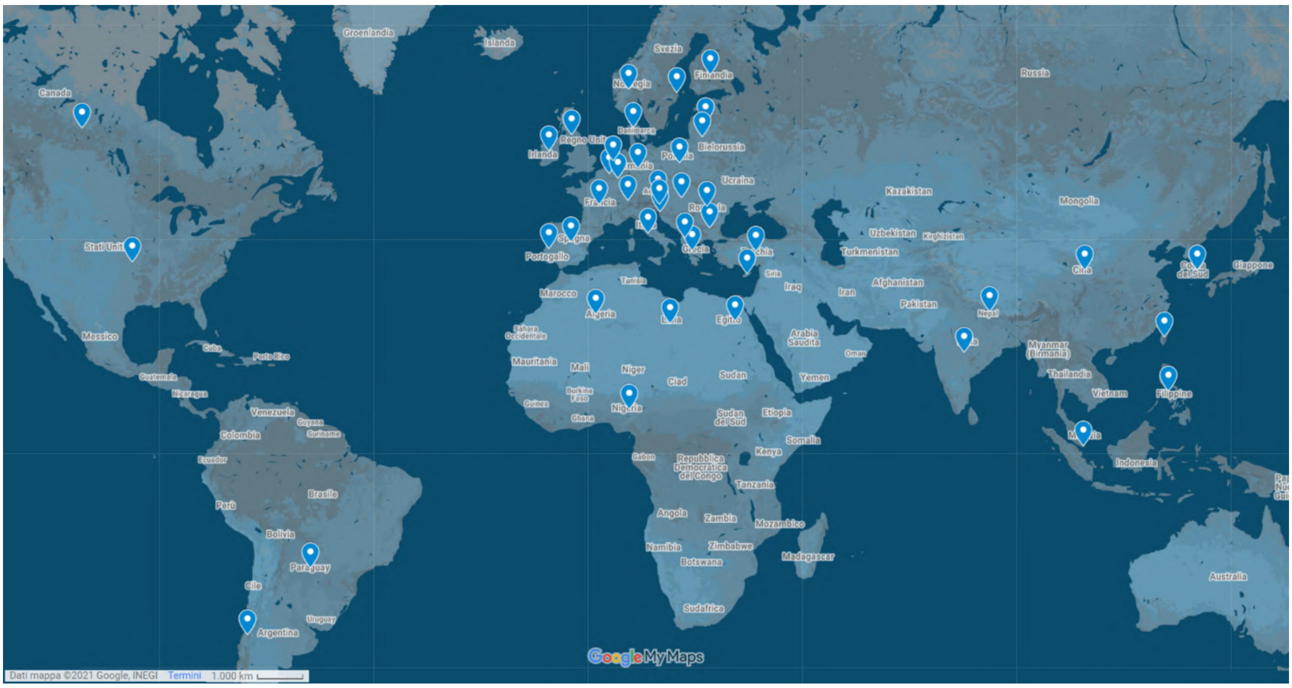

Figure 19. Country registration map

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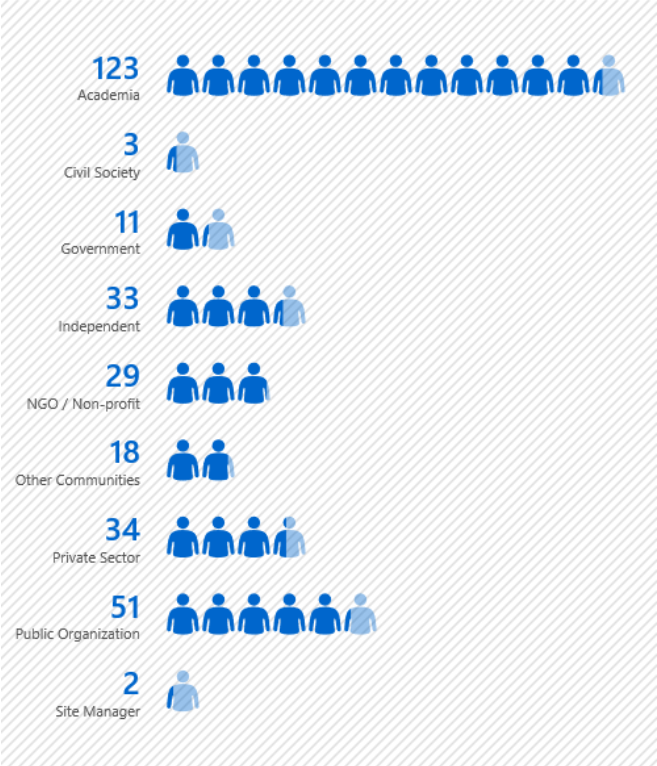

Figure 20. Type of organisation registered

Newsletter

In order to promote the initiative and keep the target audience informed on the latest news about the event, three issues of the CLIC newsletter were released, which were not envisaged by the Grant Agreement.

The aim was to update the general public and future participants on important news on the conference, for example, information about the dates of the event, invitation to register to the conference, presentation of the Speakers, the video, main results.

In addition to the newsletters planned in the project, two further newsletters have been elaborated, not scheduled in the workplan.

By way of example, the third issue of the CLIC Final Conference newsletter here follows:

- Enjoy the CLIC Final Video and discover what the H2020 project has done in three years! BECAUSE NEXT GENERATION IS TODAY! Register Now!!
- CLIC Final Conference video
- The CLIC Final Conference is just behind the corner. Register now and save the date next 22-23 September
- 19th European Week of Regions and Cities

Figure 21. Example of second Newsletter

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The list of the CLIC Final Conference newsletters and related links follows:

- The Horizon 2020 'CLIC' Final Conference Is Announced Next 22-23 September 2021! Save The Date! https://mailchi.mp/4414eaf1ae3e/the-horizon-2020-clic-final-conference-is-announced-next-22-23-september-2021-save-the-date
- CLIC Final Conference – Let's celebrate together the end of a circular journey! https://mailchi.mp/98d3e901624e/clic-final-conference-lets-celebrate-together-the-end-of-a-circular-journey
- Few days left to the CLIC Final Conference! https://mailchi.mp/80458c1aa2ab/few-days-left-to-the-clic-final-conference

Table 3. Metrics of CLIC Final Conference Newsletters

Newsletter title	Date	Delivery rate	Open rate
The Horizon 2020 'CLIC' Final Conference Is Announced Next 22-23 September 2021! Save The Date!	29 June 2021	701	356 (51.9%)
CLIC Final Conference – Let's celebrate together the end of a circular journey!	5 August 2021	694	228 (33.5%)
Few days left to the CLIC Final Conference!	17 September 2021	809	320 (40.2%)

It is worth noting that the number of subscribers to the CLIC newsletter increase of 399 units since November 2020 to the end of the conference.

Press release, online news and newsletters

Following the press releases issued by the CLIC Project Coordinator addressed to a national and international audience, several articles on the CLIC Final Conference were published on newspapers and online media. The press release is available on the project website at: https://www.clicproject.eu/media/. Details on press articles and press release are available in the Deliverable D.17 "Second series press articles".

4 Participation of CLIC project in an European and International series of events not scheduled in the Workplan

As mentioned, CLIC partners have activated synergies with international associations and organizations participating to initiatives organized at European and International level in order to communicate, promote and disseminate the activities and results of the CLIC project. Conferences, workshops and other initiatives have been held as follows:

Green Blue Days. 13-15 October 2021, Naples / online (www.greenbluedays.it), with participation of CNR-IRISS in quality of Scientific Partner. Green Blue Days is a project on systemic sustainability. It is a cultural project born from the determination of a green minded group with an established background in cultural production.

29 talks and 14 labs for 3 days of discussion. Green-Blue Days is a forum in the form of a talk structured over several days, where it is possible listen to and share experiences, propose solutions, study action plans to integrate the culture of Green-Blue in every aspect of life. It is a spin-off aimed at bringing together experts from the academic world, entrepreneurs, associations, institutions, authorities and young people in training. It is a tool to promote, develop and determine, through synergistic interaction, research, technological innovation, industrial production and the social well-being of the territory.

The talks are technical sessions coordinated by Green Blue Days, a bridge between the scientific and business worlds, between institutions and young people in training, between institutions, associations and professionals. These are moments of participatory, proactive, inclusive and practical meeting and debate in which ideas are given shape.

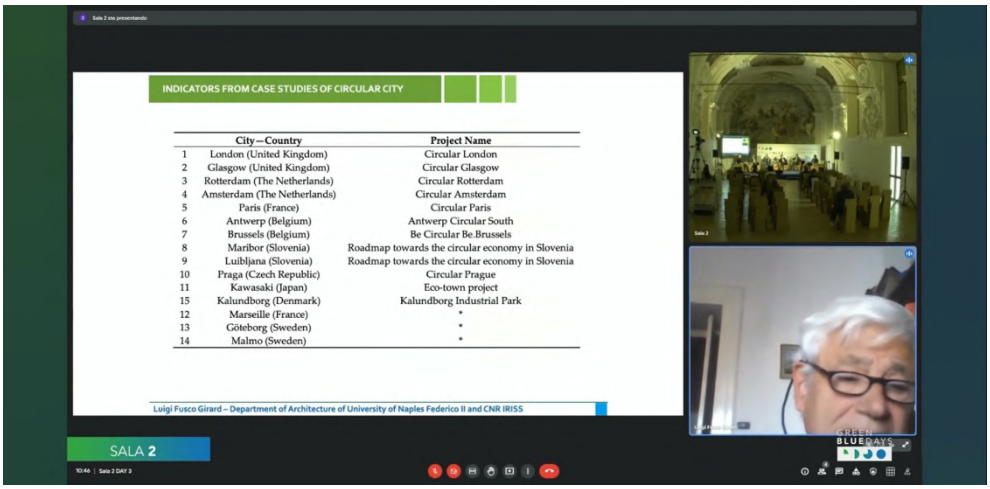

Figure 22. Prof. Luigi Fusco Girard at Green Blue Days Session

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In this framework, Professor Luigi Fusco Girard, scientific coordinator of the project, has participated at the talk 23 about the Circular Economy with the speech "Circular economy and circular city: towards a new governance" to underline that there is no economic revolution that does not derive from a cultural revolution. The real challenge in implementing the circular economy model is to activate human-centred processes capable of producing benefits in multiple dimensions.

Figure 23. Prof. Pasquale De Toro at Green Blue Days Session

Instead, in Lab 12 on Circular Recovery, Prof. Pasquale De Toro, Associate Professor in Evaluation at Unina Federico II and CNR-IRISS and Director of the Interdepartmental Research Centre in Urban Planning Alberto Calza Bini, gave a speech on urban ecosystems and assessment methods for urban metabolism.

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19th European week of the Regions and cities. 11-14 October 2021. The fully digital agenda featured over 300 sessions and online networking activities. This year's edition focused on four topics: Green Transition, Cohesion, Digital transition, Citizens engagement (https://europa.eu/regions-and-cities/highlights_en).

The European Week of Regions and Cities is the biggest event on EU regional and urban policy, open to all stakeholders. It attracts thousands of practitioners and experts to discuss EU Cohesion Policy. Every year, several side events take place around the event.

The workshop highlighted local heritage ecosystems through the lens of adaptive reuse processes. It explored how they can provide space for collaboration, engagement and bottom-up driven regeneration. Looking at the experiences of the Horizon 2020 CLIC (www.clicproject.eu/) and OpenHeritage (www.openheritage.eu) projects, the role of heritage ecosystems in the post-pandemic environment has been discussed, focusing on two interrelated aspects: different strategies for building and maintaining them, and their relationship with local business networks and heritage innovation.

In particular, the CLIC project participated in "Collaborative heritage ecosystems in a post-pandemic EU" workshop, online, 12 October. Innovation ecosystems are locally embedded networks that enable individual organisations to join forces and complement each other by moving resources and capacities more efficiently according to emerging needs. They are tools that are particularly suited to supporting local initiatives, reacting to local challenges and finding solutions to locally specific problems. The post-pandemic situation presents a rare opportunity to rebuild, with the support of a more bottom-up and eco-conscious development by strengthening these innovation ecosystems connected to local cultural heritage. The workshop has engaged in a deeper exploration of the topic by combining case-based and academic approaches in the three breakout rooms. Looking at diverse cases of cultural heritage adaptive reuse from the OpenHeritage and CLIC projects, local processes and possible innovation ecosystem-based recovery trajectories have been discussed, while a more academic line of inquiry has been pursued in a third breakout room, exploring resilient business and governance models in this context.

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Future for Religious Heritage Conference 2021. Europe's Living Religious Heritage "Continuity in Community Connection and Dialogue", 24 September 2021 – Bologna, Italy. (available registration https://youtu.be/fohT8rXunII). The FRH Biennial Conference aims to stimulate a real debate on the usage of Europe's religious heritage and to discuss the range of uses available for this heritage and their practical application.

Figure 24. Europe's Living Religious Heritage Conference

Whether it is used as a place of worship, as a resource for community development, as a space for cultural expression, Europe's religious heritage deserves our full attention and dedication to its sustainable preservation for communities throughout Europe. The conference examined issues such as the traditional use of religious heritage sites and their compatibility with being open to the general public. It addressed the case of 'Heritage for All', or the potential for inclusiveness of religious monuments and the adaptations this implies for this heritage. It underlined the importance of an inter-religious dialogue of knowledge for the better reuse of a heritage marked by its primary religious use. Finally, a light was shed on the 'museumisation' of religious heritage, an interesting model in many ways for publicising the treasures of religious monuments.

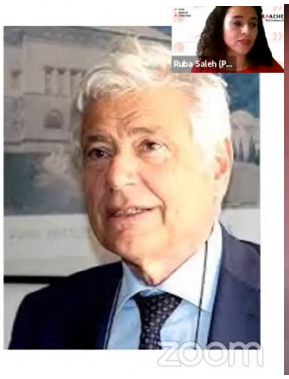
The format of the conference included 4 separate events, lasting 2 hours each that took place in different locations across Europe. CLIC participated in the second of four hybrid events of our FRH, through the contribution of the project co-coordinator Antonia Gravagnuolo (CNR-IRISS) to the panel discussion of experts in the field of religious heritage, in which output of a Working Group, as well as a mix of live and recorded video presentations from distinguished guests and FRH members were presented.

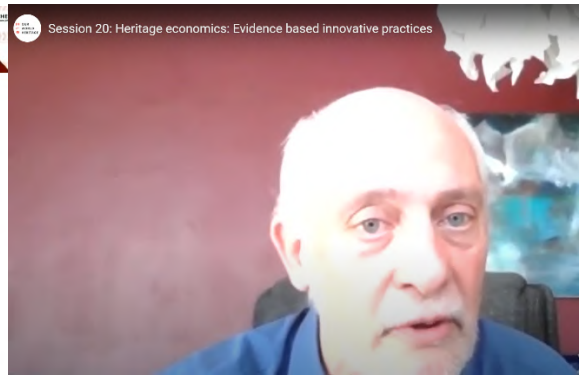
Our World Heritage. Session 20: heritage economics – evidence based innovative practices. Online, 18th June 2021, 18:00-20:00 h CEST, in which Christer Gustaffson (UU) and Luigi Fusco Girard (CNR-IRISS) participated as speakers (www.ourworldheritage.org).

OUR WORLD HERITAGE

This session reflected on innovative practices in heritage economics. Since the beginning of modern conservation, the protection and preservation of tangible heritage still justifies itself on the basis of cultural values considered as intrinsic values (values that things have inherently, for what they are, or as an end). But during its evolution, heritage conservation has faced more challenges, partly because of the successful addition of heritage sites, monuments, and buildings that require additional financial means, partly because of the threatening environment of urbanization, rural exodus, and climate change. These challenges have been so great that protection and preservation of cultural heritage today cannot be justified anymore on the sole basis of intrinsic cultural values. As a consequence, intrinsic values may become one means among other cultural values that may be intermediary values to achieve overarching goals.

A new paradigm of conservation based not only on what heritage stands for, but on what heritage contributes to achieve.





In particular, during this session Christer Gustafson discussed on “Cultural heritage and innovation – smart heritage-based development strategies”, while Luigi Fusco Girard intervened with the topic “Towards impacts assessment framework for circular “human-centered” adaptive reuse of cultural heritage”.

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Annex 1 - Agenda CLIC Final Conference 22-23 September

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Circular models Leveraging Investments in Cultural heritage adaptive reuse

CLIC Final Conference
Programme | 22 - 23 September 2021
Online event

Day 1 | The CLIC framework for circular human-centred adaptive reuse of cultural heritage

Wednesday 22nd September, 9:00 - 13:30 CET

09:00 - 10:30 h. **Session 1 | The CLIC framework for circular human-centred adaptive reuse of cultural heritage**

Moderator: **Antonia Gravagnuolo**, CNR IRISS, CLIC Project Co-coordinator

Welcome

Massimo Clemente, CNR IRISS Director

Jyoti Hosagrahar, UNESCO Deputy Director for the World Heritage Centre

The CLIC framework

Luigi Fusco Girard, CNR IRISS, CLIC Scientific Coordinator

Keynote speeches

Ugo Guarnacci, European Research Executive Agency, European Commission

Giampaolo D'Andrea, MiC Italian Ministery of Culture

Teresa Patrício, ICOMOS President

Christian Ost, Honorary Rector of ICHEC Brussels Management School, President of Raymond Lemaire International Centre for Conservation KU Leuven

10:45 - 12:00 h. **Session 2 | Innovative circular governance models and Local Action Plan for cultural heritage adaptive reuse**

Moderator: **Deniz Ikiz Kaya**, Eindhoven University of Technology

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 776758

Circular models Leveraging Investments in Cultural heritage adaptive reuse

Cristina Garzillo, ICLEI Local Governments for Sustainability | Circular governance innovation: Local Action Guide

Björn Ohlén, **Vera Telemo**, Västra Götaland Circular region

Raffaele Lupacchini, Salerno Circular city

Suzana Belošević Romac, Rijeka Circular city

Thomas Van de Sandt, Pakhuis de Zwijger, Amsterdam Circular city

Gabriella Monteleone, FacilityLive | CLIC Knowledge and Information Hub: intelligent data management for cultural heritage

Round table discussion: Innovative circular and human-centred governance for cultural heritage adaptive reuse

Moderator: **Emanuela De Menna**, European Research Executive Agency (REA), European Commission

Hanna Szemző, Metropolitan Research Institute, H2020 Open Heritage project coordinator

Eva Wascher, TUDO University, H2020 T-Factor partner

Vera Gregório, Lisboa e-nova, H2020 HUB-IN project coordinator

Isabel Ferreira, University of Coimbra, H2020 URBiNAT project scientific co-coordinator

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12:15 - 13:20 h. Session 3 | Tools for circular governance: impacts assessment for cultural heritage adaptive reuse

Moderator: **Jermina Stanojev**, Uppsala University

Christer Gustafsson, Uppsala University | Smart Specialisation Strategies and spillover effects of cultural heritage adaptive reuse in the circular economy perspective

Sigrid Stagl, **Gillian Foster**, Vienna University of Economics and Business | The future of circular environmental impact indicators for cultural heritage buildings in Europe

Antonia Gravagnuolo, CNR IRISS, CLIC Co-coordinator | Evaluation framework for circular cultural heritage adaptive reuse: from best practices to better projects

Panel Discussion

Cristiana Parisi, Copenhagen Business School, H2020 Reflow project coordinator

Marco Acri, University of Nova Gorica

Magdalena Roszczynska, University of Warsaw, Institute for Social Science

Alessio Ishizaka, Salvatore Greco, University of Portsmouth

13:20 - 13:30 h. Conclusions of Day 1

Ugo Guarnacci, European Research Executive Agency, European Commission

Luigi Fusco Girard, CNR IRISS, CLIC Scientific Coordinator

Antonia Gravagnuolo, CNR IRISS, CLIC Project Co-coordinator

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 776758

2018 EUROPEAN YEAR OF CULTURAL HERITAGE #EuropeForCulture

Italian National Research Council | IRiSS Institute for Research on Innovation and Services for Development

Annex 2 - Presentations CLIC Final Conference 22 September

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Date of Issue: Oct. 28, 21
Grant Agr. No: 776758

CLIC

CIRCULAR MODELS LEVERAGING INVESTMENTS IN CULTURAL HERITAGE ADAPTIVE REUSE

CLIC Final Conference | 22 - 23 September 2021

Online event

The CLIC framework

Luigi Fusco Girard, CNR IRISS, CLIC Scientific Coordinator

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 776758

2018 EUROPEAN YEAR OF CULTURAL HERITAGE #EuropeForCulture

Consiglio Nazionale delle Ricerche

IRISS Istituto di Ricerca su Innovazione e Servizi per lo Sviluppo

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This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 776758

1. ADAPTIVE REUSE IN THE CIRCULAR HUMAN-CENTRED PARADIGM

- CLIC offers a **cultural framework** and an **operational framework** to address the dynamic evolution of our cities through cultural heritage adaptive reuse, linking past and future.

- Thus, CLIC offers first of all a **cultural model**, from which new circular business, financing and governance models and tools are derived, transforming “intrinsic” (non-instrumental) values into instrumental values.

- The CLIC circularity framework for cultural heritage adaptive reuse aims to **transform "dead places" into "living ecosystems"**, generating virtuous circles/relationships between collective memory, economic development, inclusion, and aesthetic quality (beauty) of natural and built environment.

This project has received funding from the European Union’s Horizon 2020 research and innovation programme under grant agreement No 776758

1.Introduction: setting the scene

The double goals of this presentation:
To propose the outcomes and conclusions of the CLIC research. And also to open a scientific debate that could become useful both for improving the research itself, for stimulating new research perspectives, in an evolutionary approach.

This is an occasion for exchanging our ideas and also to combine our ideas to make them useful for identifying practical tools, for implementing the European Green Deal.

Our evidence based approaches are experimented in **four cities/regions**: Salerno, Rijeka, Amsterdam, Västra Götaland: in four place-based proposals in which many local actors of innovation have been involved.

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 776758

1. ADAPTIVE REUSE IN THE CIRCULAR HUMAN-CENTRED PARADIGM

The ambition of CLIC is to propose operational tools for contributing to the implementation of Agenda 2030 goals, New Urban Agenda goals and UNESCO goals for improving urban regeneration strategies.

The general characteristic of CLIC was identified in the presentation to the European Parliament in 2018.
The general draft framework of 21/12/2020 has been another occasion to reflect about CLIC general framework.

2.
We have analysed around 130 case studies of adaptive reuse projects in many European countries and now we can propose some conclusions about innovative financing, business, governance new models for the adaptive reuse of cultural heritage.
They can be useful and coherent with the European Green Deal, with UN-Habitat Agenda and also with the new European Bauhaus. The analysis of the interdependencies among impacts has been useful to understand the condition for implementing virtuous loops between sustainability, inclusion, quality/beauty of landscape, contributing to implement the circular city starting from cultural heritage as the entry point.

In any case, the general characteristic of CLIC in interpreting the adaptive reuse is:
- The assumption of the ecological paradigm to reconnect our built environment with nature life networks
- The assumption of the human-centred paradigm to reconnect the human beings with each other and also with future generations: a key role is recognized to culture and to cultural conditions for sustainable development. Thus, to the need of a culture local strategic plan to avoid the risk of an entropy crisis (coming from inside of our society due to the lost of sense/meanings).

Interpreting the **circular adaptive reuse** in this double perspective means to reconnect cultural heritage n the space and also in the time dimensions.
Circular human-centred adaptive reuse is characterized by the notions of: evolutionary paradigm, complexity, metabolism, entropy, capacity to mimic nature.
Some consequences: the choices of functions are less linked to the traditional tourism sector or to the residential function and are much more linked to contribute to implement the circular city, that is the six “symbioses city”. This functions are more linked to creative/cultural activities and industries.

The outcomes of CLIC therefore regard specific tools not only in technical terms. The outcomes of CLIC are also in the immaterial/cultural dimension, because the heritage asset assumes also the role of the immaterial city infrastructure for regenerating communities.

This project has received funding from the European Union’s Horizon 2020 research and innovation programme under grant agreement No 776758

2.1

The ambition of CLIC is to offer first of all a **cultural framework** about inclusion in the time and in the space evoking the contribution of H. Daly, K. Boulding, F. Capra, E. Schumacher, R. Costanza, ... And also A. Sen, I. Serageldin, that have stressed the notion that the goal of the economic development is the human being: that is the human being and not the profit is the core of the economic development.
In this way the ecological paradigm is integrated with the human-centred paradigm.

The role of culture is fundamental. As in nature a resource degenerates and is lost if it is not regenerated, in our society a cultural value (as trust, respect of rules, inclusion, etc.) is going to lost if it is not regenerated.

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2.2

Some specific common elements connecting all the research contributions, many deliverables beyond many differences of each workpackage as a general assumed basis are:

1. The interpretation of **adaptive reuse** in a **bio-ecological perspective** (the assumption of the ecological paradigm). The adaptive capacity is the creative power of nature to evolve in its dynamics of life through exploratory tentatives that are remembered by the ecosystem memory: as nature adapts and remembers, also circular adaptive reuse should be characterized by adaptive, evolving capacity to a changing context and to its memory. In this way, adaptive reuse is able to transform a dead site into a living system.

   The image of the tree/forest and its metabolism is the reference model: as a tree/forest is «generous» of spillovers, also adaptive reuse should do the same. We are dis-connecting our cities, our life from the networks of the Mother nature. We are changing the evolutionary dynamic of the nature ecosystems. We have to re-connect as soon as possible our city systems with the Earth patterns.

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1. ADAPTIVE REUSE IN THE CIRCULAR HUMAN-CENTRED PARADIGM

2. **the assumption of the key role of culture.** This evokes the assumption of the **human centred paradigm**. **CLIC introduces the cultural condition for sustainable development** that integrates the economic/ecological conditions. We have reconnect people in the fragmented society reducing growing inequalities.

3. the key role of **creativity and innovation capacity** not only in planning and designing the adaptive reuse but, first of all, in management. Innovations improve metabolism, reducing entropy and multiplying benefits.
Innovations should become engine of a new spatial shape and new architecture.

4. The assumption of the **evolutionary paradigm** coming from the notion of the adaptation. This paradigm is due to R. Ayres (1994), but many years before also to J. Schumpeter. The evolutionary paradigm characterizes whole the CLIC research: the governance models, the financial models, the business models and also the planning/design processes. The evolutionary perspective can be proposed in the planning and design; in business models; in financial tools; in governance models; knowledge and culture; in evaluation tools. The evolutionary paradigm shift the attention from market price and values and market cost to quantitative impacts and qualitative metabolism and also in their circular causation.

5. The choice of functions should satisfy three general principles: **the self-regenerative capacity, the generative capacity, the symbiotic capacity.**

6. The choice of functions should be coherent with the **intrinsic value.** The notion of intrinsic value has been introduced. The benefits of adaptive reuse have to be assessed avoiding a unique quantitative scale and assuming multiple dimensional scale.

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1. ADAPTIVE REUSE IN THE CIRCULAR HUMAN-CENTRED PARADIGM

Adaptive re-use in the perspective of the circular economy refers on the one hand to the approach of one of the greatest exponents of modern urbanism, **Patrik Geddes**, who interpreted the **bio-ecological dimension** of the dynamics of the urban system, and on the other hand to the approach of **Nicholas Georgescu-Roegen**, founder of **bio-economics and critic of mainstream economics**, as this ignored the relationship between economics and ecology, thus introducing attention to the node of energy and metabolism.

The assonance of this approach with Schumpeterian **Evolutionary Economics** becomes very evident.

Evolutionary Economics, starting from the dynamics of complex systems, recognises that all economic systems are dissipative in the sense that they "import" energy internally and "export" entropy externally.

Evolutionary Economics links the evolution of the economic system to technological innovations.

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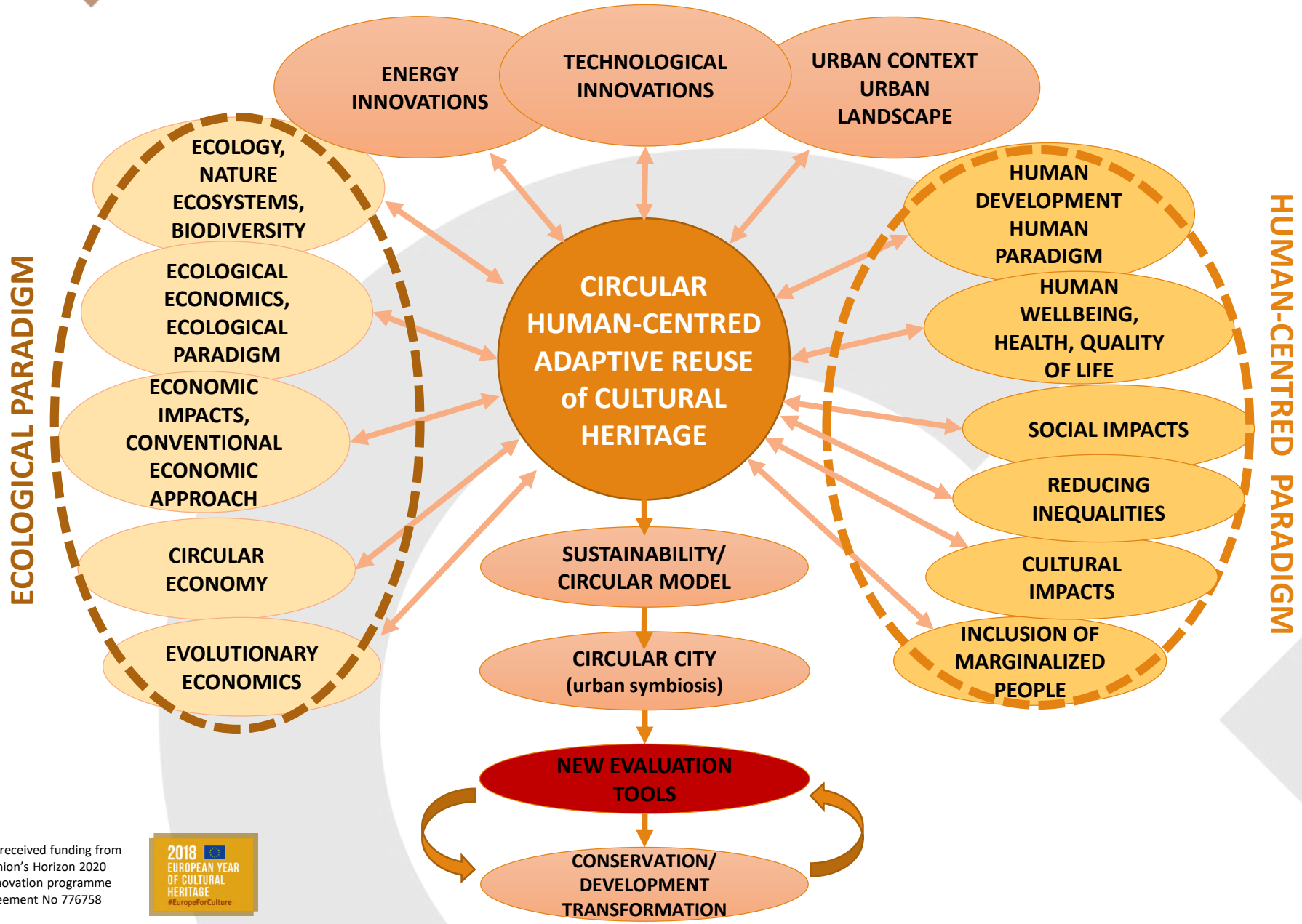
ADAPTIVE REUSE IN NATURE/CULTURE SOLUTIONS



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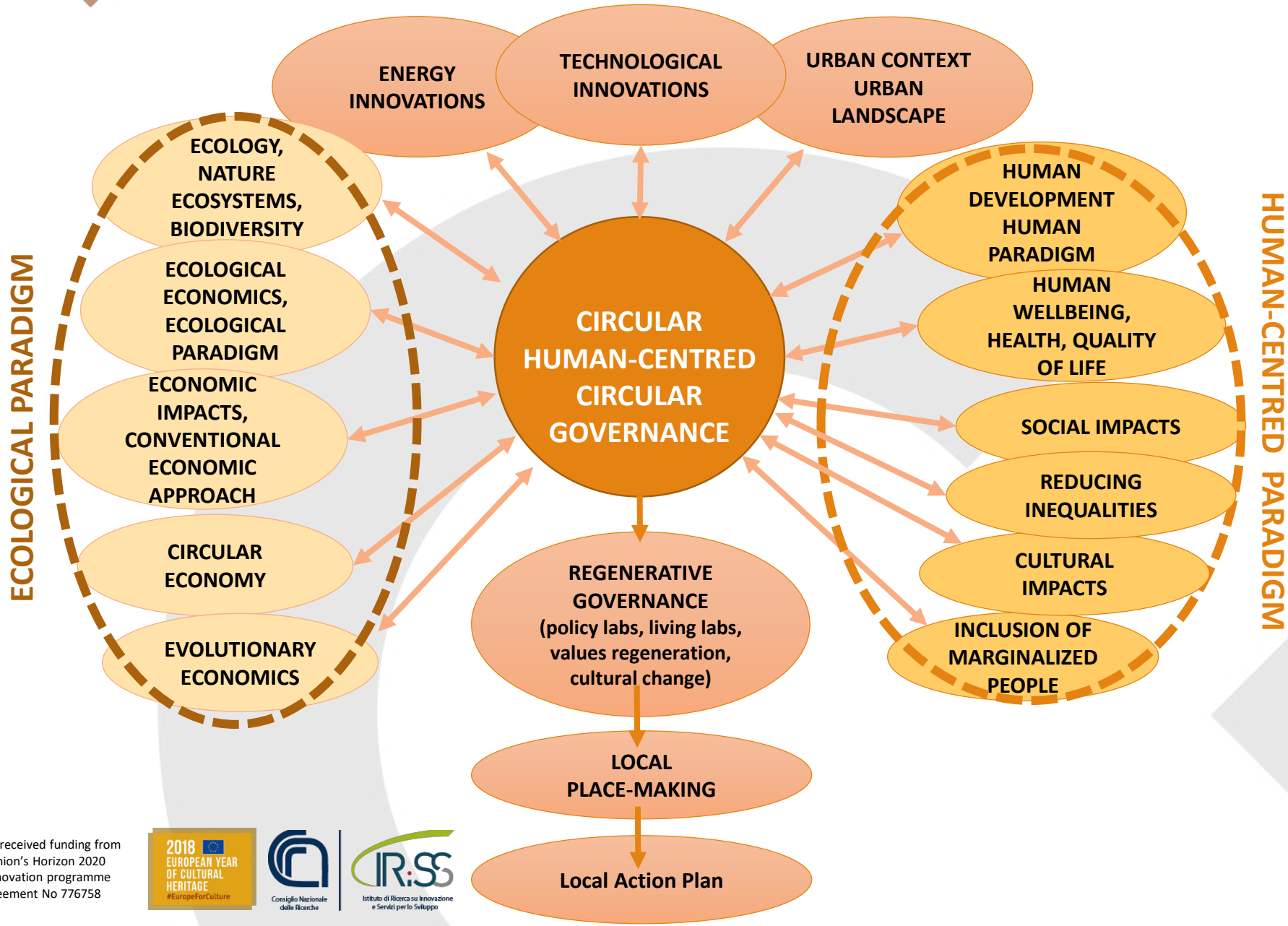
2018 EUROPEAN YEAR OF CULTURAL HERITAGE #EuropeForCulture

CIRCULAR HUMAN-CENTRED CIRCULAR GOVERNANCE



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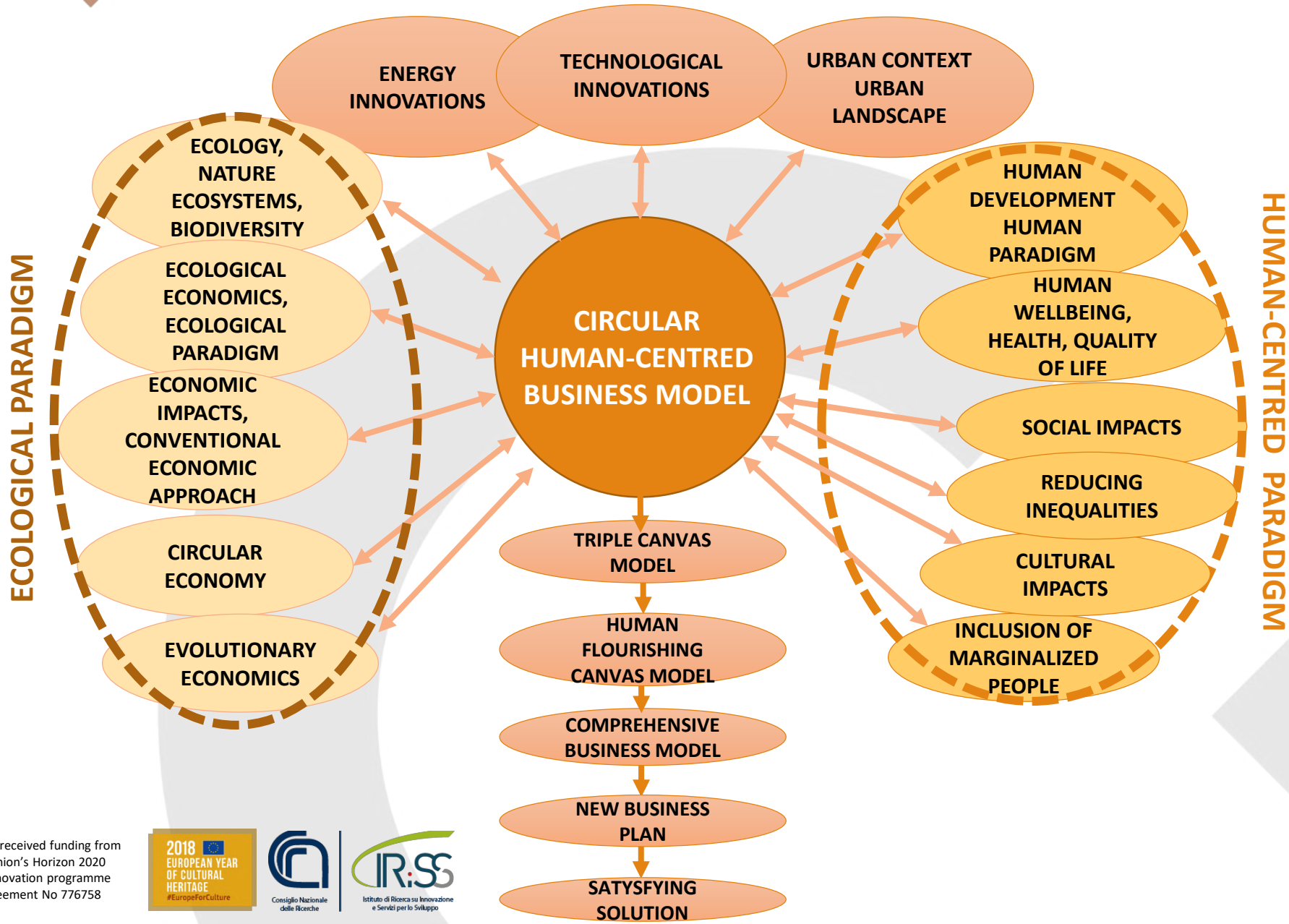
CIRCULAR HUMAN-CENTRED BUSINESS MODEL



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CIRCULAR HUMAN-CENTRED BUSINESS MODEL

In traditional business models, grounded on market prices and market costs, all natural resources (as forest, water, flora, etc.) are used, but the cost of this consumption is totally ignored because unpriced.

New business models have to recognize this key mistake. Profit achieved damaging the commons (represented by natural ecosystem that supports human activities) should not still be allowed.
The above means to take care of the territory incorporating the physical space into the economic business models because they are to be implemented not in a-spatial dimension, but in a concrete city/territory. At the same time, the above means to take care of the social environment, of the human dimension because the business models are to be implemented in a specific social space.

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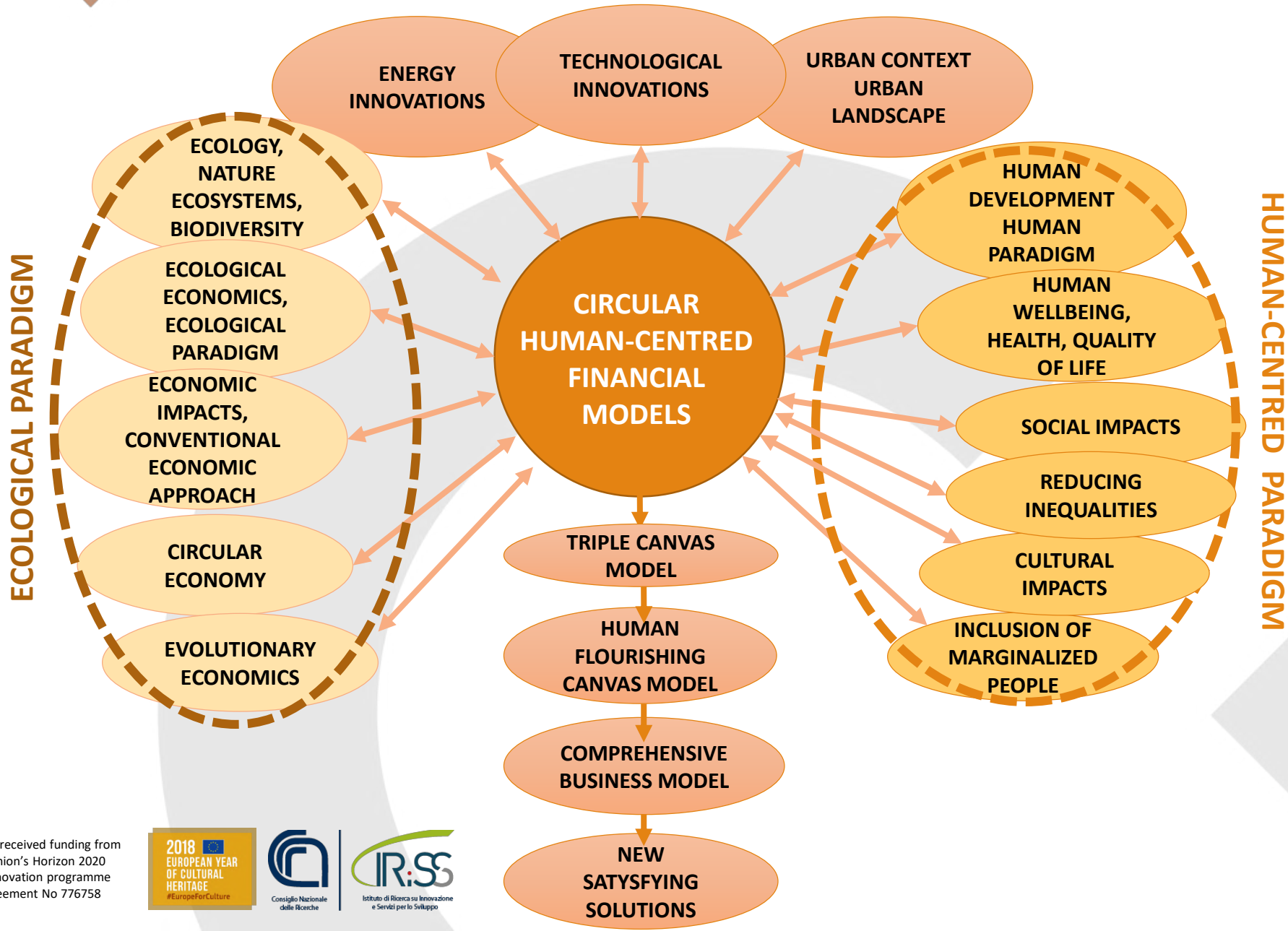
CIRCULAR HUMAN-CENTRED FINANCIAL MODELS



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CIRCULAR HUMAN-CENTRED FINANCIAL MODELS

To improve decision-making processes and choices, **new financial hybrid circular instruments** have to be proposed combining market driven impacts with crowdfunding platforms or other citizens tools.
In any case, it is important to create a general environment to reduce speculative processes, to improve the quality of heritage conservation rules. As we will hear in a while, **“revolving funds”,** as preferably public “revolving circular funds” are effective for adaptive reuse, for financing PPP (or PPPP), for financing debt.

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2. CIRCULAR HUMAN-CENTRED ADAPTIVE REUSE

Adaptive re-use is expressed through continuous adjustments and adaptations over time, to meet changes in the context in which cultural heritage is placed. In this way it is possible to guarantee a future for the cultural heritage: an extension of its useful life, a particular longevity and, eventually, its "eternity"... A cultural asset, if not used, degrades over time; it is no longer maintained and is lost. But also function inconsistent with its "intrinsic value" could lead to its degradation over time and its loss.

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3. THE NOTION OF ADAPTIVE REUSE AS A COMPLEX DESIGN AND MANAGEMENT PROCESS

Many definitions about adaptive reuse are available from Getty Research Institute, …. But at the end adaptive reuse is in any case: a **complex process**.

It is a complex process having to face with the dynamic of change. But, at the same time, it requires to make choices regarding the conservation of some elements as permanence, combining the logic of change with the logic of conservation.

It is a complex process because it requires **the capacity to distinguish and select essential elements from other accessory elements.** It requires to make choices between intrinsic value (the essential meaning of the heritage) and the instrumental values. It requires to manage conflict between needs, demands, preferences, values, goals. It requires continuous innovations. It requires a critical thinking capacity. It requires adequate evaluation tools.

The circular human centred adaptive reuse is still **a more complex process** because it is much more than recovery materials and energy or water. It requires a systemic integration between natural and built capital, between human and social capital, between human/social capital and natural/built capital.

It requires the capacity to regenerate all forms of capitals, both tangible and intangible, managing many ecological, social, environmental, symbolic, technological, aesthetical aspects and many different subjects (private, public, social).

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THE COMPLEXITY OF PLACE-BASED CIRCULAR HUMAN CENTERED ADAPTIVE REUSE

THE COMPLEXITY OF PLACE-BASED CIRCULAR HUMAN CENTERED ADAPTIVE REUSE

A) **The position in the territorial context:** in the city centre, with high potential of use value or in marginal poor areas, with no potential without connective infrastructures;

B) **The state of conservation** and the intensity of transformation or adapting to new functions: high structural cost versus low adaptive costs;

C) **Involved subjects; Public, private, social.**

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“TRADITIONAL” ADAPTIVE REUSE

Functional reuse design

↓

Extraction of natural material resources and energy

↓

Transport with CO2 production

↓

Demolition on site of some artifacts, with consumption of new natural materials, conventional energy consumption based on carbon, with production of CO2

↓

Waste transport of non-reusable materials with production of new CO2

↓

Requalification of the physical spatial layout, with consumption of water resources, production of CO2 and pollutant and climate-altering gases, particulate matter etc. in the air and on the ground

↓

Production of waste resulting from the management transported to landfills, with production of CO2 and pollution

↓

High ecological footprint (coming from functions in management in reused assets)

↓

Management based on linear business models

↓

Economic, social and cultural benefits

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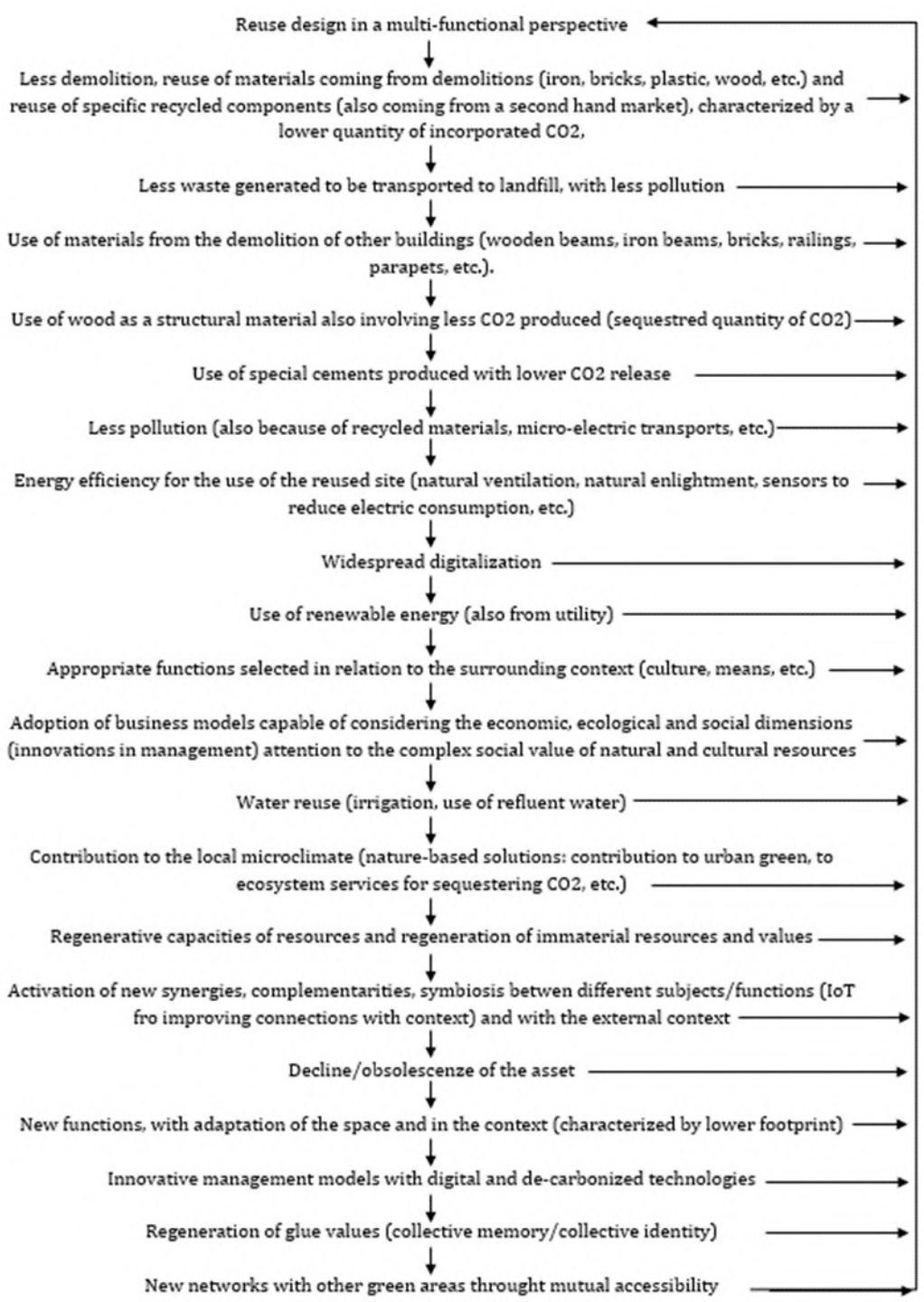
ADAPTIVE REUSE PROCESS IN THE PERSPECTIVE OF CIRCULAR HUMAN-CENTRED PARADIGM

(technical, management and financial innovations as engines of new creative relationships between ancient and new reused assets)



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ADAPTIVE REUSE: CREATIVITY MEANS INNOVATION

Creativity is the fundamental ingredient of adaptive reuse, for managing the above high complexity.

The creativity of the adaptive reuse project is not related to the reuse architectural project, but it is especially related to the management project. It is the creativity of the entrepreneur/manager. The entrepreneur decides to take on a certain investment and to run the relative risks by creating a new organisation, through new solutions that transform the cultural resource into a complex of complementary systemic relations. This takes place by adapting the cultural manmade capital, elaborating a new order, a new organisation, also through subsequent experimentation and thus "learning" from successes and possible failures, in the search for ever more performing solutions, through new combinations.

The choices he is called to make are always under conditions of increasing uncertainty, first of all because of the dynamics of demand market. This implies the need to make forecasts about the evolutionary dynamics of the demand for the various needs/goods/services in the territorial context where the cultural organisation is located.

On the other hand, the entrepreneur/manager is led to multiply the possible functional combinations in search of new synergies between different functions, activities and subjects that can mutually reinforce and consolidate over time, increasing the attractiveness of the "micro ecosystem" in which he operates. This means a continuous search for a new organisational architecture, which transforms the simple "collection" of component elements into a system of interdependencies through adaptive reuse.

This is adaptive reuse: the continuous reorganisation/remodulation that transforms a simple "aggregate" into a new "structure", with an innovative organisation based on reciprocal and dynamic relations of complementarity, which in turn generate synergies and symbiosis.

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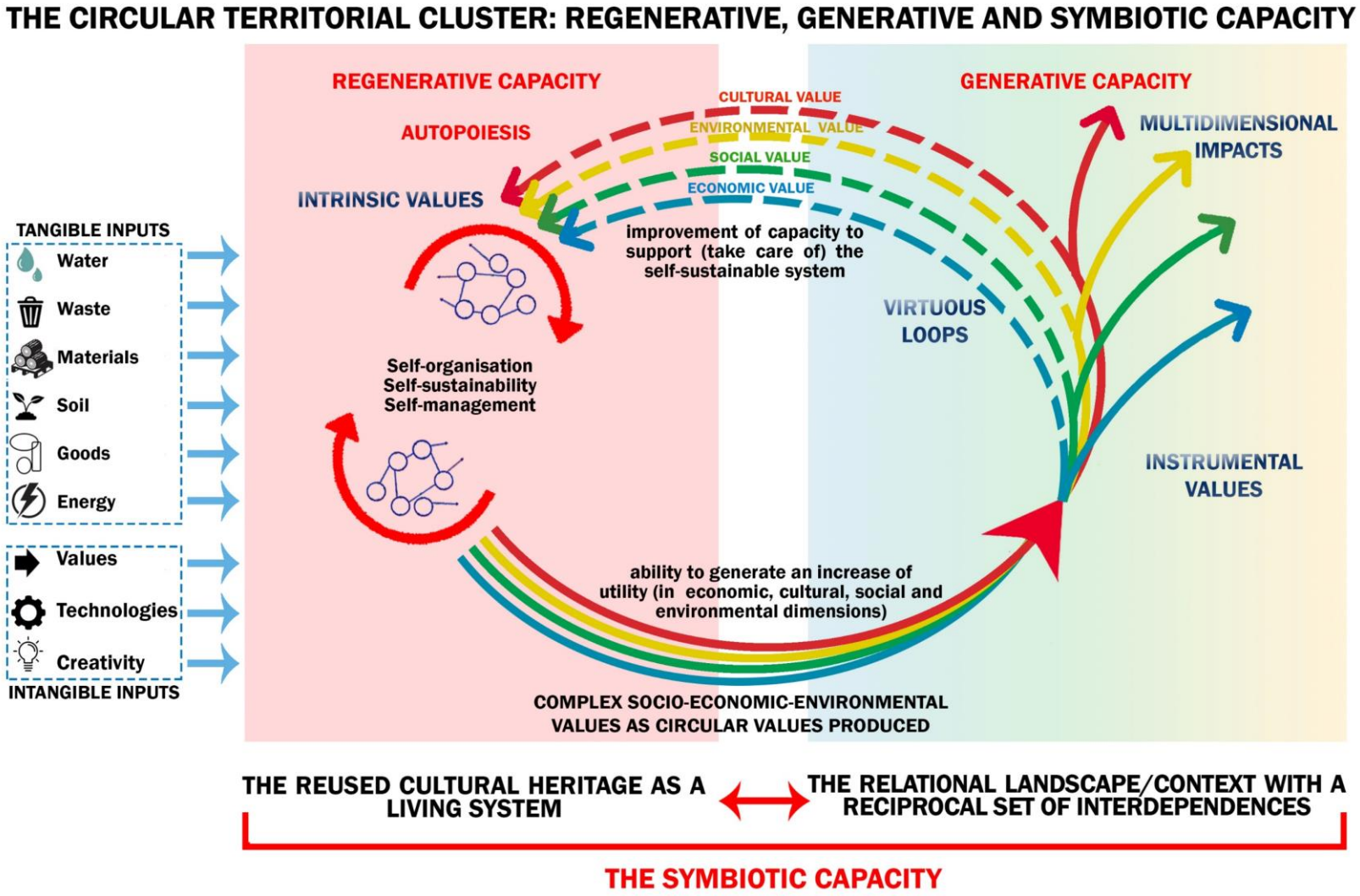
4. THE GENERAL CONDITION FOR THE SUCCESS OF ADAPTIVE REUSE

In conclusion, the general goal of the circular human centered adaptive reuse is the proposal of a **"cultural territorial circular adaptive ecosystem"** able to self-organize, self-manage, self-gorvern, able to implement condensation places for many activities in terms of organized complementarities.



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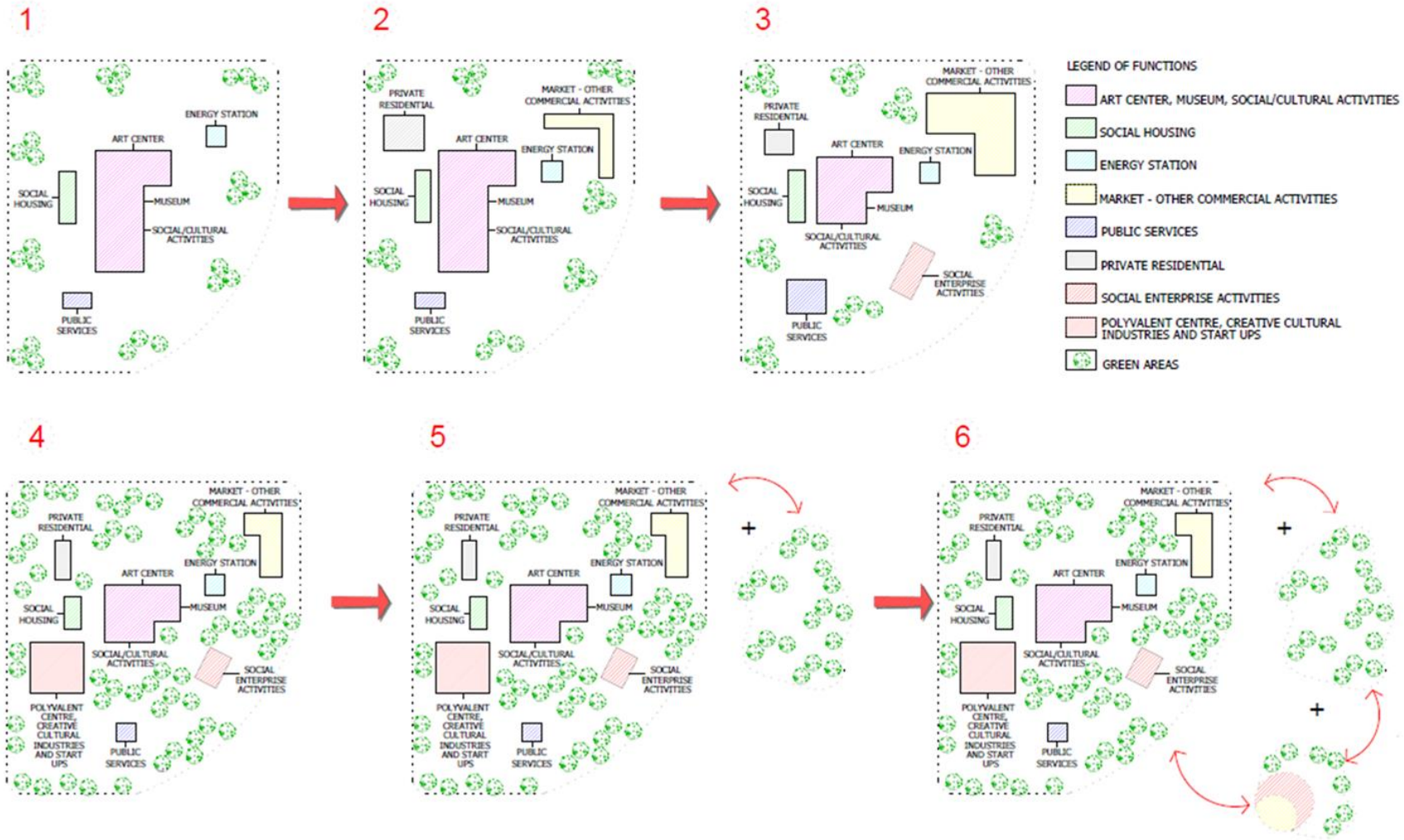
THE EVOLUTIONARY PROCESS TOWARD A SATISFYING DESIGN SOLUTIONS

THE INTEGRATION BETWEEN CIRCULAR BUSINESS PLAN AND DESIGN



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5. CIRCULAR NEW GOVERNANCE AND EVALUATION PROCESS

- The circular human-centred governance for reducing inequalities and for implementing the transition towards the ecological paradigm achievement is grounded on new evaluation capacity

- Approaches grounded on MAUT are usefull : AHP, ELECTRE,Regime, EVAMIX,NAIADE,CIE

- They allow to compare alternatives, deducing a priority

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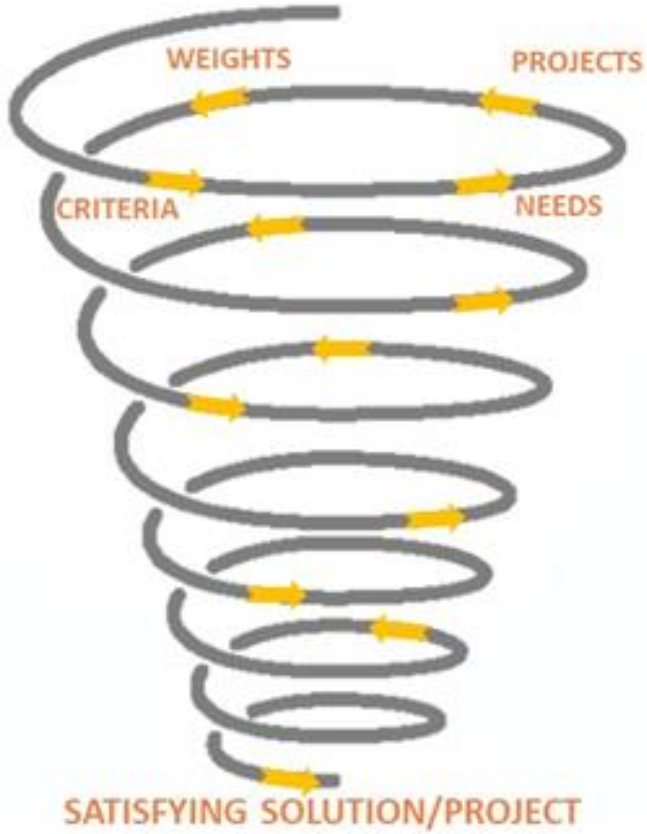
THE DYNAMIC APPROACH OF ADAPTIVE REUSE IN THE PERSPECTIVE OF THE CIRCULAR ECONOMY: THE CO-EVALUATION PROCESS

The **DYNAMIC APPROACH OF ADAPTIVE REUSE IN THE PERSPECTIVE OF THE CIRCULAR ECONOMY** should follow a coherent **evaluation approach**. This dynamic approach in turn leads to a **DYNAMIC EVALUATION APPROACH**, that is, an approach in which criteria, weights and alternatives change in an evolutionary spiral.



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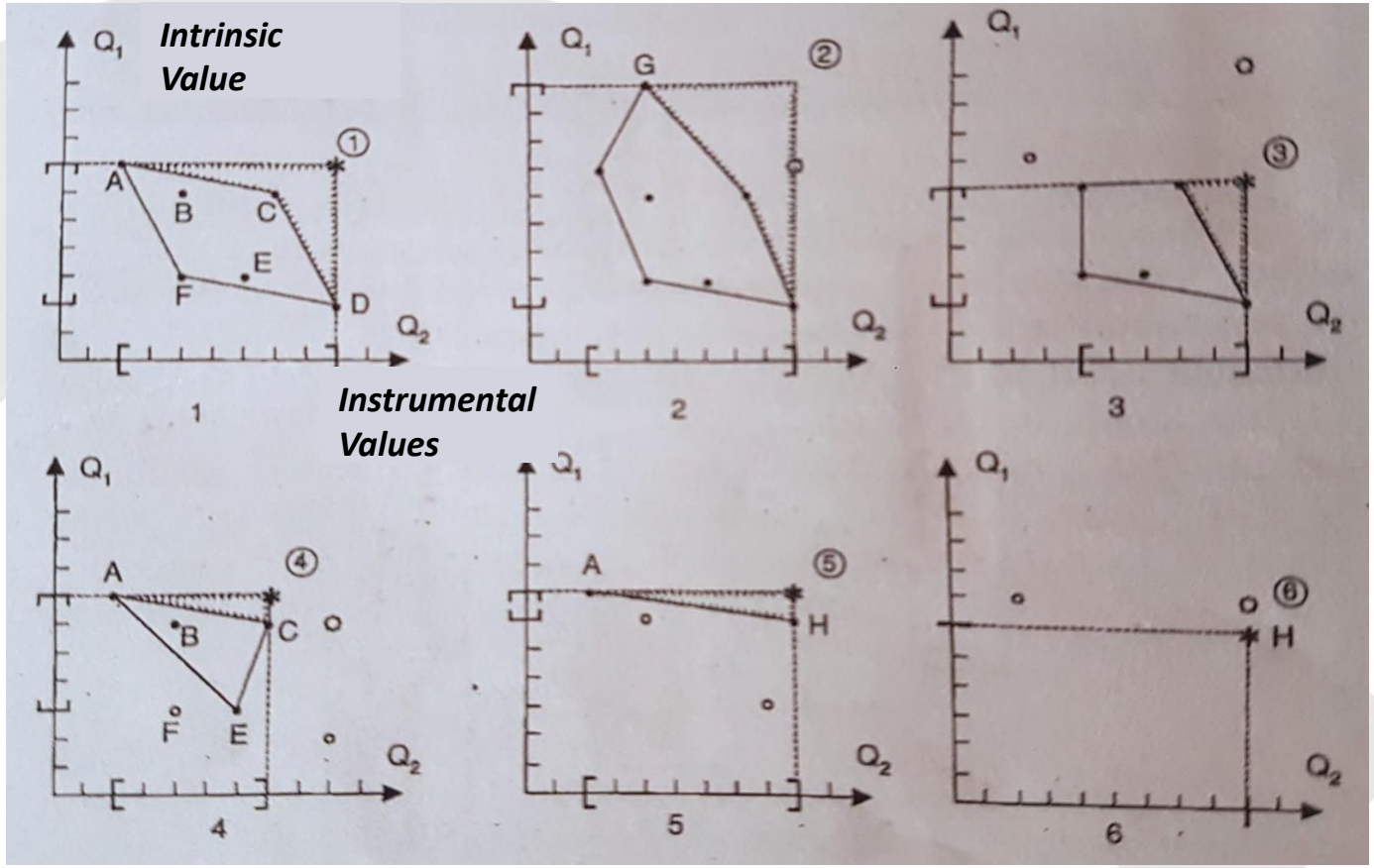
THE “IDEAL” PROJECT THROUGH INTRINSIC AND INSTRUMENTAL VALUES

The spiral process in search of satisfying solution

The **“ideal” project** of re-use and thus the main goal of reuse-regeneration is **to transform (in general) a dead site into a living system, to be managed as a living organism**, that is an organism capable of continuous adaptation to a changing/dynamic context, through learning, re-organizing, repair, self-regulating, and therefore capable of resilience.

The **“ideal” project** of re-use is identified through an evolutive approach able to combine and re-combine intrinsic and instrumental values through participatory approaches.



Source: Zeleny, 1982

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6. CONCLUSIONS

The ambition of CLIC is to offer a guidance to development actors, to cities, public institutions, financial institutions, private bodies, social actors and cultural institutions demonstrating the potential of heritage circular reuse in implementing local development.

The presentations of the outcomes of the research will be showed in this first part of the meeting and tomorrow. They will be exposed by single researchers in a more operational terms and much more in depth.

Regardless of these presentations, the **first conclusion** is to adopt a place-based approach that means to connect single points/areas in the space into a network of built and natural heritage, connecting them through synergies and cooperative activities. A specific local action plan is suggested at city level, considering the many built and green spaces and transforming them **into a network of places, in a systemic perspective.**

A **second conclusion** is linked to interpret the new governance in terms of enlarging the current world-view that is determining the growing dis-connection with natural system of life and among people, assuming that innovative governance is grounded not only on new financial economic, administrative tools but also on culture for becoming really effective and to sustain from bottom-up the initiatives (rules, investments, plans) coming from top down by institutions. Thus, the new circular governance should be involved in the regeneration of inclusion values, of solidarity values, of integration values. They are not done, but they have to be regenerated with the same speed of their consumption (as Schumpeter and also Hollis and Genovesi, Filangieri, etc. have already underlined). In this way, CLIC introduces the attention also to the **immaterial aspects of the adaptive reuse: the immaterial aspect of all forms of metabolism** and not only the material metabolism. About the financial innovative circular models, the premise is that a current capital market and asset pricing system have to be redesigned within a circular perspective in order to reconnect people, and reconnect people with the Planet. The place-led financial tools vary from “impact investing” to blended finance, to PPP (or PPPP), to urban value capture tools to crowdfunding, to grants, etc.

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6. CONCLUSIONS

The third conclusion is the promotion of a new culture. The intrinsic value

The above evaluation tools allow to identify solutions in designing a «***circular cultural heritage ecosystem***».

But the above evaluation tools can be used also to produce not only the heritage conservation but also ***to promote a new culture, essential to improve the human centered and ecological paradigm***: the goal is not only to conserve stone but also to valorize the culture that is reflected in the stone.

The notion of **intrinsic value is usefull in this cultural perspective: it assumes the interpretation capacity of people/participants to rtecognize the essential meanings incorporated into ther heritage assets**.

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6. CONCLUSIONS

The real research continually poses many questions: research is structurally evolutive/evolutionary.

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CIRCULAR MODELS LEVERAGING INVESTMENTS IN CULTURAL HERITAGE ADAPTIVE REUSE

THANKS FOR YOUR ATTENTION!!!

Luigi Fusco Girard

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Consiglio Nazionale delle Ricerche

IRiSS Istituto di Ricerca su Innovazione e Servizi per lo Sviluppo

CIRCULAR MODELS LEVERAGING INVESTMENTS IN CULTURAL HERITAGE ADAPTIVE REUSE

LESSONS FROM CLIC FOR THE (POST-COVID) FUTURE

Prof. Christian Ost
ICHEC Brussels management School
Raymond Lemaire International Conservation Center KU Leuven

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CLIC Final Conference
22 - 23 September 2021

CIRCULAR ECONOMY IS SUSTAINABILITY 2.0 OR C2C (CRADLE TO CRADLE)

WHICH IS COMMONLY ACKNOWLEDGED TODAY AS THE BEST SOLUTION TO RECONCILE THE MARKET ECONOMY, GROWTH, PRODUCTIVITY GAINS, AND SUSTAINABILITY.

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Circular models Leveraging Investments in Cultural heritage adaptive reuse

THREE REASONS THAT MAKE CLIC FORERUNNER OF POST-COVID STRATEGY

1- CLIC makes emphasis on the use of local jobs, material, skills and economic resources

2- CLIC revisits mobility, spatial integration and liveability in urban areas

3- CLIC fosters innovation for new finance, governance and business models

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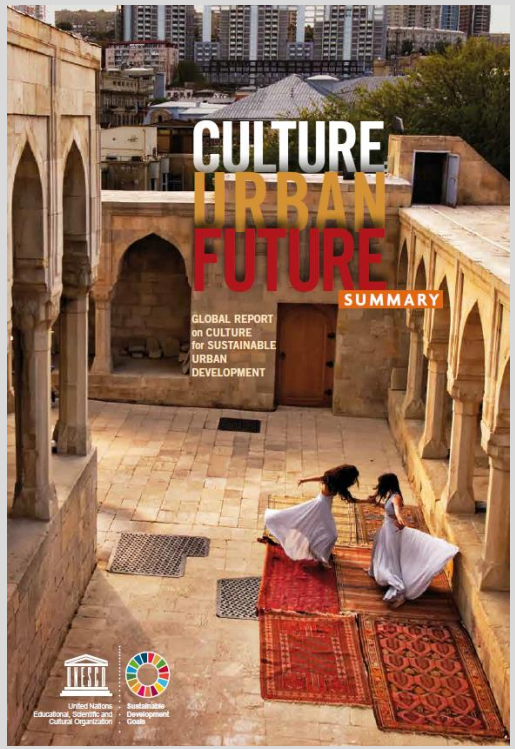
CLIC Final Conference
22 - 23 September 2021

Heritage Adaptive Reuse and Circular Economy



CLIC provides applied research on SDG's and UNESCO Global Report

11 SUSTAINABLE CITIES AND COMMUNITIES

CLIC Midterm Conference

Rijeka 27 - 28 March 2019

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Circular models Leveraging Investments in Cultural heritage adaptive reuse

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ADAPTIVE REUSE OF CULTURAL HERITAGE AS IMPLICIT CIRCULAR ECONOMY PRACTICE

HERITAGE VALUES ARE RECYCLED

CONSERVATION IS A CYCLICAL PROCESS IN MANY ASPECTS

URBAN CONSERVATION IMPROVE SOCIAL COHESION AND LIVEABILITY

CRITERIA	Description
1. Cultural values preservation	
Authenticity	The reuse practice preserved the authenticity of the building/place
Integrity	The reuse practice preserved the integrity of the building/place
2. Circularity of conservation works	
Local skills	The reuse practice made use of local skills/techniques/knowledge
Design of new components and systems	The reuse practice designed components and systems to improve service life of the building
Efficiency	The reuse practice made use of efficiency measures (e.g. energy, materials and water)
Ecosystems	The reuse practice contributed to ecosystems preservation and regeneration
Waste and landfill	The reuse practice contributed to reduce construction waste and landfill
Biodiversity	The reuse practice contributed to halt/reverse biodiversity loss
Optimization	The reuse practice achieved optimization in the use of existing resources
Long term	The reuse practice took into consideration performances of the building in the long horizon
New innovative models	The reuse practice has enhanced new innovative models for financing, business, governance.
Local return on investment	The reuse practice has contributed to higher and long-term local return on investment
3. Circularity of outcomes from the use	
Cultural visitors	The reuse practice has increased the number of cultural visitors
Common good	The reuse practice has provided commons to the local community
Spatial integration	The reuse practice has improve spatial integration of cultural capital
Adaptability	The reuse practice has increased future flexibility and adaptability of the building
Raising awareness	The reuse practice has improved local awareness for heritage and circular economy
Real estate market	The reuse practice has provided circular economy processes in real estate market
Productivity	The reuse practice has contributed to higher productivity (less inputs for more output)
Creativity	The reuse practice has enhanced creativity and innovation
Public good	The reuse practice has generated long-term free use concession
Wellbeing	The reuse practice has improved local health/ wellbeing
Sustainable development	The reuse practice has contributed to local sustainable development
Micro communities	The reuse practice contributed to the creation/regeneration of micro communities
Identity	The reuse practice contributed to enhance civic pride, identities, and sense of the place

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Circular models Leveraging Investments in Cultural heritage adaptive reuse

ADAPTIVE REUSE OF CULTURAL HERITAGE AS IMPLICIT CIRCULAR ECONOMY PRACTICE

Bratislava, Old Market – Stara Trznica

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Circular models Leveraging Investments in Cultural heritage adaptive reuse

CLIC

THE ECONOMIC LANDSCAPE IDENTIFIES INTEGRATION OF URBAN CULTURAL ASSETS AND URBAN REALITY.

ADAPTIVE REUSE OF URBAN TANGIBLE AND INTANGIBLE HERITAGE IMPROVES THE CIRCULAR ECONOMY

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CLIC Circular models Leveraging Investments in Cultural heritage adaptive reuse

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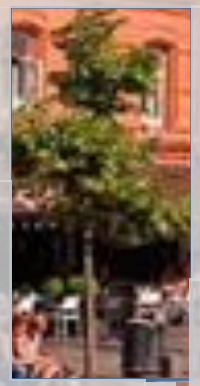
THE ECONOMIC LANDSCAPE IDENTIFIES INTEGRATION OF URBAN CULTURAL ASSETS AND URBAN REALITY.

ADAPTIVE REUSE OF URBAN TANGIBLE AND INTANGIBLE HERITAGE IMPROVES THE CIRCULAR ECONOMY

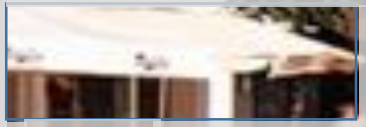
Blue sky

Built heritage

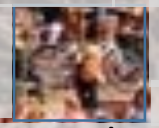
Trees



Urban furniture



Terraces



Bicycles

Flowers

Human beings

Pavement

Water

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WHERE DO WE GO FROM HERE?

LESSONS FROM CLIC FOR THE (POST-COVID) FUTURE

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CLIC
Circular models Leveraging Investments in Cultural heritage adaptive reuse

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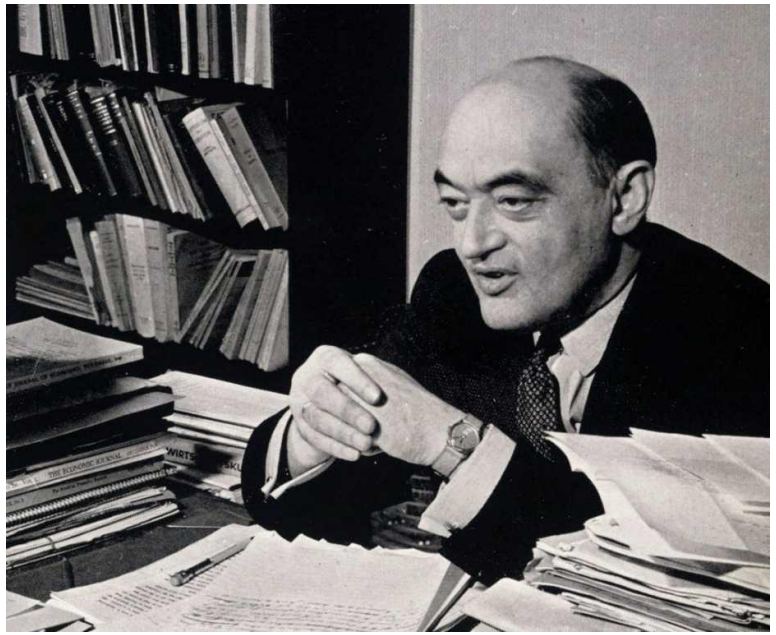
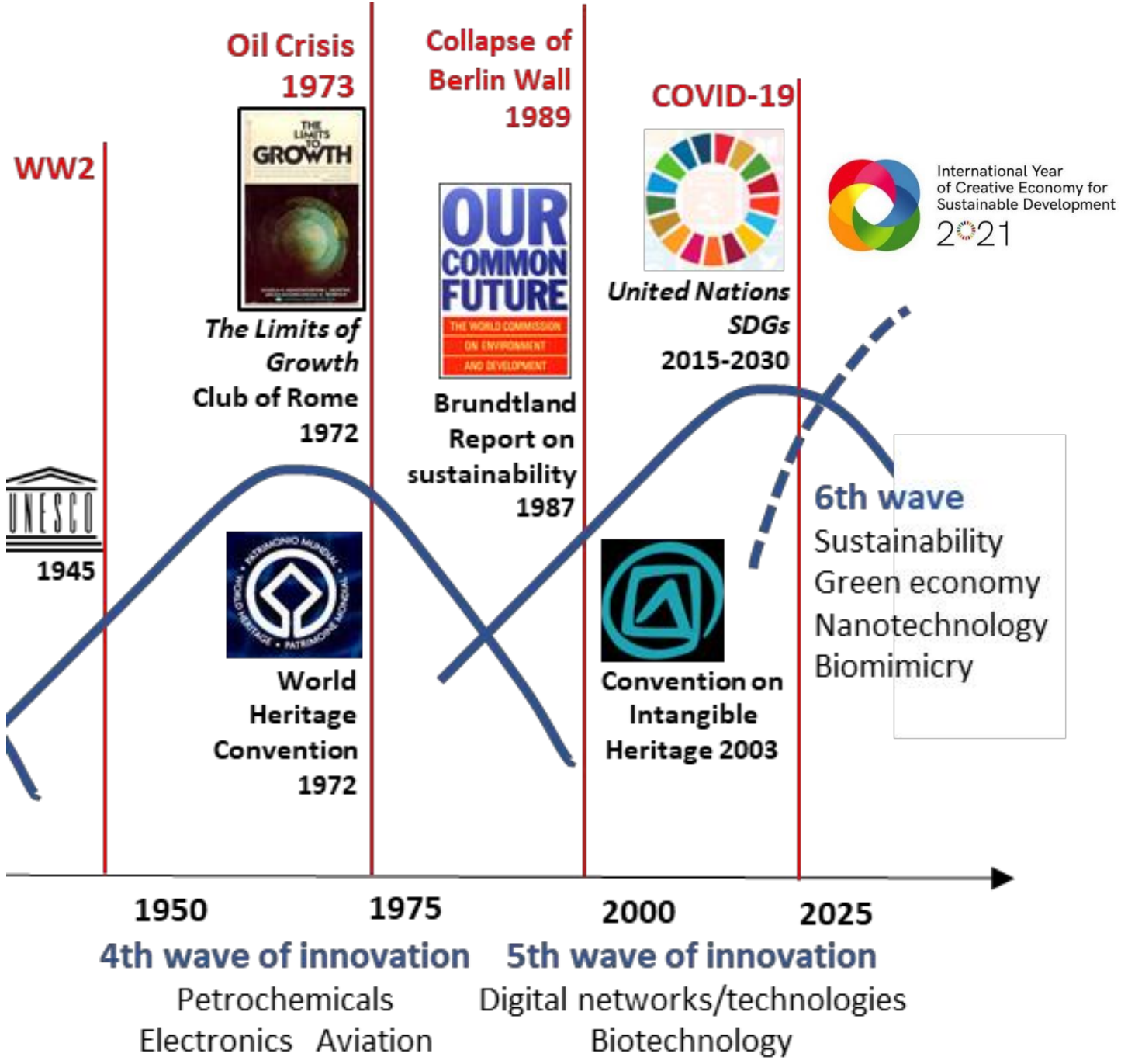
CLIC

CULTURAL HERITAGE HAS BENEFITED IN THE PAST FROM TWO WAVES OF INNOVATION

A NEW WAVE OF SUSTAINABILITY- BASED INNOVATIONS CAN STILL BENEFIT TO CULTURAL HERITAGE (ASK 'CLIC')



Joseph Schumpeter 1883-1950



A NEW WAVE OF SUSTAINABILITY-BASED INNOVATIONS

Innovations in terms of cultural heritage :

- *Bring sustainability in heritage principles and decisions (designation, management, monitoring)*
- *Take care of intangible heritage*

Innovations in terms of conservation practices :

- *Green, sustainable, circular heritage with local outcomes to attract new residents, business and tourism*
- *Trade-offs between sustainable conservation and economic development (cultural values are not enough)*
- *Participatory approaches (bottom-up)*

Innovations in terms of decision-making/management tools :

- *New financial, governance, business models (where is the chain value?)*
- *Training* in *cultural and heritage entrepreneurship*

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 776758

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ICHEC BRUSSELS MANAGEMENT SCHOOL

CLIC

CIRCULAR MODELS LEVERAGING INVESTMENTS IN CULTURAL HERITAGE ADAPTIVE REUSE

CLIC Final Conference | 22 - 23 September 2021

Online event

Evaluation framework for circular cultural heritage adaptive reuse: from best practices to better projects

Antonia Gravagnuolo, CNR IRISS, CLIC Co-coordinator

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 776758

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Italian National Research Council | IRISS Institute for Research on Innovation and Services for Development

What is the evaluation framework

The **CLIC Evaluation Framework** is:

- **a conceptual framework** defining the objectives of a *circular* «human-centred» adaptive reuse of cultural heritage, according to the specific *notion of value* driven by the circular economy model

- **a set of evaluation tools to assess the circularity and impacts** of cultural heritage adaptive reuse projects: evaluation methods, criteria, indicators

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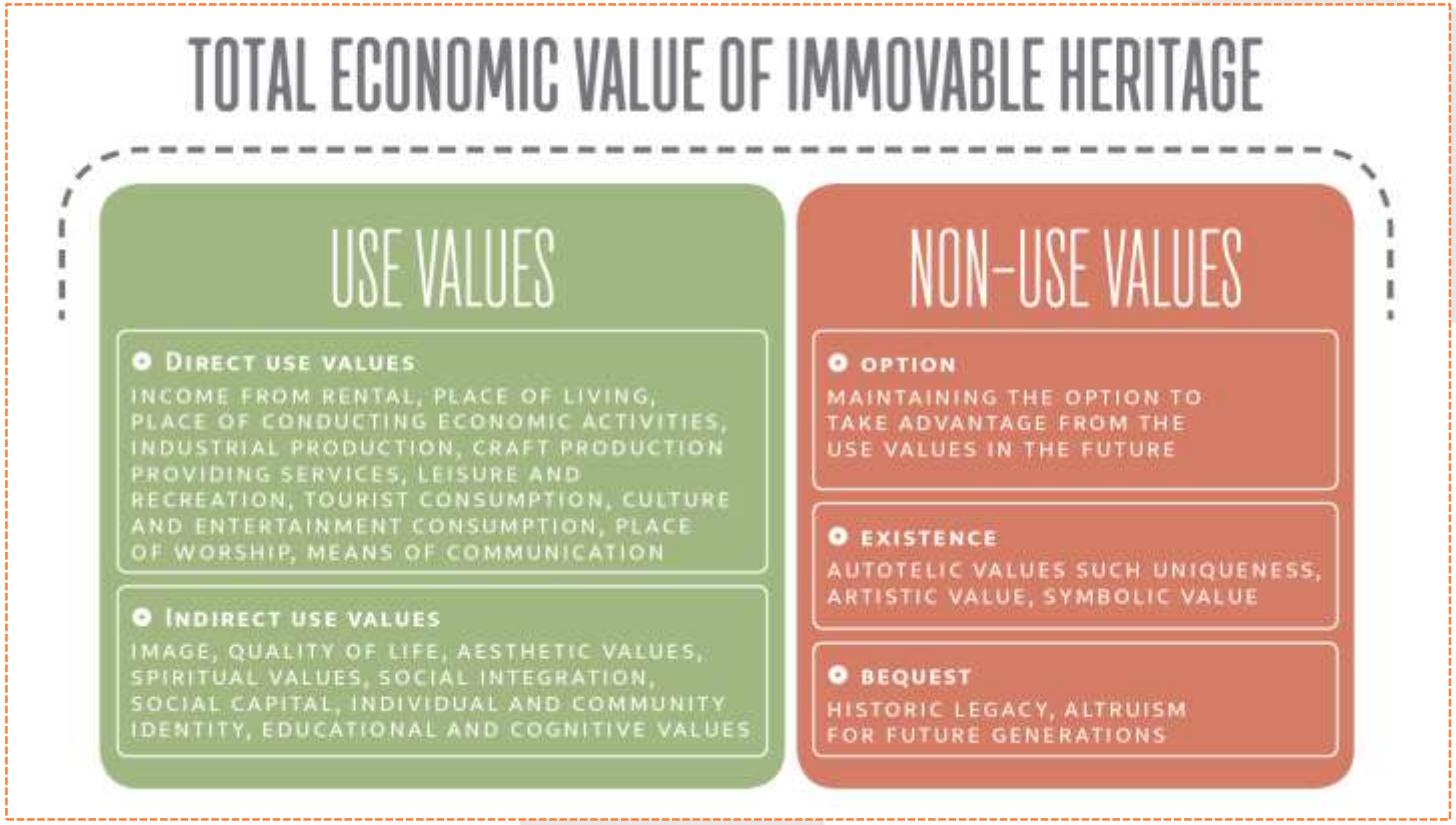
The specific notion of value of cultural heritage: instrumental and non-instrumental values

Instrumental values



Cultural heritage counts for Europe, 2015

Non-instrumental value

«INTRINSIC VALUE»

Intrinsic anthropogenic and non-anthropogenic values

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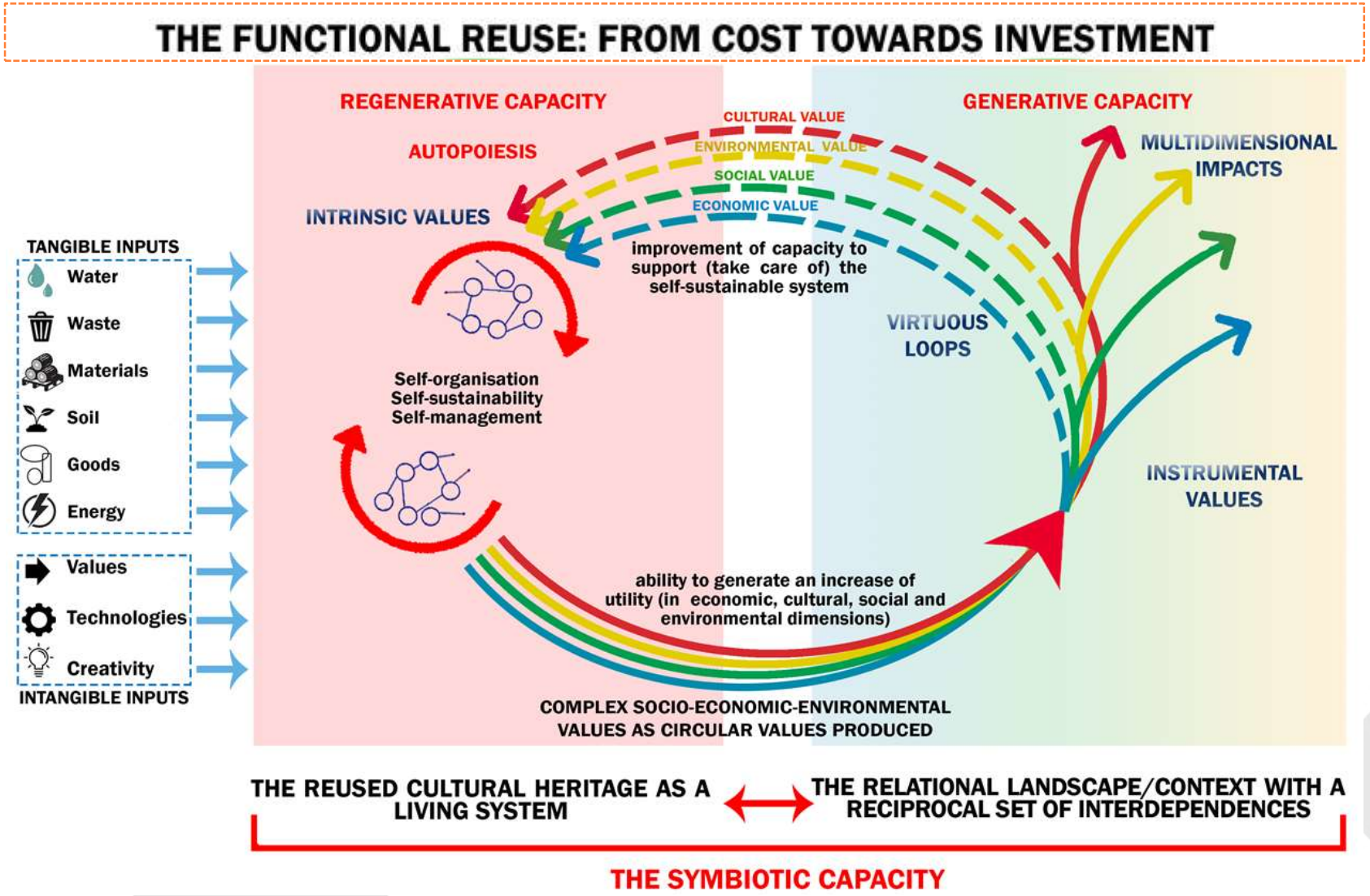
The conceptual framework of **Circular «human-centred» adaptive reuse of cultural heritage**



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Circular «human-centred» adaptive reuse of cultural heritage

Self sustainability and self-regeneration of resources (auto-poietic capacity)

- **Cultural resources**: Conservation of heritage authenticity and integrity, Intangible values, Historic Urban Landscape quality, Accessibility of cultural heritage site
- **Economic resources**: Financial self-sustainability as capacity of not being sustained by external public and self-generating knowledge and financial resources, private or social actors, Reinvestment of profits to generate new activities
- **Environmental resources**: Energy; Water; Soil; Raw materials extraction; Green surfaces; Local and healthy materials; Remediation; Carbon emissions; Use of regional resources
- **Social resources**: Heritage community, Local community, Entrepreneurial involvement of people, Skills enhancement, Education & Training

Symbioses and synergies (circular «human-centred» economy enablers)

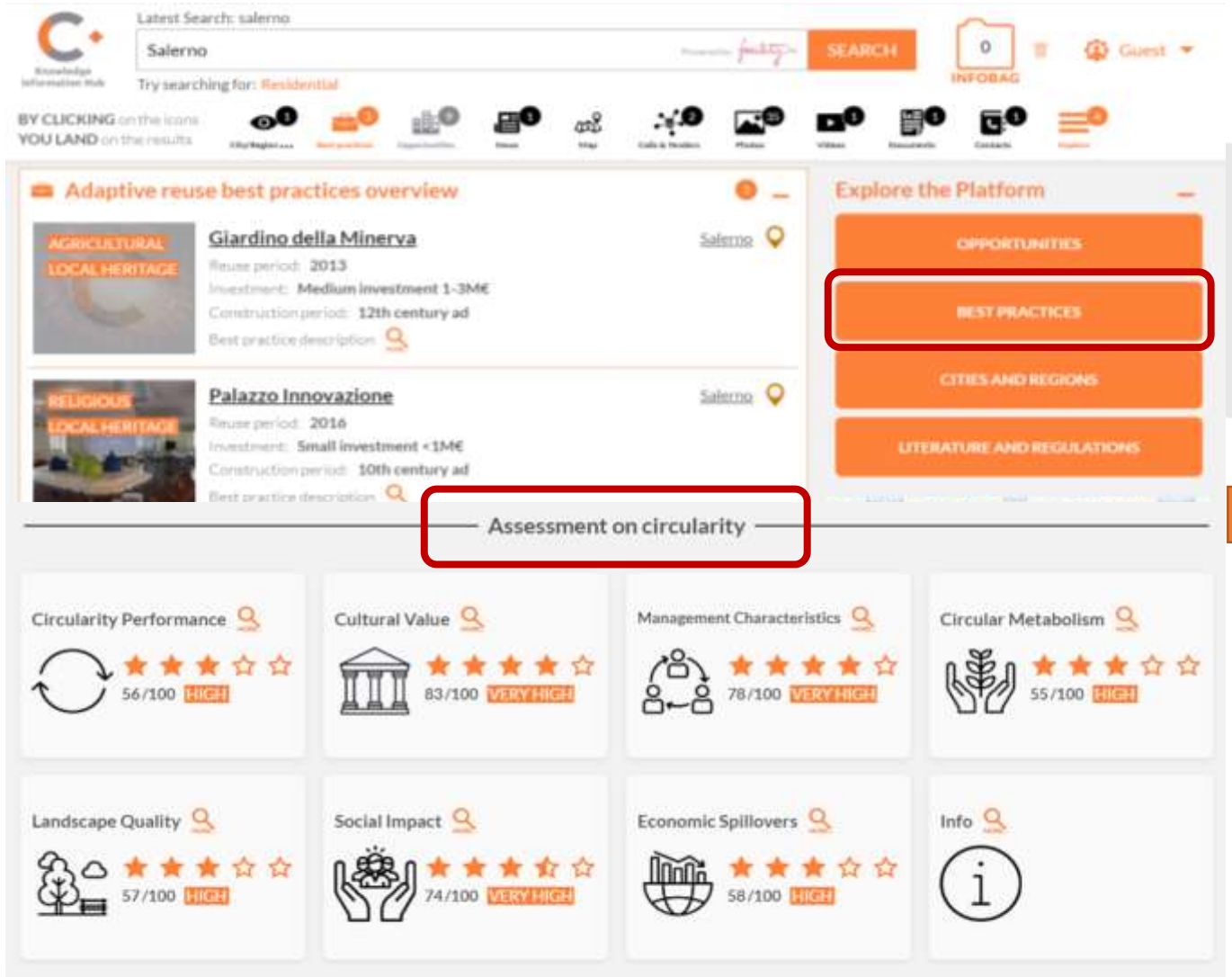
- **Cultural factors**: Trust, Traditional skills and capacities
- **Environmental factors**: Reuse of Construction & Demolition Wastes, Materials extraction, Recovery/regeneration of public space, Pedestrian mobility, Sustainable mobility, Accessibility enhancemen
- **Economic factors**: Complementarity between functions and contribution to Smart Specialization Strategies, Businesses collaboration and symbioses
- **Social factors**: Social Sustainability (synergies and cooperation networks in the ecosystem), Cultural vibrancy, Participation in decision-making

Generative capacity (impacts generated in the territory)

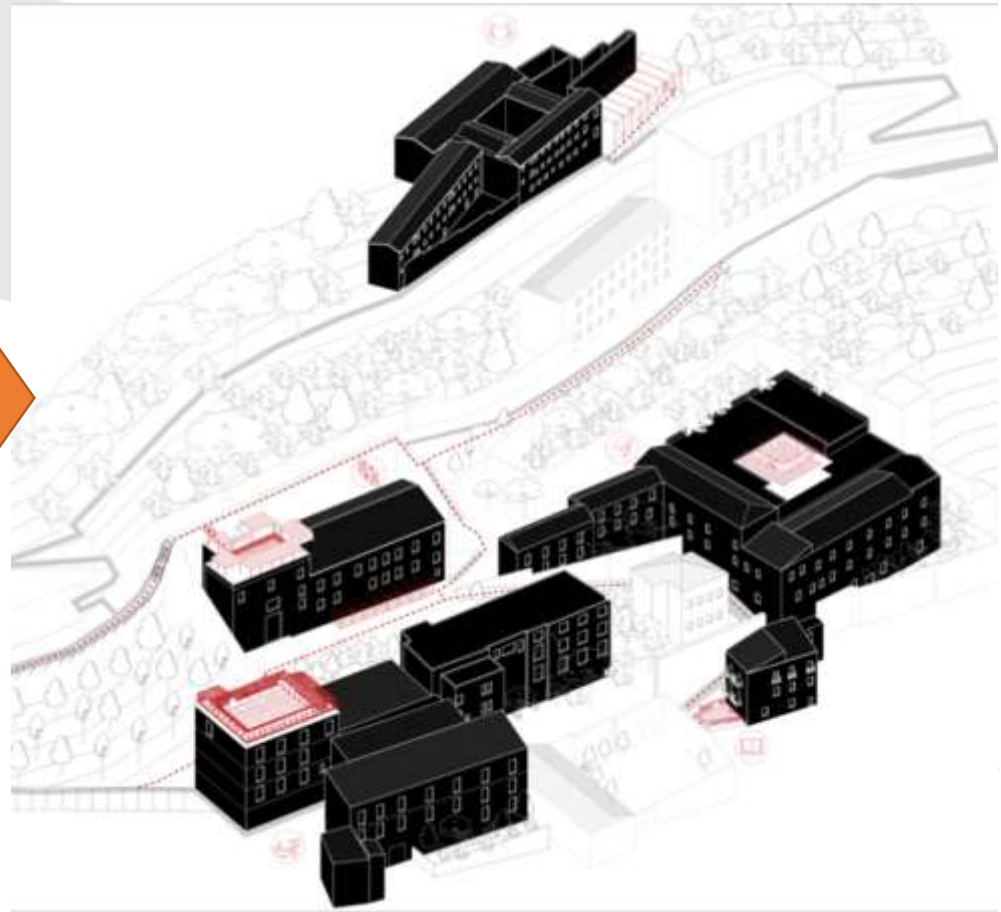
- **Cultural generative capacity**: Participation in culture, Cultural visitors, Arts, craft, making and repairing activities, Creative and innovative spaces
- **Economic generative capacity**: Jobs creation, Indirect and induced economic impacts, Financial returns for the public sector, Localization of new businesses, Localization of enterprises and entrepreneurs in the reused cultural heritage site, Proximity activities
- **Environmental generative capacity**: CO2 sequestration, GHG emissions, Air quality, Water quality, Biodiversity, Soil pollution
- **Social generative capacity**: Place attractiveness, Landscape quality, Cleanliness of public spaces, Safety of public spaces, Wellbeing and Health, Quality of life for residents, Public space for socialization

RESOURCES → **ENABLERS** → **OUTCOMES**

FROM BEST PRACTICE TO BETTER PROJECT



Opportunities for cultural heritage adaptive reuse: towards the definition of “satisfying project”



Credits: Irene Antonelli and Giovanni Mazzanti

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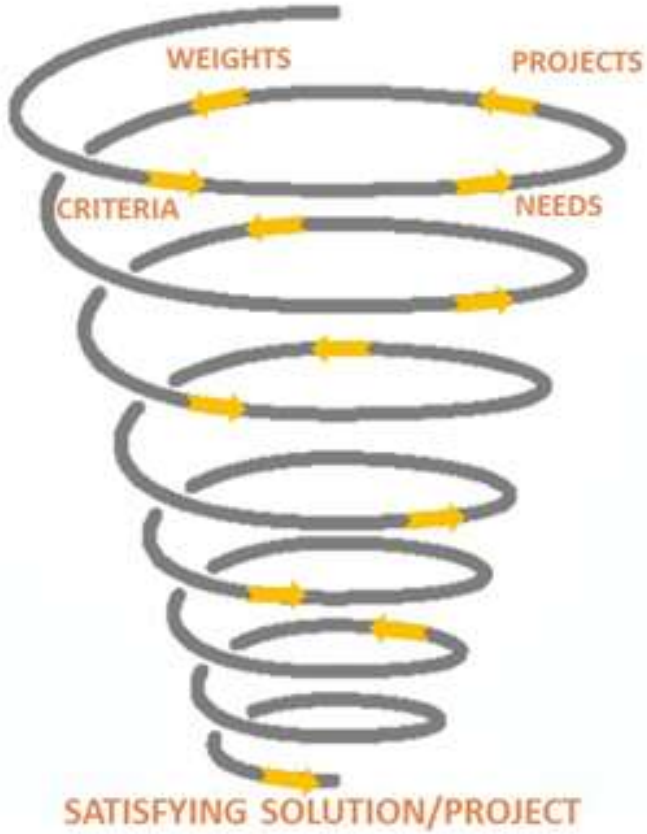
THE DYNAMIC APPROACH OF ADAPTIVE REUSE IN THE PERSPECTIVE OF THE CIRCULAR ECONOMY

The **DYNAMIC APPROACH OF ADAPTIVE REUSE IN THE PERSPECTIVE OF THE CIRCULAR ECONOMY** should follow a coherent evaluation approach. This dynamic approach in turn leads to a **DYNAMIC EVALUATION APPROACH**, that is, an approach in which criteria, weights and alternatives change in an evolutionary spiral.



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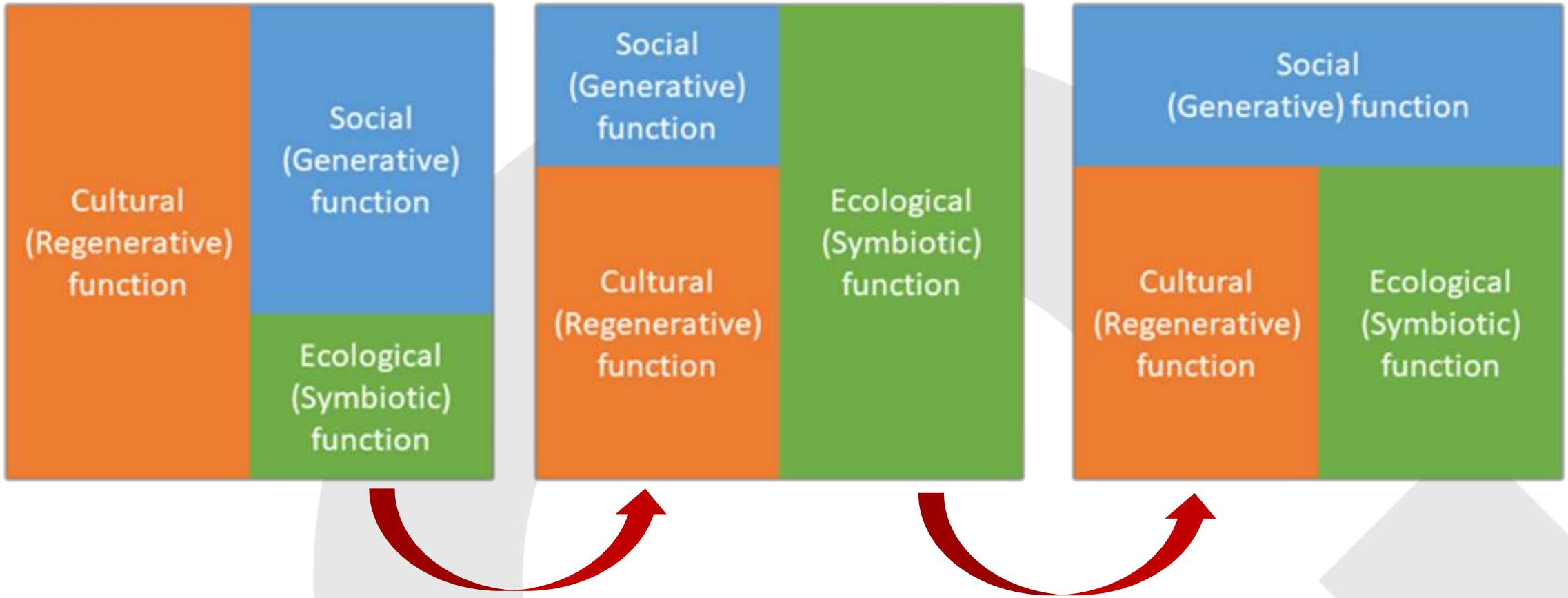
THE DYNAMIC APPROACH OF ADAPTIVE REUSE IN THE PERSPECTIVE OF THE CIRCULAR ECONOMY



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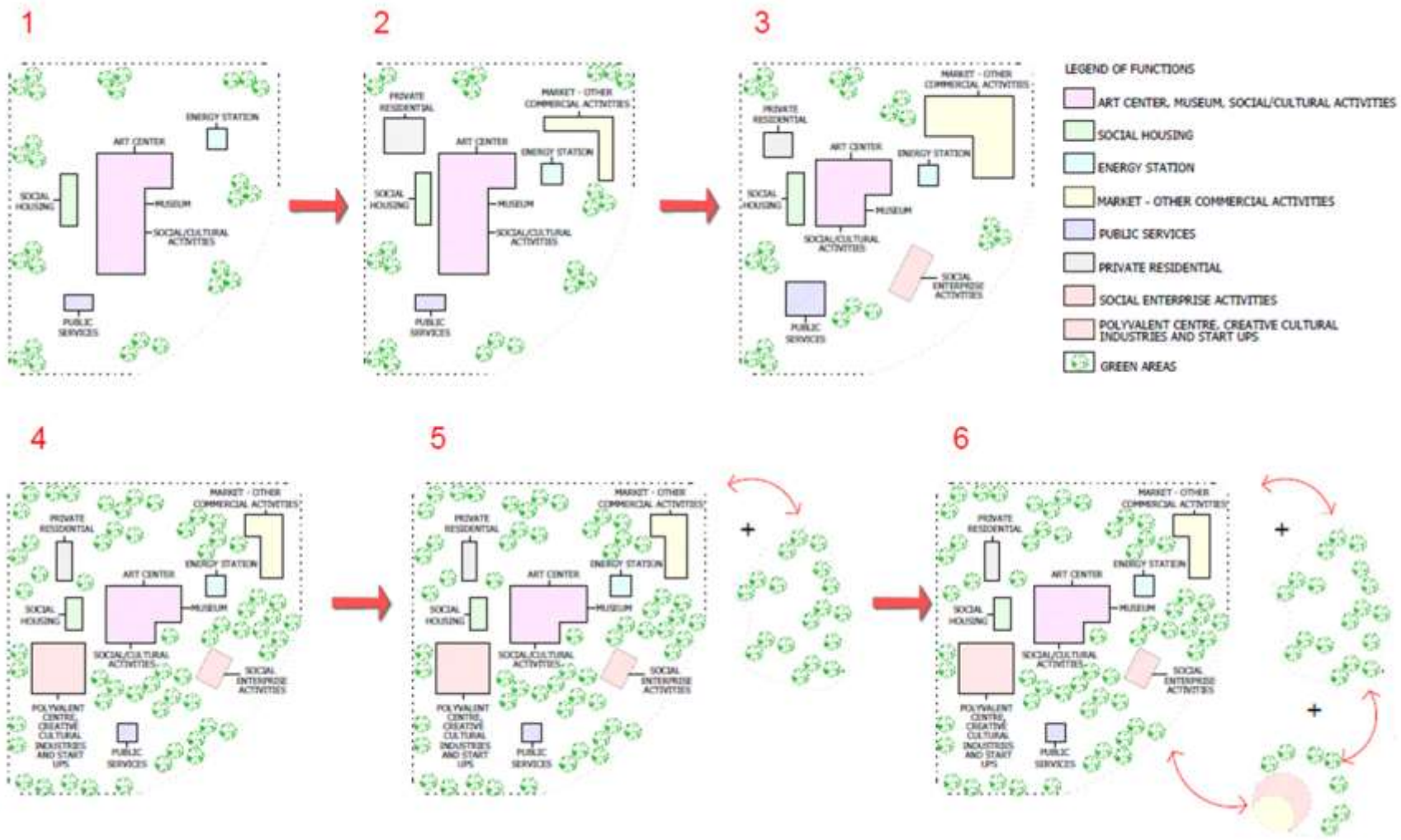
THE EVOLUTIONARY PROCESS TOWARD A SATISFYING DESIGN SOLUTIONS

THE INTEGRATION BETWEEN CIRCULAR BUSINESS PLAN AND DESIGN



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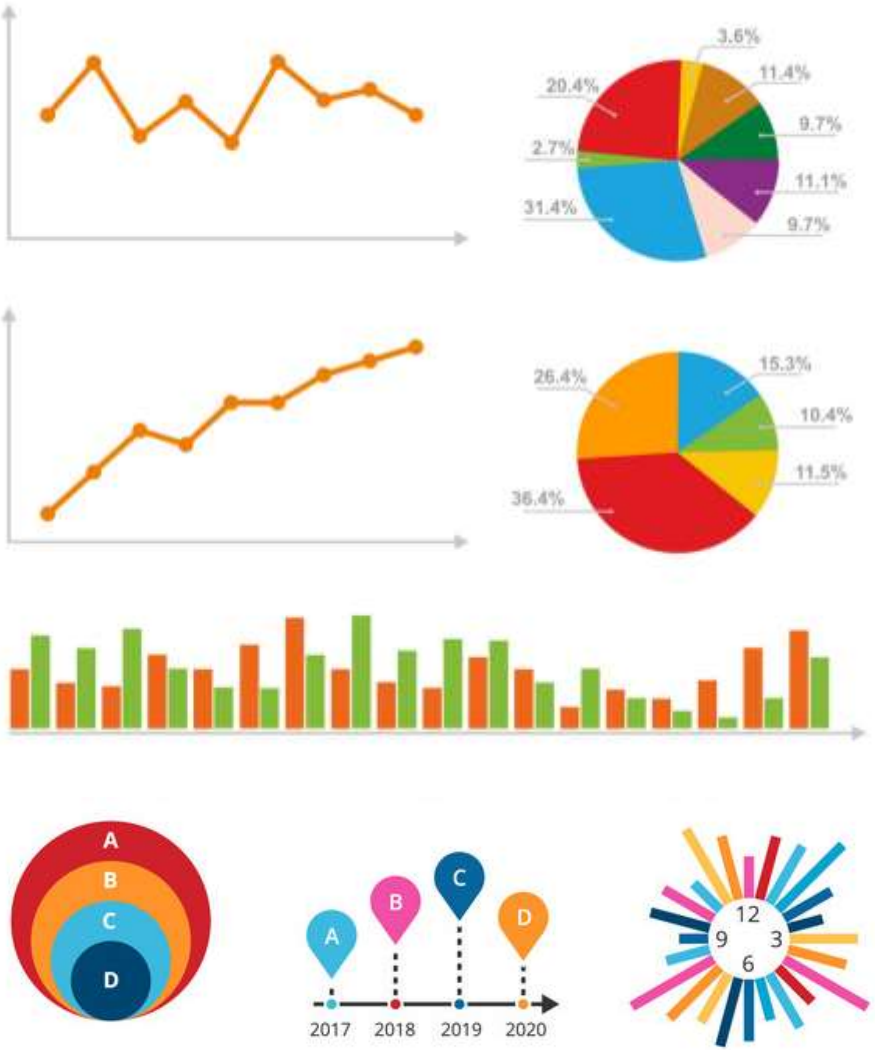
Why and how to use the evaluation framework

- **The evaluation framework is addressed to cultural heritage managers and owners, as well as to public institutions**, to support them in taking more informed and more effective choices in cultural heritage adaptive reuse with respect to circularity objectives
- **The evaluation framework is based on a set of criteria and indicators** that enable performance assessment of existing projects with respect to circularity objectives, and that can be used to orient choices towards circular «human-centred» adaptive reuse of cultural heritage
- **Indicators are synthetic tools to interpret reality**: sound data collection, data analysis and data interpretation is needed to assess the indicators



@vectorstock.com

We use three types of **indicators**:

- **Statistical indicators** which are normally expressed as ratios or as percentages, allowing them to be assessed in relation to a baseline.
- **Trends**, whereby 'raw' numbers are monitored over time (e.g., number of visitors from one year to the next).
- **Checklists** which are not statistical (i.e., non-parametric), but enable some assessment of topics which cannot be captured through quantitative measurement (e.g., asking residents whether a certain cultural heritage site represents a factor of local identity). Even a checklist requires supporting evidence to permit validation of the responses.

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Data collection and Data analysis

Data are collected from:

- **Interviews to managers and owners of the heritage sites**: financial self-sustainability (e.g. balance sheets), core revenue flows, investment and operational costs, yearly number of visitors of the site, energy and water consumption, air quality, number of jobs, synergies and cooperation networks…
- **Questionnaires to users of the heritage site, community members, local stakeholders**: heritage appreciation, cultural and educational values conveyed, sense of place, sense of attachment to cultural heritage, participation in culture, density of social relationships, wellbeing, quality of life…
- **Statistical sources and territorial surveys**: e.g. localization of residents, localization of (creative and innovative) entrepreneurs, commercial activities; real estate market prices; attraction of tourists and visitors; …

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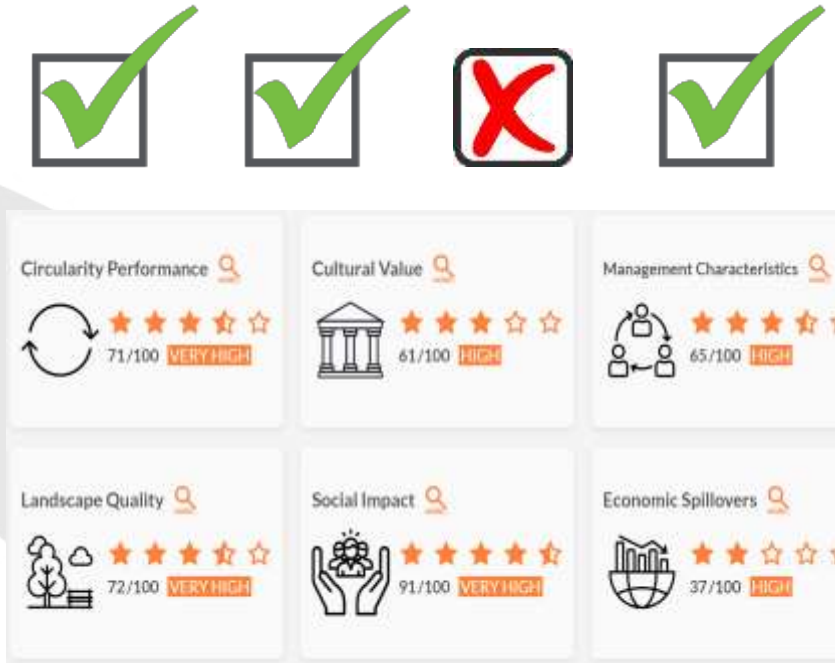
Practical results: what you get from the evaluation framework

- **«Performance check»** of the cultural heritage adaptive reuse project: complete assessment and monitoring of the project, useful to understand to which extent the goals of circularity are reached to re-orient choices for enhanced performance
- **Pre-assessment** of projects: ex-ante evaluation of project alternatives (linked to DSS) useful to take more informed choices considering stakeholders' needs, conflicts and goals (community impact evaluation)
- **Calls and Tenders orientation criteria**: criteria and indicators can be used to orient calls for projects / calls for ideas and public tenders in order to obtain the best «value for money» with respect to circularity goals (towards a «circular city»)



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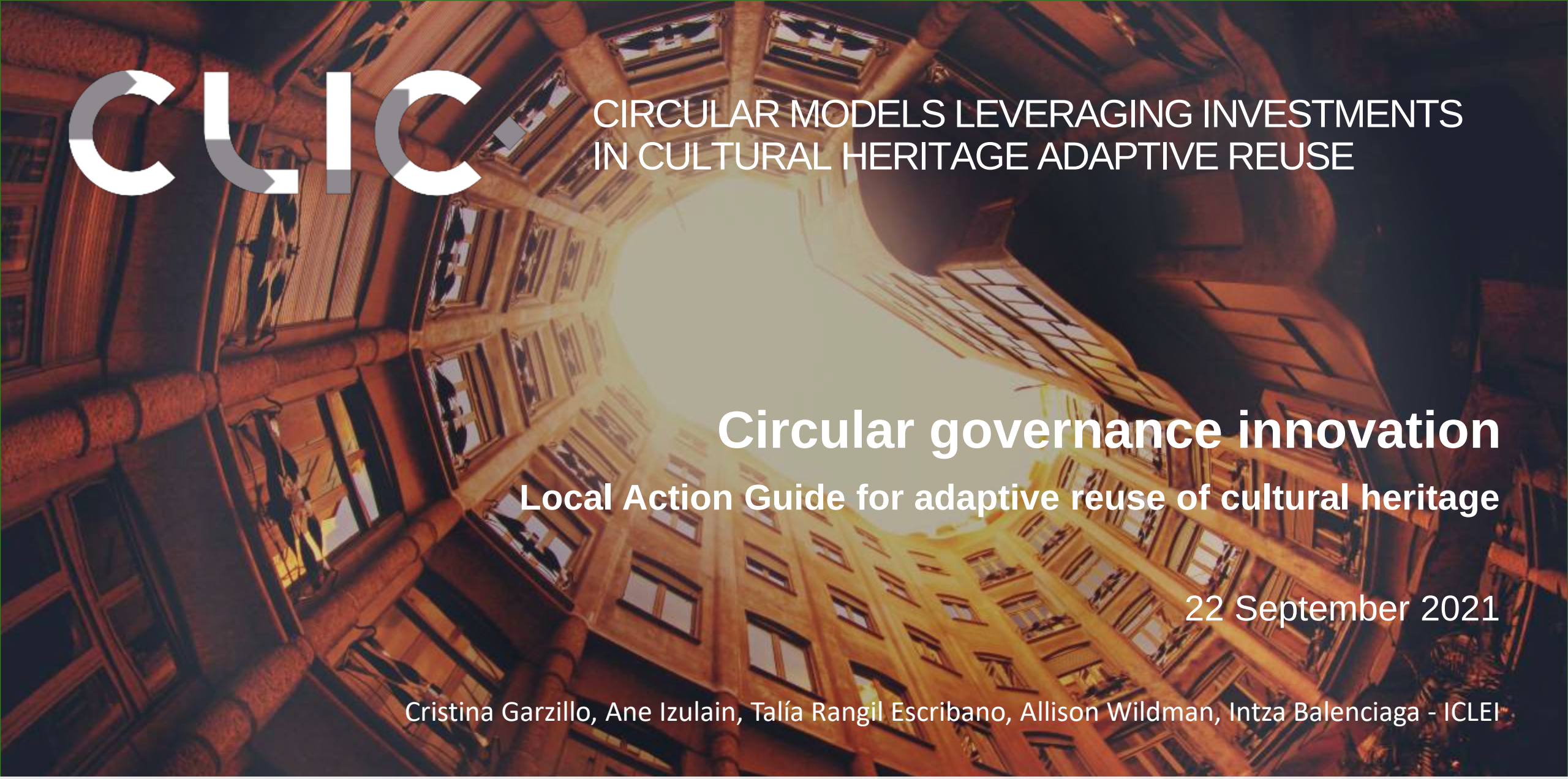

CIRCULAR MODELS LEVERAGING INVESTMENTS IN CULTURAL HERITAGE ADAPTIVE REUSE

Circular governance innovation

Local Action Guide for adaptive reuse of cultural heritage

22 September 2021

Cristina Garzillo, Ane Izulain, Talía Rangil Escribano, Allison Wildman, Intza Balenciaga - ICLEI

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 776758

Adaptive reuse of cultural heritage and benefits

"Adaptive reuse of cultural heritage implies transforming an abandoned or disused cultural heritage asset into a **living system**, which has to be managed as a complex organism, and is able to adapt itself into the changing context and external conditions, and therefore, capable of resilience over time "
Fusco Girard, 2019

Cultural: Safeguards tangible and intangible cultural elements, unravels chapters of history, calls upon skills and experience

Environmental: Reduces raw material use and soil consumption, decreases energy consumption, scales down carbon emissions

Economic: Creates new job opportunities and reduces unemployment, attracts new investments, boosts tourism, regenerates neighborhoods

Social: Preserves neighborhood identity, contributes to a greater sense of safety and quality of life, increases engagement and accessibility

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Our understanding of adaptive reuse of cultural heritage

Adaptive reuse cases can include, for example, monastic complexes, churches, castles and fortresses…

















…palaces, old factories and industrial sites, warehouses, marketplaces, manors, unused railway stations, abandoned mines, hydroelectric power stations, and slaughterhouses…

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An approach to address the adaptive reuse of cultural heritage in a circular way: Heritage Innovation Partnerships

Heritage Innovation Partnerships (HIPs) are an indispensable element in the journey towards the co-creation of a LAP for Adaptive Reuse of Cultural Heritage. These multi-stakeholder partnerships ensure the inclusion of a wide and diverse array of actors in the process, and advocate for a shared and **circular governance** model for cultural heritage, with a mix of bottom-up and top-down actions.

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What is a Local Action Plan for adaptive reuse of cultural heritage?

A **Local Action Plan** for adaptive reuse of cultural heritage is the result of a co-creation process that provides a comprehensive approach to help build support for and **implement circular, adaptive reuse of cultural heritage at the sub-national level**.

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The HIP/LAP process roadmap

		MEETINGS		OUTCOME	
2018	Sep	Dialogue 1	Heritage commons perceptions mapping workshop	Summary reports	City Leaders Guidebook & Local Action Plans
	Nov	Peer Review visit 1	Salerno hosts Amsterdam and Rijeka		
2019	Jan	Dialogue 2	Governance models and selection of the sites for circular models implementation	Summary reports	
	Mar	Peer Review visit 2	Rijeka hosts Vastra Gotaland and Salerno		
	May	Dialogue 3	New destinations for cultural heritage: financing and business models		
	Sep	Peer Review visit 3	Vastra Gotaland hosts Amsterdam and Salerno		
	Sep	Dialogue 4	Feasibility Evaluation of proposals and the first draft of the Local Action Plans		
2020	Feb	Dialogue 5	Creation of innovative procedures for adaptive reuse (tender procedures, service contracts, ...)	Summary reports	
	Mar	Peer Review visit 4	Amsterdam hosts Västra Götaland and Rijeka		
	Jun	Dialogue 6	Calls Launch and submission of the Local Action Plans		
	Sep	Open Day			

Six HIP Dialogues provided the convening structure to create and strengthen local multi-actor partnerships, and enhance local knowledge, ideas, capacities and cooperation.

Peer Review visits gave the HIP leaders opportunities to share and exchange experiences across pilot areas during site visits.

HIP Open Days were foreseen to publicly share the HIP results (primarily the "Local Action Plan") with the wider local community at the end of the project.

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Catalogue of Tools and Resources

ELEMENT	TOOLS	RESOURCES
Build Heritage Innovation Partnership	• Heritage Innovation Partnerships	• Principles for circular governance
Harvest Local Knowledge	• Network analysis • Perception Mapping • Economic Landscapes • Peer Review • Stakeholder Engagement Workshop for Mapping Barriers and Bottlenecks	• Heritage Factsheet • CLIC Knowledge Platform • Legal Framework Mapping table • Cultural heritage policy framework databases • References for cultural heritage management • CLIC Toolkit of Financial and Non-financial instruments
Create a Shared Vision and Agree on Actions	• Urban Seeding • Decision Support System • Circular Business Model Workshop	• LAP Matrix • Monitoring table
Formalize the process	• Adoption process • Open Day	• Dissemination strategy table
Check in and Refresh		• Monitoring table (bis) • Evaluation Questionnaire

Tool	Description
Circular Business Model Workshop	Co-design process during which stakeholders propose reuse ideas/solutions in relation to their territorial needs and available resources; test their desirability; identify partnerships, users and beneficiaries and make sure that the social, environmental and economic impacts are sustainable.
Decision Support System	Aids to work in multi-actor decision-making environments to identify compatible and sustainable uses of cultural assets. Indeed, collecting and managing different kinds of information, CLIC DSS permits: considering diverse points of view, prioritisation, better directing available resources, better integration with other urban programs.
HUL Barriers & Bottlenecks Mapping	Workshop bringing together individuals and organizations with a diversity of disciplinary and cultural backgrounds, as well as, a variety of experiences in adaptive reuse of cultural heritage and heritage related practices in order to develop a comprehensive understanding of barriers and bottlenecks.
Perceptions Mapping	Participatory documentation process based on active listening, feedback, and reflection. It maps perceptions, feelings, and opinions about cultural heritage assets and their spatial integration within the lived environment, based on all five senses (sight, sound, taste, touch, smell). The purpose of mapping perceptions of cultural heritage is to design *with* the people, instead of *for* the people.
Urban Seeding	Co-design and co-implementation process of small, replicable and low-cost sustainable actions that enable attention, participation, stewardship, experimentation and sustainable aptitude. This tool is a versatile and dynamic process that acts as a catalyst for revitalisation following systematic step-by-step implementation of the urban low-cost and small-scale interventions, called *seeds*.

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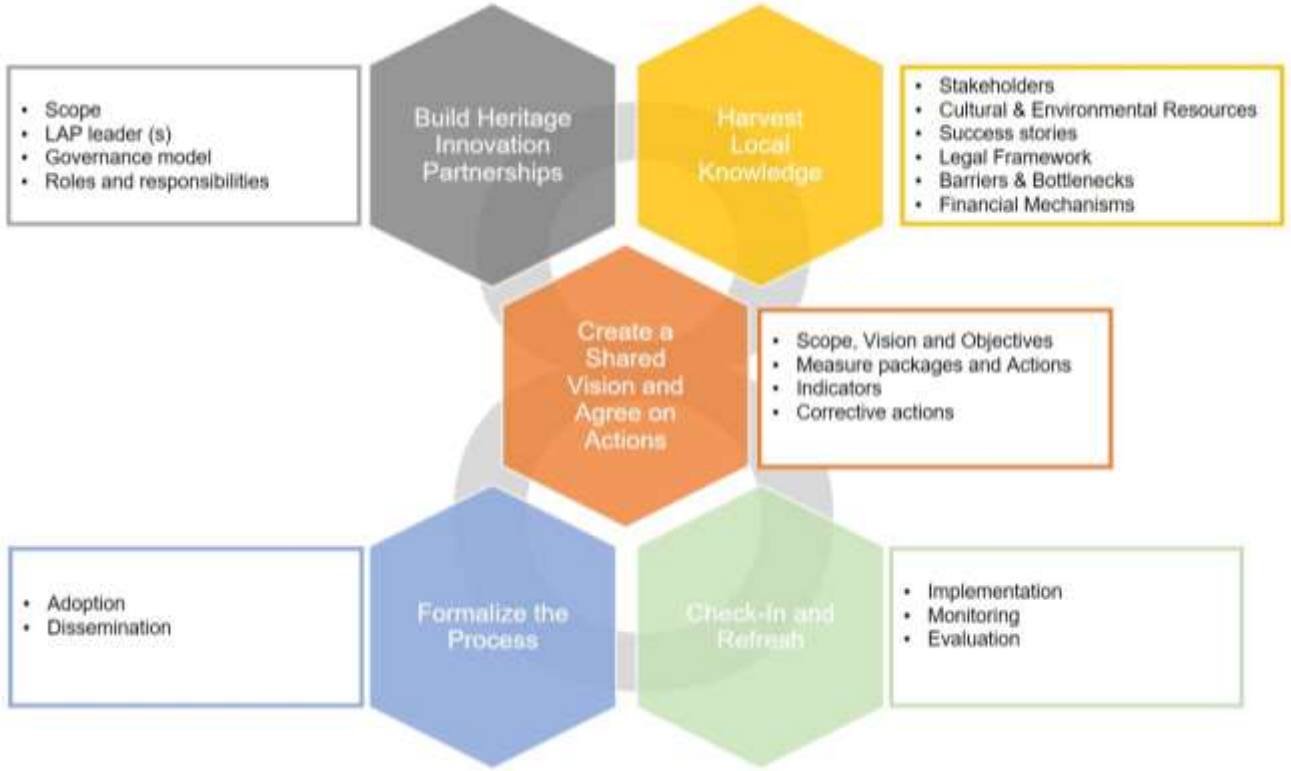
Why invest in a Local Action Plan for adaptive reuse of cultural heritage?

User-friendly instructional guide and tool catalogue for local leaders



- Protects heritage quality, preserves value
- Collective and responsible use
- Flexible and adaptable to multiple scales
- Co-creation benefits
- New supportive policies and regulations
- New financing and business models
- Circular economy perspective

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Establishing a Circular Governance model

“Circular governance is a necessary precondition for sustainable adaptive reuse of cultural heritage”

What are the factors and conditions that enable circular governance for adaptive reuse of cultural heritage?

Circular Governance Principles

1. **Participatory**: open the process to all members of society so that they can contribute a legitimate voice. Participation is not unidirectional. It should not simply be the practice of informing the public, but rather enabling the spaces (physical and virtual) and conditions for all interested community members to engage in open dialogues about community cultural heritage assets.

2. **Inclusive**: engage a wide variety of public and private actors with diverse experiences and expertise, and not just those in the cultural heritage field. Diverse perspectives can offer new angles and potential solutions to problems hidden in groups with similar views and practices. By inviting and enabling a wide variety of participants to contribute in cultural heritage processes, the Heritage Communities concept is reinforced, which only strengthens the potential for collaborative, sustainable, community-managed cultural heritage adaptive reuse projects.

3. **Transparent**: governance processes and decision-making processes should be transparent so that they are easier to understand from the outside and enable new actors to better engage and participate in the long term. Transparency is a cornerstone of good governance and co-functions with another Circular Governance principle, Accountability.

4. **Accountable**: be accountable to the public and communicate clear, concise, and sufficient information about decisions, and accepting responsibility for its actions. Together with Transparency, these principles provide a foundation for mutual trust and long-term organisational resiliency.

5. **Collaborative**: encourage partnerships between different actors to share in the “ownership” of the processes, programs, and projects through collaborative ideation, development, execution, and management. Collaboration adds value to adaptive reuse processes by bringing together resources and talent from a variety of sources and reinforces the concept of Heritage Communities.

6. **Circular (Focused and Iterative)**: focus on concrete objectives through an inclusionary process that includes visioning, long-term goal setting, and built-in feedback loops, such as 5-year plan updates or annual performance reporting. Communities and societies are dynamic. Needs and aspirations change, particularly as global influences, like rapidly evolving technologies and climate change, start to impact regions. The adaptive reuse of cultural heritage assets is one mechanism to adjust to this changing landscape, by both preserving historic cultural assets and adapting them for present needs. However, its governance processes need to balance long-term goals (e.g., physical preservation, cultural storytelling) with the evolving needs of a modern society in crisis. In other words, it is not just the building that needs to be adaptive, but also the process.

7. **Fair and Just**: strive to improve the well-being of society and provide a voice for the voiceless, particularly for intangible cultural heritage aspects and the environment. Many voices have been missing from cultural heritage discussions and decisions, which directly affect unrepresented populations. This principle intends to reset historical imbalances and provide an opportunity for underrepresented, marginalised, or voiceless entities, as future generations, to be considered in the cultural heritage adaptive reuse process.

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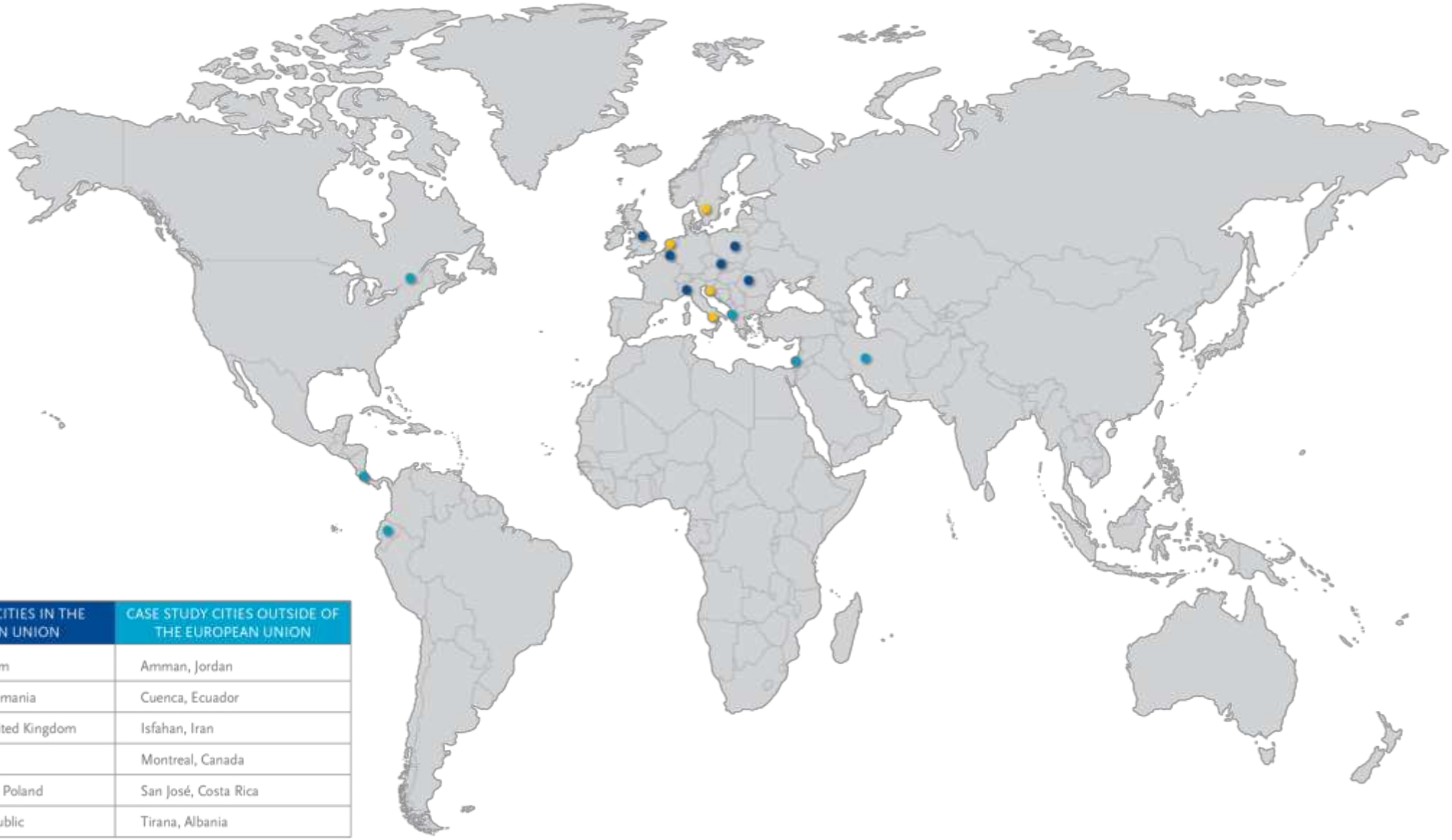
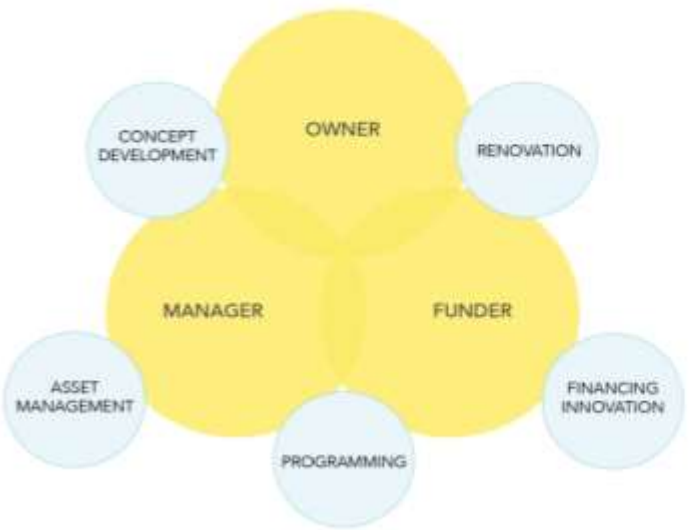
16 International Case Studies



CLIC HERITAGE INNOVATION PARTNERSHIPS (HIP)	CASE STUDY CITIES IN THE EUROPEAN UNION	CASE STUDY CITIES OUTSIDE OF THE EUROPEAN UNION
Amsterdam, Netherlands	Brussels, Belgium	Amman, Jordan
Rijeka, Croatia	Cluj-Napoca, Romania	Cuenca, Ecuador
Salerno, Italy	Manchester, United Kingdom	Isfahan, Iran
Västra Götaland, Sweden	Turin, Italy	Montreal, Canada
	Podkowa Lesna, Poland	San José, Costa Rica
	Zlin, Czech Republic	Tirana, Albania

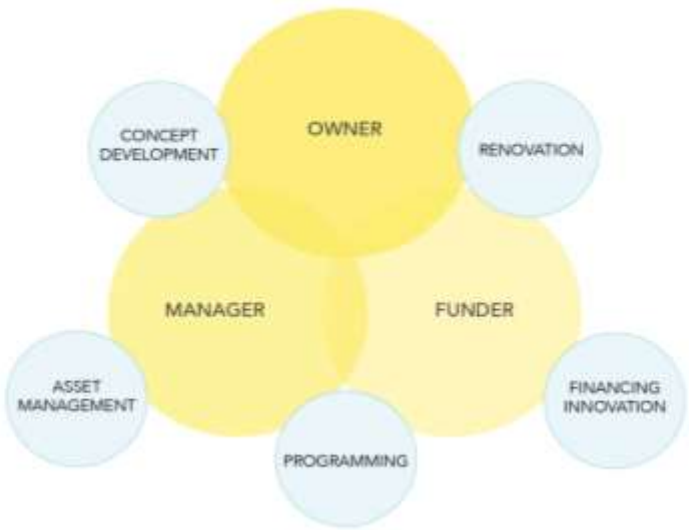
CLIC Custodian Models

PUBLIC CUSTODIAN MODEL



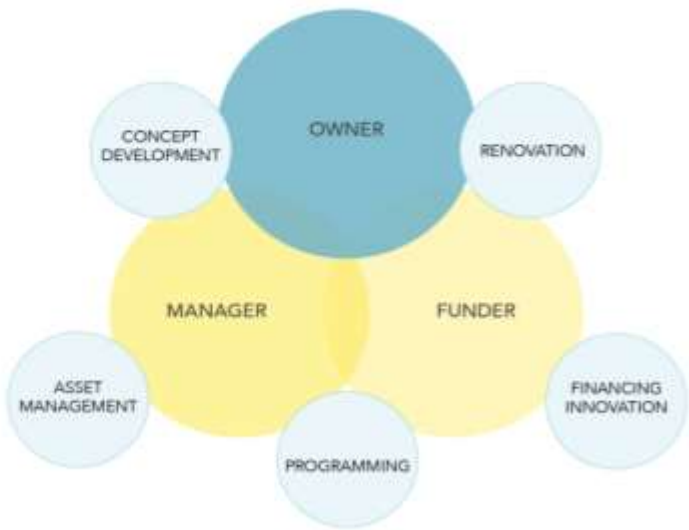
BYRRH – Le Byrrh, Brussels (Belgium)
Casino Urban Culture Centre, Cluj (Romania)
Naqsh-e Jahan Square, Isfahan (Iran)
Casino Palace, Podkowa Leśna (Poland)
Galeb Ship, Rijeka (Croatia)
Botica Solera, San José (Costa Rica)
14|15 Baťa Institute Zlín (Czech Republic)

COMMUNITY CUSTODIAN MODEL



Ibrahim Hashem House, Amman (Jordan)
Victoria Baths, Manchester (UK)
The Young Project, Montreal (Canada)
Minerva‘s Garden, Salerno (Italy)
The New Bazaar, Tirana (Albania)
Cavalerizza Reale, Turin (Italy)

PRIVATE CUSTODIAN FOR THE COMMON GOOD



Pakhuis de Zwijger, Amsterdam (Netherlands)
Simonsland, Borås - Västra Götaland (Sweden)
San Roque Neighborhood, Cuenca (Ecuador)

Reflections on the HIP process in CLIC

Challenges

Municipalities in particular had to scale back or shift resources, and/or prioritize other organizational matters related to the pandemic.

Partnerships have proved to be effective only when visions were aligned from the beginning, priorities set, and roles and responsibilities clearly divided.

Sustaining stakeholder engagement throughout the lifetime of the project and process was not always easy, particularly when there were no short-term results to be shared and enthusiasm could wane.

The lack of ownership and jurisdiction or explicit decision-making power to influence local projects - revitalization mechanisms are often developed to fit urban settings, and it can be difficult to translate or fit the processes into rural environments.

The tools' success was closely correlated to the degree of cooperation between the tool developers and the local partners during its implementation.

Reflections on the HIP process in CLIC

Opportunities

Some CLIC pilots will continue to use the HIP framework as they continue on with their work after the project.

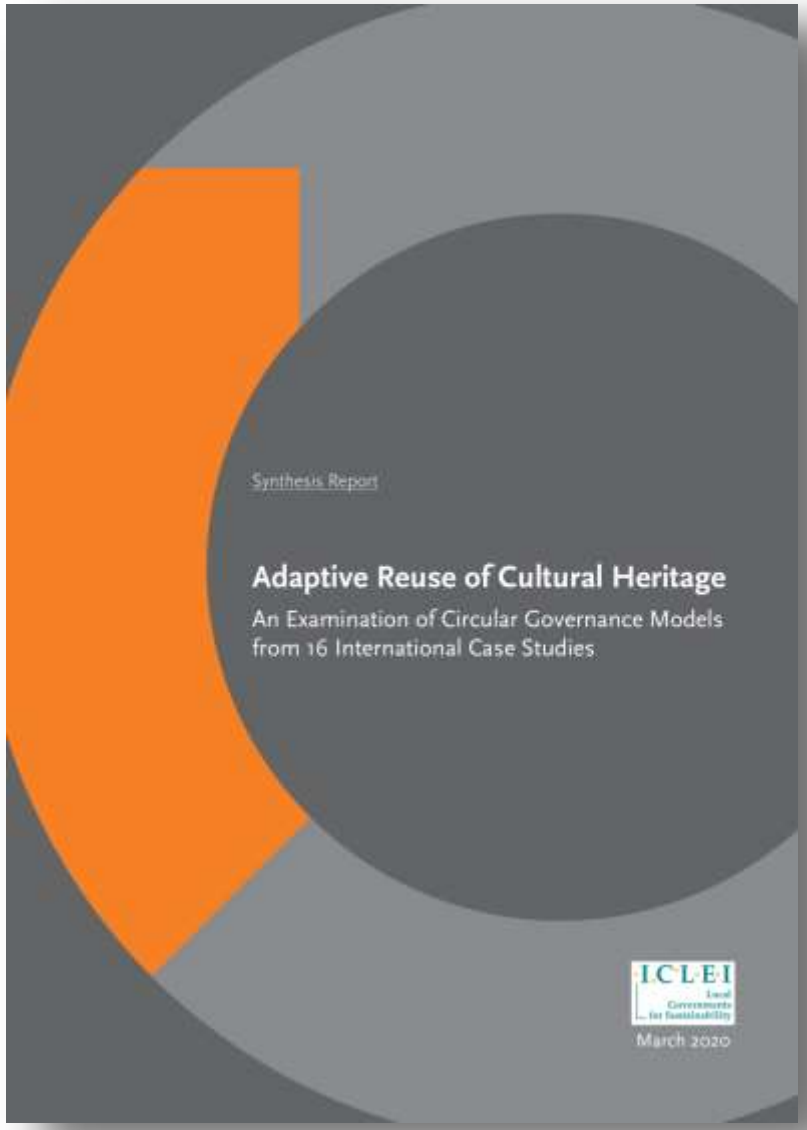
Peer learning was most useful as an instrument to exchange success stories from pilot areas and as a space to debate and develop innovative mechanisms to foster community participation at the local level.

The HIP processes managed to bring new and unconventional actors to the scene of cultural decision-making (e.g. the financial sector and ethical banks, or children and young people).

The findings from the HIP process have provided a wealth of co-created ideas and actions to present to local decision-makers, triggering and/or reinforcing the political commitment to the HIP process and its outcomes.

The influence of the HIP process is notable both in individual actions and in general “way of doing things”. HIPs are an entrance door to prepare heritage communities for the changes necessary to move to circular adaptive reuse processes adopting a holistic and cross-cutting approach.

The Publications



THE SHORT REPORT

Adaptive Reuse of Cultural Heritage: An Examination of Circular Governance Models from 16 International Case Studies

https://iclei-europe.org/publications-tools/

THE FULL REPORT

D3.4 Circular governance models for adaptive reuse of cultural heritage

https://www.clicproject.eu/files/D3-4.pdf /

The Publications

Action Plans

D5.5 CLIC Pilot Local Action Plans: One Approach, Diverse Outcomes

https://www.clicproject.eu/wp-content/uploads/2021/05/CLIC-D5.5-CLIC-Pilot-Local-Action-Plans-One-Approach-Diverse-Outcomes.pdf

Guide

D5.2 Local Action Guide: Collaborative Approaches to Adaptive Reuse of Cultural Heritage

https://www.clicproject.eu/wp-content/uploads/2021/04/CLIC-D5.2-Local-Action-Guide_ICLEI_Final.pdf

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 776758

CIRCULAR MODELS LEVERAGING INVESTMENTS IN CULTURAL HERITAGE ADAPTIVE REUSE

Adaptive reuse of industrial heritage in rural areas: Region Västra Götaland

Vera Telemo, Björn Ohlén, Region Västra Götaland, Sweden

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 776758

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VÄSTRA GÖTALANDSREGIONEN

Adaptive reuse of industrial heritage in rural areas

Vera Telemo, Björn Ohlén, Region Västra Götaland, Sweden

4 local cases in the region

Fengersfors, Strömsfors, Gustavsfors and Forsvik
Capacity building in the local communities

Industrial heritage

– great cultural importance/value

– cathalyst in placemaking/regional dev

– use of embodied energy, reuse as part of a circular economy

Innovations:

Co-created ideas on adaptive reuse in sites

Circular Business Model Canvas on site level

Nature and Culture integration: Polluted soils phytoremedition

Territorial synergies: Cross-sector cooperation on regional level

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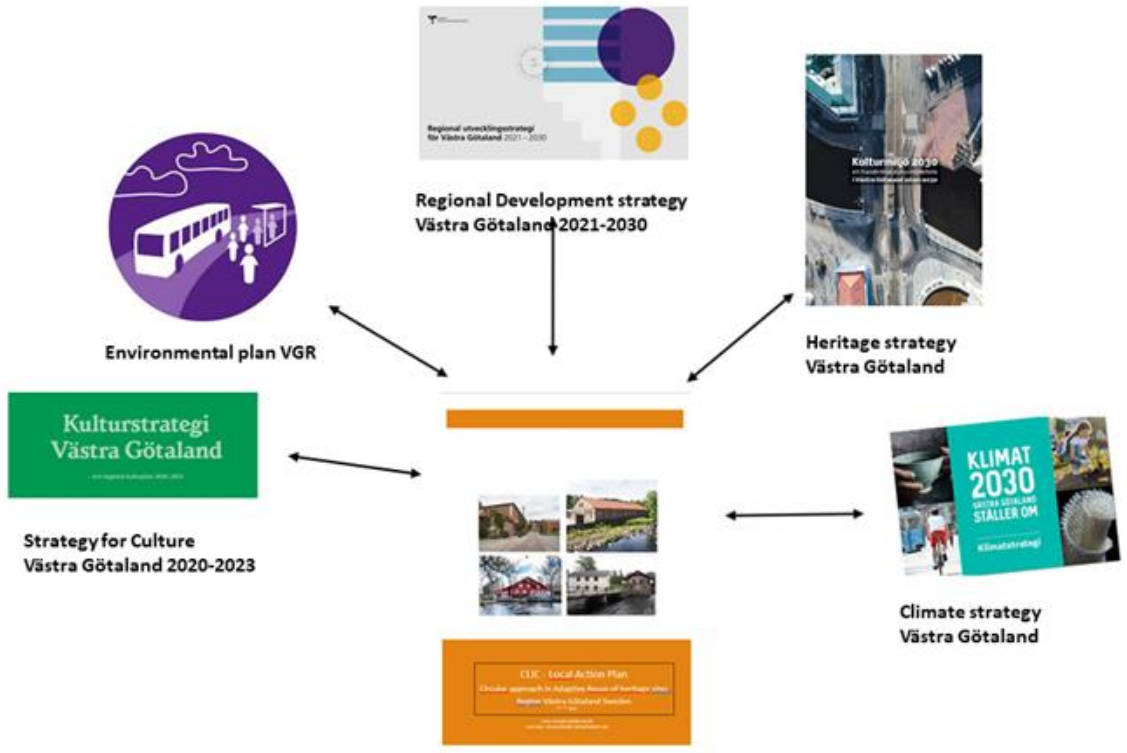
VÄSTRA GÖTALANDSREGIONEN

LAP in Region Västra Götaland



1. Strengthen capacities of property owners for managing, development and adaptive reuse
2. Improve financial support to heritage maintenance and restoration
3. Increase capacities on circular business models and adaptive reuse
4. Increase knowledge on financing instruments for adaptive reuse
5. Knowledge building on pilots on biological remediation of contaminated soil
6. Policy improvement

CLIC LAP – CONNECT TO OTHER STRATEGIC PLANS IN THE REGION

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 776758

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VÄSTRA GÖTALANDSREGIONEN

CLIC

CIRCULAR MODELS LEVERAGING INVESTMENTS IN CULTURAL HERITAGE ADAPTIVE REUSE

Innovative circular governance models and Local Action Plan for cultural heritage adaptive reuse: Salerno Circular City

Raffaele Lupacchini, Salerno Municipality, Italy

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 776758

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COMUNE DI SALERNO

Adaptive reuse of abandoned and underused cultural heritage

Raffaele Lupacchini, Salerno Municipality, Italy

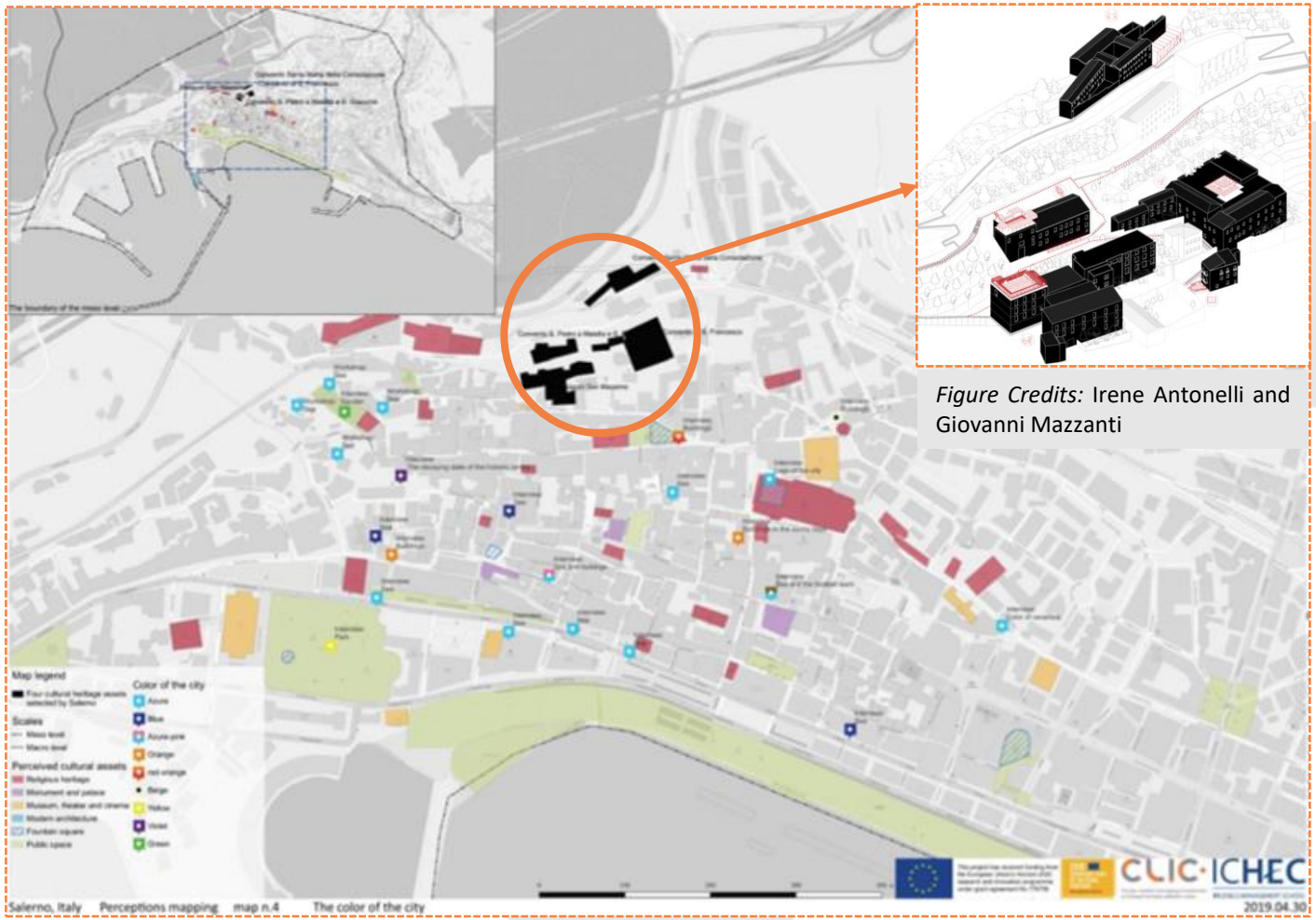

Figure Credits: Irene Antonelli and Giovanni Mazzanti

Source: Deliverable D3.3 Maps of Landscape Perceptions (https://www.clicproject.eu/files/D3-3.pdf)

Adaptive reuse of cultural heritage in the historic center

- More than 30 heritage buildings and sites mapped in state of abandonment, underuse and reused
- Four large historic buildings (Edifici Mondo) abandoned since 30 years

Innovations:

- A shared vision for **Salerno Circular City**
- **Investment programme** for Salerno historic centre (PICS: Integrated Programme for Sustainable Cities)
- **Public funding received**: >8 Million Euro to realise circular adaptive reuse of one large building, as leverage to new private investments - Adaptive reuse of Edifici Mondo
- **Circular governance model** based on heritage as "common good": Regulation for the shared management of cultural heritage
- **Public-Private-People Partnerships (4P)** and **multi-level governance synergies**

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 776758

Local Action Plan in Salerno

Salerno Local Action Plan

Adaptive reuse Cultural Heritage towards the «Circular City»

Objective 1
Strengthening dialogue and cooperation between citizens and the municipality (circular governance)

Objective 2
Adaptive reuse of abandoned and underused cultural heritage

Objective 3
Facilitating cooperation and partnerships between public, private, third sector and citizens

Objective 4
Increase the attractiveness of Salerno for public and private investors and impact finance

Objective 5
Promote Salerno as the first "Circular City" in Southern Italy

ACTION 1
Regulation for shared management of cultural heritage as a common good

ACTION 2
Adaptive reuse of Edifici Mondo

ACTION 3
Valorization of Salerno Ancient Medical School

ACTION 4
Knowledge & Information Hub investment platform

ACTION 5
Cross-cutting vision for «Salerno Circular City»

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 776758

CLIC

CIRCULAR MODELS LEVERAGING INVESTMENTS IN CULTURAL HERITAGE ADAPTIVE REUSE

Innovative circular governance models and Local Action Plan for cultural heritage adaptive reuse:

Rijeka Circular City

Suzana Belošević, City of Rijeka

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 776758

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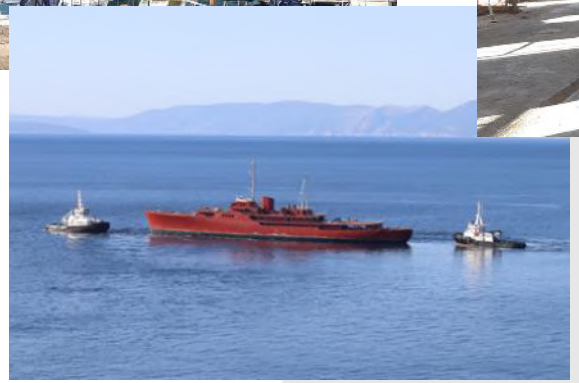
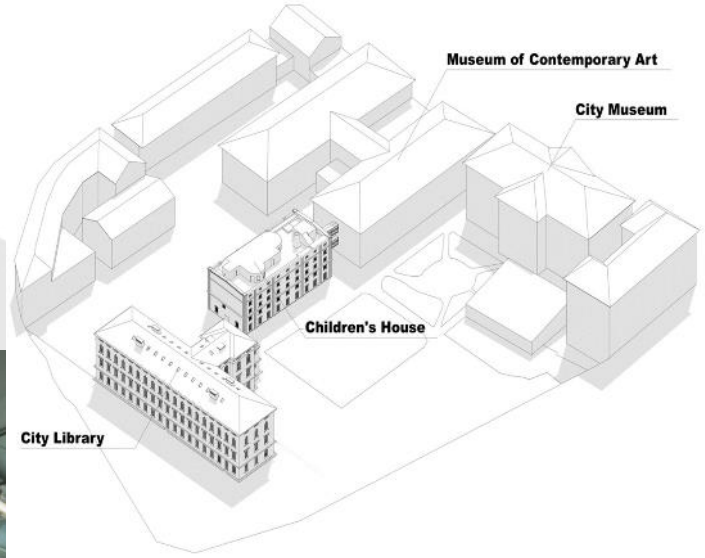
City of Rijeka
European Capital of Culture 2020

CLIC & Rijeka …in the meantime





27.000 m² of new cultural infrastructure

Expert findings – that will lead to qualified decisions and better performances

Sharing ideas and good practices - creativity, energy

Urban regeneration – Cultural District „Benčić"– the largest cultural project in Croatia. It solves the urban problem of the devastated post-industrial block and public space in the city center, gives new value to sensational industrial heritage through a comprehensive approach and provides an adequate response to traditional urban deficits in the fields of art and culture.

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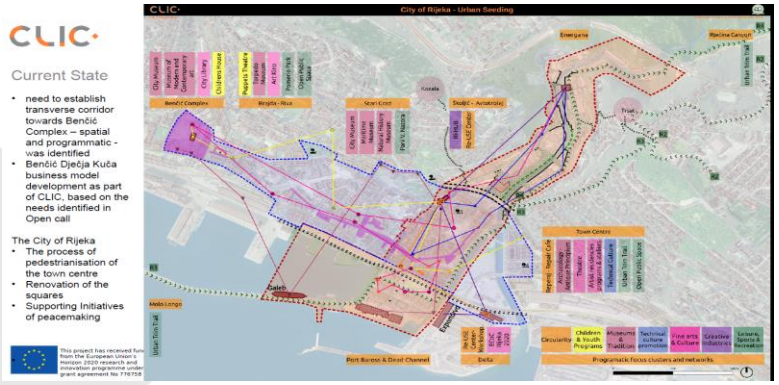
City of Rijeka
European Capital of Culture 2020

Three main achievements in Rijeka:

1. Incorporating the principles of circular economy for the new vision of the city, aiming at enhancing the rich historic urban landscape by enabling the social capital;
2. Creation of the Cultural Corridor Model by identifying a focus area through participatory assessment, where the future interventions criteria will be the circular economy and the cultural heritage careful regeneration for the reactivation of the historic urban landscape. Such area is characterised by the principles of the Commons Governance;
3. Identification of a set of tools for the actuation of the cultural corridor. Among these tools we should mention the Urban Seeding, a landscape based situational learning workshop approach meant to reconnecting the historic urban landscape through low cost and replicable micro interventions on cultural tangible and intangible heritage and the underused urban assets. The seeding is conceived as a socio-economic glue that opens space to new governance solutions



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City of Rijeka
European Capital of Culture 2020

CLIC

CIRCULAR MODELS LEVERAGING INVESTMENTS IN CULTURAL HERITAGE ADAPTIVE REUSE

Innovative circular governance models and Local Action Plan for cultural heritage adaptive reuse: Pakhuis de Zwijger, Amsterdam Circular city

Thomas Van de Sandt, Pakhuis de Zwijger

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 776758

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PAKHUIS DE ZWIJGER*

Pakhuis de Zwijger – Amsterdam Circular City Challenge & Innovations

Challenges

- Creating more resilient business model
- Strengthening community around circularity and heritage
- COVID-19: from 90,000 to 0 physical visitors per year

Innovations

- New circular governance & business model
- Green team, corporate story, waste and energy collective
- Live events to livecasts

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 776758

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PAKHUIS DE ZWIJGER*

Pakhuis de Zwijger – Amsterdam Circular City
Key Points from Local Action Plan

New Amsterdam Agreement & Program Council

- Introduced the voice of cultural heritage and social innovation within the idea of circular cities

Demonstrating platform for circular city

- Green team working together with local stakeholder on implementing ‘Green Menu’

Local Symbiotic network & series on circular heritage

- New series on sustainable cultural heritage
- Community building

This project has received funding from the European Union’s Horizon 2020 research and innovation programme under grant agreement No 776758

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PAKHUIS DE ZWIJGER*

CIRCULAR MODELS LEVERAGING INVESTMENTS IN CULTURAL HERITAGE ADAPTIVE REUSE

CLIC Knowledge and Information Hub: Intelligent Data Management for Cultural Heritage

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 776758

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facility live

THE CHALLENGE

To harness and manage the **heterogenous data on Cultural Heritage** in EU regions, developing:

- participatory **mapping**
- **unified access** to heritage-related databases
- data **visualization**
- citizen-generated **data**

New technology for information management

- empower local governments and citizens
- enabling **cooperation processes** based on trust, transparency and engagement in **decision-making**

Technology can boost local heritage-led economies

- **Reducing costs of adaptive re-use** processes
- Creating new markets for useful **services that enhance the quality of life**

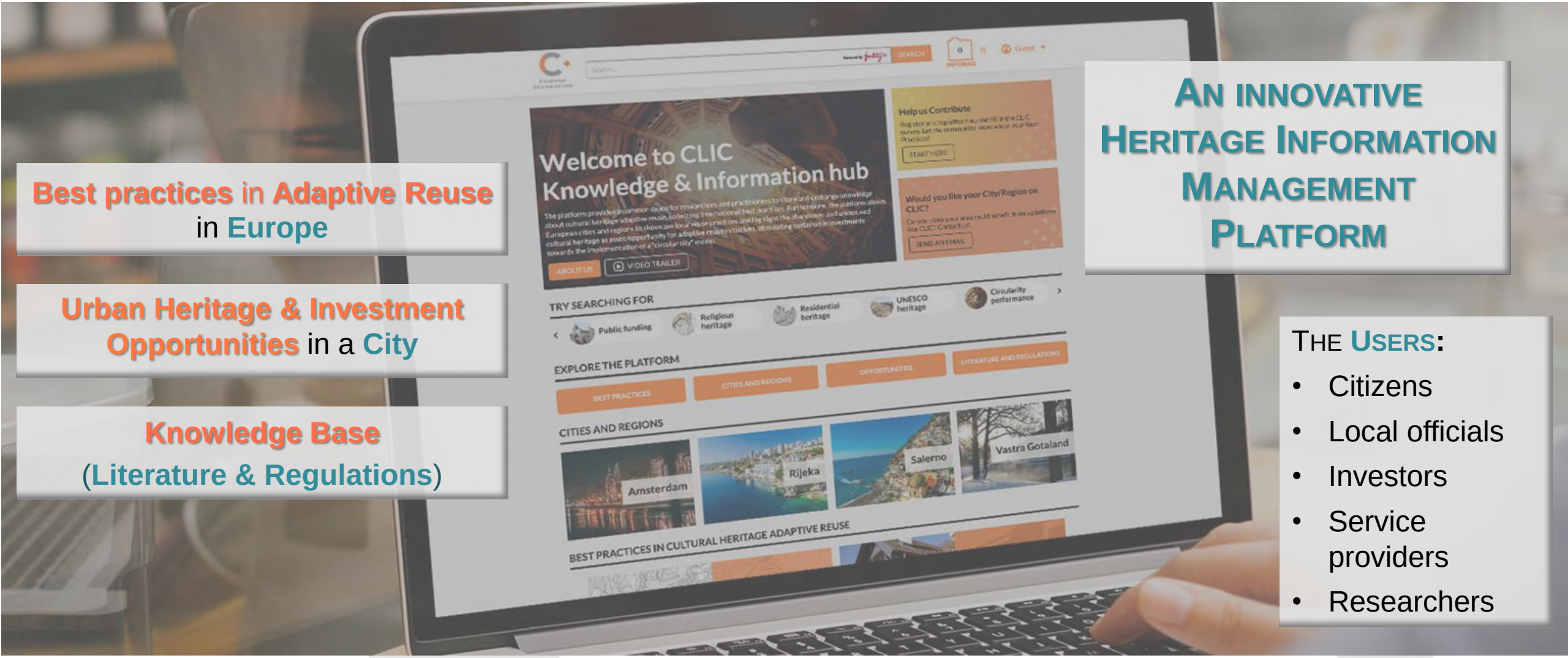
This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 776758

THE PLATFORM

Best practices in **Adaptive Reuse** in **Europe**

Urban Heritage & Investment Opportunities in a **City**

Knowledge Base (**Literature & Regulations**)



AN INNOVATIVE HERITAGE INFORMATION MANAGEMENT PLATFORM

THE USERS:

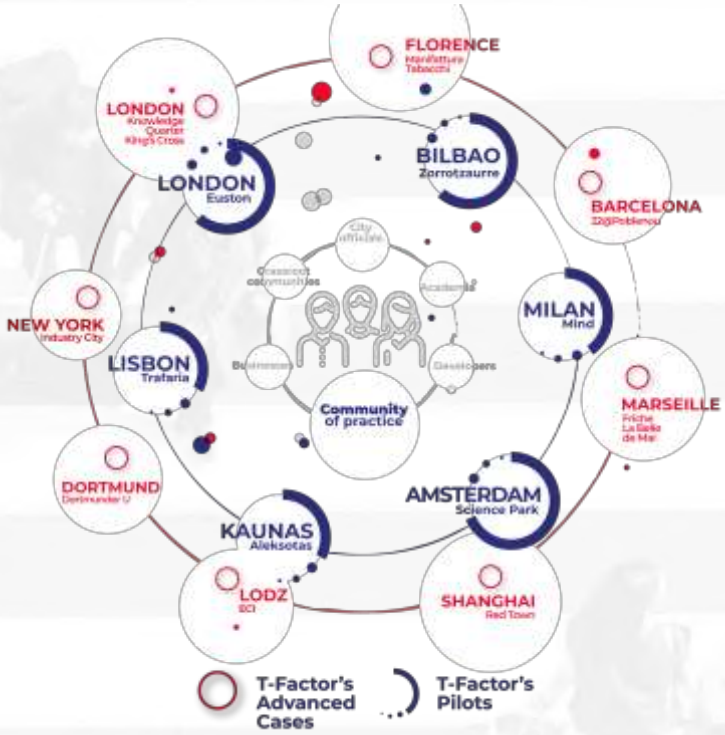
- Citizens
- Local officials
- Investors
- Service providers
- Researchers

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 776758

OPEN HERITAGE

WWW.OPENHERITAGE.EU

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 776766



T-FACTOR HAS RECEIVED FUNDING UNDER HORIZON 2020 RESEARCH & INNOVATION PROGRAMME WITH GRANT AGREEMENT NO. 868887

HUBS OF INNOVATION & ENTREPRENEURSHIP FOR THE TRANSFORMATION OF HISTORIC URBAN AREAS

Funded by the Horizon2020 Framework Programme of the European Union.

HUB-IN

https://hubin-project.eu/

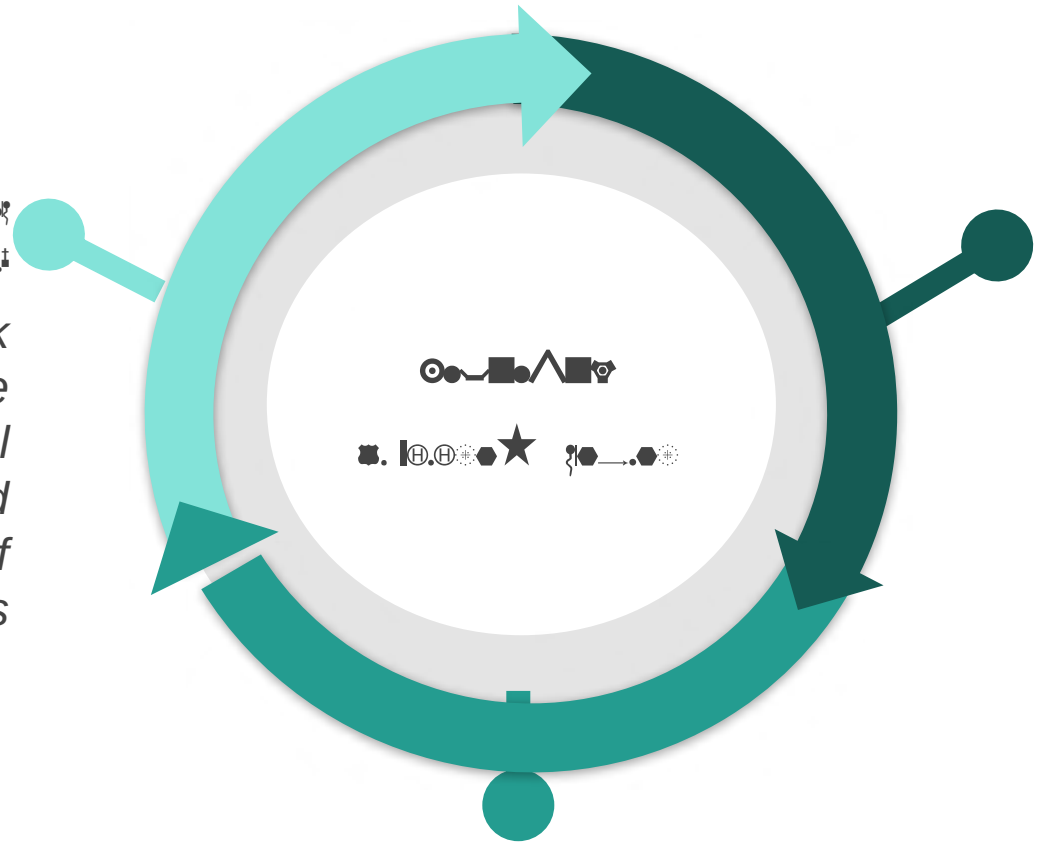
HUBS OF INNOVATION & ENTREPRENEURSHIP FOR THE TRANSFORMATION OF HISTORIC URBAN AREAS

https://hubin-project.eu/

Culture of participation → **MUNICIPAL ROADMAP**

➔introduction of elements to improve the quality of participation as a means and as an end
➔adjusted to local needs, cultures and the ambitions of each city

constitute a municipal task force that guarantees the political and technical commitment to receive and follow the entire path of the co-created solutions



Project number 776783
www.urbinat.eu
contact@urbinat.eu

CIRCULAR MODELS LEVERAGING INVESTMENTS IN CULTURAL HERITAGE ADAPTIVE REUSE

Smart Specialisation Strategies and spillover effects of cultural heritage adaptive reuse in the circular economy perspective

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 776758

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REGIONAL INNOVATION STRATEGIES FOR SMART SPECIALISATION – RIS3

The smart specialisations approach

- A key instrument for identifying **regions' opportunities for growth, development and circular economy.**
- A **place-based** approach and plays a critical function in benchmarking **regional competitiveness and attractiveness.**
- A strategic factor in formulating investment choices and playing a role in **circular economy** chain and process.
- A tool to complement innovation funding and support **the whole innovation cycle** with the aim to bring solutions to the market at the regional level

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 776758

CULTURAL HERITAGE IN RIS3

No reliable evidence on how much and if European **regions** are recognising the importance of **cultural heritag**e under their strategies

- **Analyse** and designate the representation of cultural heritage and culture **in existing smart specialisation** approach as a tool to strengthen innovation for the circular economy in regard to the total number of regions as well as the total number of priorities;

- **Map** European regions that are recognising cultural heritage and culture as an integrated part of their strategies toward circularity processes;

- **Identify** the most significant cultural heritage and culture features and workflows that are currently available in different European regions toward circularity processes;

- Offer a **comparison** in smart specialisation approaches per **economic domains, scientific domain and policy objectives** (and their respective sub-domains) as an element of circularity;

- Understand **current and further possible advancements** on the topic of cultural heritage and culture in smart specialisations.

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CULTURAL HERITAGE IN RIS3

Quantitative and qualitative research methods using publicly available data from the Smart Specialisation Platform (S3P) and the dedicated online database, **Eye@RIS3**.

This research uses data of **243 NUTS** entities in total, covering the EU-28 and their regions, as well as 8 non-EU countries with their 22 non-EU regions

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 776758

CONSERVATION OF CULTURAL HERITAGE

Conservation as a discipline is at the intersection between the **conservation activities** of objects (material or not), the **meaning** that people attach to these objects and the **professional practices** that have been developed related to the objects and their meanings.

Conservation is the art of **preserving, developing and in a sustainable way using** material and intangible cultural heritage from the past

Conservation is about **taking care of existing resources** and buildings that are not demolished can be said to be the **most sustainable**.

Conservation - take something from the past and in a **conscious act** bring this into the **future.**

Conservation **- Ideologies and Politics**

Benefit some interests - disadvantage others

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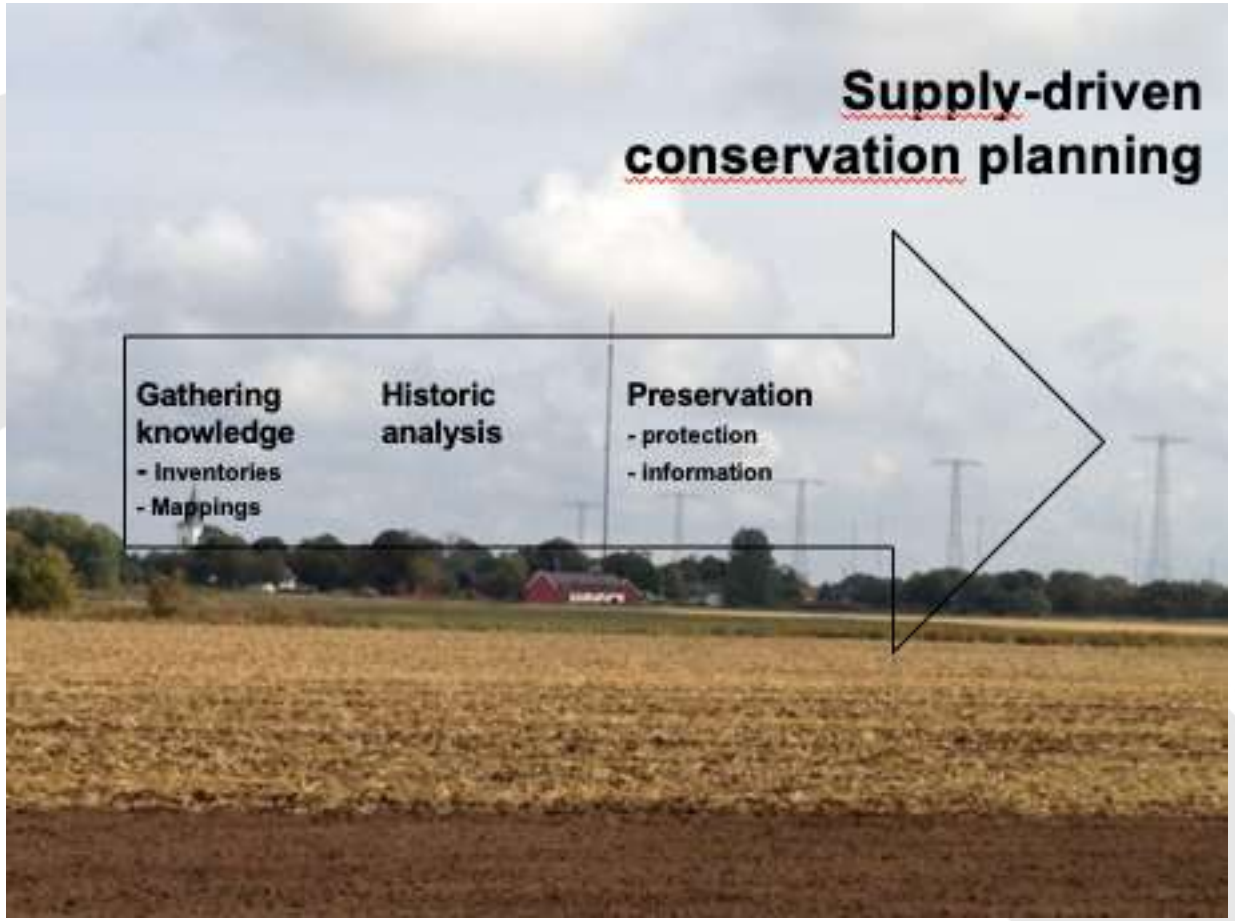
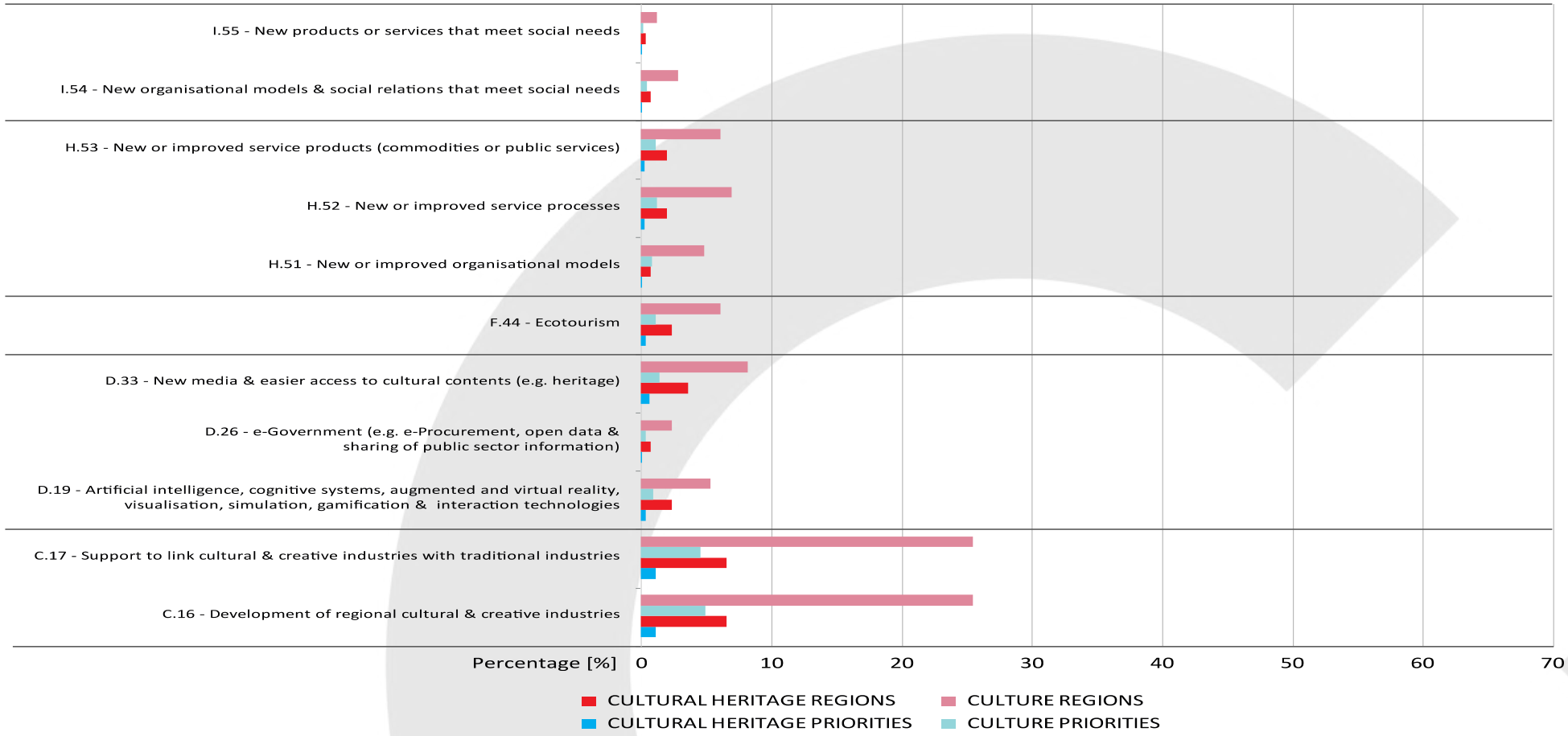
SUPPLY-DRIVEN CONSERVATION PLANNING



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 776758

Percentage of regions and priorities having culture/cultural heritage as a focus in relation to main policy sub-objectives in proportion to the total number of regions and priorities.



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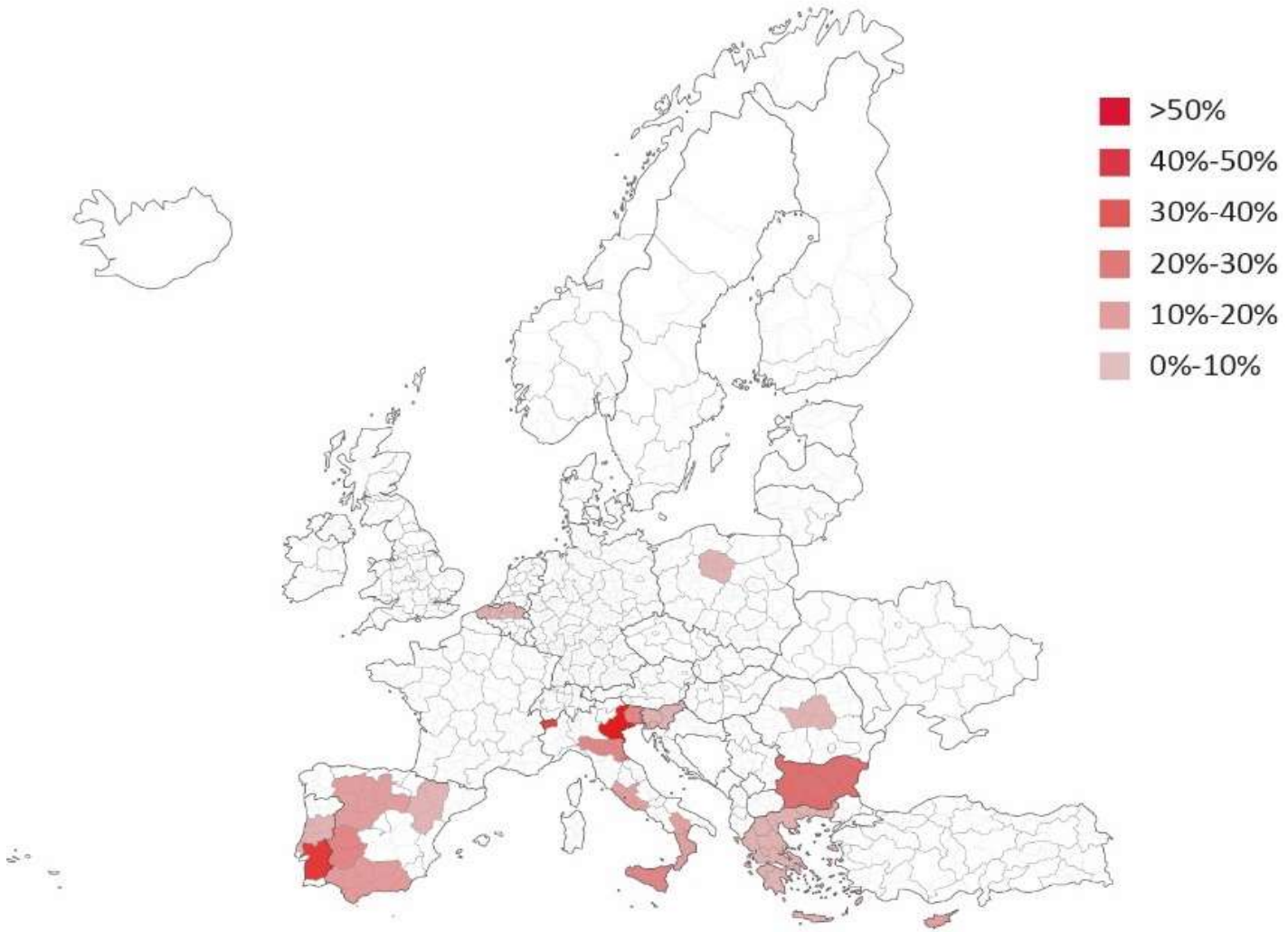
Graphical presentation of regions prioritising cultural heritage



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SPILLOVER EFFECTS OF CULTURAL HERITAGE ADAPTIVE REUSE

Within the CLIC project, spillover effect is considered as the process where an **adaptive reuse** of cultural heritage in one area has a subsequent **broader impact on places, society or the economy** through the overflow of concepts, ideas, skills knowledge and different types of capital.

Spillovers exist over fluctuating timeframes, intentionally or unintentionally, planned or unplanned, direct or indirect, negative as well as positive.

In the framework of this research, we focus on those spillover effects that emerge as a consequence of investment by public or private stakeholders in the adaptive reuse of cultural heritage buildings.

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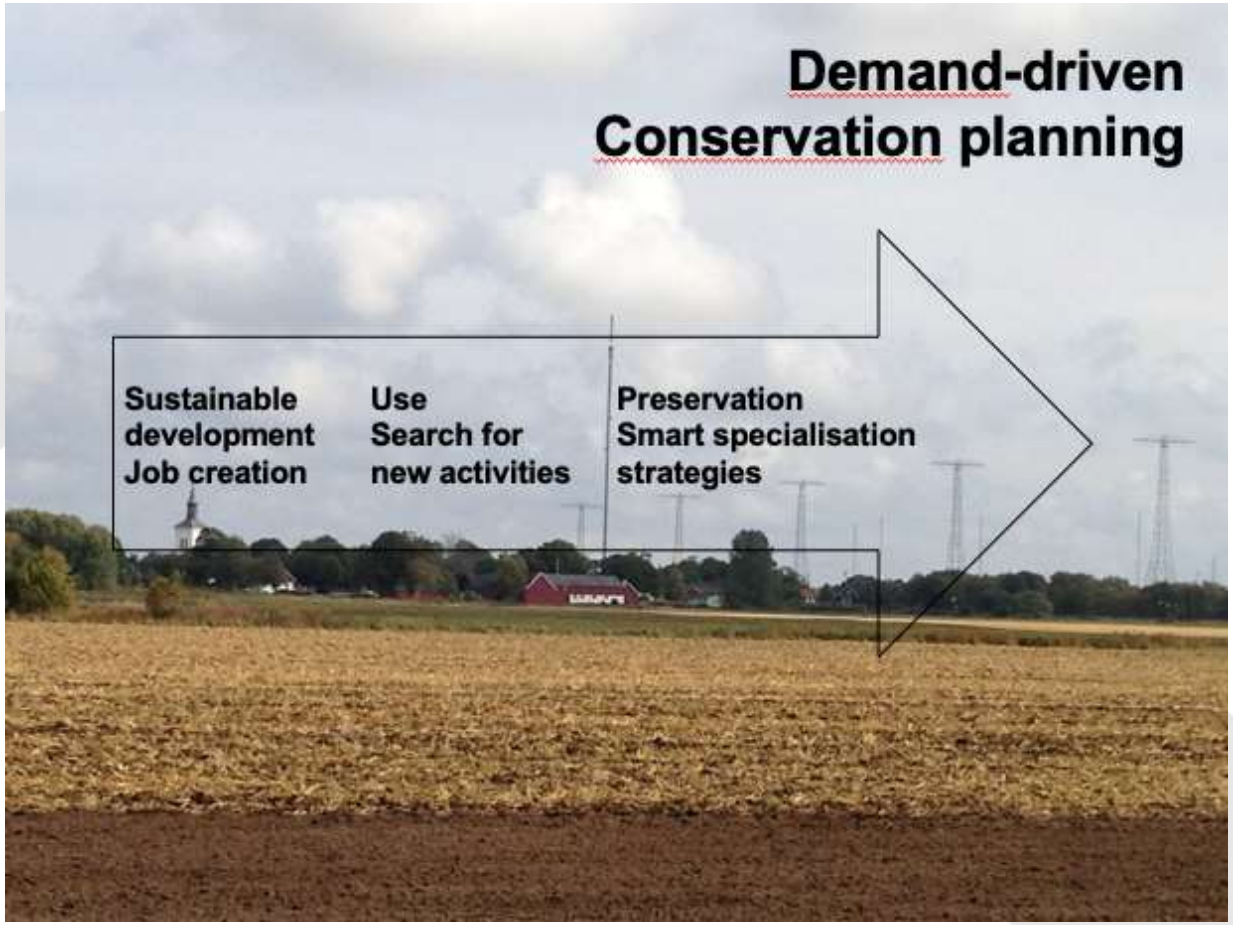
ADAPTIVE RE-USE: DEMAND-DRIVEN CONSERVATION PLANNING



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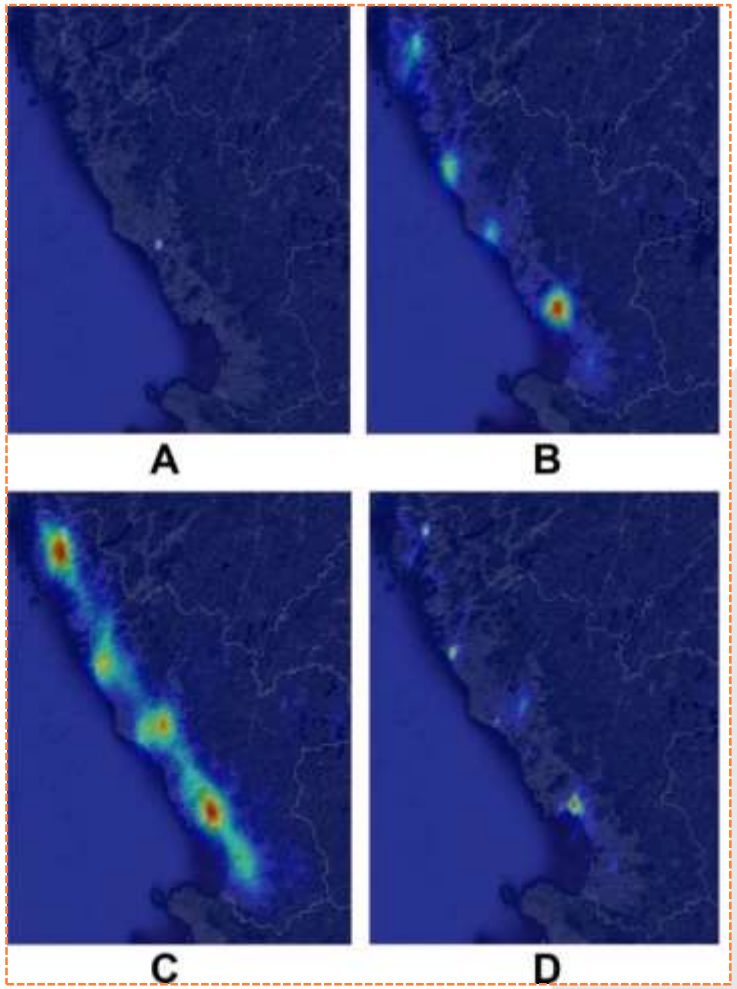
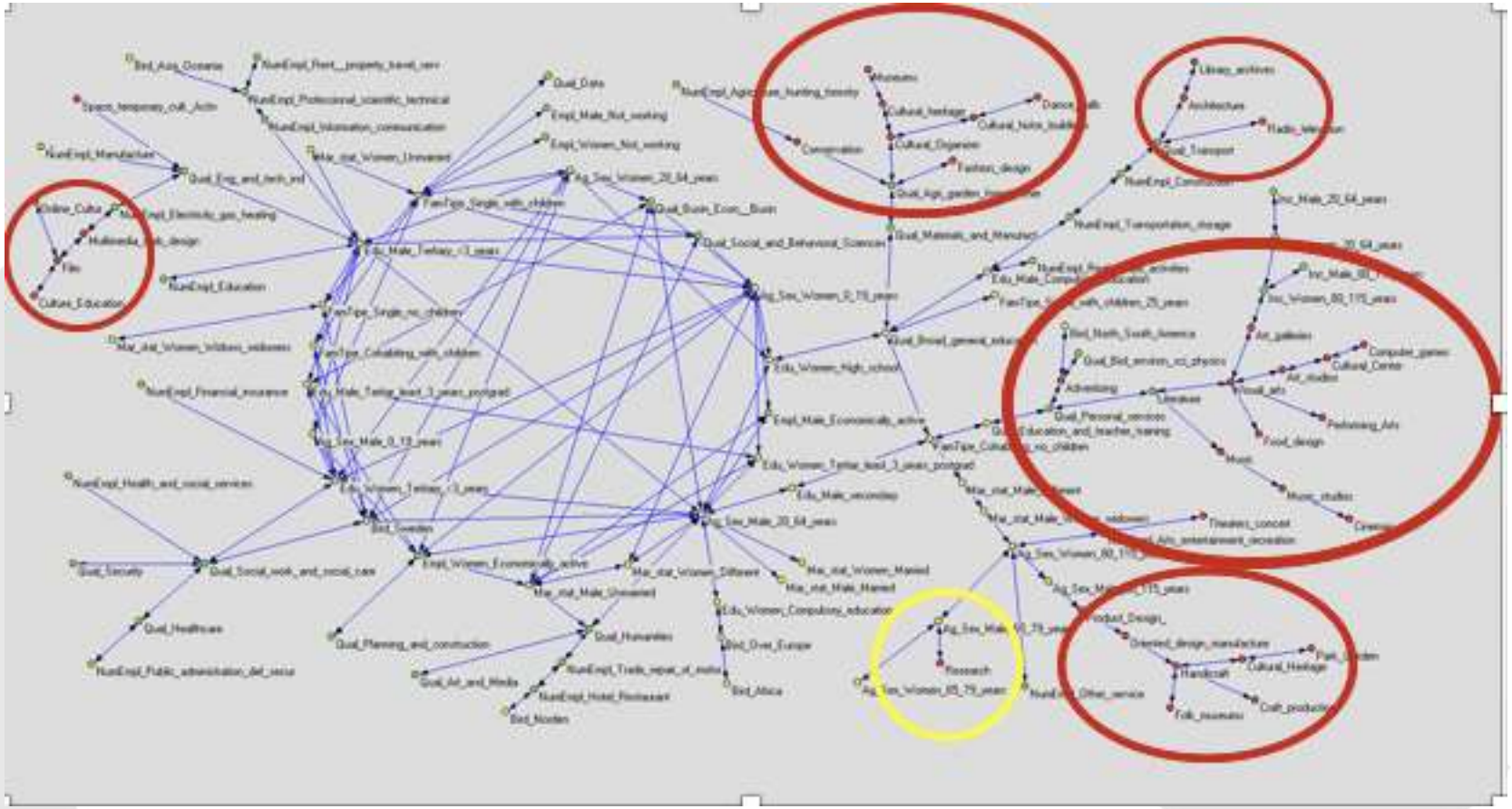
ADAPTIVE RE-USE





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CIRCULAR MODELS LEVERAGING INVESTMENTS IN CULTURAL HERITAGE ADAPTIVE REUSE

THANKS FOR YOUR ATTENTION!!!

Christer Gustafsson, Jermina Stanojev
Uppsala University

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 776758

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CLIC

CIRCULAR MODELS LEVERAGING INVESTMENTS IN CULTURAL HERITAGE ADAPTIVE REUSE

The future of circular environmental impact indicators for cultural heritage buildings in Europe

Final CLIC Conference

September 22-23, 2021

Authors: Gillian Foster, Halliki Kreinin, and Sigrid Stagl

Institute for Ecological Economics

Vienna University of Economics and Business

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 776758

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WU VIENNA | INSTITUTE FOR ECOLOGICAL ECONOMICS

An environmental indicator should be relevant, clear, specific, measurable, and actionable.

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Building Up from New Knowledge to New Policy

1. State-of-the Art of current practices globally over the ten-year period 2008 to 2017 of environmental impact indicators for ARCH buildings.

2. A comprehensive framework of CE Strategies for ARCH buildings to reduce environmental impacts based on a synthesis of the literature.

3. Analysis comparing best practice Environmental Impact Assessment, Life Cycle Analysis, Green Building Certifications, and European regulatory models to actual practice.

4. Proposal for a comprehensive framework for Circular Environmental Impact Indicators for ARCH.

IOP Publishing Environ. Res. Lett. 15 (2020) 043003 https://doi.org/10.1088/1748-9326/ab751e

Environmental Research Letters

TOPICAL REVIEW

A review of environmental impact indicators of cultural heritage buildings: a circular economy perspective

Gillian Foster and Halliki Kreinin

Institute for Ecological Economics, Vienna University of Economics and Business, Austria

E-mail: gillian.foster@wu.ac.at

Keywords: circular economy, environmental indicators, adaptive reuse, cultural heritage buildings, urban, renovation

OPEN ACCESS

15 November 2019

11 February 2020

11 February 2020

15 April 2020

Abstract

This paper is the first in-depth review of the state of the art of environmental impact indicators for adaptive reuse of cultural heritage (ARCH) buildings from a circular economy perspective. Buildings are a necessary component of sustainability planning because they are significant consumers of natural resources, producers of construction and demolition waste, and contributors to greenhouse gas emissions. In addition, buildings, particularly ARCH buildings, are long lasting; therefore, measuring and managing their environmental impacts is crucial to achieving the universal vision of a sustainable, low-carbon economy. The research answers the questions, 'What are the environmental impact indicators used by individual ARCH building project analyses?' and 'Are the most commonly used indicators reflecting Circular Economy concepts?' It synthesizes and defines current practice in the field whilst highlighting the gaps between practice and policy. Although the term 'Circular Economy' is not explicitly and routinely used in the literature, related concepts such as life cycle analysis, energy consumption reduction, energy efficiency, and embodied carbon/energy are evident at the project level. Concrete and measured environmental indicators are not mainstream. However, narratives of environmental protection feature prominently in the literature, indicating an environmental motivation for repurposing cultural heritage buildings. Further, there is a gap between common indicators of circularity and the ARCH building project level indicators shown in the dataset.

1. Introduction

This paper reviews the state of the art of environmental impact indicators for adaptive reuse of cultural heritage (ARCH) buildings from a circular economy (CE) perspective. The city centers of Paris, London, Vienna, Berlin, New York, and Hong Kong are but a few examples of cultural heritage buildings' role in crafting the unique personalities of distinct communities around the world. Likewise, ARCH buildings anchored in rural landscapes such as windmills in Estonia or paper factories in Sweden are living connections to an impactful shared past. 'Cultural heritage is an expression of the ways of living, developed by a community and passed on from generation to generation, including customs, practices, places, objects, artistic expressions and values.' (ICOMOS 2002:21) There are 1,121 cultural properties on the UNESCO World Heritage List.[1] Listed ARCH properties are a tiny percentage of the culturally significant buildings that are not recognized by an international organization but are formally and informally recognized by their communities as forming the fabric of daily life across the world.

The number of listed and unlisted cultural heritage buildings is expected to grow. For example, about 17% of buildings in the United States were built before the end of World War II (Elefante 2007). In the Austrian capital, Vienna, an estimated one third of buildings were built before the First World War (Hatz 2008). While all old buildings are not listed, many are preserved because they are crucial to local cultural heritage and identity. In addition, preservationists 'will have to address a much larger building stock when modern-era buildings become more fully the stuff of preservation.' (Elefante 2007:28) Listed or not, the International Energy Agency predicts that about 60% of today's building stock in Europe, the United States and Russia will remain in 2050 (OECD/IEA 2013),

[1] UNESCO website. https://whc.unesco.org/en/list/?&type=cultural. Downloaded 14 January 2020.

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 776758

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2018 EUROPEAN YEAR OF CULTURAL HERITAGE

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Full length article

Circular economy strategies for adaptive reuse of cultural heritage buildings to reduce environmental impacts

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ARTICLE INFO

Keywords:
Circular economy
Adaptive reuse
Cultural heritage
Sustainability
Urban planning
Buildings

ABSTRACT

Circular economy strategies seek to reduce the total resources extracted from the environment and reduce the wastes that human activities generate in pursuit of human wellbeing. Circular Economy concepts are well suited to the building and construction sector in cities. For example, refurbishing and adaptively reusing underutilized or abandoned buildings can revitalize neighborhoods whilst achieving environmental benefits. Cultural heritage buildings hold a unique niche in the urban landscape. In addition to shelter, they embody the local cultural and historic characteristics that define communities. Therefore, extending their useful lifespan has multiple benefits that extend beyond the project itself to the surrounding area, contributing to economic and social development. To explore this complex issue, the research applies systematic literature review and synthesis methods. Decision makers lack knowledge of the environmental benefits of adaptive reuse of cultural heritage buildings and lack tools to implement these projects. A new comprehensive circular economy framework for the adaptive reuse of cultural heritage buildings to reduce environmental impacts intends to meet these needs. The framework integrates methods and techniques from the building and construction literature that aim to reduce lifecycle environmental impact of buildings with a circular product supply chain approach.

1. Introduction

Today's city planners and city dwellers desire environmentally sustainable and vibrant communities. Resourceful and innovative approaches for the built environment in general and existing buildings in particular are key to accomplishing future sustainability. Urban cultural heritage buildings are of particular interest because they may be underutilized or abandoned; nevertheless, are important for the heritage of local, and possibly international, communities. The unique historic and cultural characteristics of the building(s) are their "heritage". Heritage extends beyond the project itself to the surrounding area, is often a public or common good, and is recognized for contributions to the economic and social development of the area (Guzmán et al., 2017; Hosagrahar et al., 2016; Rypkema and Cheong, 2011; Throsby, 2009; Vileniske, 2008; Zhang, 2010). Cultural heritage[1] buildings can be former places of religious worship, aristocratic/royal residences, community meeting places, industrial production sites, early modern office buildings, or military objects. It is important to seek sustainable solutions for these buildings in urban development.

A solution proposed by this paper is a comprehensive circular economy (CE) framework for the adaptive reuse of cultural heritage buildings based on a synthesis of the literature. The proposal integrates methods and techniques from the building and construction literature that reduce environmental impact of buildings over their lifecycle with the goals of adaptive reuse of cultural heritage buildings. An adaptive reuse of a cultural heritage project is the retrofit, rehabilitation and redevelopment of one or more buildings that reflects the changing needs of communities. Cultural heritage projects include both legally protected (listed) and unprotected buildings. Although the original purpose of a building is no longer continued, the goal of the project is to maintain the building's distinct historic and cultural character (Binder, 2003). Experts may judge if cultural heritage values are sufficiently preserved (Forsyth, 2013). These projects are often the keystones of unique urban neighborhoods worldwide (Boeri et al., 2016; Girard, 2014; Yung et al., 2017).

This research is motivated by four drivers found in the literature: 1) The CE is a new and compelling strategy to achieve a sustainable economy; 2) The building and construction industry's crucial role in

E-mail address: gillian.foster@wu.ac.at.

[1] "Cultural heritage is an expression of the ways of living, developed by a community and passed on from generation to generation, including customs, practices, places, objects, artistic expressions and values. Cultural heritage is often expressed as either intangible or tangible cultural heritage." ICOMOS, I.I.C.o.C.T. (2002). ICOMOS international cultural tourism charter: principles and guidelines for managing tourism at places of cultural and heritage significance. International Council on Monuments and Sites, ICOMOS International Cultural Tourism Committee.

https://doi.org/10.1016/j.resconrec.2019.104507

0921-3449/

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https://doi.org/10.1186/s12302-020-00411-9

Environmental Sciences Europe

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The future of circular environmental impact indicators for cultural heritage buildings in Europe

Gillian Foster*, Halliki Kreinin and Sigrid Stagl

Abstract

Background: The European building and construction sector is extremely resource-intensive. This makes the renovation of existing buildings, including the adaptive reuse of cultural heritage buildings (ARCH), important for reducing the materials and energy intensity of the sector. Currently, Europe is embarking on a Circular Economy (CE) strategy that directly affects the environmental indicators for buildings and landscapes, including ARCH. However, there is a misalignment between macro-level European CE policy goals and micro-level renovation and management of existing buildings and ARCH. The analysis shows that macro European Union-level indicators are too narrowly defined to effectively guide the implementation of CE at the micro-project level for ARCH.

Results: This policy study develops a comprehensive ARCH Circular Environmental Impact Indicator Framework to close this gap by: (1) defining the research question; (2) identifying the causal network; and (3) selecting the best indicators. The study compares Circular Environmental Indicators for ARCH projects to current and developing European management schemes. Best practices in environmental impact assessment at the project level are highlighted for the building and construction sector in Europe.

Conclusions: The proposed new framework is a comprehensive and suitable list of explicitly circular environmental indicators for ARCH. The framework has immediate practical applications for practitioners and policymakers interested in the CE regime for buildings in Europe.

Keywords: Circular economy, Environmental indicators, Adaptive reuse, Cultural heritage, Buildings, Sustainability, Transition, Europe, Policy

Background

This article focuses on a subset of existing building renovations, the adaptive reuse of cultural heritage (ARCH) buildings. Its purpose is to contribute to better alignment between macro-level European Circular Economy (CE) policies with micro-level renovation and management of existing buildings and ARCH. With this aim, the article proposes a new ARCH Circular Environmental Impact Indicator Framework.

The new framework is a research-based comprehensive list of explicitly circular environmental indicators for ARCH. CE indicators for ARCH are examined in the context of the existing and forthcoming decision-making landscape in Europe. The framework has practical application to the European Union (EU) CE regimes for existing buildings, particularly ARCH.

European buildings are strikingly resource-intensive, responsible for 40% of Europe's consumed energy each year [1]. From a life-cycle perspective, European buildings generate: "40% of greenhouse gas emissions; half of raw materials; and a third of water consumption" [2]. As a result, this sector is critical for the transformation to a sustainable economy in Europe. The renovation of

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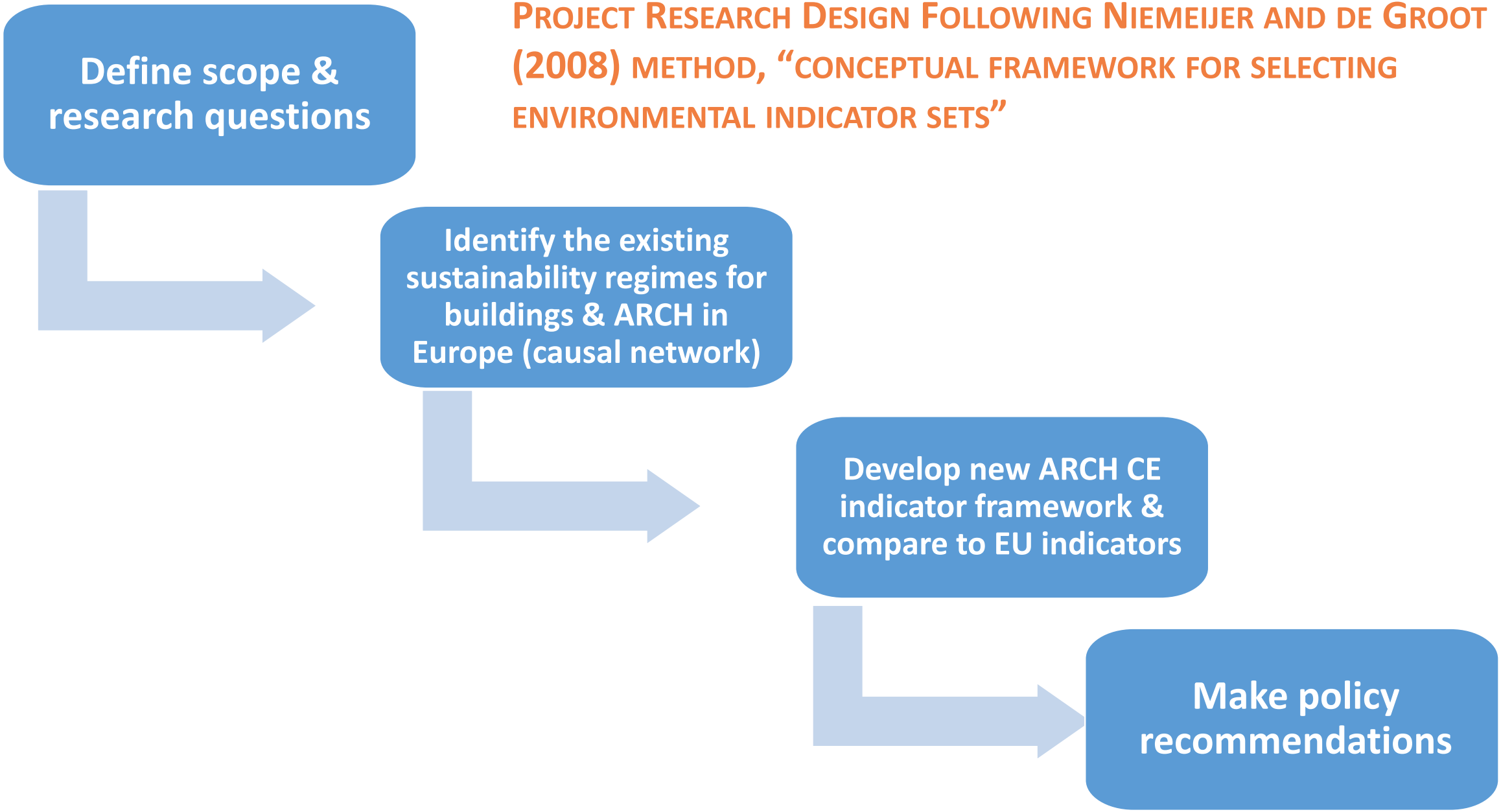
Project Research Design Following Niemeijer and de Groot (2008) method, "conceptual framework for selecting environmental indicator sets"



Define scope & research questions

- What is the existing and forthcoming environmental decision making landscape relevant to CE for ARCH in Europe?
- How do current practices for CE Environmental Indicators for ARCH compare to major project (micro-level) regimes for buildings in Europe?
- What are the ideal CE environmental indicators and how do these fit with macro-level EU sustainability policies?

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What are the existing sustainability regimes for buildings & ARCH in Europe? (defining the causal network)

Micro EU Indicator Regimes

- Life Cycle Analysis-based International Standards (ISO 2011)
- EU Environmental Impact Analysis Guidance (2017)
- Circular Green Building Certifications (BREEAM) - next
- Level(s) – EU plan in test phase - next

Macro EU Indicator Regimes

- Resource Efficiency Scoreboard Indicators
- Circular Economy Indicators
- State of the Energy Union Indicators

E.U., 2017. Environmental Impact Assessment of Projects Guidance on the preparation of the Environmental Impact Assessment Report (Directive 2011/92/EU as amended by 2014/52/EU). European Union, 2017, Luxembourg.

https://ec.europa.eu/environment/eussd/buildings.htm

The BREEAM initiative report was written by a consortium of organizations working to expand CE. These are Circle Economy (www.circle-economy.com), Dutch Green Building Council (www.dgbc.nl/), Metabolic (www.metabolic.com), SGS Search (www.sgssearch.nl/), and Redevco Foundation.

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Develop new ARCH CE indicator framework & compare to EU indicators

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New ARCH CE indicator framework due to the adaptive reuse

Table 1 This table summarizes the results of the analysis of existing and emerging micro-level regimes for buildings and ARCH discussed in the "Analysis of current and forthcoming environmental indicators for ARCH" section. The table shows the prevalence or absence of common circular environmental indicators in each of the regimes

Comparison of current circular environmental indicators [3] to current and developing environmental indicators relevant for ARCH				
	Life Cycle Analysis-based standards [32]	Environmental Impact Assessment [36]	Green Building Certifications (w/CE) [37]	Level(s) [38]
The current CE indicators prevalent in ARCH building projects in [3]				

Categories

1. **Indicators of direct reductions to new natural materials extraction**
2. **Indicators of direct reductions to energy use**
3. **Indicators of direct environmental improvements**
4. **Indicators of indirect reductions to energy use or pollution**

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Framework = 20 Indicators / “Bridging Device” to connect micro to macro environmental management levels and connect policymakers to practitioners.

Indicator and Unit of Measure	CE Goal of Indicator Reduce Environmental Pollution, Reduce Extraction of Materials, Reduce Energy & Water Consumption, Encourage Low-Carbon Energy, Replace Fossil Fuels, Limit Land-use Change	Scope Energy & Climate Change, Water, Land, Air, Waste Generation, Ecosystems & Biodiversity Conservation, Natural Heritage Conservation
Traditional and/or biomass and/or local sustainable materials used Description & Volume (kilos / tons)	Reduce Extraction of Materials Low Carbon Energy	Energy & Climate Change, Ecosystem and Biodiversity
Implement Water Collection, Storage and Reuse Systems Onsite – Volume of Water (kiloliters/person/year)	Reduce Water Consumption	Water
Implement Natural Heritage Conservation of Site (Legally protected landscape m^2 or hectares & % of project)	Limit Land-use Change	Land, Ecosystems & Biodiversity, Natural Heritage Conservation
Maintain Embodied Energy in onsite reused concrete, stone, brick, steel etc. (CO_2 equiv. GHGs tons /year avoided or avoided/reused)	Reduce Extraction of Materials, Reduce Energy Consumption, Encourage Low-Carbon, Replace Fossil Fuels	Energy & Climate Change

Policy Recommendations

Several buildings-relevant indicators are not currently included in the EU CE indicators, such as renewable energy and materials from biomass.

Regenerative capacity of building projects such as water collection, renewable energy, soil recovery and habitat should be clarified at the EU level and explained for practitioners' use

Procurement focused on office space is too limited.

Based on the findings and observations make recommendations that:

- **Inform practitioners how to use environmental indicators to implement CE**

- **Harmonize, to the extent possible, the multiple EU directives and guidance under a common CE umbrella.**

- **Speed the transition to CE in Europe**

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CLIC

CIRCULAR MODELS LEVERAGING INVESTMENTS IN CULTURAL HERITAGE ADAPTIVE REUSE

THANKS FOR YOUR ATTENTION!!!

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CLIC Final Conference | 22 - 23 September 2021

Online event

CLIC evaluation framework for circular cultural heritage adaptive reuse: from best practices to better projects

Antonia Gravagnuolo, CNR IRISS, CLIC Co-coordinator

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What is the **CLIC evaluation framework**

The **CLIC Evaluation Framework** is:

- **a conceptual framework** defining the objectives of a *circular* «human-centred» adaptive reuse of cultural heritage, according to the multidimensional *notion of value* introduced, in the perspective of the circular economy

- **a set of evaluation tools to assess the circularity and impacts** of cultural heritage adaptive reuse projects: evaluation methods, criteria, indicators

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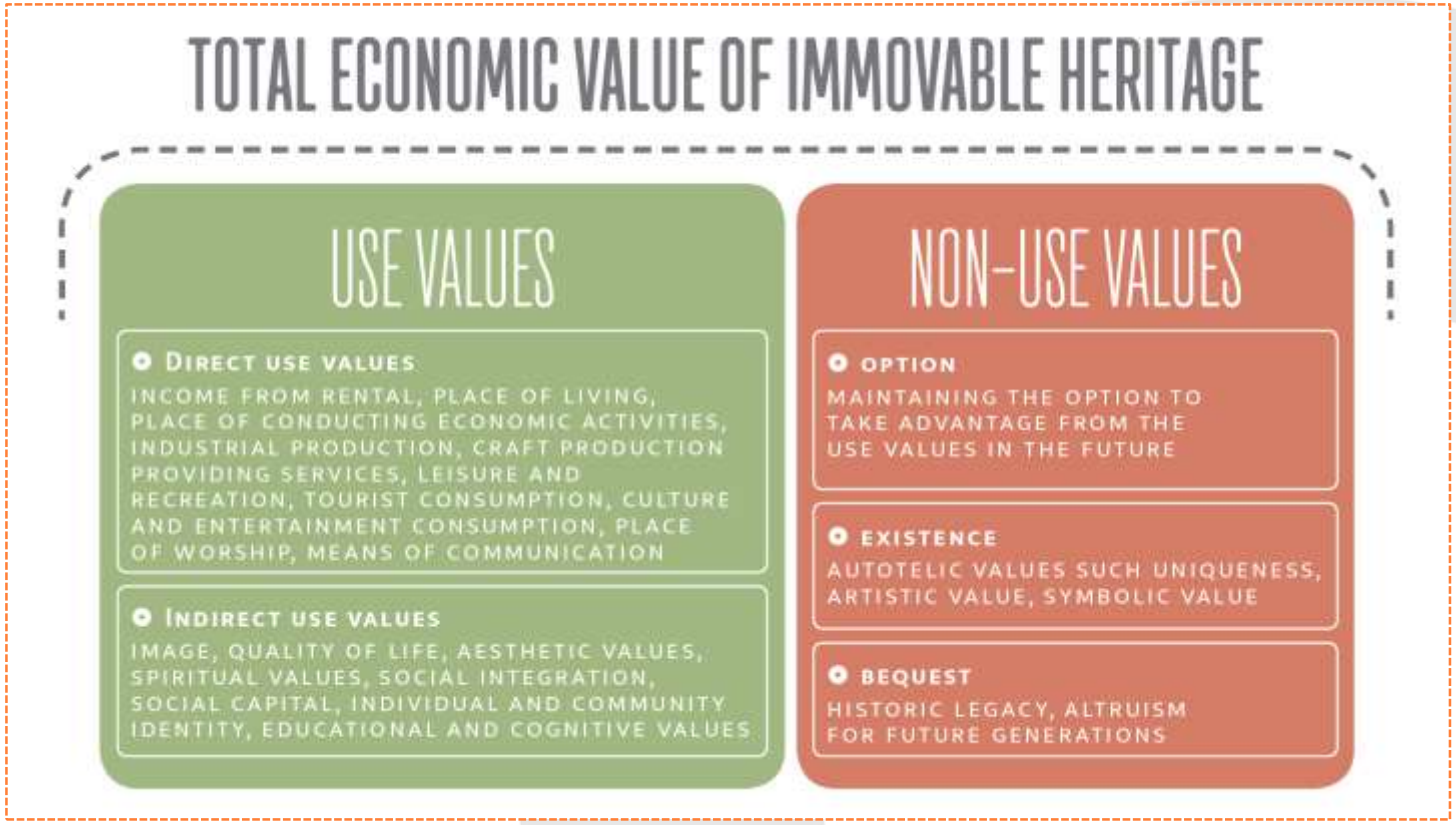
The **Complex Social Value** of cultural heritage: instrumental and non-instrumental values

Instrumental values



Source: Cultural heritage counts for Europe, 2015

Non-instrumental value

«INTRINSIC VALUE»

Intrinsic anthropogenic and non-anthropogenic values

Source: Luigi Fusco Girard, 1987, 1997, 2019, 2020, 2021

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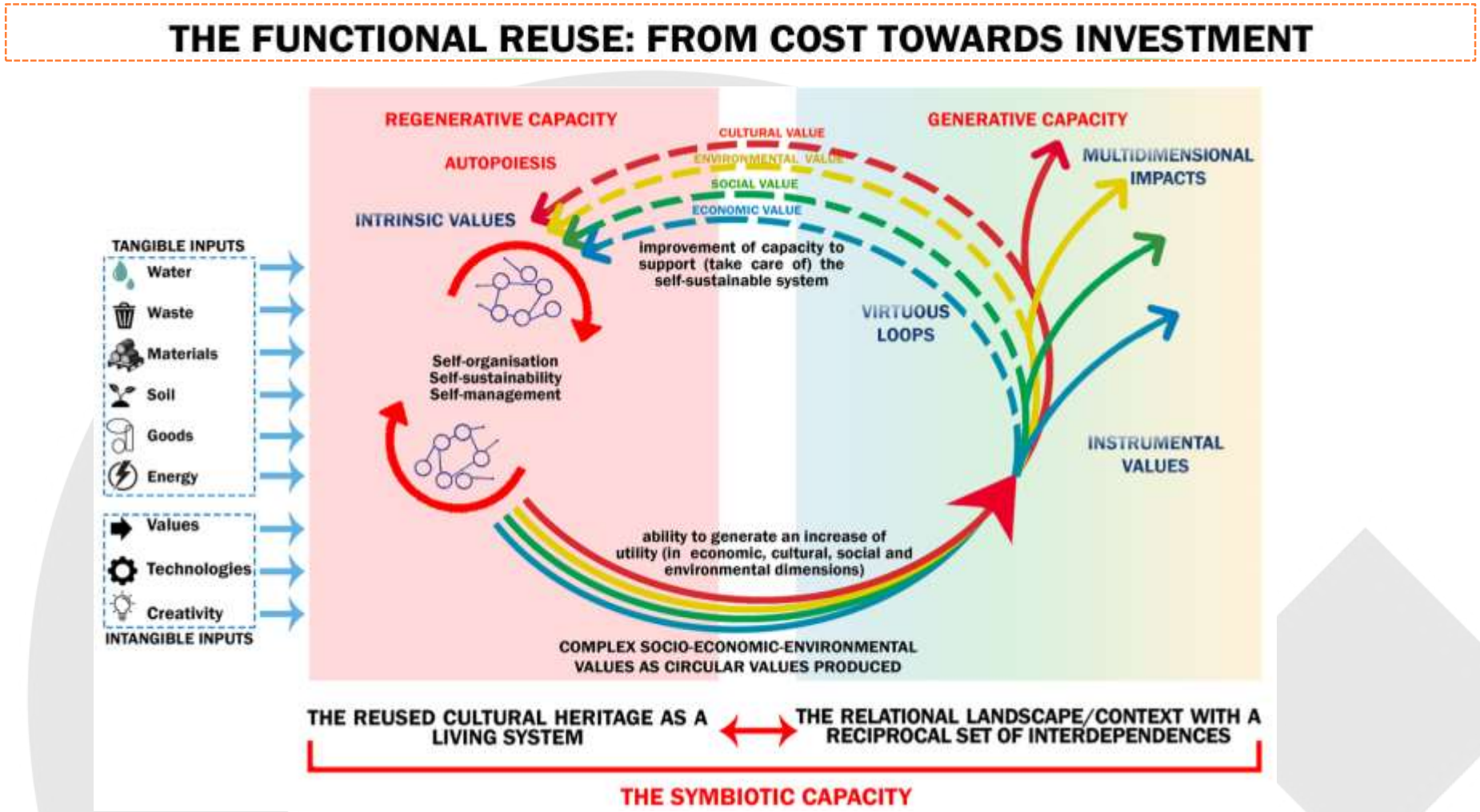
The conceptual framework of **Circular «human-centred» adaptive reuse of cultural heritage**



Source: Luigi Fusco Girard, CLIC framework

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From theoretical framework to criteria and indicators

Circular «human-centred» adaptive reuse of cultural heritage

Self sustainability and self-regeneration of resources (auto-poietic capacity)

- **Cultural resources**: Conservation of heritage authenticity and integrity, Intangible values, Historic Urban Landscape quality, Accessibility of cultural heritage site
- **Economic resources**: Financial self-sustainability as capacity of not being sustained by external public and self-generating knowledge and financial resources, private or social actors, Reinvestment of profits to generate new activities
- **Environmental resources**: Energy; Water; Soil; Raw materials extraction; Green surfaces; Local and healthy materials; Remediation; Carbon emissions; Use of regional resources
- **Social resources**: Heritage community, Local community, Entrepreneurial involvement of people, Skills enhancement, Education & Training

Symbioses and synergies (circular «human-centred» economy enablers)

- **Cultural factors**: Trust, Traditional skills and capacities
- **Environmental factors**: Reuse of Construction & Demolition Wastes, Materials extraction, Recovery/regeneration of public space, Pedestrian mobility, Sustainable mobility, Accessibility enhancemen
- **Economic factors**: Complementarity between functions and contribution to Smart Specialization Strategies, Businesses collaboration and symbioses
- **Social factors**: Social Sustainability (synergies and cooperation networks in the ecosystem), Cultural vibrancy, Participation in decision-making

Generative capacity (impacts generated in the territory)

- **Cultural generative capacity**: Participation in culture, Cultural visitors, Arts, craft, making and repairing activities, Creative and innovative spaces
- **Economic generative capacity**: Jobs creation, Indirect and induced economic impacts, Financial returns for the public sector, Localization of new businesses, Localization of enterprises and entrepreneurs in the reused cultural heritage site, Proximity activities
- **Environmental generative capacity**: CO2 sequestration, GHG emissions, Air quality, Water quality, Biodiversity, Soil pollution
- **Social generative capacity**: Place attractiveness, Landscape quality, Cleanliness of public spaces, Safety of public spaces, Wellbeing and Health, Quality of life for residents, Public space for socialization

RESOURCES → **ENABLERS** → **OUTCOMES**

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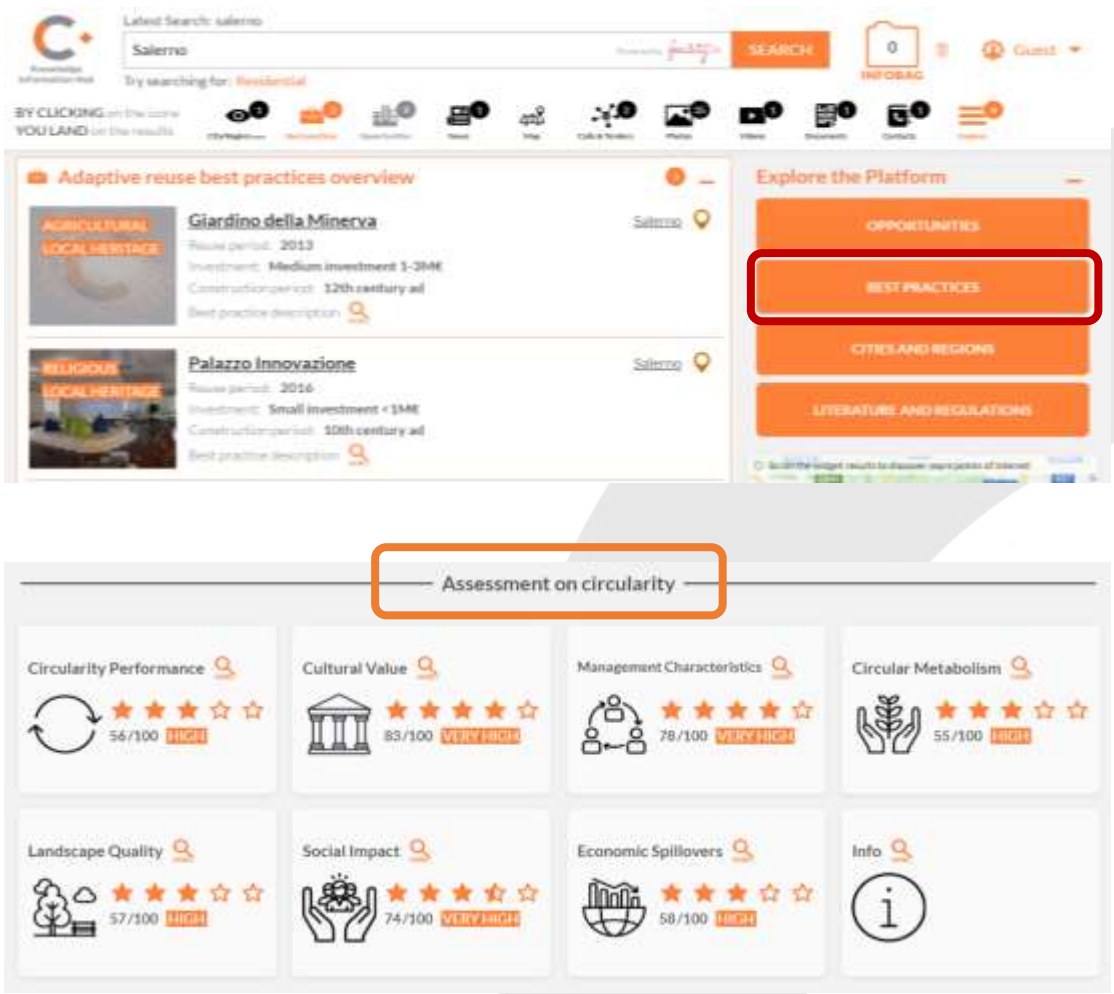
From Best Practices to better projects



Opportunities for cultural heritage adaptive reuse: towards the definition of "satisfying project"

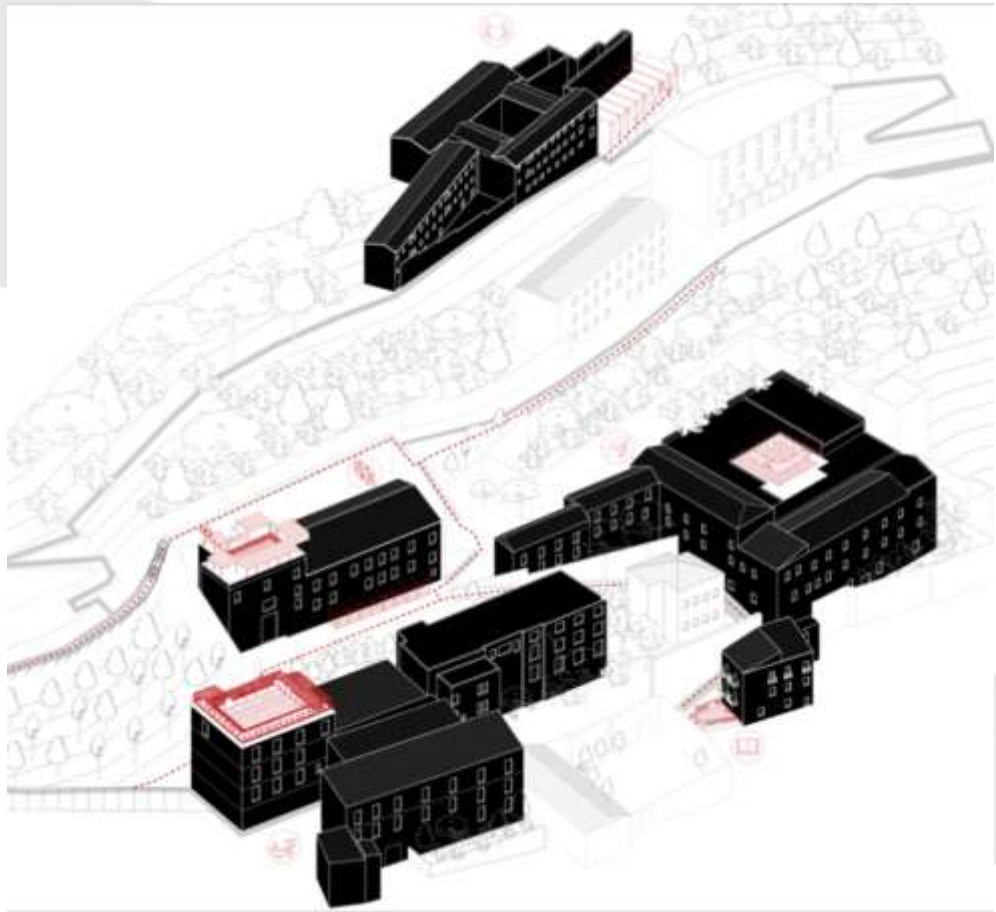


Figure Credits: @Irene Antonelli and @Giovanni Mazzanti, Salerno Edifici Mondo public consultation

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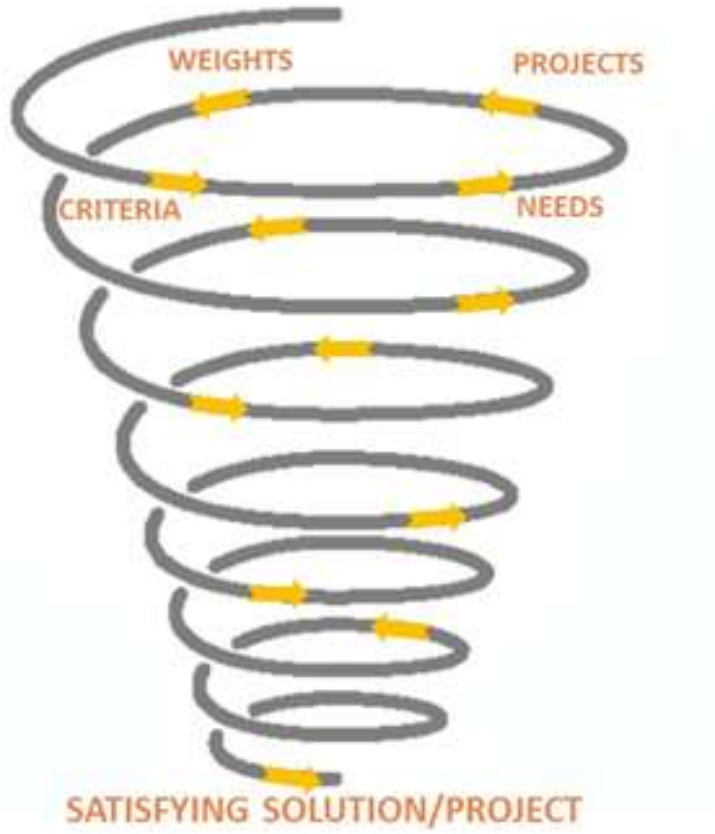
The dynamic co-evaluation approach



Source: Luigi Fusco Girard, CLIC framework

The **adaptive reuse of cultural heritage** should follow a coherent evaluation approach.

This dynamic approach in turn leads to a **dynamic co-evaluation approach**, that is, an approach in which criteria, weights and alternatives change over time in an evolutionary perspective.

Experimentation in **Salerno – Edifici Mondo** adaptive reuse solutions

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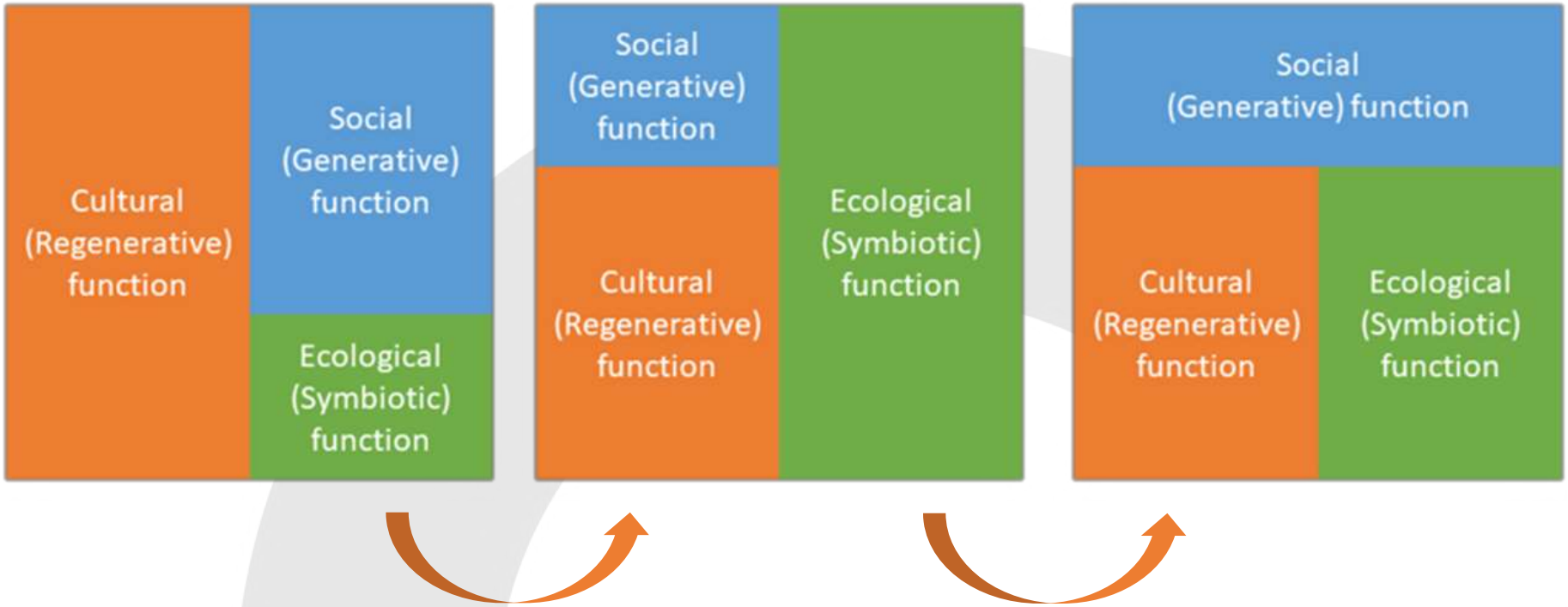
The dynamic co-evaluation approach



Feedback process / co-evaluation

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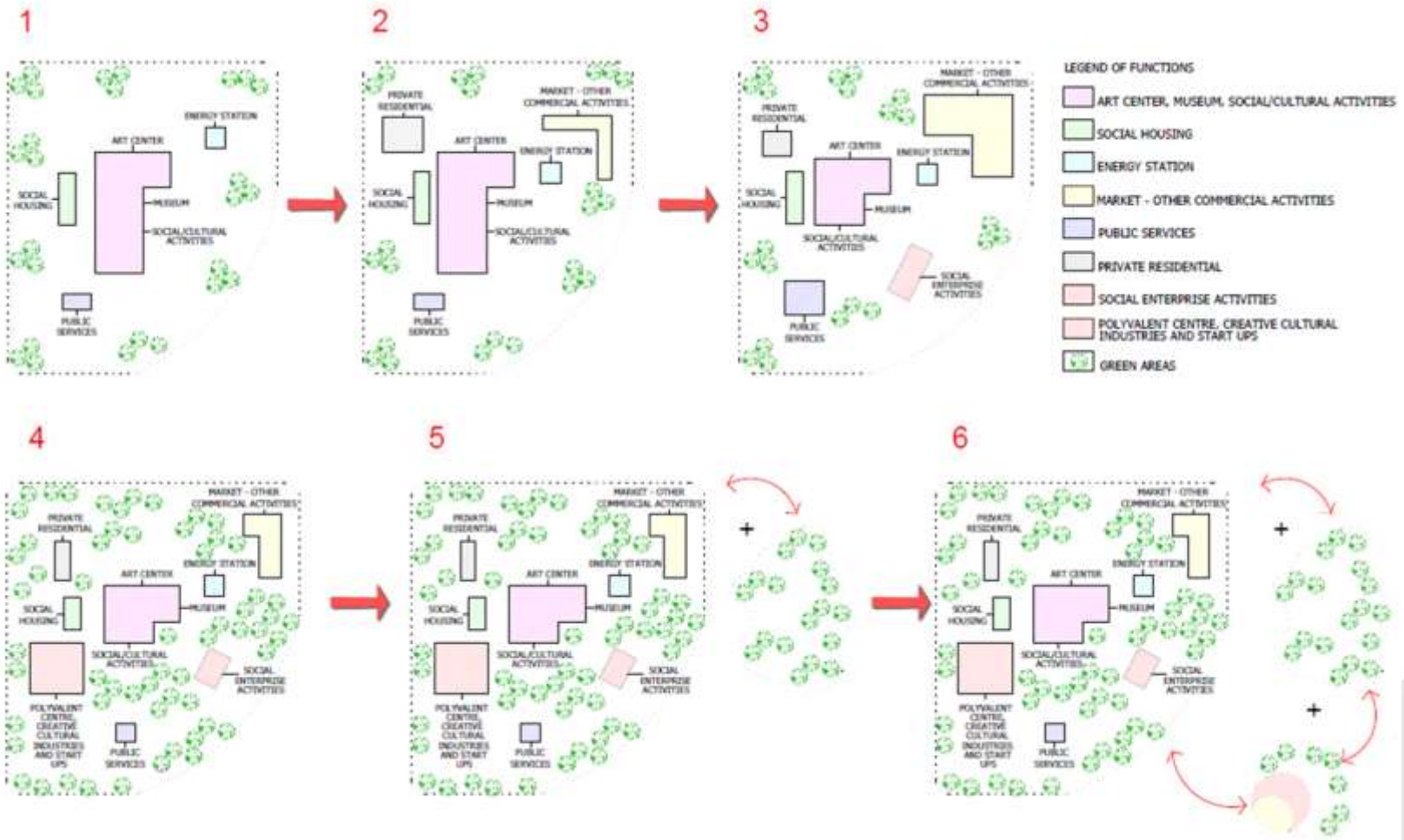
The evolutionary co-evaluation process toward a satisfying design solutions

Integration between **circular business model** and **design solutions**



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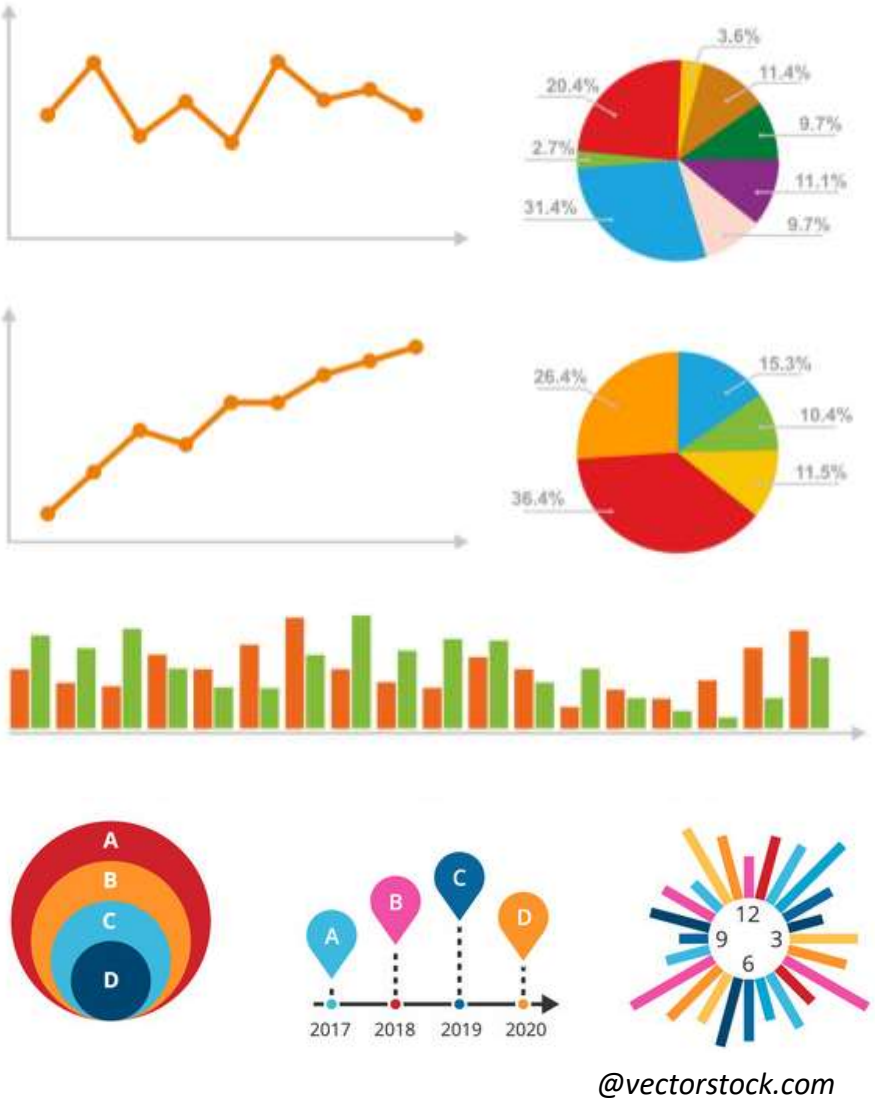
Why and how to use the evaluation framework

- **The evaluation framework is addressed to cultural heritage managers and owners, as well as to public institutions**, to support them in taking more informed and more **effective choices** in cultural heritage adaptive reuse with respect to circularity objectives
- **The evaluation framework is based on a set of criteria and indicators** that enable **performance assessment** of existing projects with respect to circularity objectives, and that can be used to **orient choices** towards circular «human-centred» adaptive reuse of cultural heritage
- **Indicators are synthetic tools to interpret reality**: sound **data collection, data analysis and data interpretation** is needed to assess the indicators



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CLIC uses three types of **indicators**:

- **Statistical indicators** which are normally expressed as ratios or as percentages, allowing them to be assessed in relation to a baseline.
- **Trends**, whereby 'raw' numbers are monitored over time (e.g., number of visitors from one year to the next).
- **Checklists** which are not statistical (i.e., non-parametric), but enable some assessment of topics which cannot be captured through quantitative measurement (e.g., asking residents whether a certain cultural heritage site represents a factor of local identity). Even a checklist requires supporting evidence to permit validation of the responses.

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Thank you!

Antonia Gravagnuolo, CNR IRISS, CLIC Co-coordinator

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REFLOW: *enabling the transition towards circular and regenerative cities*

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Associate Professor in Management Control
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CLIC Final Conference
September 22 2021

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REFLOW VISION

A circular and regenerative city in REFLOW represents a urban system with social and business practices which place equal attention to social, environmental and economic impact; where technology is open and represents a central enabler of positive social and environmental change; where the urban system ensures and support resilience of social and ecological systems; where governance is collaborative and inclusive; where knowledge is shared and stakeholders are active and involved.

Source: Cities' Circular Action Plan (Parisi et al., 2020)

The REFLOW Methodology

REFLOW VISION

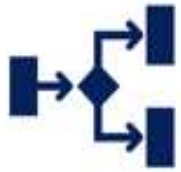
Theoretical Framework

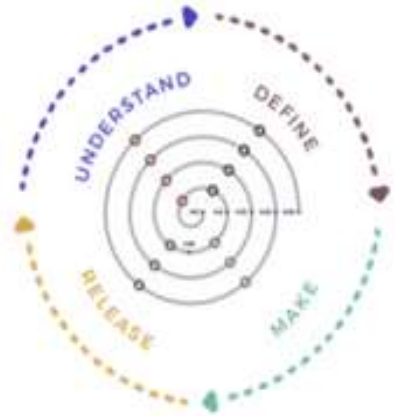
Baseline for **common understanding** of the approach of each WP

Understanding of CE

Baseline for **common understanding** of CE

REFLOW PROCESS





Theory of Change

Baseline for a common understanding of the **causal pathway** between the different **activities** of the WPs, the **outputs** (i.e. resources & deliverables) produced and the **outcomes** of Reflow

Circular Design Thinking

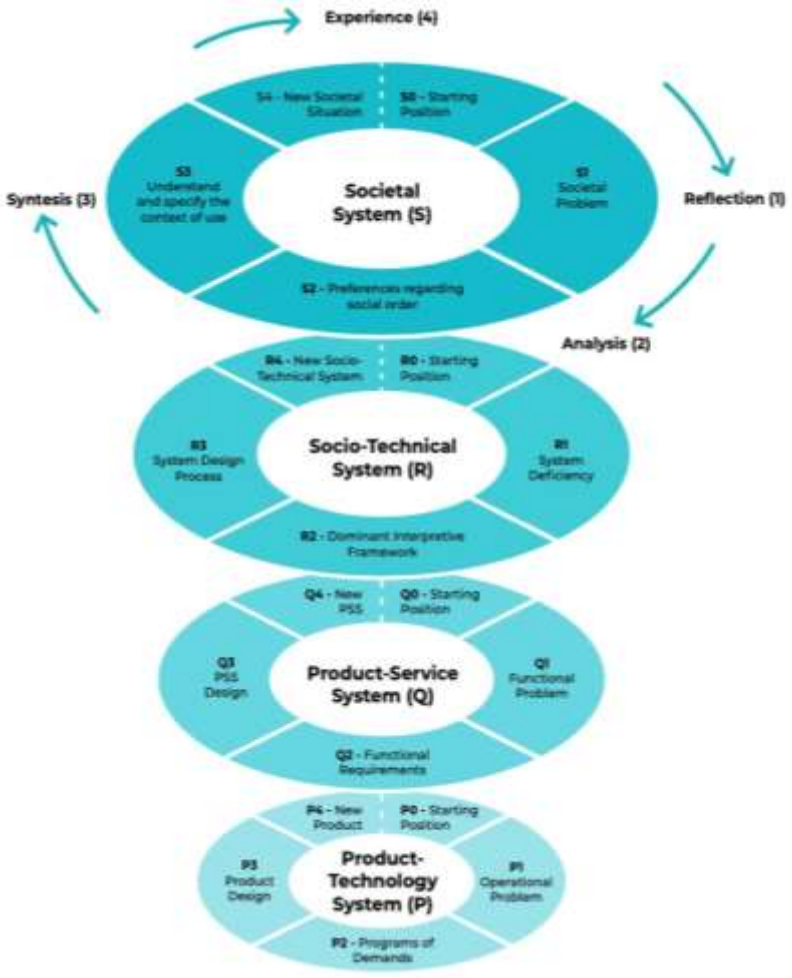
Baseline for **Alignment and coordination** of activities of Pilots and WPs, in a way that allows to understand the state-of-the art, identify challenges and opportunities for synergies, make and release the project outputs.

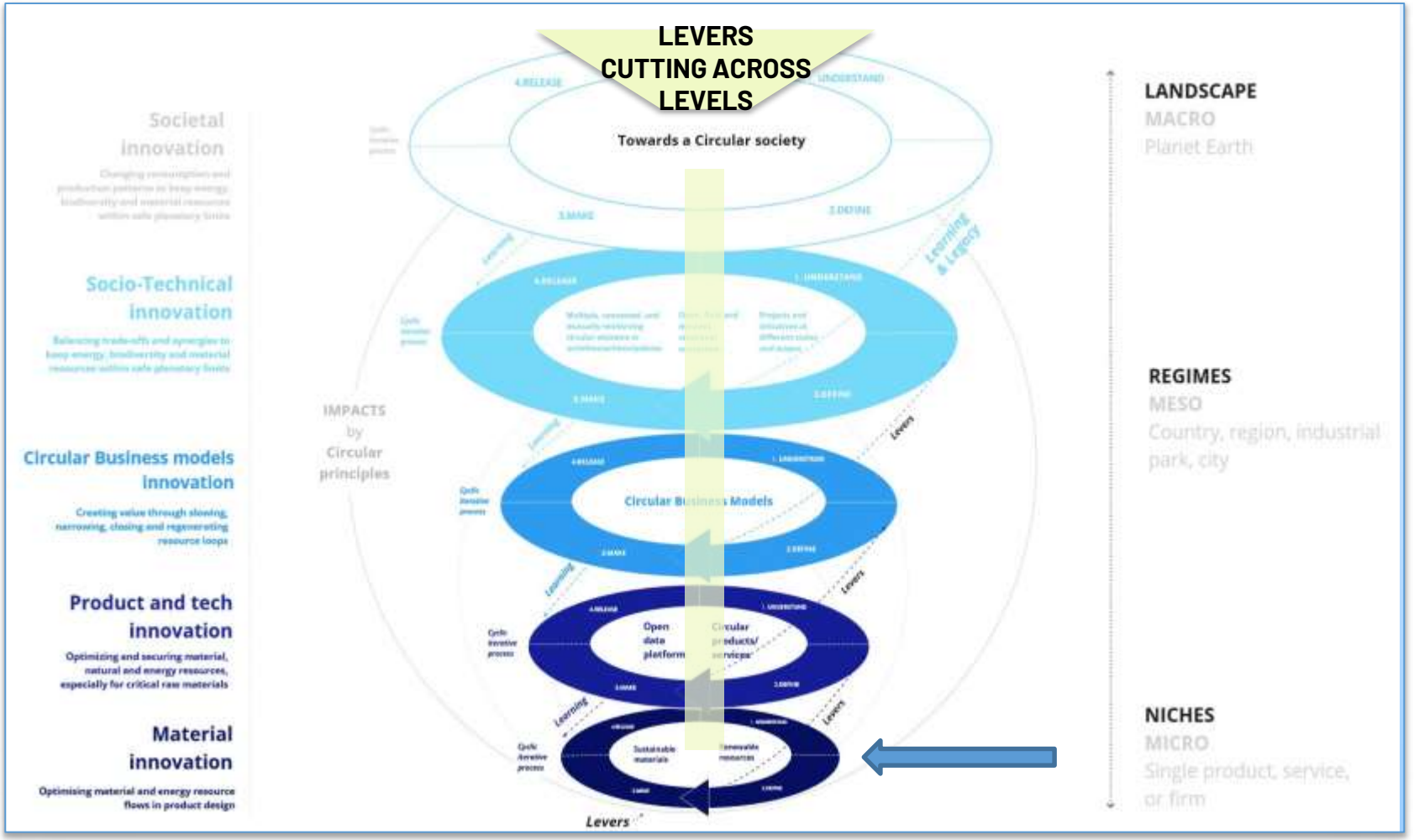
REFLOW RESOURCES

Resources are developed in line with the REFLOW Vision and throughout the REFLOW Process to support the pilots in their transition to become circular and regenerative cities.

Reflow

From the MDM to the REFLOW model





Multilevel Design Model (MDM). Adapted from Peter Joore and Han Brezet, (2015)

CBS COPENHAGEN BUSINESS SCHOOL
HANDELSHØJSKOLEN

THANK YOU!

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https://reflowproject.eu/

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Reflow

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THE CULTURAL CORRIDOR AND THE URBAN SEEDING

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Vision

Reconnecting the HUL through heritage led circular actions boosting micro entrepreneurship

Main general objectives

1. **Reusing the Rijecina**
2. **Revitalising and re-appropriating the water front for leisure and entertainment**
3. **Improve the preservation of the historic cultural heritage of the city**
4. **Improve the internal accessibility but reducing pollution**

Cleaning and reusing the Rijecina

- Restoring the river banks
- Making the river accessible and usable
- Guaranteeing the cleaning of the water
- Providing facilities along the river

Circular Economy?

- Using new materials from recycling?
- Producing green path and parks?
- Introducing phitodepuration solutions?
- Reusing existing buildings? Energana?

Solutions comes from actions and actions suggest solutions.
How many fields of research/employment could be opened?

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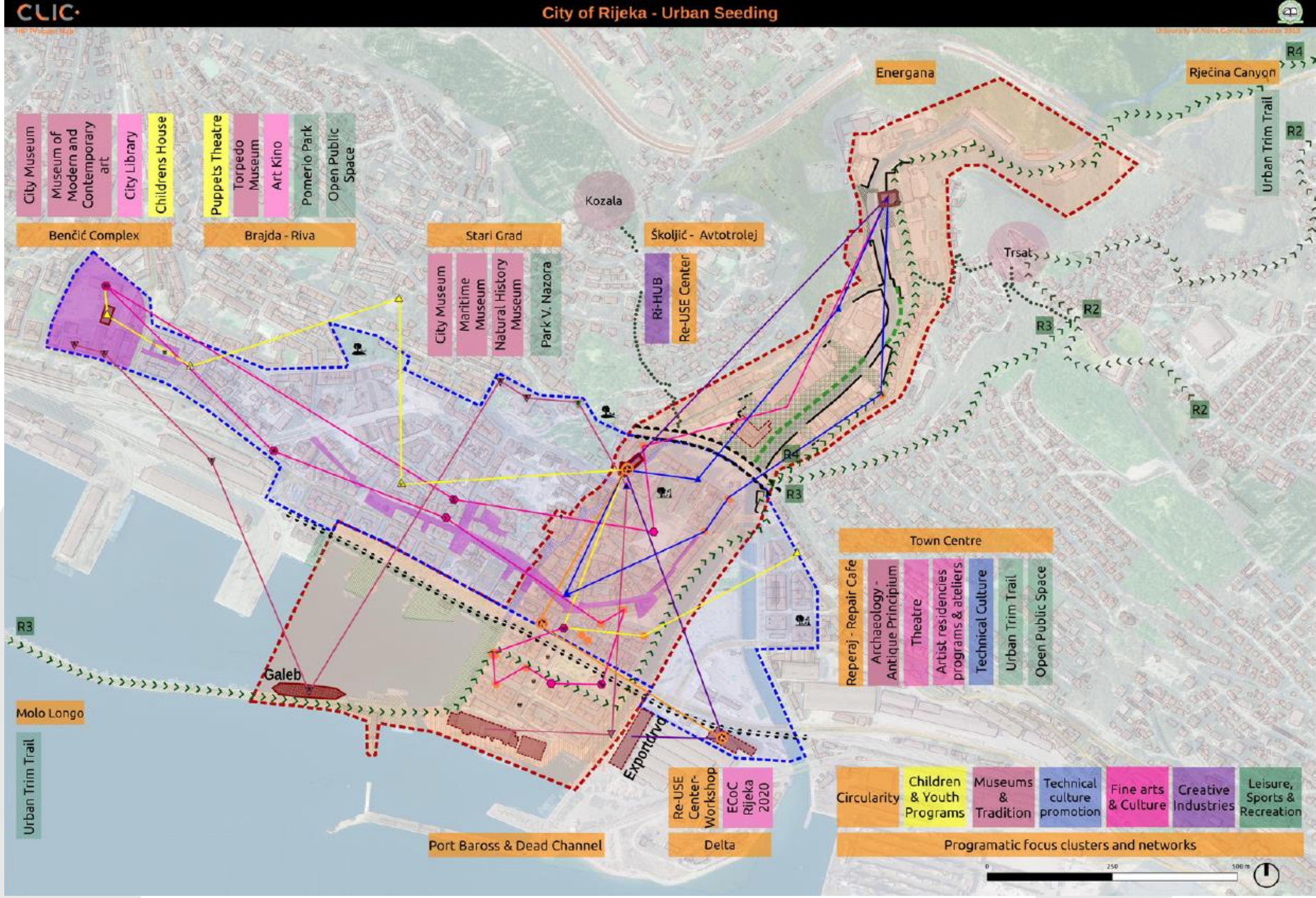
These 8 principles for managing the commons according to the Ostrom Theory are:

- Boundaries of users and resource are clear.
- Congruence between benefits and costs.
- Users had procedures for making own **rules**.
- Regular monitoring of users and resource conditions.
- Graduated sanctions.
- Conflict resolution mechanisms.
- Minimal recognition of rights by government.
- Nested enterprises.



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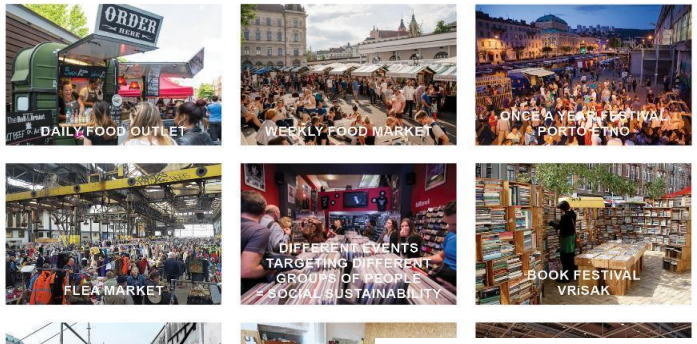
A POSSIBLE TOOL FO THE CC - URBAN SEEDING AND THE CATALOGUE

LOWER WATERFRONT

PROPOSALS



BUILDING & MATERIAL SCALE

		feasibility: ease of implementation	feasibility: cost of implementation	CLIC project relatedness: **circular economy**	CLIC project relatedness: **cultural heritage**	impact: visibilty & use	impact: ease of replication
1	QR codes + rijeka-heritage.org	5	5	3	4	4	5
2	light installation on the bridge	4	4	3	4	5	5
3	opening of the bridge	5	5	3	5	4	2
4	food outlet/street food market	3	3	5	5	5	5
5	urban furniture prototypes	4	3	5	4	5	4
6	(urban) furniture workshop Export	2	2	5	5	4	4
7	flea market Export	4	4	5	4	4	4
8	green facade Export	4	4	5	4	5	5
9	bike paths and Ricikleta station	2	2	4	3	4	3

5 4 3 2 1

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Annex 3 - Presentations CLIC Final Conference 23 September

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The circular BM for CH adaptive reuse
CLIC Final Conference, 23 September 2021

dr. Ruba Saleh, ICHEC Brussels Management School

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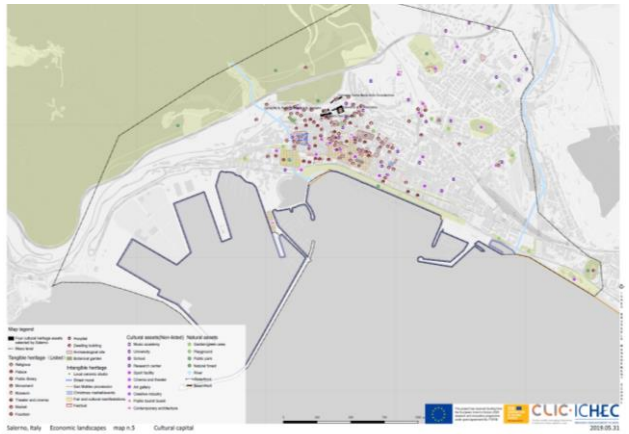
ICHEC BRUSSELS MANAGEMENT SCHOOL

The circular BM for CH adaptive reuse: an iterative process

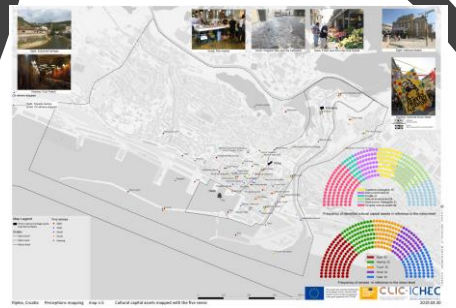
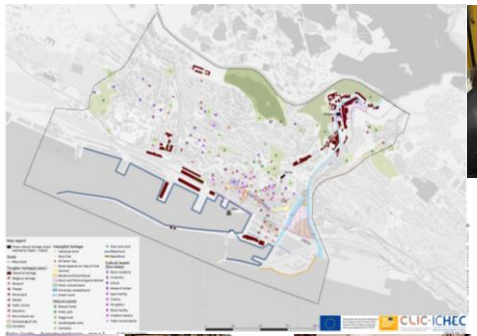
Salerno, Italy





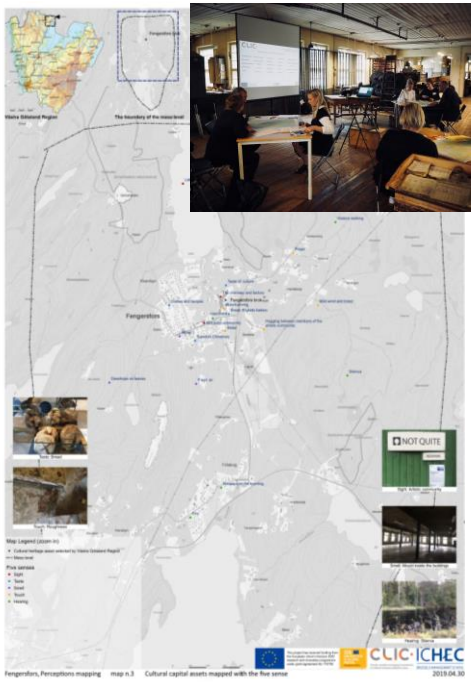


Rijeka Croatia

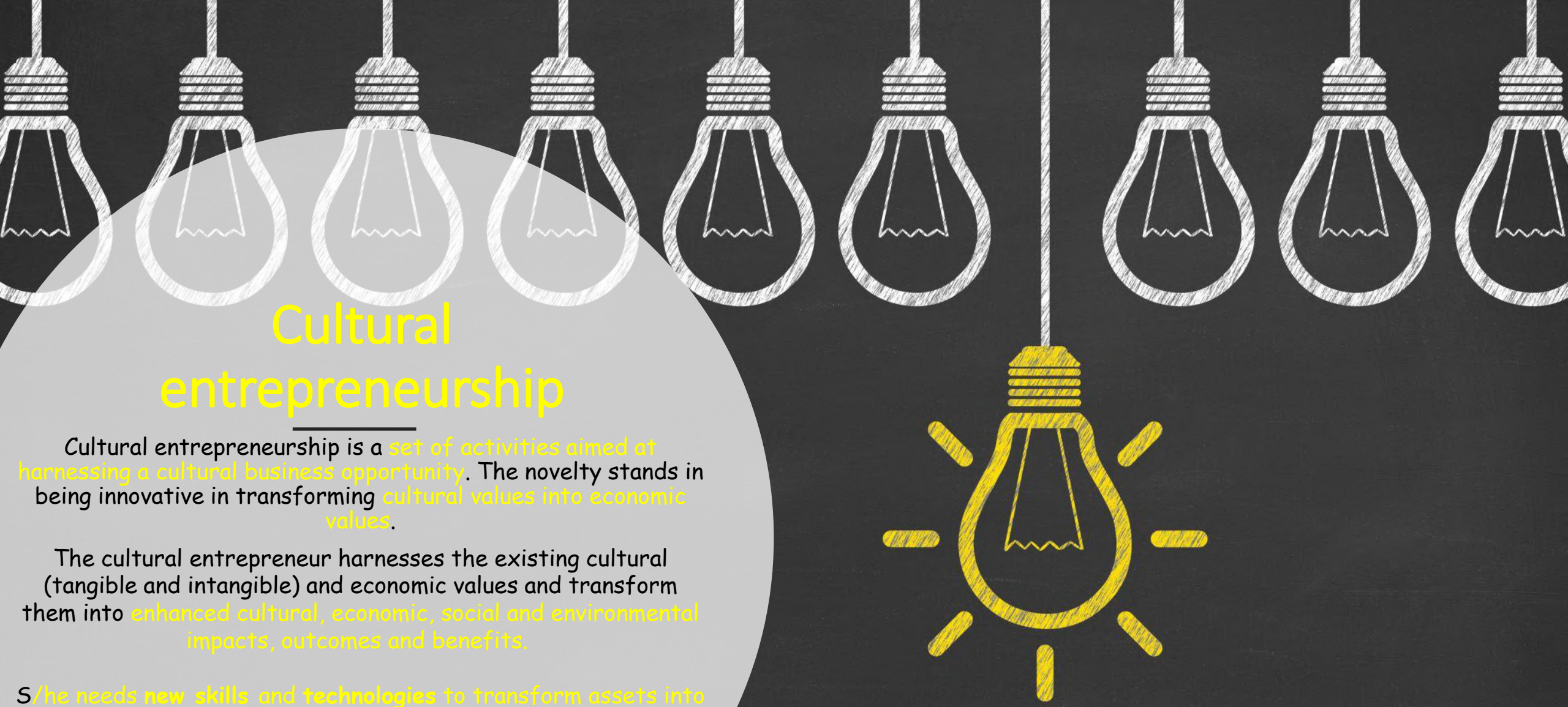



Pakhuis de Zwijger Amsterdam


Vastra Gotaland Region, Sweden



Perceptions mapping & Economic landscape mapping in CLIC pilots



Cultural entrepreneurship

Cultural entrepreneurship is a set of activities aimed at harnessing a cultural business opportunity. The novelty stands in being innovative in transforming cultural values into economic values.

The cultural entrepreneur harnesses the existing cultural (tangible and intangible) and economic values and transform them into enhanced cultural, economic, social and environmental impacts, outcomes and benefits.

S/he needs **new skills** and **technologies** to transform assets into **innovative cultural services, goods,uses and organizational forms** that generate financial revenues, positive societal impacts, and new creative and cultural markets.

Ost, C., Saleh, R. Cultural and creative sectors at a crossroad: from a mainstream process towards an active engagement. *Built Heritage* **5**, 14 (2021). https://doi.org/10.1186/s43238-021-00032-y

HUL

Human-centered approach

Ecological paradigm

What is a BM?

"(a) business models center on the logic of **how value is created for all stakeholders**, not just how it is captured by the focal firm;
(b) **activities performed** by the focal firm as well as by **partners, suppliers**, and even **customers** play an important role;
(c) business models emphasize a **system-level**, holistic approach toward explaining **how firms "do business"**; and
(d) the business model is emerging as a new level and unit of analysis" (Zott and Amit, 2013).

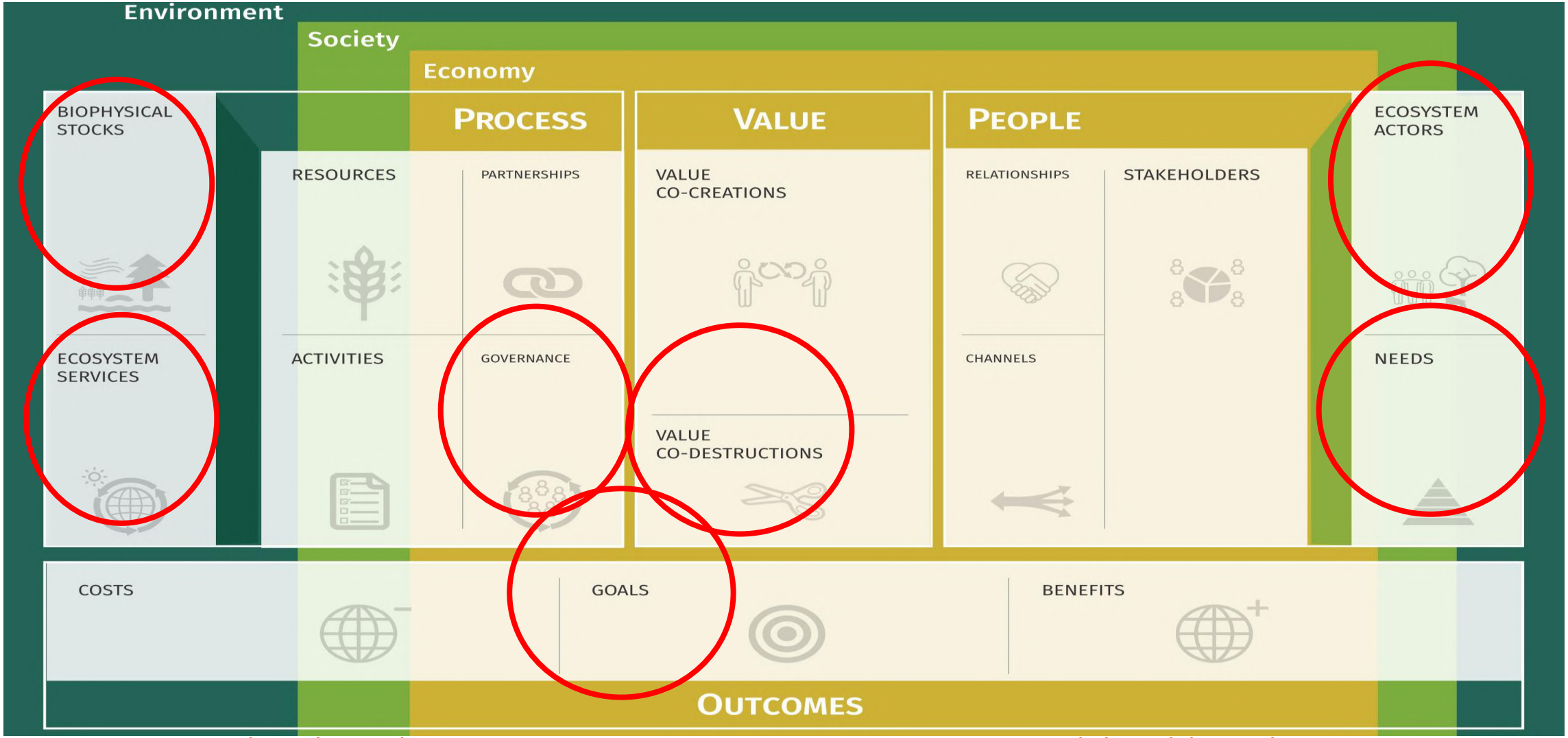
This BM Canvas generates value in monetary terms only with no consideration of other possible values

What about the Human-centered approach?
The European Green Deal slogan is: Leaving no one behind!

How can a society and its related organizations' attain the SDGs without addressing the cultural, social and environmental values in an integrated manner?

Business Model Canvas: 9 business model building blocks
Osterwalder, Pigneur et al. 2010

The Flourishing Business Model. A tri-profit metric
Environmental regeneration, social benefits & economic viability



The Flourishing Business Canvas SSBM: 16 business model building blocks

The circular business model for CH adaptive reuse

HOW

(PROCESS)

How to process? **How** can we co-accomplish what we want? Using which resources?

WHAT

(VALUE)

What are the values being co-created

What is the vision behind co-creation or co-destruction values?

FOR WHOM

(PEOPLE)

For whom building the model? Who are the customers and users? What are their needs? The community at large? What governance model?

WHY

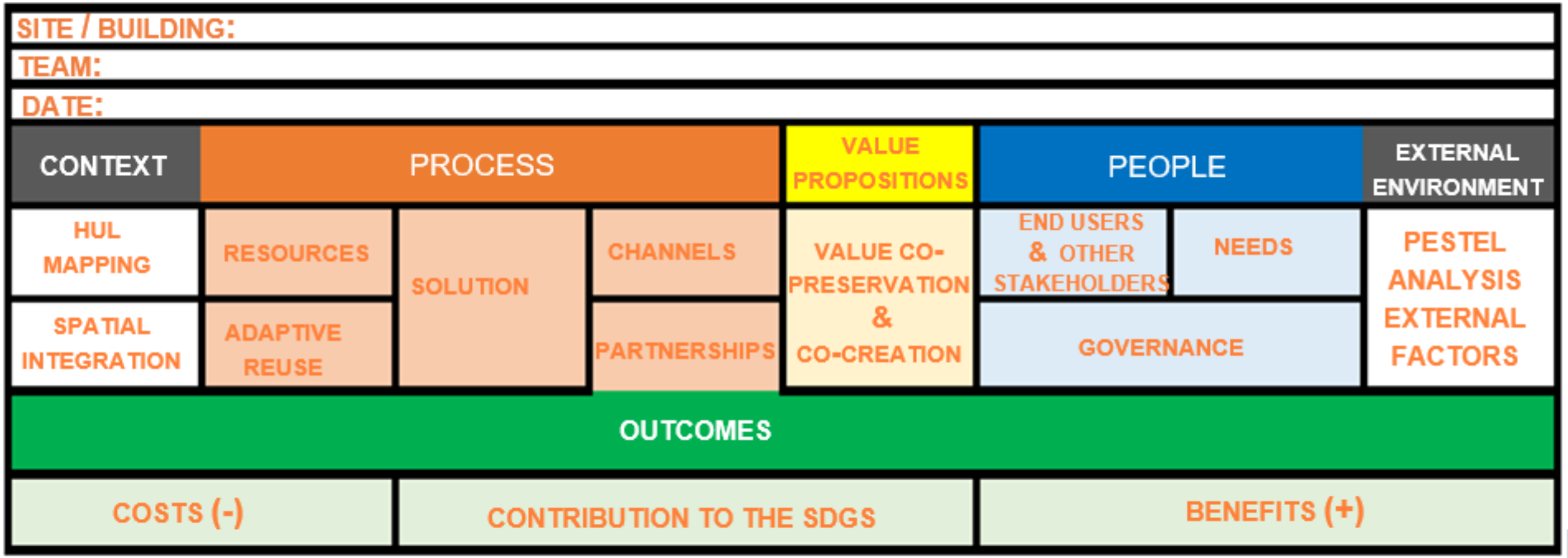
(GOALS)

Why are we building this model? To achieve which goals? With which means shall we evaluate how tri-impactful it is?

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 776758

Ost & Saleh 2019: 15 business model building blocks

The circular business model for CH adaptive reuse



Ost & Saleh 2019: 15 business model building blocks

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The circular business model for CH adaptive reuse

City/site/building:

Team:

Date:

<table>
<tr><th>Context</th><th colspan="3">Process</th><th>Value propositions</th><th colspan="2">People</th><th>External environment</th></tr>
<tr><td rowspan="2">HUL Mapping</td><td>Resources</td><td rowspan="2">Solution</td><td>Channels</td><td rowspan="2">Value co-preservation & co-creation</td><td>End users, customers & other stakeholders</td><td>Needs</td><td rowspan="2">External factors</td></tr>
<tr><td>Spatial integration</td><td>Adaptive reuse</td><td>Partnerships</td><td colspan="2">Governance</td></tr>
<tr><th colspan="8">Outcomes</th></tr>
<tr><td colspan="3">Costs (-)</td><td colspan="2">Contribution to the whole - Sustainable Development Goals</td><td colspan="3">Benefits (+)</td></tr>
</table>

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 776758

The circular BM for CH adaptive reuse- in a nutshell

The circular business model is a **co-design process** during which stakeholders propose **reuse ideas/solutions** in relation to their **territorial needs and available resources;** test their desirability; identify partnerships, users and beneficiaries and make sure that the social, environmental and economic impacts are sustainable.

Keywords:

Adaptive reuse

Circular business model

Inclusion and positive impacts

Desirability

Feasibility

Viability

Target groups and users: Public, private or third sector organisations aiming at reusing/investing in cultural heritage under the framework of the circular economy.

Asset: Pakhuis De Zwijger Owner of the asset: Stadsherstel Challenge: How to make Pakhuis de Zwijger more resilient to shocks? i.e. COVI19	Asset: Beniçiç building Owner of the asset: Municipality of Rijeka Challenge: How to make the management of the children's house sustainable from an economic viewpoint? What type of circular child-friendly and child-oriented activities should take place?	Asset: The complex of Edifici Mondo Owner of the assets: Municipality of Salerno Challenge: How to combine and increase the strength and robustness of the selected proposals from the open call.	Asset: Fengersfors paper mill Owner of the asset: Private owner Challenge: What solutions could be co-designed in order to make the business model of the new paper mill town ecologically and socially sound and financially sustainable?

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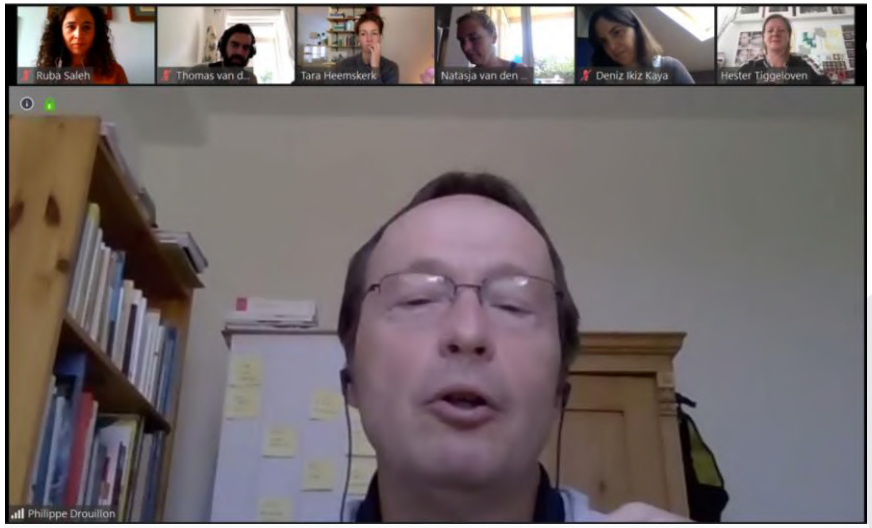


Partner: Pakhuis De Zwijger

Asset: Pakhuis De Zwijger building (industrial heritage)

Owner of the asset: Stadsherstel

Challenge: How to make Pakhuis de Zwijger more resilient to shocks? i.e. COVI19

Workshop participants: 5 from Pakhuis De Zwijger + 1 from TU/e, Eindhoven University of Technology + 2 ICHEC team

Workshop format: Virtual workshop (one session)

Workshop tools

ICHEC's team provided: Zoom plenary and break-out rooms & pre-set Mural walls

Topics addressed during the workshop:

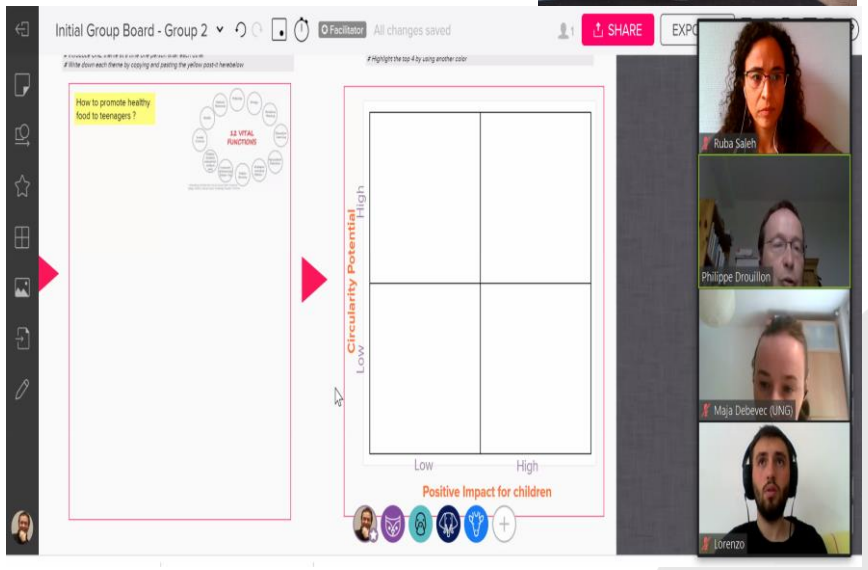
The process, value proposition, people and the outcome; the circular business model for cultural heritage adaptive reuse; Revenue streams cards; Business model cards (circular, inclusive and local collaboration); the 9Rs strategies, and the twelve vital functions.

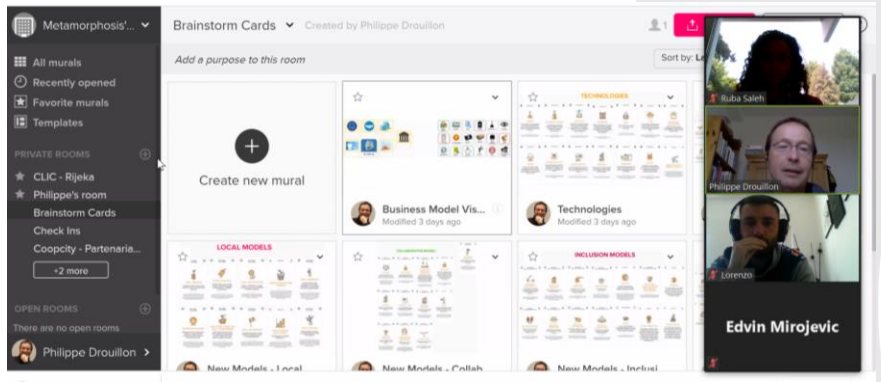
Results:

General framework of the current business model.

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 776758

CLIC





Partner: Municipality of Rijeka

Asset: The Brick Building within the former Rikard Benčić industrial complex

Owner of the asset: Municipality of Rijeka, Croatia

Challenge: How to make the management of the children's house sustainable from an economic viewpoint? What type of circular child-friendly and child-oriented activities should take place?

Workshop participants: 6 stakeholders+2 Rijeka municipality+ 2 University of Nova Gorica + 2 ICHEC team

Workshop format: Virtual workshop (7 remote sessions)

Workshop tools: Zoom plenary and break-out rooms; Pre-set Mural walls

Topics addressed during the workshop:
Context, objectives and broader landscape of related topics; the process, value proposition, people and the outcome; the 9Rs strategies, the twelve vital functions, value proposition definition and example; Test action plan interview guide and questions; the circular BM for cultural heritage adaptive reuse; Steps for defining RAT; MVS; VP, prototyping and MVS and VP updates; Revenue streams cards; Business model cards (circular, inclusive and local collaboration); Grids for quantifying revenue streams and costs; Sustainable Development Goals; Methodology for defining desirability, feasibility, viability
and impacts; Reasons behind start-up failure; and pulse surveys.

Results: A business model encompassing three revenue streams:
Health and food Hub
Creativity Hub
STEM Hub

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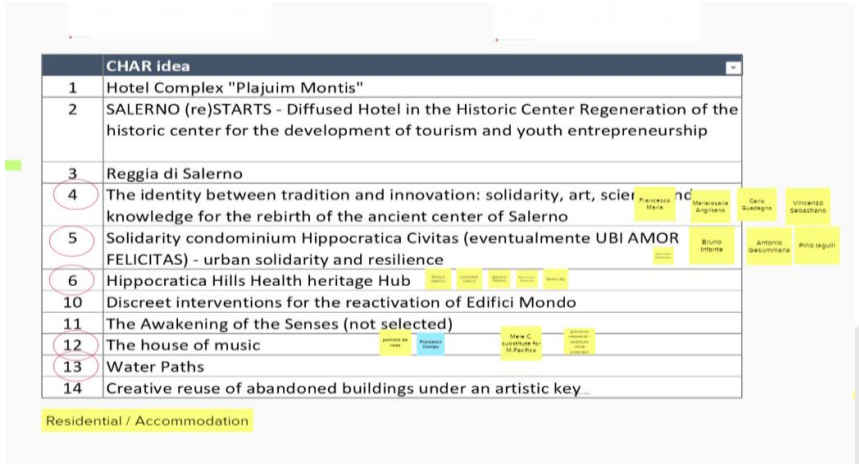
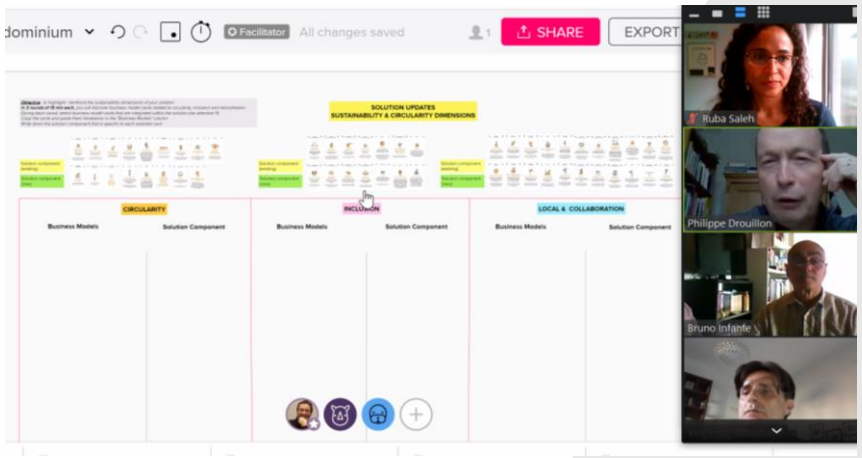
ICHEC BRUSSELS MANAGEMENT SCHOOL





Partner: **Municipality of Salerno**

Asset: **The complex of Edifici Mondo** (convents of San Francesco and San Giacomo and San Pietro a Maiella and Palazzo San Massimo).

Owner of the asset: Municipality of Salerno, Italy

Challenge: How to combine and increase the strength and robustness of the selected proposals from the open call.

Workshop participants: 31 stakeholders +2 Municipality of Salerno+ 7 IRISS-CNR + 2 ICHEC team + 1 ICHEC expert

Workshop format: Virtual workshop (6 remote sessions

Workshop tools: Zoom plenary and break-out rooms; Pre-set Mural walls

Topics addressed during the workshop:
Context, objectives and broader landscape of related topics; the process, value proposition, people and the outcome; the 9Rs strategies, the twelve vital functions, value proposition definition and example; Test action plan interview guide and questions; the circular BM for cultural heritage adaptive reuse; Steps for defining RAT; MVS; VP, prototyping and MVS and VP updates; Revenue streams cards; Business model cards (circular, inclusive and local collaboration); Grids for quantifying revenue streams and costs; Sustainable Development Goals; Methodology for defining desirability, feasibility, viability and impacts; Reasons behind start-up failure; the governance circles model; and Pulse surveys.

Results: Four business models embracing a cultural ecosystem for the city of Salerno as follow:
Hippocratica Hills Health Heritage Hub & water paths BM
House of music BM
The identity between tradition and innovation BM
Solidarity condominium BM

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 776758

Partner: Vastra Gotaland Region

Asset: Fengersfors paper mill

Owner of the asset: Private owner

Beneficiaries: The **Not Quite collective**

Challenge: What solutions could be co-designed in order to make the business model of the new paper mill town ecologically and socially sound and financially sustainable?

Workshop participants: 39 Stakeholders +Vastra Gotaland Region +2 Uppsala University+ 2 ICHEC team

Workshop format: Face to face workshop (3 days of co-design).

Workshop tools

The Not Quite collective provided the following:
A workshop room, the vision of the New Mill project, workshop materials (flipchart, pens, colors, post-it, and DIY material for mock-ups), & food and beverage.
ICHEC's team provided:
The circular BM for cultural heritage adaptive reuse in A1 format; the economic landscape maps of Fengersfors, revenue streams cards, BM cards (circular, inclusive and local collaboration), presentations including definitions (circularity, RAT; MVS; VP, etc…); process; methodology relevant examples and the way forward

Results: A business model encompassing five revenue streams:
Accommodation, retreats, events; Rural innovations Center; Phytoremediation services; Creative industries hub; Ecosystem of sustainable businesses (food, arts, agriculture, construction, education & training).
&
A group of **four committed persons** pursue a roadmap for the **next three years**.

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 776758

ICHEC BRUSSELS MANAGEMENT SCHOOL

International Year of Creative Economy for Sustainable Developement 2021

Developing a just, sustainable and profitable global creative economy through impact investment

MARKET ANALYSIS OF THE CULTURAL AND CREATIVE SECTORS IN EUROPE

A SECTOR TO INVEST IN

"Creativity is the answer we've been looking for– now is the time to embrace and invest in it"

Marisa Henderson, Chief of Creative Economy, UNCTAD
(United Nations Conference on Trade and Development)

Source: Creativity, Culture and Capital: Impact investing in the global creative economy

Website: https://www.creativityculturecapital.org/?

CIRCULAR MODELS LEVERAGING INVESTMENTS IN CULTURAL HERITAGE ADAPTIVE REUSE

THANKS FOR YOUR ATTENTION!!!

dr. Ruba Saleh
ICHEC Brussels Management School
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This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 776758

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ICHEC BRUSSELS MANAGEMENT SCHOOL

CLIC

Circular models Leveraging Investments in Cultural heritage adaptive reuse

CLIC approach to social impacts assessment

Intrinsic value, essentialism & grassroots circularity

dr Anna Domaradzka, Institute for Social Studies, University of Warsaw

CLIC Final conference

September 23rd, 2021

Untangling the intrinsic value concept

- describes the **relation** between people and places → **place attachment**

  … but also the **spirit of the place** → **the essence**

- attachment on **individual level**

  … but also **community attachment**

- aligned with **values** of people and communities
- historical “weight” of embodied **memory**
- intangible qualities going **beyond aesthetics**
- **how to measure it ???**

the measurement of intrinsic value is very much needed to inform the planning processes regarding adaptive reuse

intrinsic value reflects the importance of a place to a local community and establishes a frame for human-centered transformation

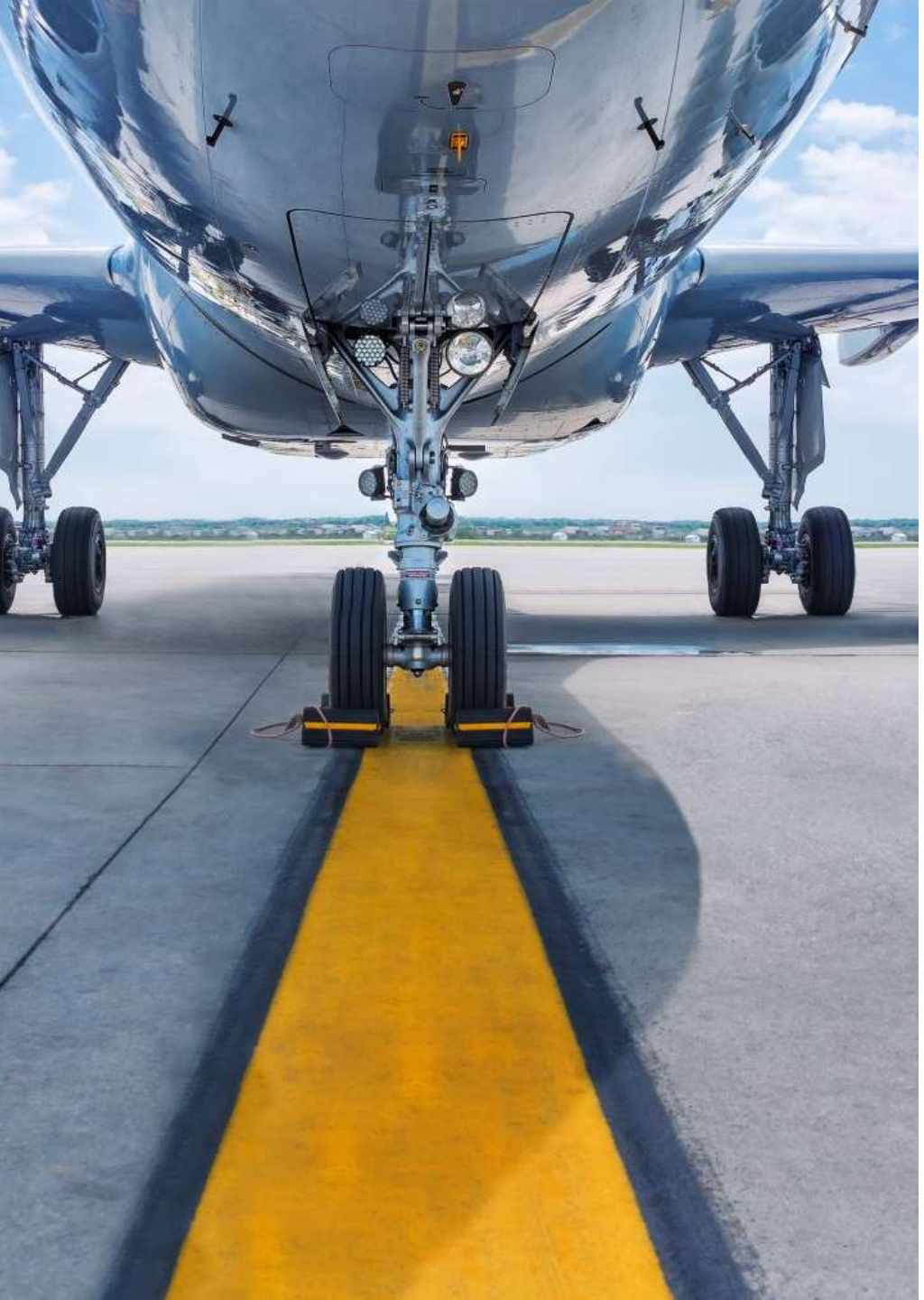
it facilitates common meaning-making within the community

it reflects the specific identity of places

… and generates a complex system of **economic, social, environmental and cultural values**

Better planning of cultural heritage interventions

- The social perception of planned interventions in cultural heritage sites depends on:
  - the **qualities of places**
  - communities' and individuals' **preferences**
  - expected effect on the local **wellbeing**
- Some changes boost the livability and happiness of communities in a balanced manner, while others influence one aspect at the cost of another
- Change often requires **compromise** – a trade-off between adding an attractive function and changing the 'spirit of the place'
- Measuring different aspects of intrinsic value and essence of the place help to design **change in a human-centered and strategic way**



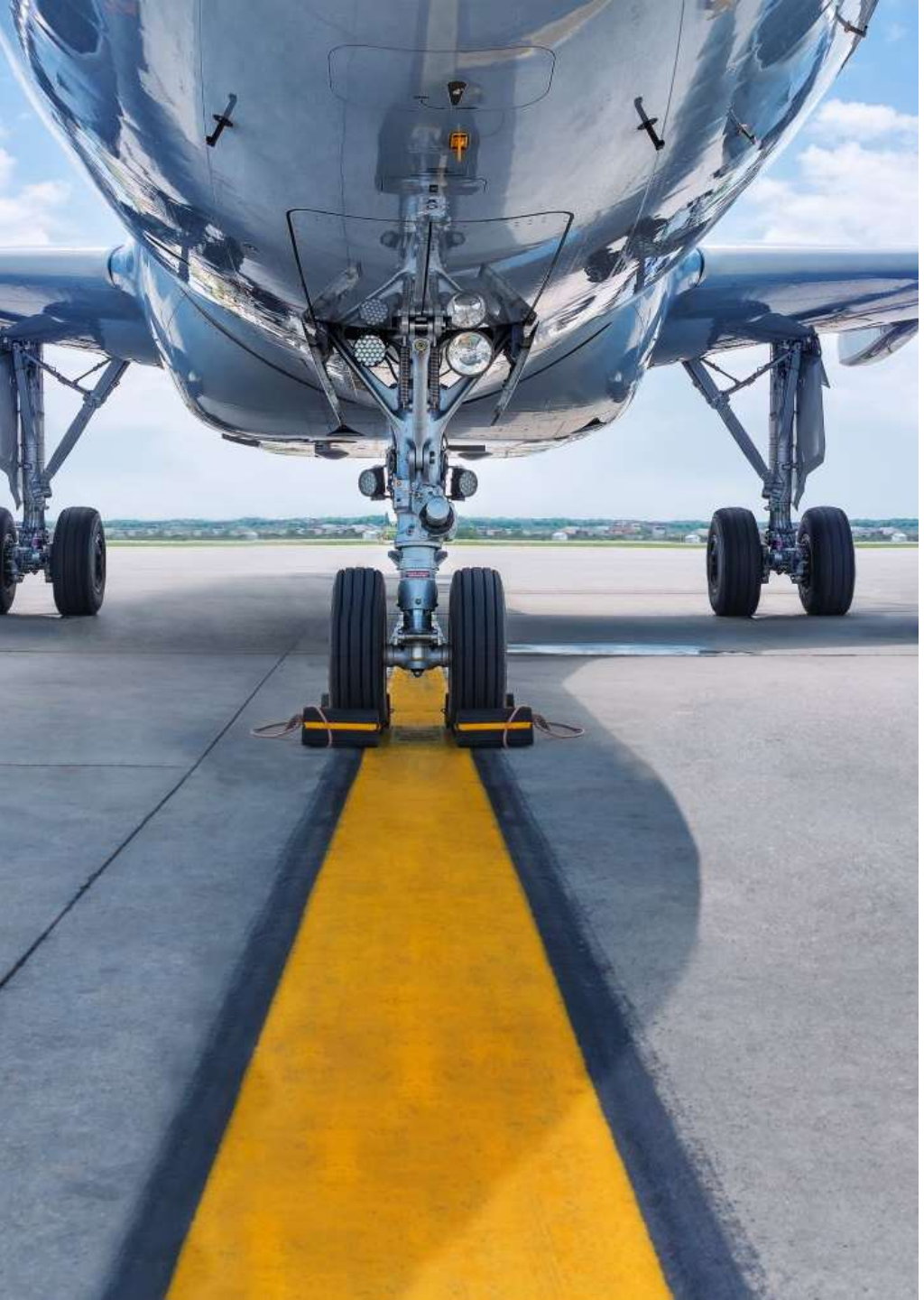
Pilot studies

(1) What kind of changes are acceptable for a local community in the context of historical green spaces?

(2) What factors and qualities of location influence the level of social acceptance for such changes?

(3) What measures of social sustainability are related with acceptance of changes and which?

- We designed and piloted questionnaires measuring the importance of place for community
  - **Collectively sustained sentiments** attached to and created around it
  - **Emotions that the place evokes** in users and passers-by
- Tapping into them is a key element of achieving **social sustainability** of any renovation or re-adaptation plan.



sustainability

MDPI

Article

Intrinsic Value and Perceived Essentialism of Culture Heritage Sites as Tools for Planning Interventions

Magdalena Roszczynska-Kurasinska [1,*], Anna Domaradzka [1], Anna Wnuk [1] and Tomasz Oleksy [2]

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Abstract: In order to remain alive and relevant, cultural heritage sites have to react and adapt to changing context in a coherent manner, i.e., in a way that is in line with the memory and identity of the place. The incoherent changes, i.e., the transformations that according to the local community do not agree with a character of a place, can be destructive for the long-term vitality of urban cultural heritage. In this study, we test which factors influence social acceptance of different alternations within the context of urban historical gardens that might, in turn, ensure the resilience of the place. Our study focuses on the intangible qualities of the place measured by intrinsic value, perceived essentialism and anti-essentialism as important predictors shaping the response to change. The correlational study was conducted using an online questionnaire designed to empirically grasp intangible qualities of cultural heritage sites. Five hundred twenty-nine responses were included in the analysis. The study shows that perceived historic value, inherent value (uniqueness and importance of the place) and (anti-)essentialist character of a place capture the differences between parks well and enables the finding of interventions that are coherent with a site's genius loci. Measuring intangible qualities of urban gardens can help to design changes that find higher approval among local community members and users of the site. We discuss how the analysis of an intrinsic value and essentialism allows for planning better spatial interventions that align with the human-centered approach to urban development.

Keywords: cultural heritage; intrinsic value; essentialism; essentialist and anti-essentialist place; intervention in park; urban garden

Citation: Roszczynska-Kurasinska, M.; Domaradzka, A.; Wnuk, A.; Oleksy, T. Intrinsic Value and Perceived Essentialism of Culture Heritage Sites as Tools for Planning Interventions. *Sustainability* **2021**, *13*, 5078. https://doi.org/10.3390/su13095078

Academic Editors: Luigi Fusco Girard

Our approach

CIRCULAR MODEL + GRASSROOTS ENERGY = GRASSROOTS CIRCULARITY

CIRCULAR ECONOMY MODEL SHOULD INCLUDE THE BOTTOM-UP POTENTIAL OF GRASSROOTS MOBILIZATION

GRASSROOTS CIRCULARITY DEFINES FACTORS ENABLING CHANGE AND SUSTAINABILITY

BASED ON A SOCIAL SUSTAINABILITY FRAMEWORK ADAPTED TO CIRCULAR REUSE PROJECTS

GRASSROOTS CIRCULARITY CAN BE DIAGNOSED, UNDERSTOOD AND DEVELOPED

See also: Roszczynska-Kurasinska, M, Domaradzka, A., Ślosarski, B, Żbikowska, A. (2019). **Embracing circularity in adaptive reuse – grassroots perspective**

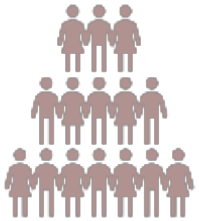
The founding factors of grassroots circularity

diversity of skills and actors involved

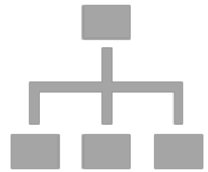
openness to experience and cooperation among stakeholders

capacity for **learning** and adapting to change

common meaning and compatibility with circularity values



in-group and out-group **trust**



capacity for **self-organization**

Way forward

- to perfect the tools allowing to **measure the intrinsic value** of the place as well as **community readiness for change**
- to offer those **tools to local leaders**, groups and institutions responsible for adaptive reuse projects
- to strengthen **human-centered planning practices**
- **to empower residents and communities** as active actors, not only consumers of adaptive reuse interventions

CLIC

Circular models Leveraging Investments in Cultural heritage adaptive reuse

ISS

Thank you!

civilcitylab@gmail.com
https://www.facebook.com/civilcitylab/

CENTRINNO New CENTRalities in INdustrial areas as engines for inNOvation and urban transformation

https://centrinno.eu/

CIRCULAR MODELS LEVERAGING INVESTMENTS IN CULTURAL HERITAGE ADAPTIVE REUSE

CLIC Final Conference | 22 - 23 September 2021

Online event

CLIC evaluation framework for circular cultural heritage adaptive reuse: from best practices to better projects

Antonia Gravagnuolo, CNR IRISS, CLIC Co-coordinator

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 776758

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Italian National Research Council | IRISS Institute for Research on Innovation and Services for Development

What is the **CLIC evaluation framework**

The **CLIC Evaluation Framework** is:

- **a conceptual framework** defining the objectives of a *circular* «human-centred» adaptive reuse of cultural heritage, according to the multidimensional *notion of value* introduced, in the perspective of the circular economy

- **a set of evaluation tools to assess the circularity and impacts** of cultural heritage adaptive reuse projects: evaluation methods, criteria, indicators

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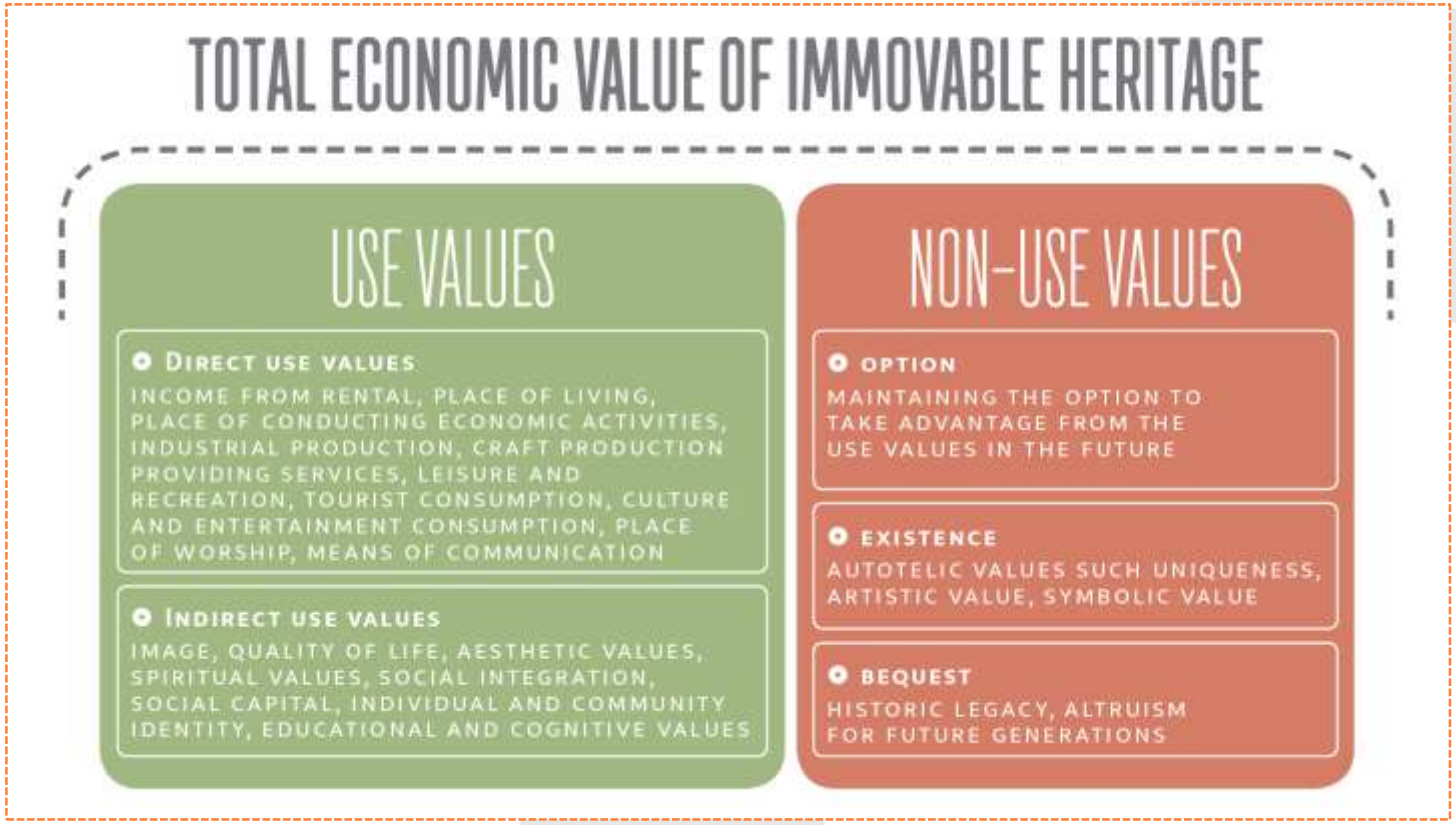
The **Complex Social Value** of cultural heritage: instrumental and non-instrumental values

Instrumental values



Source: Cultural heritage counts for Europe, 2015

Non-instrumental value

«INTRINSIC VALUE»

Intrinsic anthropogenic and non-anthropogenic values

Source: Luigi Fusco Girard, 1987, 1997, 2019, 2020, 2021

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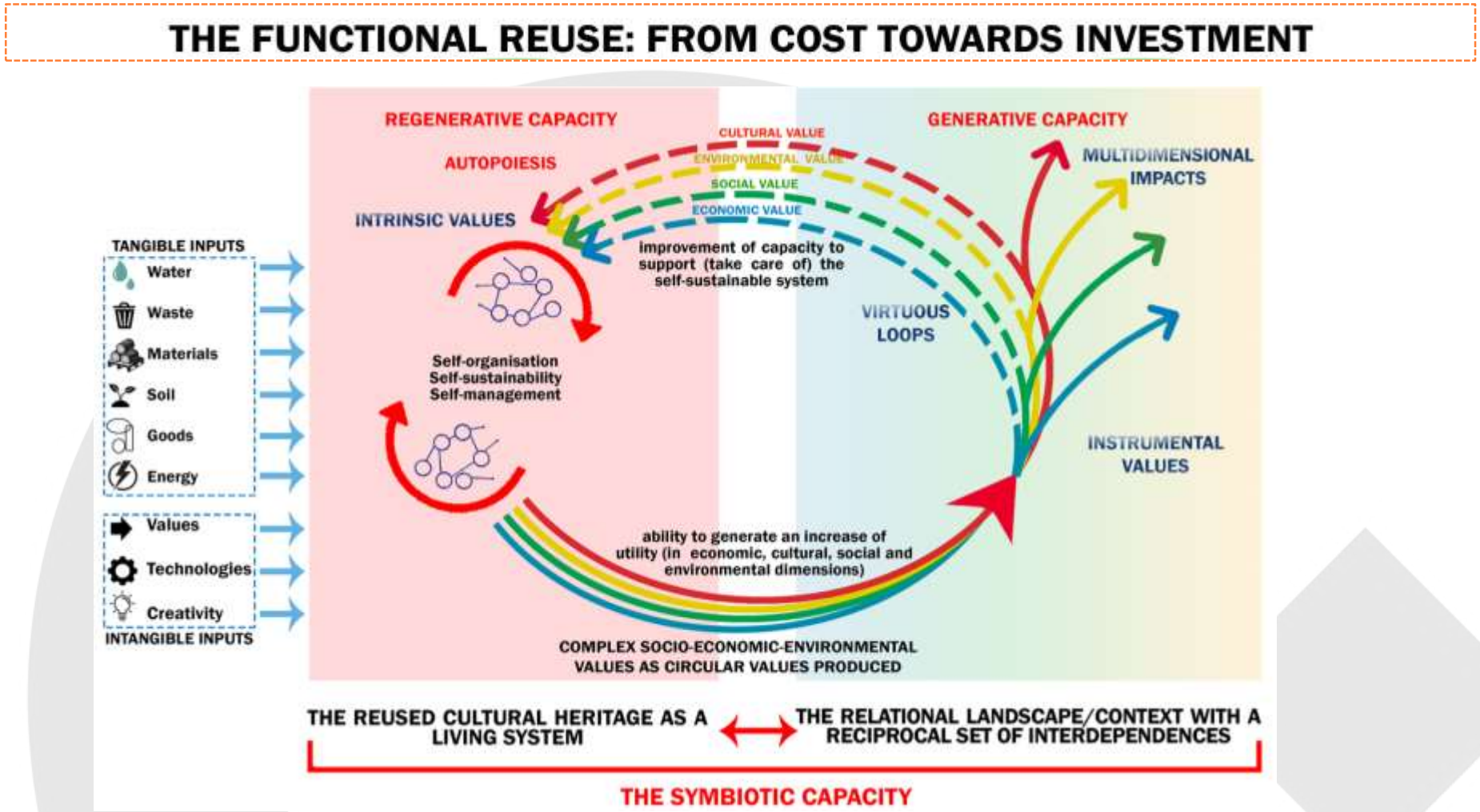
The conceptual framework of **Circular «human-centred» adaptive reuse of cultural heritage**



Source: Luigi Fusco Girard, CLIC framework

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From theoretical framework to criteria and indicators

Circular «human-centred» adaptive reuse of cultural heritage

Self sustainability and self-regeneration of resources (auto-poietic capacity)

- **Cultural resources**: Conservation of heritage authenticity and integrity, Intangible values, Historic Urban Landscape quality, Accessibility of cultural heritage site
- **Economic resources**: Financial self-sustainability as capacity of not being sustained by external public and self-generating knowledge and financial resources, private or social actors, Reinvestment of profits to generate new activities
- **Environmental resources**: Energy; Water; Soil; Raw materials extraction; Green surfaces; Local and healthy materials; Remediation; Carbon emissions; Use of regional resources
- **Social resources**: Heritage community, Local community, Entrepreneurial involvement of people, Skills enhancement, Education & Training

Symbioses and synergies (circular «human-centred» economy enablers)

- **Cultural factors**: Trust, Traditional skills and capacities
- **Environmental factors**: Reuse of Construction & Demolition Wastes, Materials extraction, Recovery/regeneration of public space, Pedestrian mobility, Sustainable mobility, Accessibility enhancemen
- **Economic factors**: Complementarity between functions and contribution to Smart Specialization Strategies, Businesses collaboration and symbioses
- **Social factors**: Social Sustainability (synergies and cooperation networks in the ecosystem), Cultural vibrancy, Participation in decision-making

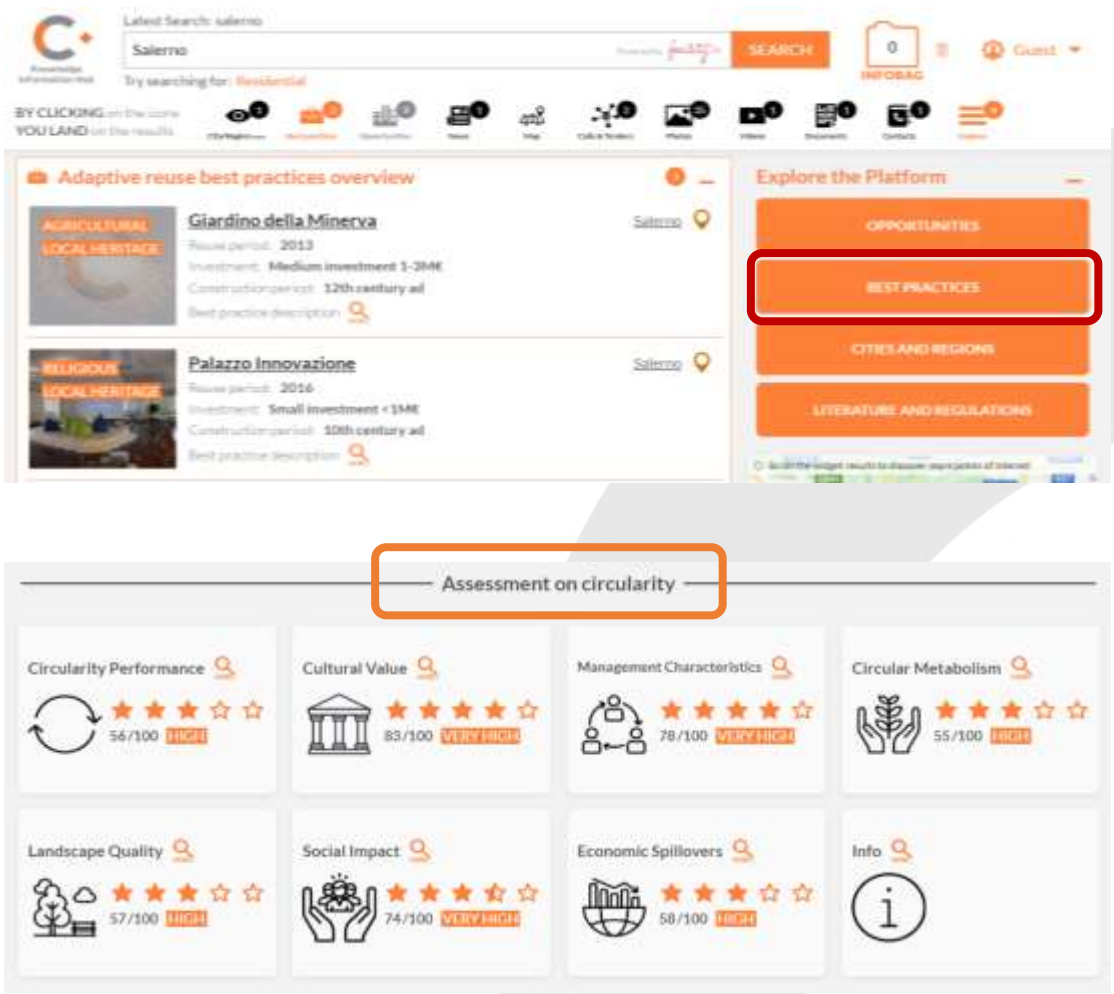
Generative capacity (impacts generated in the territory)

- **Cultural generative capacity**: Participation in culture, Cultural visitors, Arts, craft, making and repairing activities, Creative and innovative spaces
- **Economic generative capacity**: Jobs creation, Indirect and induced economic impacts, Financial returns for the public sector, Localization of new businesses, Localization of enterprises and entrepreneurs in the reused cultural heritage site, Proximity activities
- **Environmental generative capacity**: CO2 sequestration, GHG emissions, Air quality, Water quality, Biodiversity, Soil pollution
- **Social generative capacity**: Place attractiveness, Landscape quality, Cleanliness of public spaces, Safety of public spaces, Wellbeing and Health, Quality of life for residents, Public space for socialization

RESOURCES → **ENABLERS** → **OUTCOMES**

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 776758

From Best Practices to better projects



Opportunities for cultural heritage adaptive reuse: towards the definition of "satisfying project"

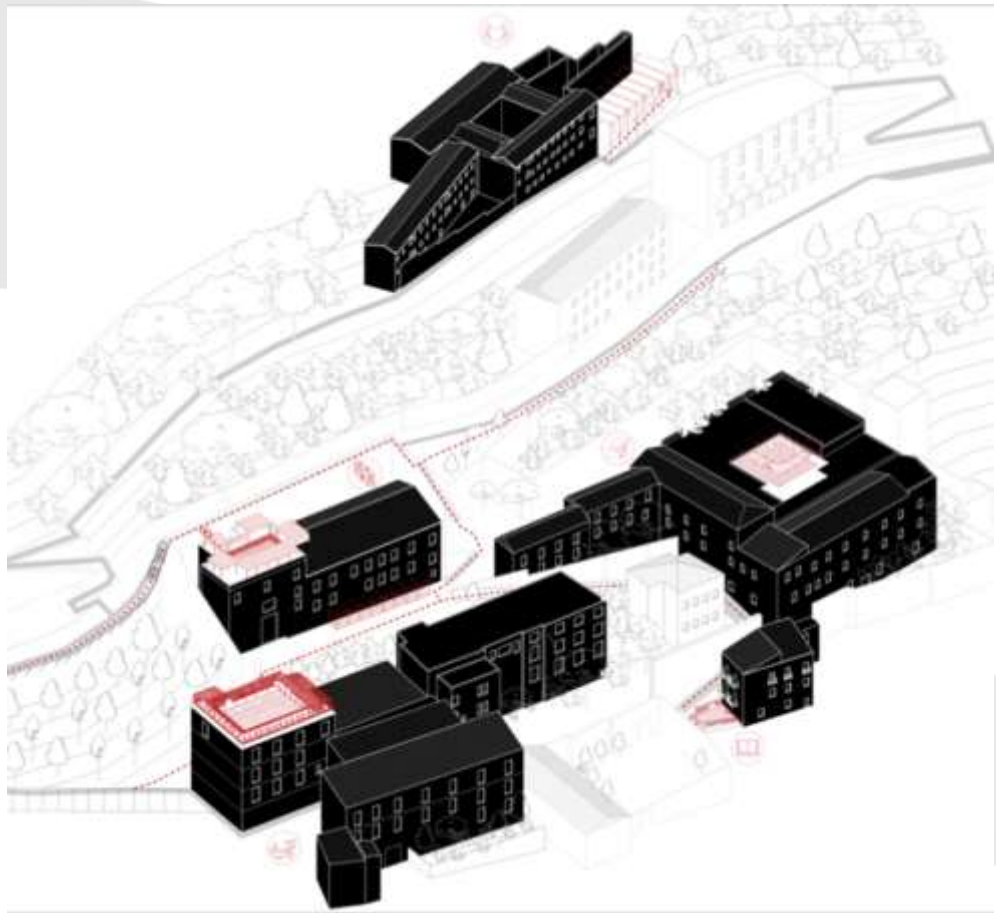


Figure Credits: @Irene Antonelli and @Giovanni Mazzanti, Salerno Edifici Mondo public consultation

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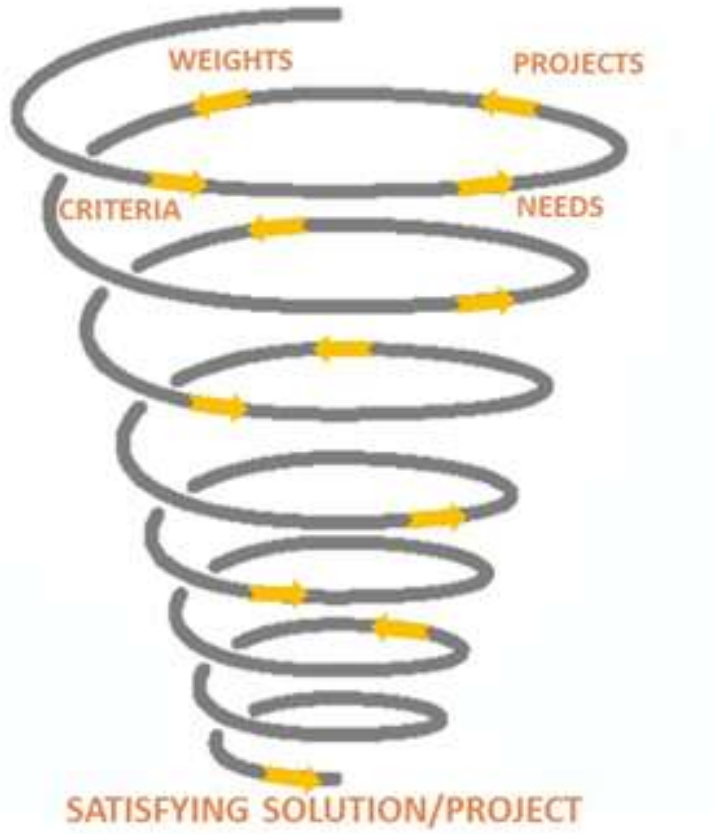
The dynamic co-evaluation approach



Source: Luigi Fusco Girard, CLIC framework

The **adaptive reuse of cultural heritage** should follow a coherent evaluation approach.

This dynamic approach in turn leads to a **dynamic co-evaluation approach**, that is, an approach in which criteria, weights and alternatives change over time in an evolutionary perspective.

Experimentation in **Salerno – Edifici Mondo** adaptive reuse solutions

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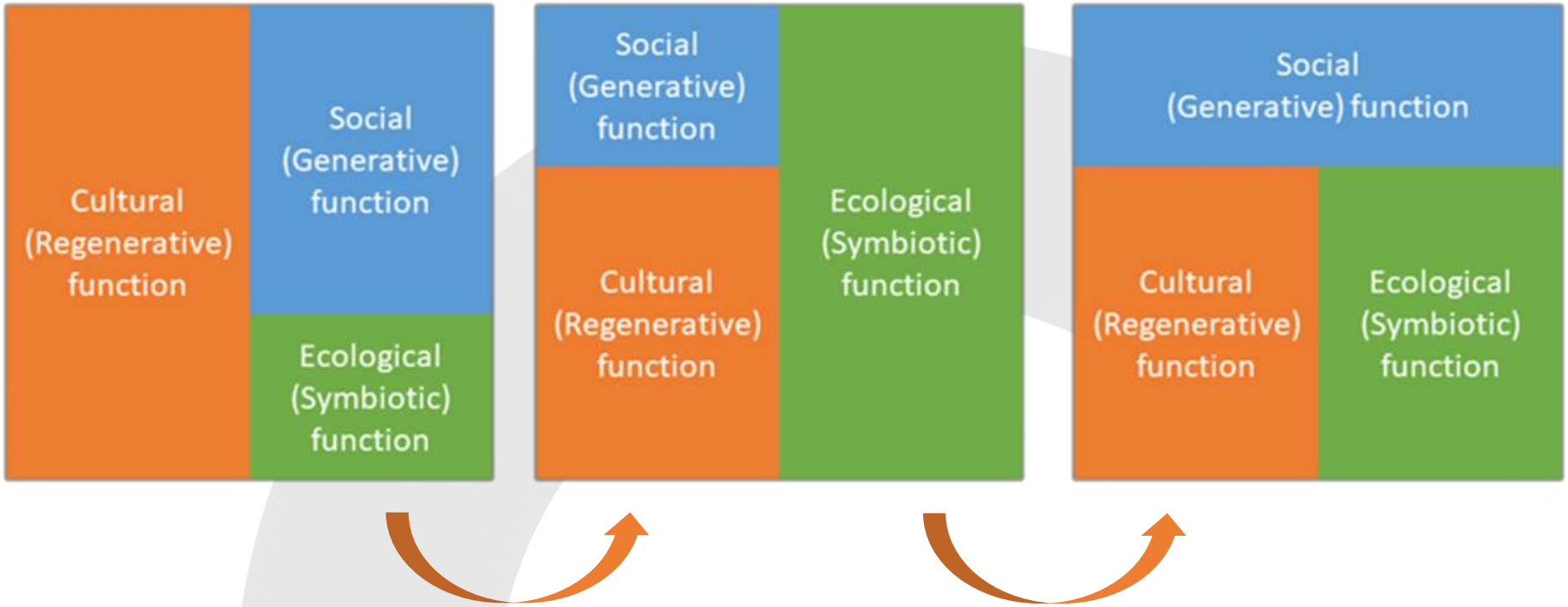
The dynamic co-evaluation approach



Feedback process / co-evaluation

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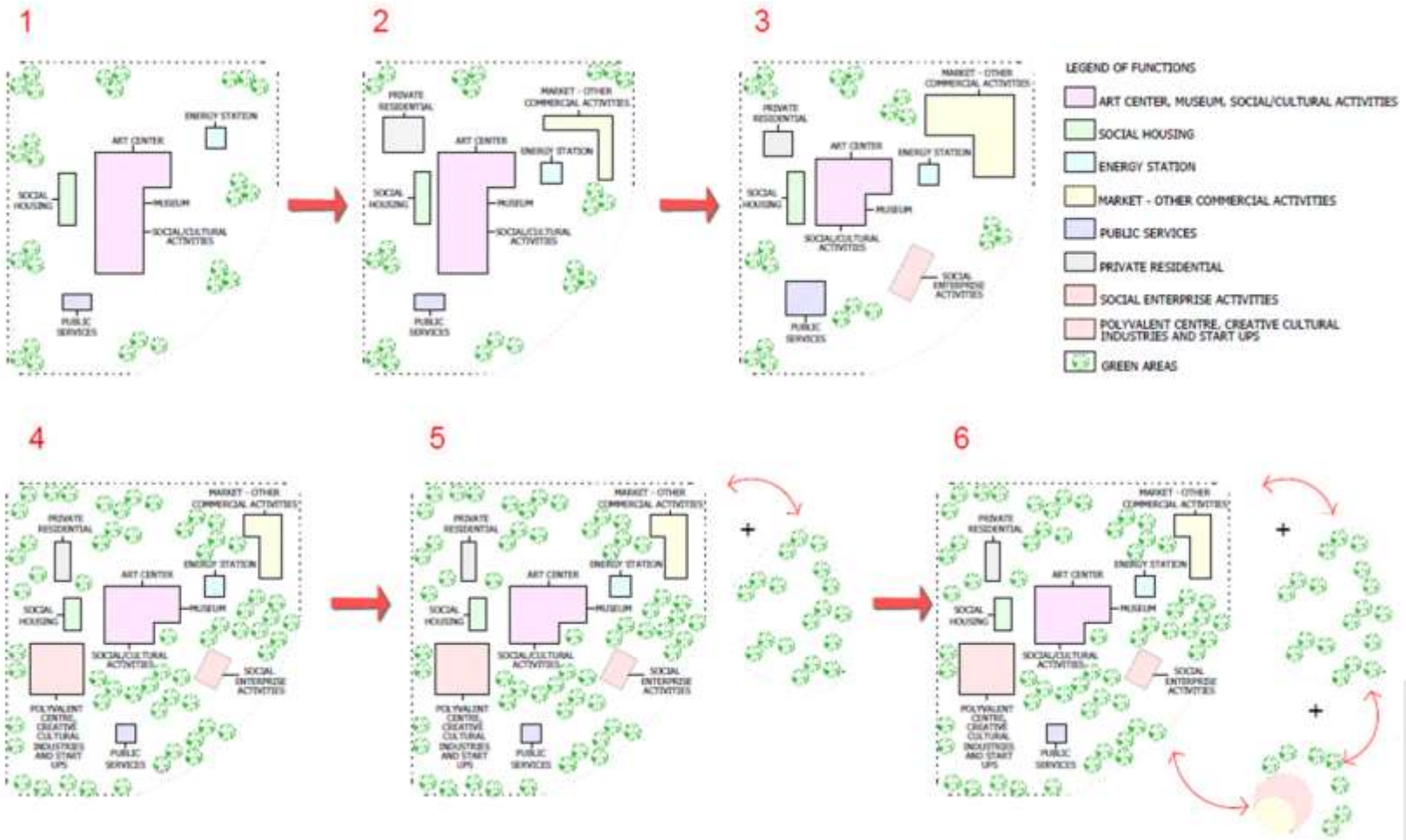
The evolutionary co-evaluation process toward a satisfying design solutions

Integration between **circular business model** and **design solutions**



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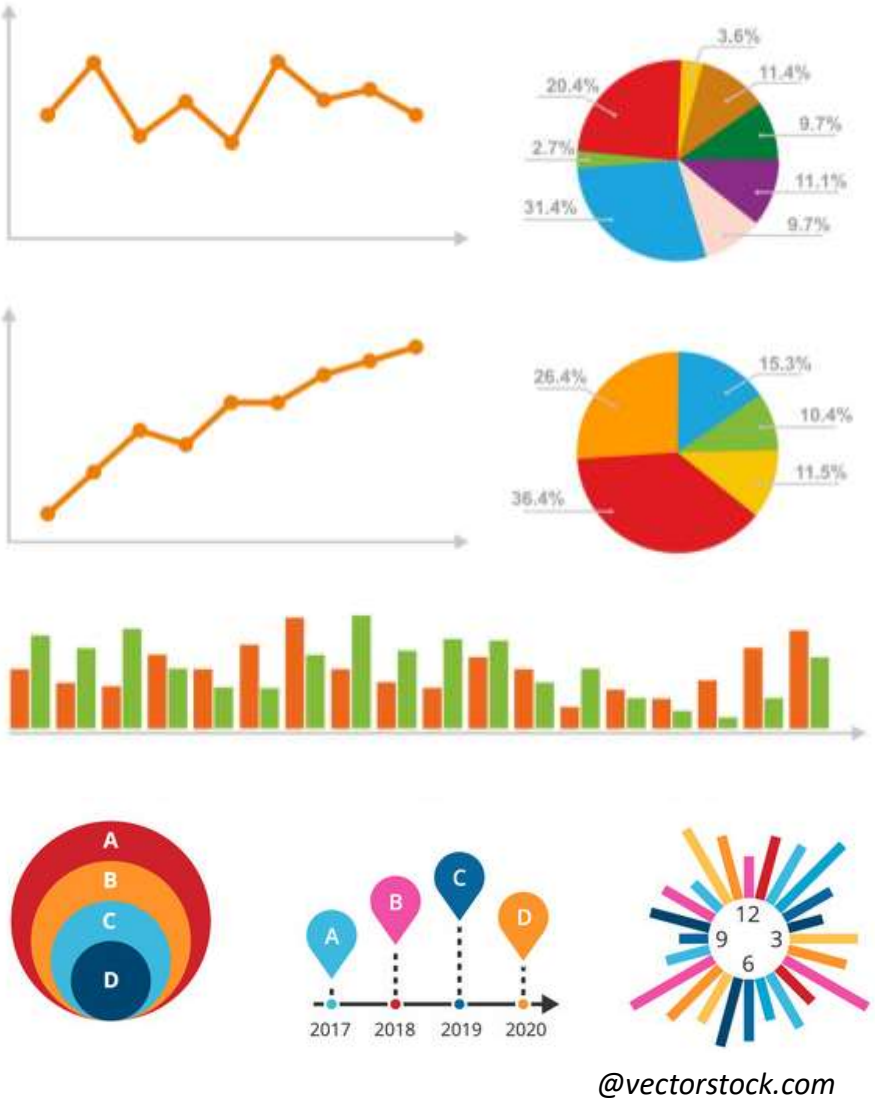
Why and how to use the evaluation framework

- **The evaluation framework is addressed to cultural heritage managers and owners, as well as to public institutions**, to support them in taking more informed and more **effective choices** in cultural heritage adaptive reuse with respect to circularity objectives
- **The evaluation framework is based on a set of criteria and indicators** that enable **performance assessment** of existing projects with respect to circularity objectives, and that can be used to **orient choices** towards circular «human-centred» adaptive reuse of cultural heritage
- **Indicators are synthetic tools to interpret reality**: sound **data collection, data analysis and data interpretation** is needed to assess the indicators



@vectorstock.com

CLIC uses three types of **indicators**:

- **Statistical indicators** which are normally expressed as ratios or as percentages, allowing them to be assessed in relation to a baseline.
- **Trends**, whereby 'raw' numbers are monitored over time (e.g., number of visitors from one year to the next).
- **Checklists** which are not statistical (i.e., non-parametric), but enable some assessment of topics which cannot be captured through quantitative measurement (e.g., asking residents whether a certain cultural heritage site represents a factor of local identity). Even a checklist requires supporting evidence to permit validation of the responses.

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CLIC

CIRCULAR MODELS LEVERAGING INVESTMENTS IN CULTURAL HERITAGE ADAPTIVE REUSE

CLIC Final Conference | 22 - 23 September 2021

Online event

Thank you!

Antonia Gravagnuolo, CNR IRISS, CLIC Co-coordinator

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 776758

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Italian National Research Council | IRISS Institute for Research on Innovation and Services for Development

CIRCULAR MODELS LEVERAGING INVESTMENTS IN CULTURAL HERITAGE ADAPTIVE REUSE

CLIC Final Conference 22-23 September 2021

The CLIC Startup competition: outcomes and future perspectives

Antonia Gravagnuolo, CNR IRISS, CLIC Co-coordinator

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 776758


A BETTER FUTURE COMES FROM ALL OF US
START-UP
COMPETITION
2020
NAPLES
25-27 NOVEMBER

CLIC
START-UP
COMPETITION
2020
NAPLES
25-27
NOVEMBER

CLIC Startup Competition
RESULTS

73 applicants from all over the world

25 startups participating to online vote

15 finalists presenting today

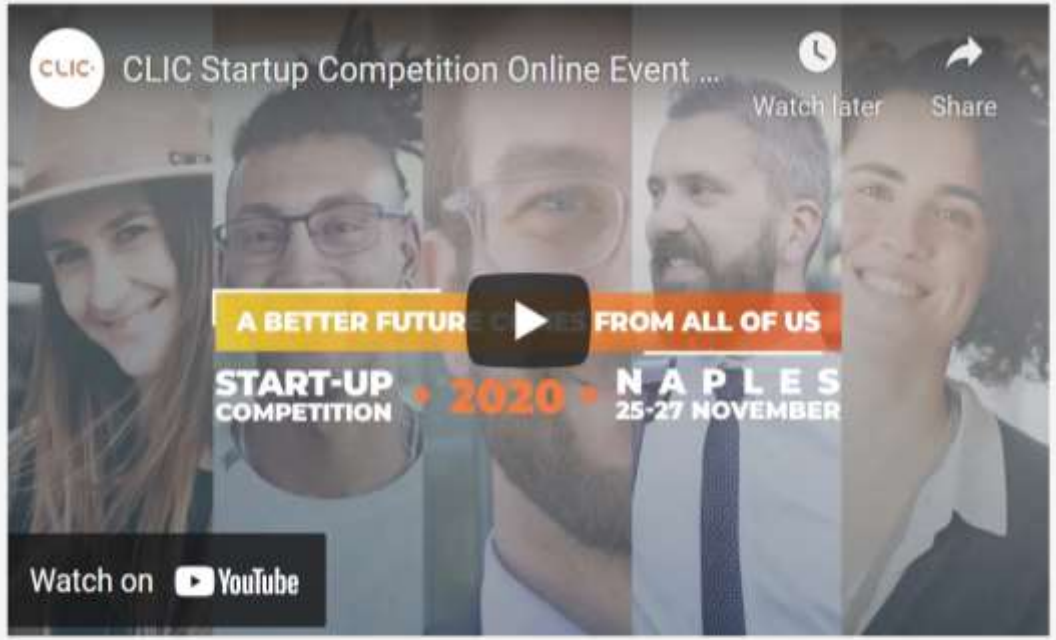
5 WINNERS !

CLIC Startup Competition topics: innovative heritage-led entrepreneurship

3 days interactive & training event

3 topics:

- **Circular tourism**
- **Circular creative industries and social innovation**
- **Circular and creative cities and regions**



Download the Report

Winners and Finalists

CLIC Startup Competition Programme

Meet CLIC Startup Competition Jury and Speakers

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 776758

CLIC STARTUP COMPETITION PRIZES

MENTORING PROGRAMME
15000€ valued
POWERED BY INIZIATIVA Finanza e innovazione

PREMIUM PROFILE
SEMED for 12 months
POWERED BY facility live

+

ADDITIONAL SPECIAL PRIZES

COMMUNICATION AND MARKETING SERVICES
3000€ valued

INCUBATOR SERVICES
3000€ valued

ENHANCING INNOVATION MANAGEMENT CAPACITY SERVICE (EIMC)
Customised support for the assessment of the innovation management capacity

20h COACHING PROGRAMME
*Within the **C-SHIP** Programme at **ICHEC***

FREE ACCESS TO EVPA ANNUAL CONFERENCE
Meeting venture philanthropy and social economy experts

NICE VISIONS, YA AMAR, THE DAW MAKERS, A TERRACED SOUNDSCAPE, RESTRUCTURE HERITAGE, TOUREGENERATION

+ 25 STARTUPS AWARDED SEMED PRIZE

EXTRARTIS, TASTE OF TERRACES

G-CEMENT

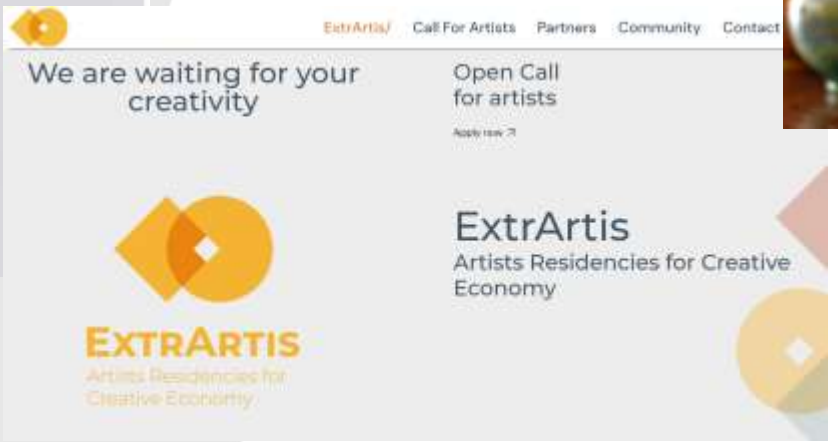
15 STARTUPS

TASTE OF TERRACES

THE DAW MAKERS

Results

- **Mentoring programme**: training & development of business model and business plan
- **Development of new products**
- **Strategic marketing services**: branding, website development, social media support
- **Partnerships for enhanced access to funding/financing**
- **Circular economy model** embedded in heritage-led entrepreneurial initiatives



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CIRCULAR MODELS LEVERAGING INVESTMENTS IN CULTURAL HERITAGE ADAPTIVE REUSE

Mentoring programme CLIC Startups

CLIC Final Conference | 22-23 September 2021

Iniziativa Cube

Aliona Lupu, Maria Di Fusco, Luca Memoli, Giovanni Arnaboldi, Chiara Palomba

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Mentoring programme overview

Mentoring programme objective: enhance the involved entrepreneurs vision towards a holistic and systemic picture of their sustainable projects and elaborate strategic action plans through a mix of practical methodologies.

Circular Business aspects assessed:

- Leadership team capability
- Product readiness
- Market readiness
- Financial readiness

Meeting #	Date	Topic	Type of meeting
1	February	Circular Business Model part 1	Plenary session
2	March	Follow up session	One to one session
3	March	Business planning part 1	Plenary session
4	April	Follow up session	One to one session
5	April	Innovation and financing strategies	Plenary session
6	May	Follow up session	One to one session
7	May	Circular Business Model part 2 and Business planning part 2	Plenary session

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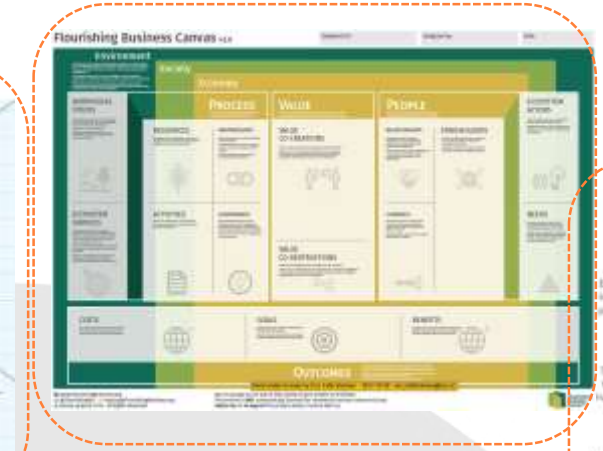
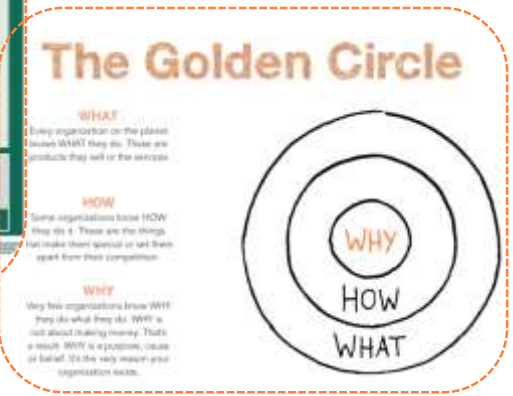
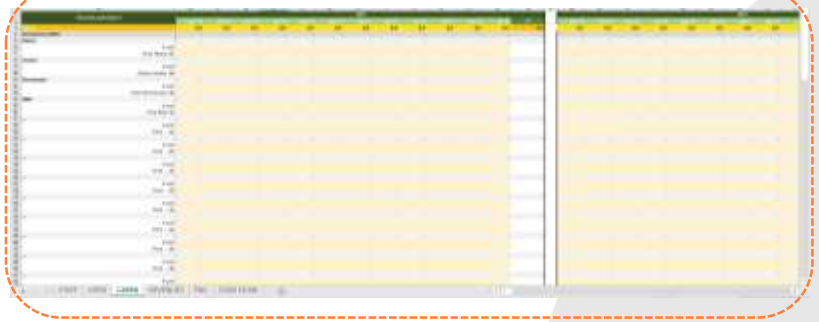
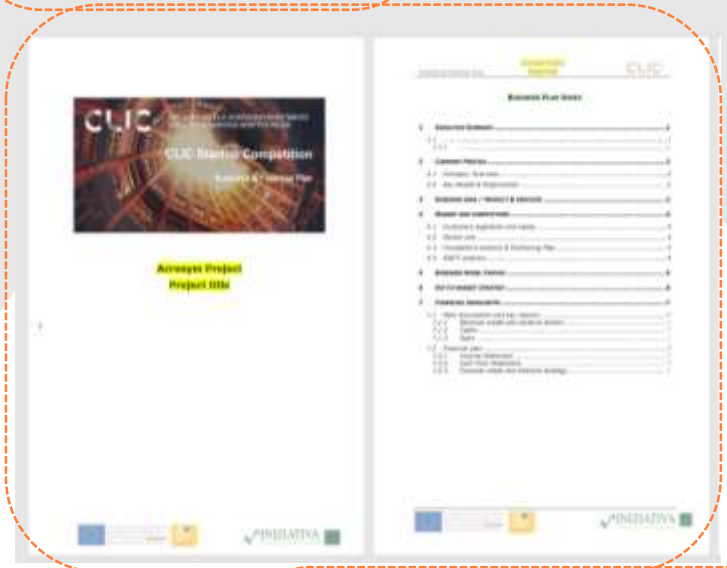
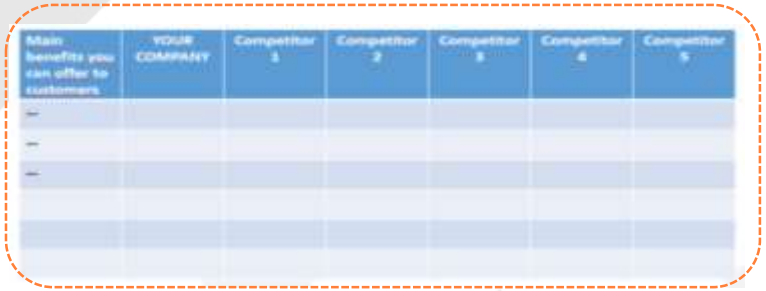
CLIC · Tools

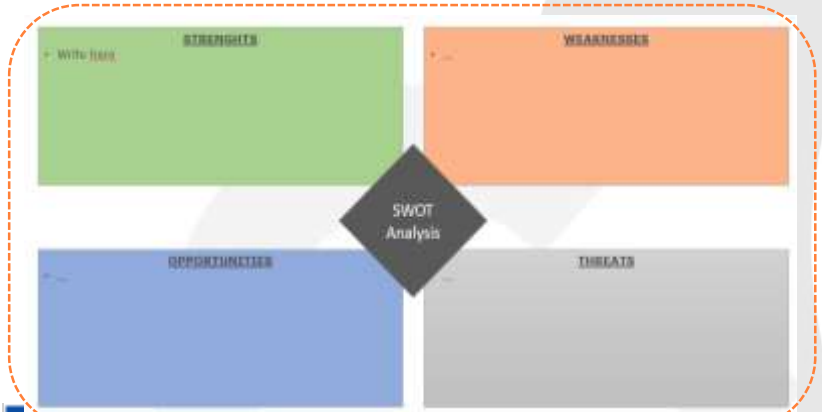


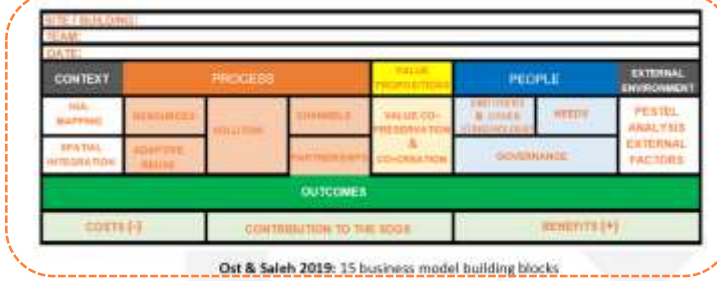












Ost & Saleh 2019: 15 business model building blocks

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Outputs of the mentoring programme

- *Business modelling*
- *Start-up of activities (2nd Falastin Festival 2021)*

NiceVisions

- *Preparation of HE call for proposal to enhance the NiceVision TRL*

- *Business plan*
- *Action plan*
- *On-going crowdfunding campaign preparation*

CLIC Project

- *Business modelling*
- *HE call for proposal under evaluation*

ReSTRUCTURE
Keeping Heritage Alive

- *Business modelling*
- *HE call for proposal under evaluation*
- *Start-up of activities (1st Workshop on an abandoned church in Spain)*

DAWmakers

- *Business plan*
- *HE call for proposal under evaluation*

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INIZIATIVA Finanza e Innovazione

CLIC

CIRCULAR MODELS LEVERAGING INVESTMENTS IN CULTURAL HERITAGE ADAPTIVE REUSE

THANKS FOR YOUR ATTENTION!!!

Aliona Lupu
aliona.lupu@iniziativa.cc
www.iniziativa.cc

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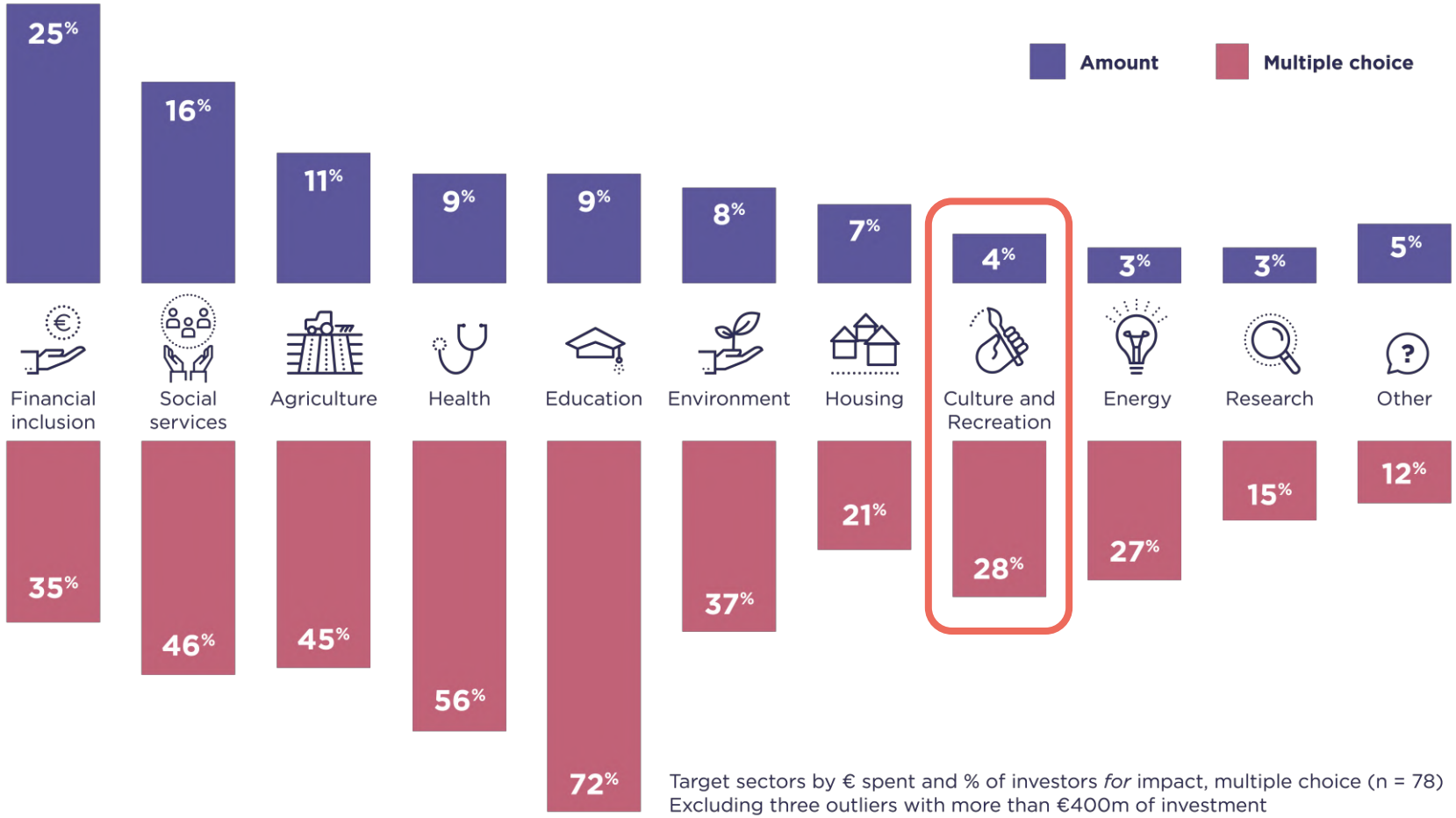
INIZIATIVA Finanza e Innovazione

EVPA INDUSTRY SURVEY | SECTORS



Target sectors by € spent and % of investors *for* impact, multiple choice (n = 78)
Excluding three outliers with more than €400m of investment

Source: The 2020 Investing *for* Impact Survey

EVPA SUCCESS STORIES | CULTURE

INVESTOR *FOR* IMPACT

In 2013, the ERSTE Foundation launched the **ERSTE Foundation Roma Partnership**

INVESTEE

- Funded in **2010**
- The **first** Roma fashion studio
- Fashion and design to **create bridges** between Roma and non-Roma
- Break **stereotypes**
- Popularise the **Roma culture and community**,
- Create employment for **disadvantaged Roma women**

SUPPORT PROVIDED

Financial:

- Total **grant of €217,235** in several tranches.
- **Loan from Erste Bank HU** with a credit limit amount of €115,546
- **EU funding** to work on education (training, workshops).

Non financial:

Organisational development:

- financial training
- social business plan
- website and blog

Source: EVPA Success Stories

LA B IO
MISTA
.BE

mine
GENK


ACTAVISTA
L'énergie de bâtir


MARSEILLE
FORESTA


RICARD


LES GRANDS VOISINS


LÉPODÉE
LE VILLAGE DONT VOUS ÊTES LE HÉROS
LUNDI
MARDI
MERCREDI
JEUDI
VENDREDI
SAMEDI
DIMANCHE
ÉCOLE

NiceVisions

Problem

NiceVisions

Solution

NiceVisions

customizable solar
facade for sensitive areas

Solar Tiles

CIRCULAR MODELS LEVERAGING INVESTMENTS IN CULTURAL HERITAGE ADAPTIVE REUSE

Hybrid Financial Instruments & Investment Leverage Enablers for Cultural Heritage Adaptive Reuse

September 23° 2021

Dr. Tracy Pickerill, TU Dublin
Email: tracy.pickerill@tudublin.ie

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 776758

Transitioning to Circular models Leveraging Investment in Cultural heritage adaptive reuse

- Built Heritage Adaptive Reuse & Energy Retrofit
- Protection of natural eco-systems
- Socio-cultural community enterprise activities

Loss of Trust:

- *Dysfunctional Extractive Capital Market Structures*
- *Market Failure, Financial Barriers & Trade-off between Value Judgements for many cultural heritage investment opportunities in urban & rural territories*

Regaining Trust:

How Can Capital Serve People?

Re-evaluate Value Creation & Co-Creation Models & Impact Metrics to Regenerate Capital by

Recycling Capital & Recycling Value

Photos: Red Squirrel (Biodiversity Ireland); Tropical Fruit Market, Dublin Docklands (IPUT); Cloghleagh Forest, Wicklow

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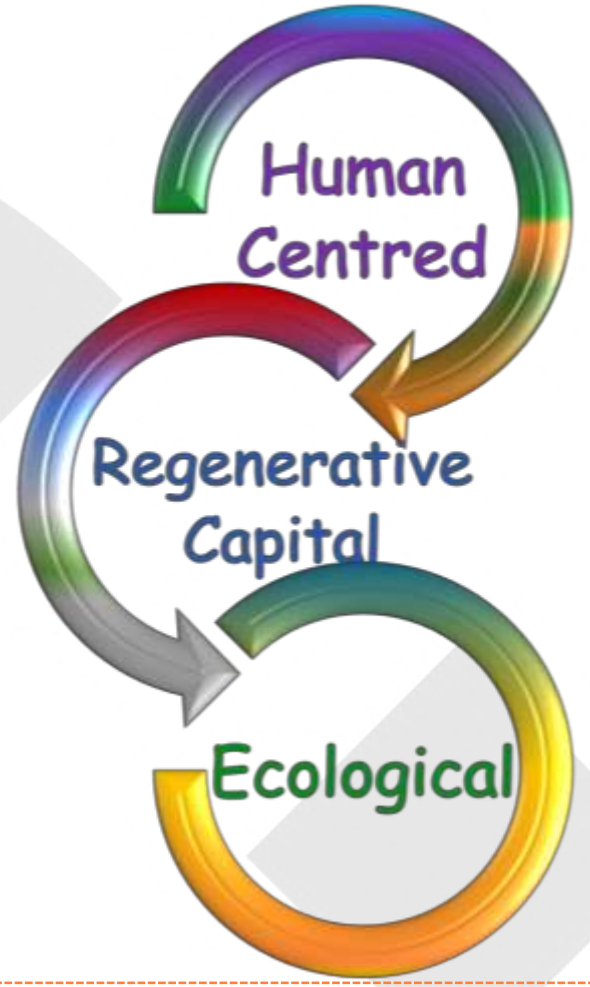
Aligning Regenerative Capital within the CLIC Framework

- **Regenerative Capital Paradigm** nurtures ***R**esponsibility, **R**esilience and **R**egeneration* additional to the ***T**riple **B**ottom **L**ine* People Planet Profit*
- **Foster Connective Human Infrastructure** between 'G-local' communities & **Investment Leverage Enablers**
- **Design Hybrid Financial Instruments** within mainstream Capital Markets to protect people and natural ecosystems in parallel with adaptive reuse of vulnerable cultural heritage resources

Evolutionary Paradigms



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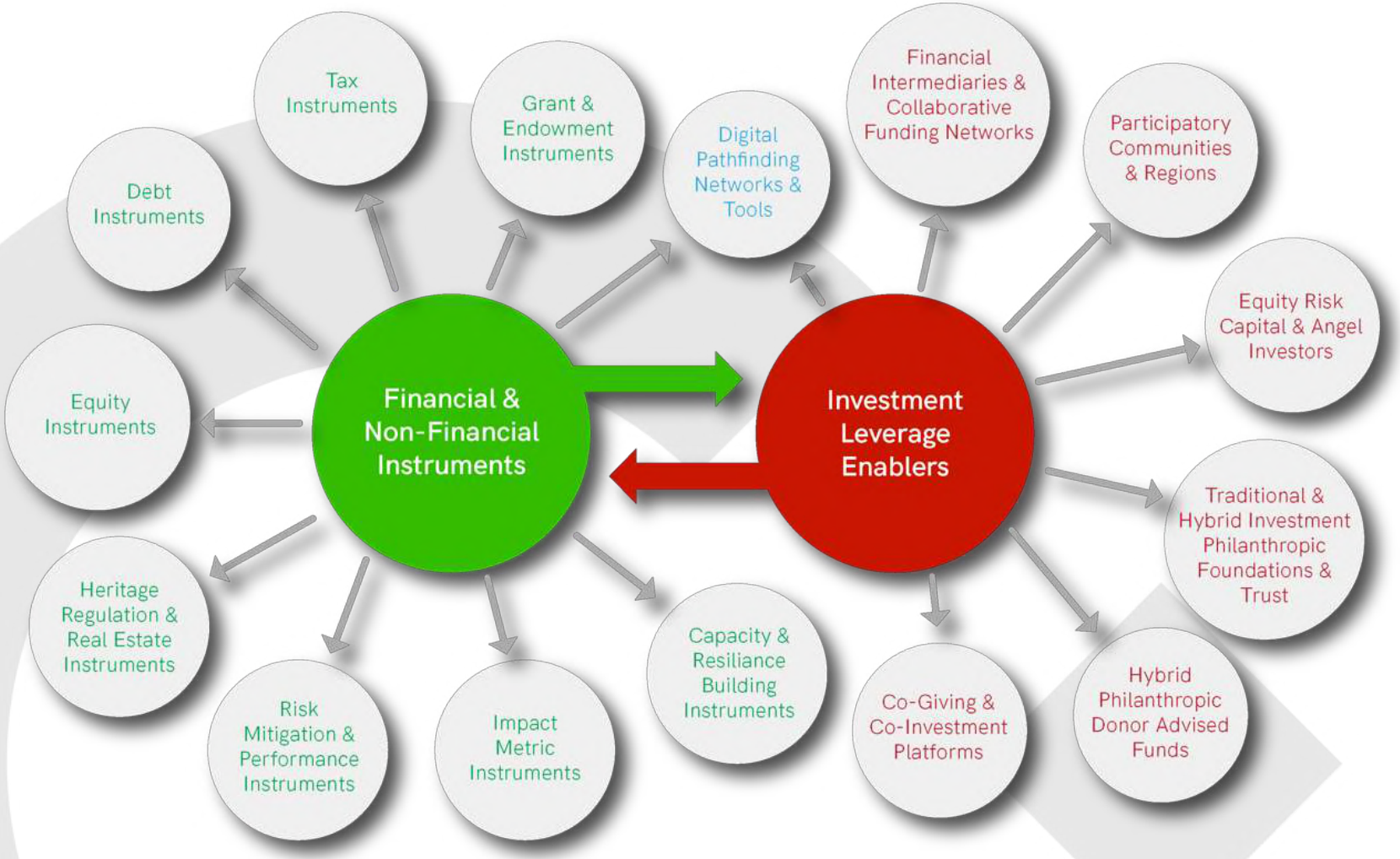
*TBL: People Planet Profit (John Elkington)

CLIC Panoptic Toolkit provides a blueprint of umbrella categories designed to aid capital investment leverage

Pooling diverse investment leverage enablers into multi-disciplinary collaborative fund structures

Blending financial & non-financial instruments

Intentional & Measurable **Impact Returns**



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 776758

Leveraging Circular Investment Flows

Hybrid Financial & Non-financial Instruments

- Grant & Endowment Instruments
- Tax Instruments
- Debt Instruments (Bonds/Loans)
- Equity Instruments
- Heritage Regulation & Real Estate (Place-based) Instruments
- Risk Mitigation & Performance Instruments
- Impact Metric Instruments
- Capacity & Resilience Building Instruments
- Digital Pathfinding Tools (IoT)

Investment Leverage Enablers

- Financial Intermediaries & Collaborative Funding Networks
- Participatory Communities & Regions
- Equity Risk Capital & Angel Investors
- Traditional & Hybrid Investment Philanthropic Foundations & Trusts
- Hybrid Philanthropic Donor Advised Funds
- Co-Giving & Co-Investment Platforms: Lottery Funds & Crowd Funding
- Digital Pathfinding Networks

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Holistic Territorial Approach to Landscape Regeneration

Salerno, Italy

Fengersfors Mill Town, Sweden

- **Blended Hybrid Financial Instruments can be optimally designed within:**
  - **Fund Structures** (For Profit, Non-Profit & Hybrid)
    - Community Cooperatives, REIFs, REITs, Social Enterprise Impact Funds, Heritage Trusts, B Corporations)
  - **Circular Business Models**
- **Align Master Planning & Blended Procurement informed by Local Action Plan, Perception Mapping & Heritage Innovation Partnerships**
  - **Procurement Strategy:** PPP, Joint Venture, Public Asset Corporations
  - **Land Value Capture Finance Strategy:** Asset leverage, Voluntary Planning Agreements (VPA), Tax Increment Financing (TIF), Developer contributions, Social Value Leases
- **Align Climate Adaptation & Energy Infrastructure**
  - **District Heating Systems:** Industrial Surplus, Data Centers, Geothermal, Biomass, Biochar, Anerobic Digestion
  - **Smart Monitoring Tech:** Carbon & Water footprints, Real-Time calcs, Lifecycle CBA
  - **Heat Wave & Flood Management:** Street & Pocket Park Water holding

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CLIC Toolkit Choice & Design:

Market Risk

≠

Impact Risk

- **Tool Knowledge:** Operating Characteristics
- **Design Knowledge:** Target, Tailor & Time to Leverage Circular Flows
- **Stakeholder Knowledge:** Risk Tolerance & Sharing
- **Impact Knowledge:** Predefined IMM at design stage

Choice varies: Community to Community & Region to Region in Political Context

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Evolving Financial, Real Estate (Place-based) & ARCH Indicators

- UN SDGs
- EU Sustainable Finance Strategy: Taxonomy, Disclosures, screening, Transitionary Finance, Inclusion (Social taxonomy), Resilience (Double materiality) & forthcoming EU Green Bond Standard (EuGB)
- ICOMOS Quality Principles on EU funded interventions impacting Cultural Heritage (2021)
- UN Environment Programme (UNEP) Finance Initiative (Network and Tools) (2021)
- COP 26 & Glasgow Financial Alliance (Banking, Asset owners, Asset managers & Insurance (pending)
- EIT Climate KIC (European Institute of Innovation & Technology – Climate Knowledge & Innovation Community
- Global Impact Investing Network (GIIN) Metrics: IRIS, IRIS +, IMP5, Compass Benchmark
- European Venture Philanthropy Assoc. (EVPA) Toolkit & Guidance
- Real Estate (GRESB, Nzeb, WGBC, LEED, BREEAM, WELL….
- International Valuation Standards IVSC 'ESG Value Creation'

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DUBLIN

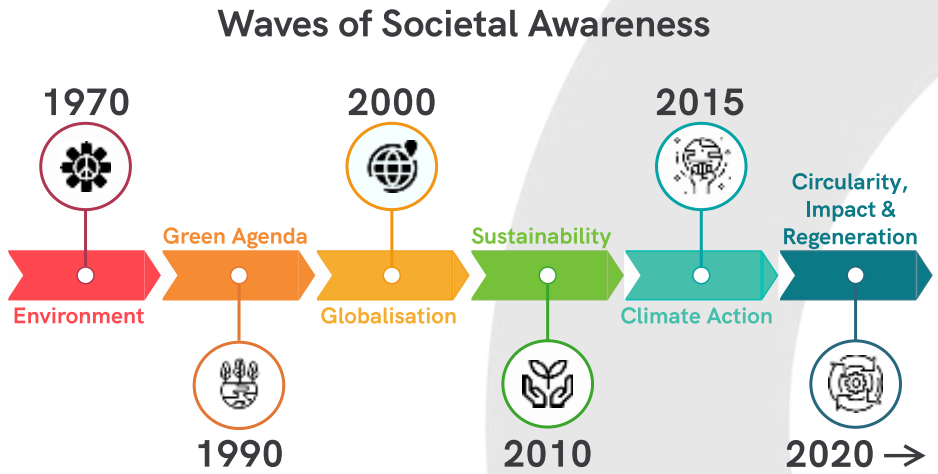
Evolutionary Reform for Regenerative Capital Markets

'Circular Economy is about Design Process - Innovation and Skills'

Joss Bleriot, Ellen MacArthur Foundation

UN ECE Conference 12th July 2021

Circular Mindsets Evolving for Exponential Human Prosperity



- Reboot Dysfunctional Capital Markets via EU Sustainable Finance Strategy - Taxonomy & Financial Disclosures
  - Flawed Financial Appraisal techniques (IRR, DCF, ESG)
- Blend Hybrid Financial & Non-financial Instruments **[CLIC Panoptic Toolkit]**
- Recycle Capital within 'patient' Revolving Funds
  - **Mirror Innovative EU Fund Structures**
- Enable Co-creation Partnership Processes to build Capacity & Resilience of Communities, Municipal & Regional agencies
- Mainstream intentional Impact Benchmarking metrics (IMM) at design stage
- Matchmake & align shared goals via multi-disciplinary Networking Infrastructures to develop Pooled Procurement Strategies

[IRR: Internal Rate of Return; DCF: Discounted Cashflow; IMM: Impact Measurement & Management]

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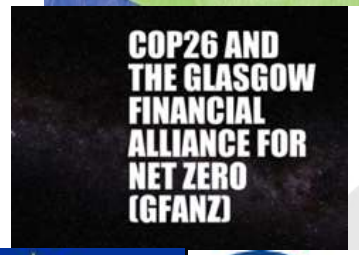
Evolutionary Reform: ARCH is a Key Asset in Circularity Process



- Define Cultural Heritage Adaptive Reuse as an **Asset Class** to enable comparison with Generic 'new build' construction & real estate data collection & metrics:
  - EU Taxonomy Technical Screening Criteria to reorientate capital flows to Sustainable Investment (2021) 'Construction & Buildings' (NACE f41)
  - GIIN Metrics (Real estate, Tourism, Community Devlp', Energy, Infrastructure, Arts & culture)
- Measure Whole Life Carbon **(Embodied** & Operational Energy) within Built Environment Decision Making
  - World Green Building Council (WGBC)
  - Historic England (2019) Understanding Carbon in the Historic Environment (Duffy et al 2019)
- Align Funding with Quality Conservation & Energy Principles (ICOMOS / Europa Nostra)

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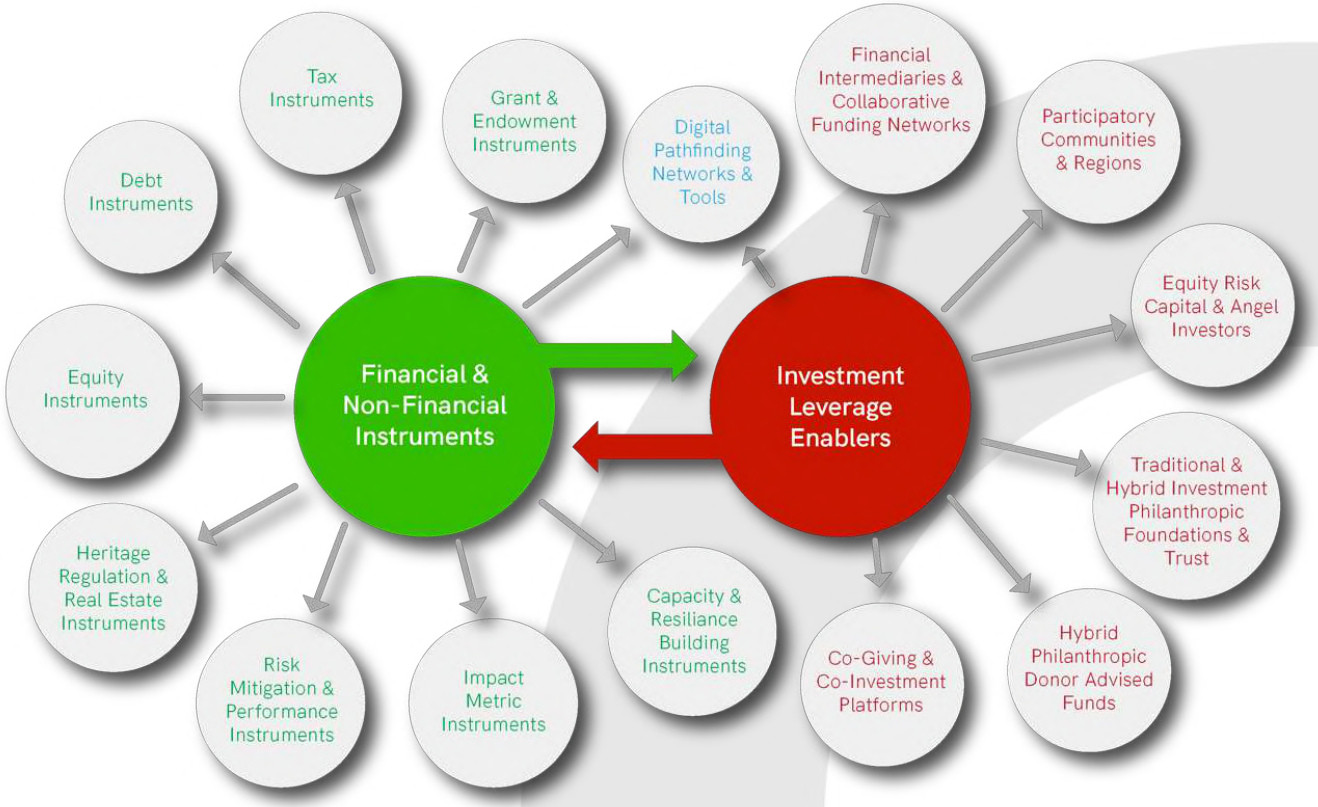
Creating Virtuous Investment Circles using the CLIC Toolkit

Matchmaking, Blending, Pooling, De-Riskin, Master Planning, Recycling



Regenerative Investment Leverage Strategies create

Value for Money upstream solutions for ARCH Activities within **Virtuous Investment Circles**

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Link to CLIC Deliverable 4.1:
https://www.clicproject.eu/wp-content/uploads/2021/06/D4.1-Overview-of-Hybrid-Financial-Instruments-and-Investment-Leverage-Enablers-for-Cultural-Heritage-Adaptive-Reuse.pdf

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TU Dublin, Ireland
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OLLSCOIL TEICNEOLAÍOCHTA BHAILE ÁTHA CLIATH
TU DUBLIN
TECHNOLOGICAL UNIVERSITY DUBLIN

CLIC
Circular models Leveraging Investments in Cultural heritage adaptive reuse

Photo: Triskele Celtic Triple Spiral (3300 BC) Newgrange Passage Tomb, Bru na Boinne, Co. Meath, UNESCO WHS

CIRCULAR MODELS LEVERAGING INVESTMENTS IN CULTURAL HERITAGE ADAPTIVE REUSE

Circular Financing Instruments for the Adaptive Reuse of Cultural Heritage

Iniziativa Cube | Ivo Allegro | Aliona Lupu

CLIC Final Conference | 22-23 September 2021

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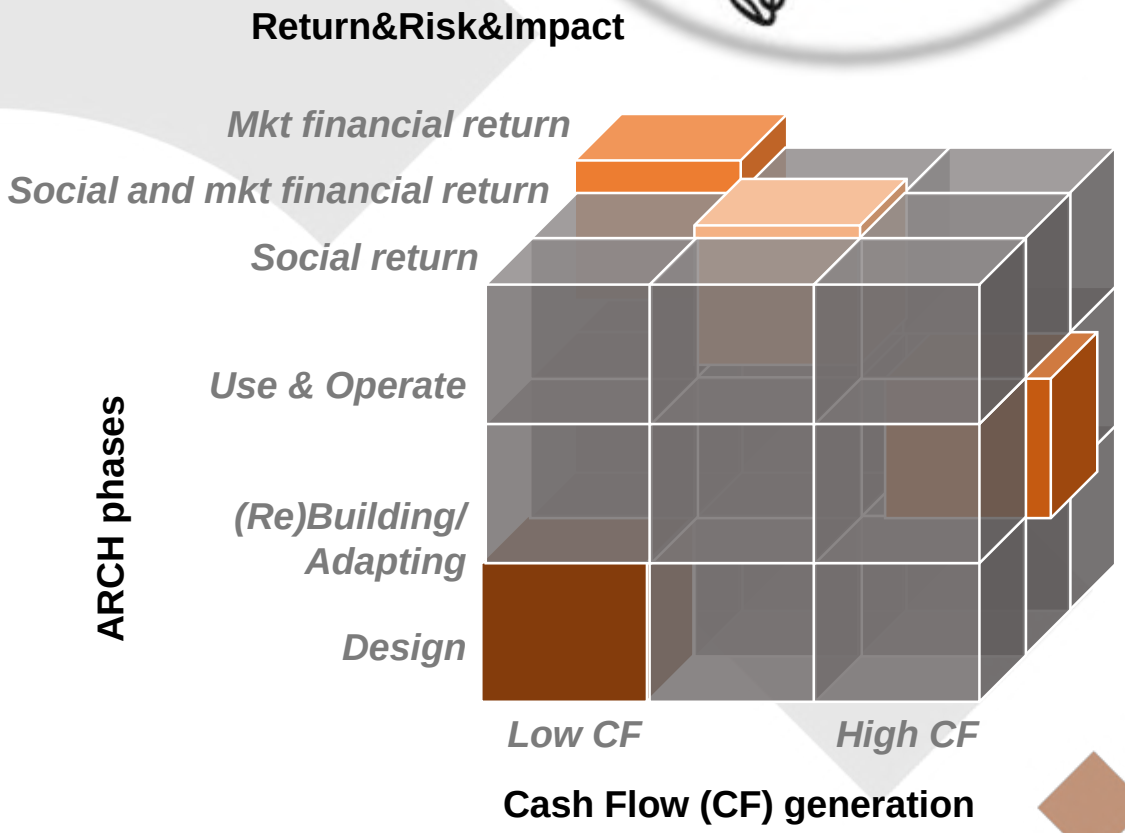
CLIC project approach towards circular financing of ARCH initiatives

- The Value Proposition of CLIC circular financial mechanisms fosters 5 principals:
  - generation of value at local level
  - high replication potential in different contexts
  - win-win-win solutions towards «People» dimension;
  - synergies and cooperation empowering social and solidarity economy
  - multidimensional RoI (ESG+C) through viable business models



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Overview of the three CLIC circular financing mechanisms

Revolving Circular Impact Fund

Hybrid PPP Approach

Investment Readiness Facility

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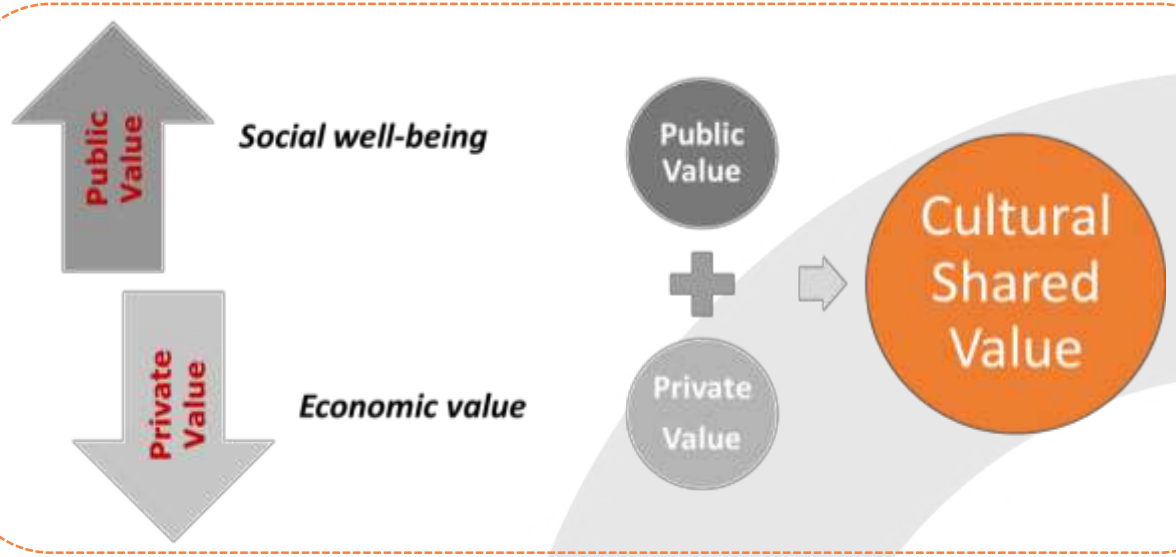
Hybrid Public Private Partnership Approach (1/2)



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Hybrid Public Private Partnership Approach (2/2)

Hybrid PPP

People

Outcomes
Indicators
Pay-per-Results

WP2 Impact Measurement Framework

Regenerative Capacity	Symbiotic Capacity	Generative Capacity
Cultural Capital	Partnerships & Synergies	Employment
Natural Capital	Accessibility of the urban /rural area	Local entrepreneurship & innovation
Human Capital		Quality of life, wellbeing and health
Social Capital		
Financial Capital		

**in coherence with UNECE People-first principles*

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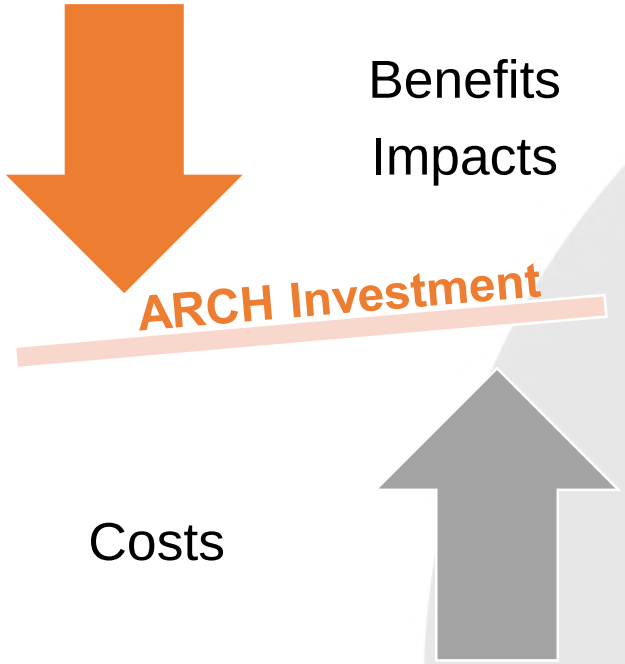
Investment Readiness Facility (IRF) (1/2)

Investment proofing & decision making



Geographical scale	• EU • National or Regional
Technical form	• Grant
Beneficiaries	• Public authorities • Private for-profit • Non-profit organisations
Goals	• Design circular business models and organisational innovation • Build technical, economic, financial, impact measurement and legal expertise • Ensure high degree of replicability of similar initiatives • Remove existing barriers for ARCH initiatives • Mobilize private investments • Bundle projects and mix interventions to reach critical size

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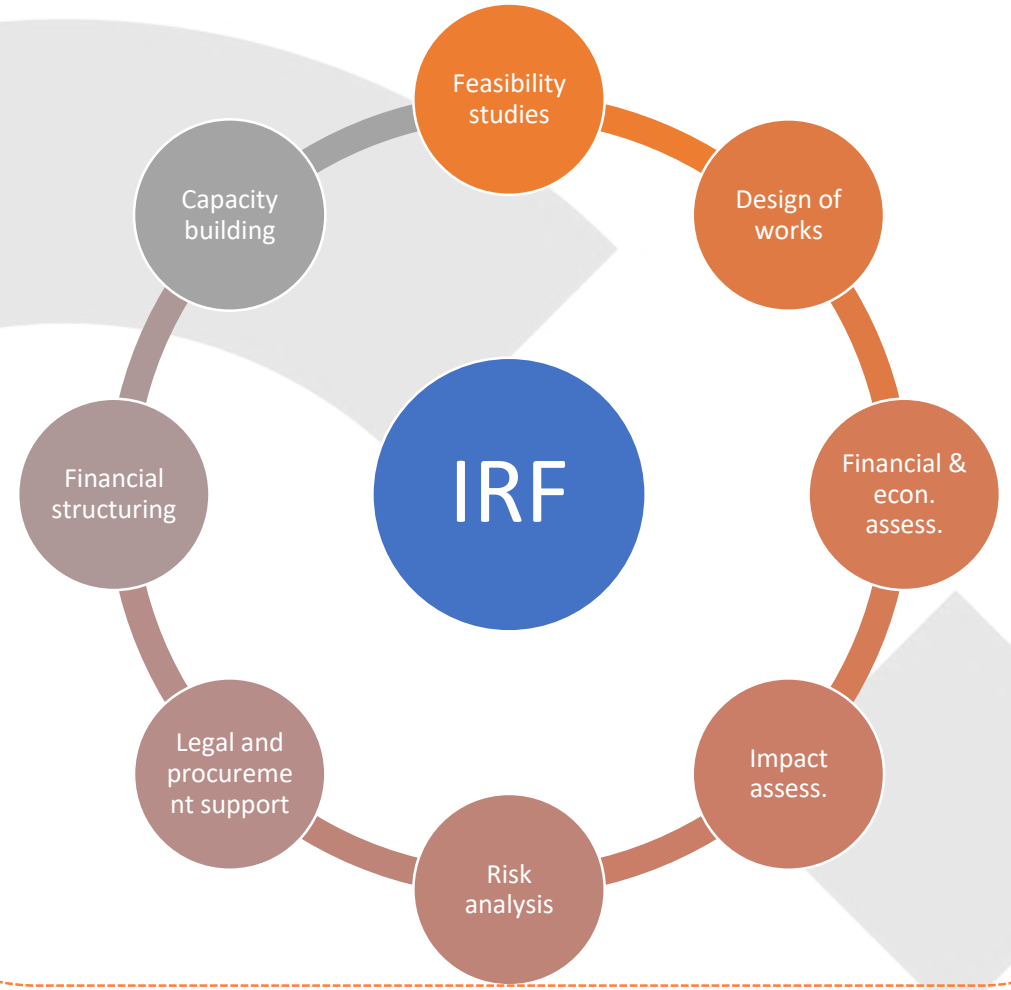
Investment Readiness Facility (IRF) (2/2)

IRF shall valorise innovation in relation to:

- Mobilization of the investment programme (project bundling, pooling, stakeholder engagement, community finance)
- Financial engineering
- Ex-ante impact assessment
- Leverage factor

Type of activities supported by IRF



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 776758

Revolving Circular Impact Fund

Public ownership and private/crowdfunding co-investment approach (€)

Impact/ESG invest

Revolving approach (re-invest of returns)

Project bundling

Results-based financing

Use of proceeds approach for Circular Economy ARCH

Blended finance (Risk & Impact adjusted Return)

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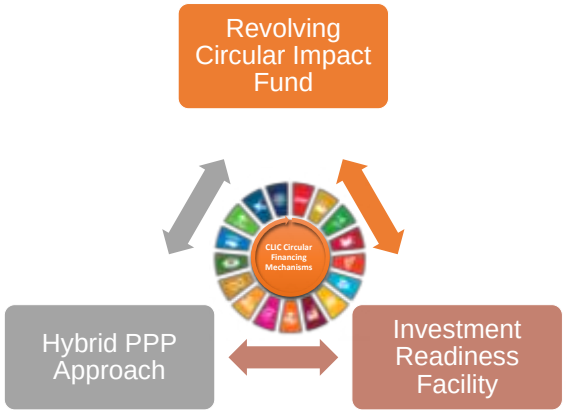
2018 EUROPEAN YEAR OF CULTURAL HERITAGE

INIZIATIVA Finanza e Innovazione

Synergies of CLIC Circular Financing Mechanisms: Salerno case



Large projects: ARCH investments

Regional IRF
- Design sustainable ARCH
- Masterplan
- Econ-fin. Plan
- Legal expertise
- Impact assessment etc.

Hybrid PPP
- ARCH re-building & adaptation
- ARCH Use & Operate

Regional Revolving Circular Impact Fund
- Circular financing (debt, equity etc.) for the private partner implementing the PPP

Small projects: Management of ARCH (profit/non-profit)

Regional IRF
- Feasibility studies for econ-fin-impact viability
- Circular business modelling etc.

Hybrid PPP
- Use & Operate stage of an ARCH investment

Regional Revolving Circular Impact Fund
- Circular financing for CAPEX & OPEX needs of implemented circular business models

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CLIC

CIRCULAR MODELS LEVERAGING INVESTMENTS IN CULTURAL HERITAGE ADAPTIVE REUSE

THANKS FOR YOUR ATTENTION!!!

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2018 EUROPEAN YEAR OF CULTURAL HERITAGE

INIZIATIVA Finanza e Innovazione

Bonnie Burnham
Cultural Heritage Finance Alliance
www/heritagefinance.org

Impact and Identity

Investing in Heritage for Sustainable Development








CHiFA

CULTURAL HERITAGE FINANCE ALLIANCE

Case Studies in Heritage Regeneration

Medina of Fez
Morocco

Architectural Heritage Fund
United Kingdom

Historic Center of Mexico City
Mexico

Stadsherstel Amsterdam
The Netherlands

Conservatorio
Panama

Doh Eain, Yangon
Myanmar

CHiFA

CULTURAL HERITAGE FINANCE ALLIANCE

Spectrum of Strategies for Capitalizing Heritage Regeneration

Fez

International Development Financing

United Kingdom

Heritage Revolving Funds

Mexico City

Private Initiative, Public Commitment

Amsterdam

A Heritage Investment Corporation

Panama City

A Heritage B-Corp

Yangon

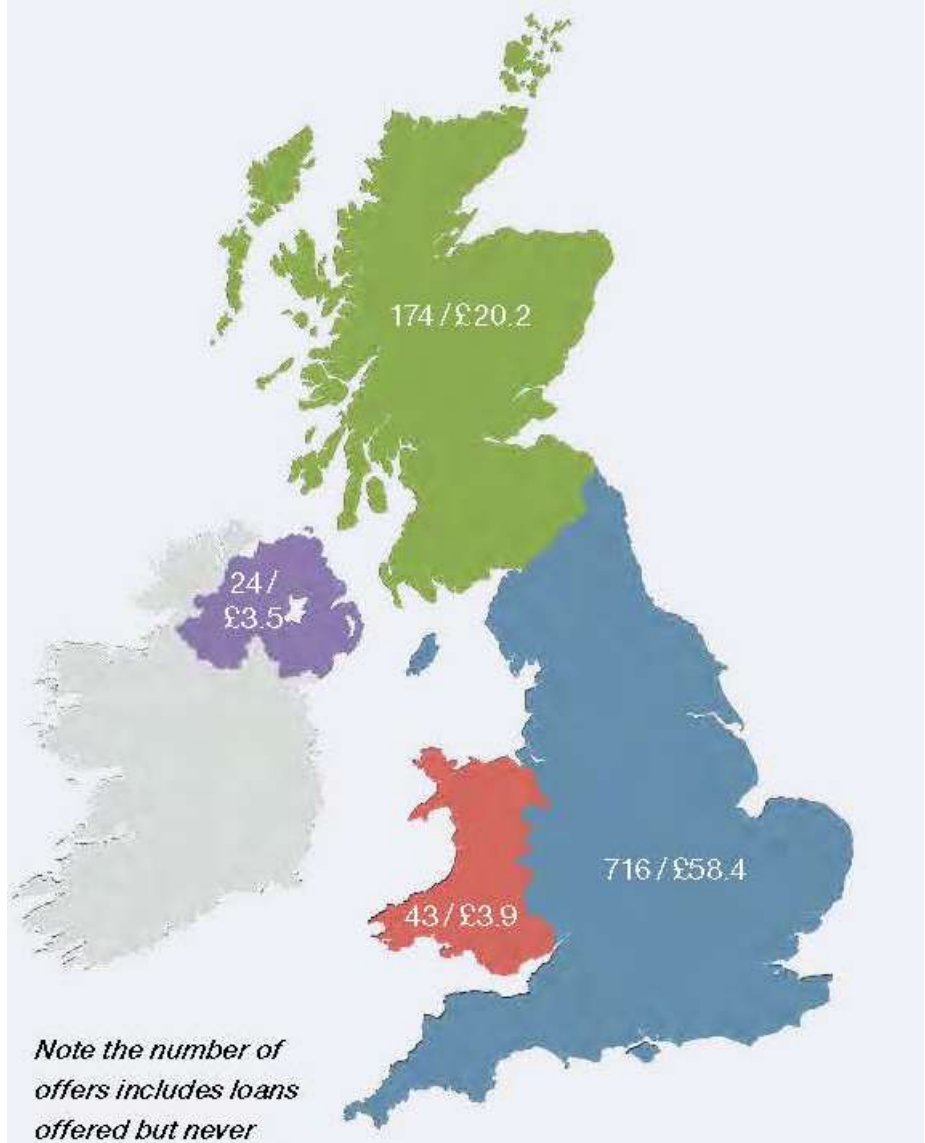
Social Enterprise

Debt	Equity	Short-term Financing

Architectural Heritage Fund Loans

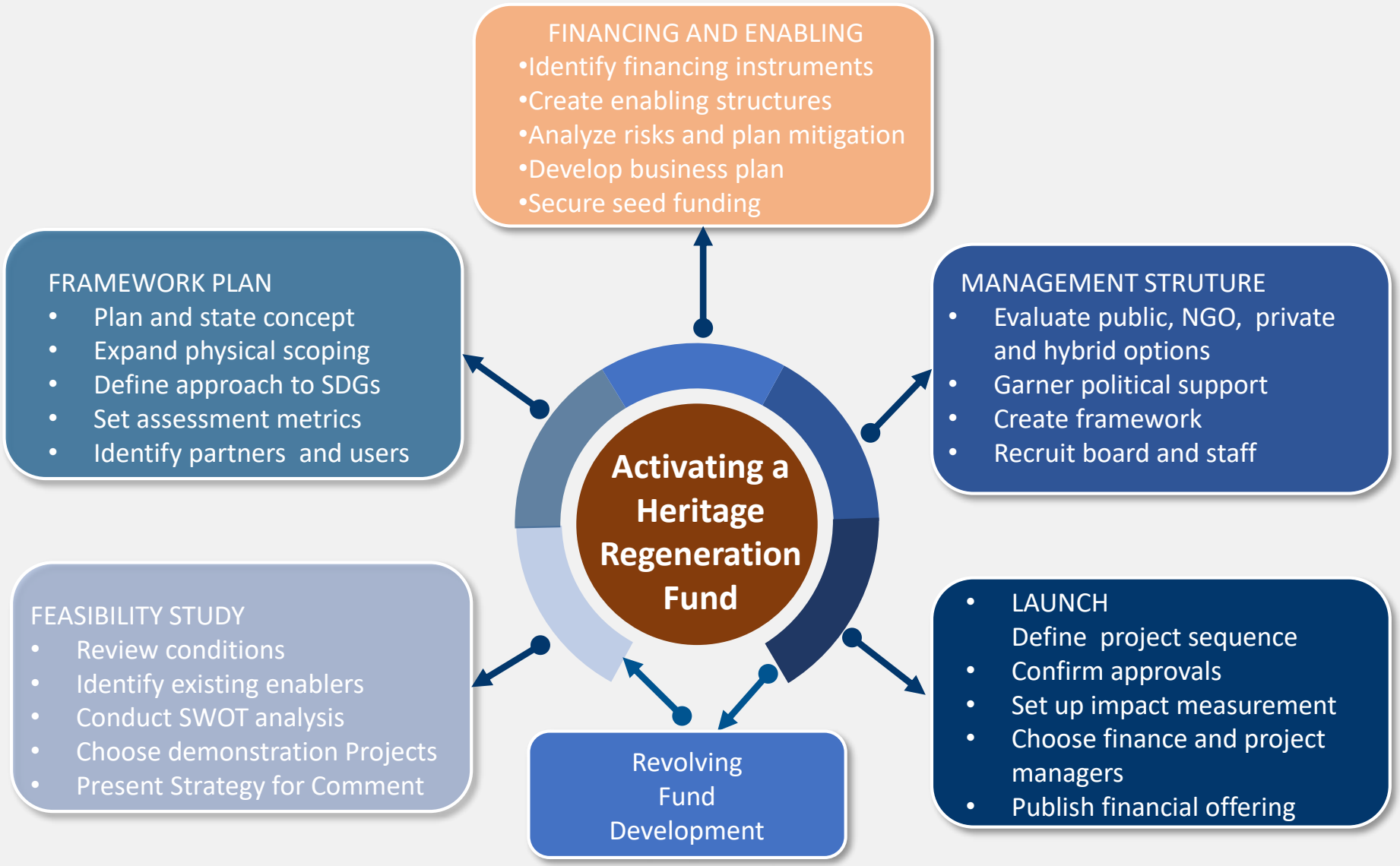
With initial contributions of £1 million and gradual capital growth over time, AHF has been able to offer loans to more than 900 projects across the United Kingdom, encourage the creation of hundreds of building preservation trusts, and leverage far more significant funding from other governmental and private sources.

Loans	**Offers**	**Amount** (millions)
England	716	£58.4
NI	24	£3.5
Scotland	174	£20.2
Wales	43	£3.9
Totals	**957**	**£86.0**

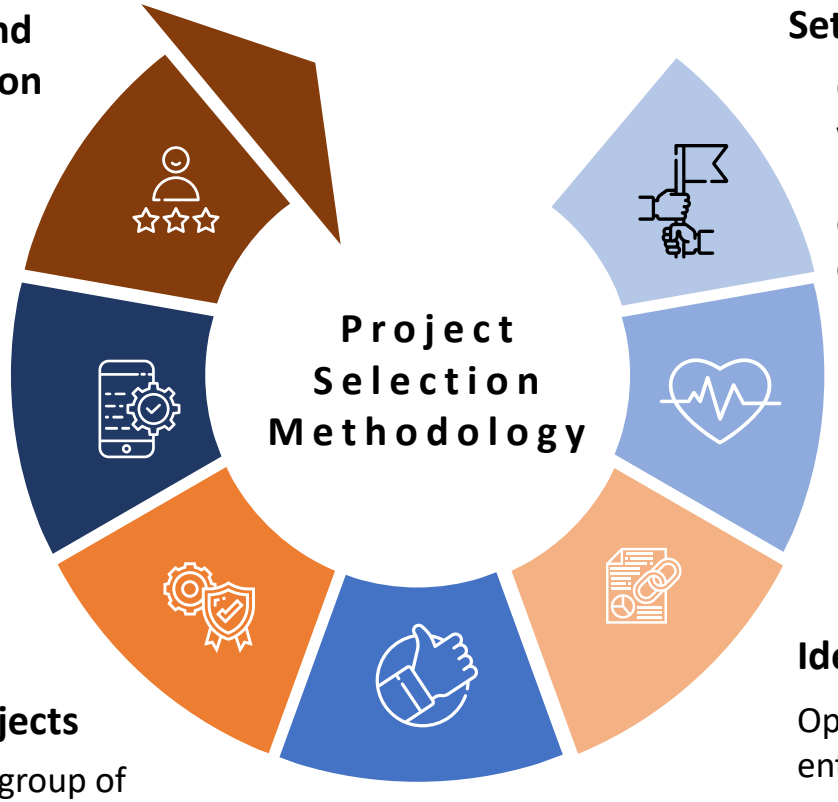


Note the number of offers includes loans offered but never drawn down. Totals are since 1976.

Heritage Regeneration: From Vision to Implementation



Feasibility Study: Vision and Strategy



Set Vision

Create an interdisciplinary visioning group of decision makers, influencers and enablers and and identify overarching goals

Review Conditions

Collect information about existing economic, physical and social factors

Identify Enabling Factors

Opportunities, incentives, entities, and elements that mauy enhance the viability of the Action Plan

Conduct SWOT Analysis

Conduct an analysis of the strengths, weaknesses, opportunities and challenges present. Adjust vision and set strategy.

Select Pilot Projects

Identify a small group of projects for proof of the concept and strategy.

Assess Feasibility and Set Impact Metrics

Project costs, revenue, sources of capital, non-financial contributions, outcomes and impacts.

Present Strategy and Invite Participation

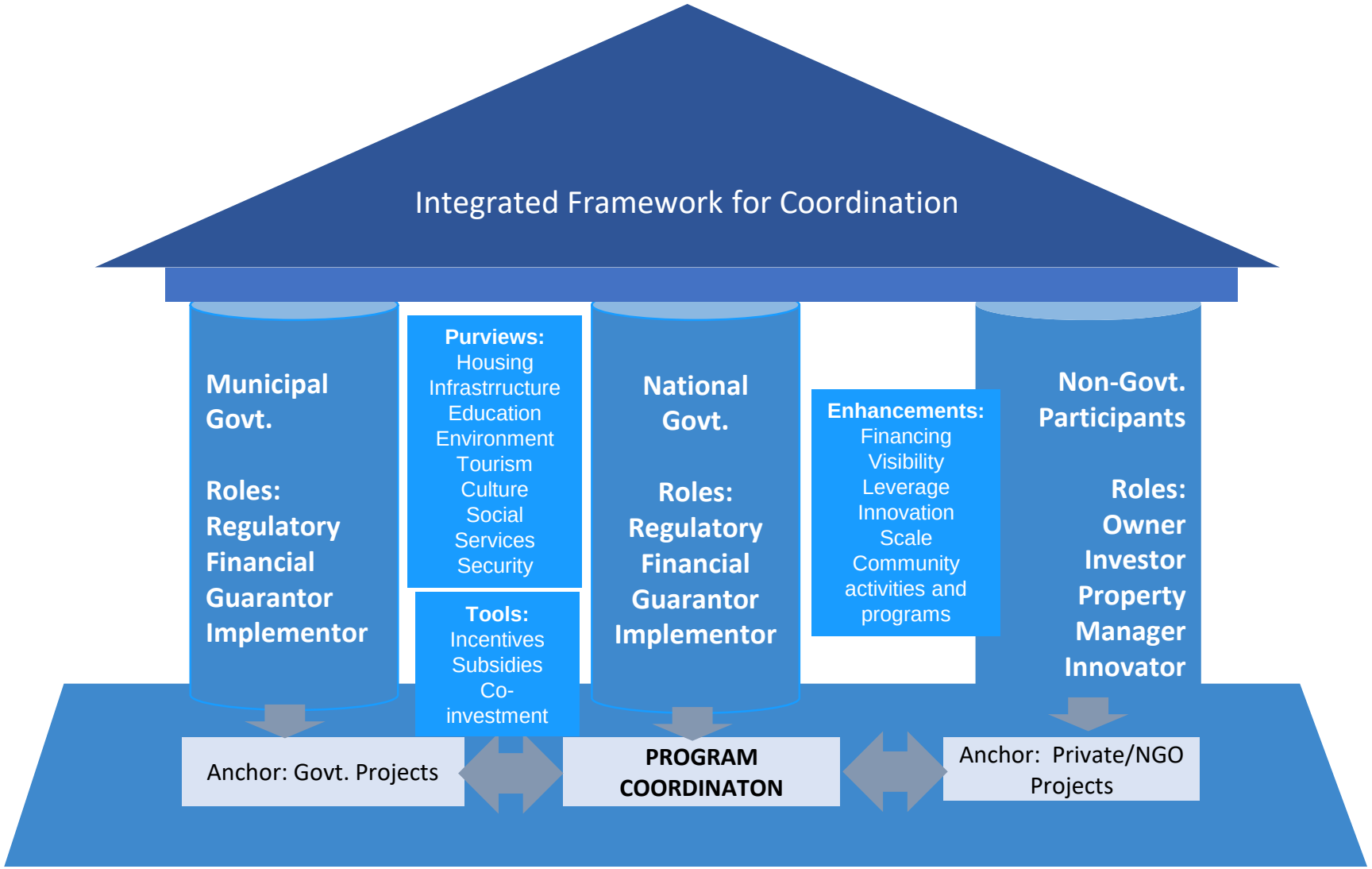
Present Action Plan to decision makers, stakeholders and prospective partners.

While heritage conservation is most notably aligned with SDG 11 target 11.4—to "strengthen efforts to protect and safeguard the world's cultural and natural heritage"—many of the other 17 goals are relevant. Across the case studies presented in this paper, CHiFA found major outcomes for SDG 4, 8, 11, 12, and 13, as well as specific projects that have achieved goals in Poverty Alleviation (1), Infrastructure (9), Reduced Inequities (10), and Global Partnership (17).

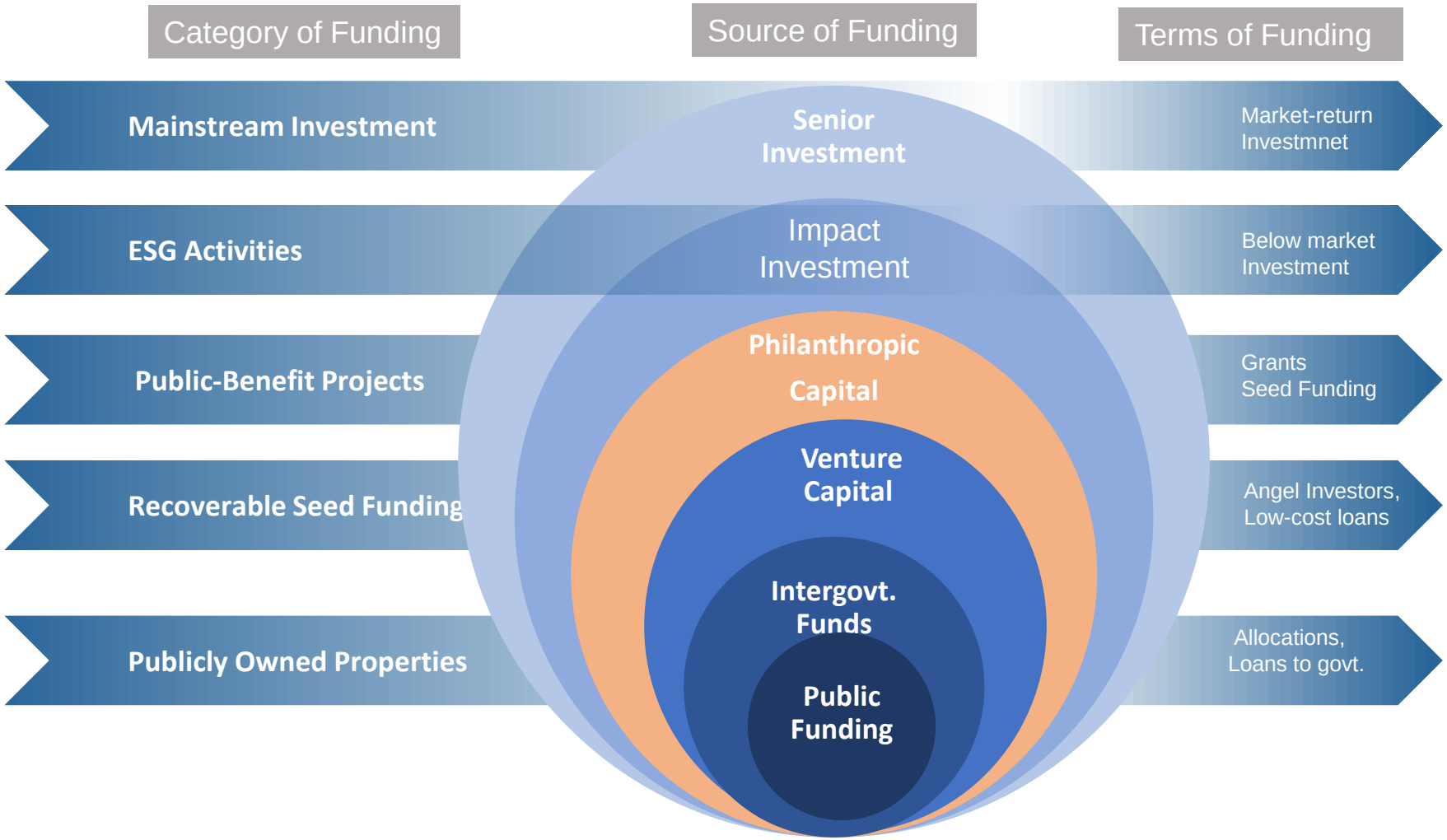
Risks and Mitigation

	Risk	Mitigation
01	**Public Policy** Stability of government decisions	Political capital, Greenlighting of approvals. Preapproved use and implementation plans.
02	**Repayment** Market failure, default	Risk reserve. Thorough market analysis. Recourse provisions.
03	**Environmental** Catastrophic disruptions, Green bldg. compliance	Thorough impact assessment, site testing, carbon guidelines prior to implementation.
04	**Innovation** The "known unknowns" about a new king of project	Onboarding of community voices and possible sources of opposition. Review of comparable examples elsewhere.
05	**Timing** Meeting investor payment milestones	All permissions in place, contractor penalties, government "open window" for status review. Debt repayment cushion.
06	**Implementation** Failure in project completion, budget, scope	Thorough independent professional review. Contingency allowance for unforeseen conditions. Option to assume project management.
07	**Concentration** **Proportion of capital in project.**	Pooled capital to spread risk. Balancing risk in portfolio.

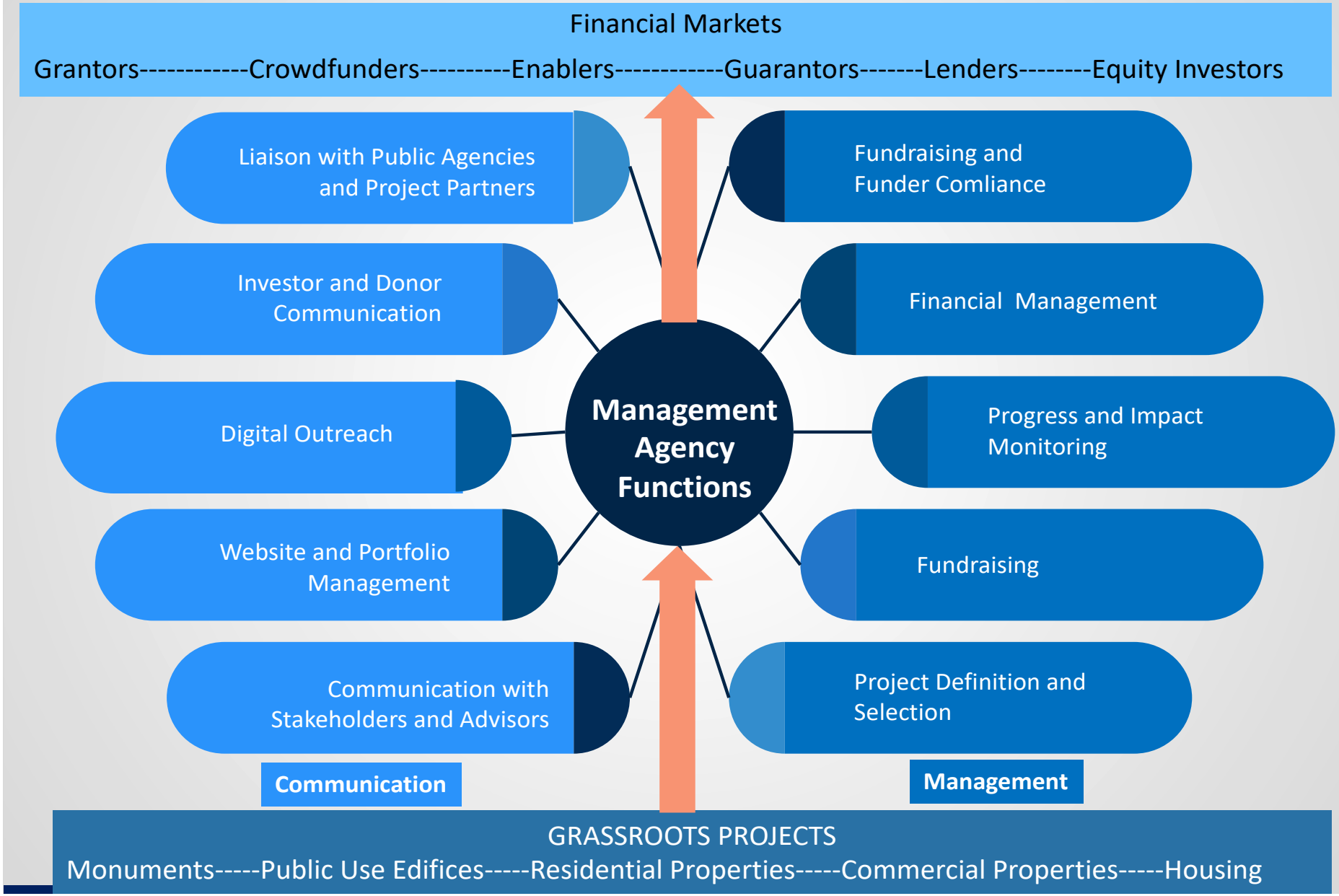
PILLARS OF COORDINATION



Capital Pool



Model for Managing Project Development and Financing



Ingredients of Success

- Political Will
- Charismatic Leadership
- Risk Mitigation and Incentives
- Capable and empowered local partners
- Transparent and effective management structure