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Collaborative Decision-Making Processes for Cultural Heritage Enhancement: The Play ReCH Platform

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Abstract

These days, cultural heritage is one of the topics at the center of the urban sustainability agenda. Current economic and urbanization trends place significant pressure on urban resources, systems, and infrastructures and demand for novel approaches in governing, financing, and monitoring urban performances with particular attention to abandoned, unused, or underutilized cultural heritage, defined “waste heritage.” In this perspective, cities are laboratories where innovative and collaborative approaches can be tested, and culture-led processes can be implemented consistent with circular economy principles. In order to structure and activating collaborative decision-making processes for regeneration and adaptive transformation of cultural heritage, gamification assumes a central role. The chapter analyzes the interaction among gamification and collaborative decision-making processes relevant to support the enhancement of cultural heritage and describes the Play ReCH (Reuse Cultural Heritage) platform, winner of the 2019 Welfare Che Impresa call, activated with the purpose to promote a cultural creative enterprise and include cooperation and innovation in cultural heritage regeneration processes. Play ReCH allows rethinking the management model of cultural heritage reuse through gamification processes in combining technology and reality, involving city users within creative processes.

Keywords: cultural and creative enterprises, intellectual property, co-evaluation, gamification, cultural heritage

1. Introduction

In 2016, the 2030 Agenda for Sustainable Development [1], at the 11th point, defines cities as centers for new ideas, commerce, culture, science, productivity, and social development, inviting to strengthen efforts to protect and safeguard cultural and natural heritage in order to build sustainable cities and communities. In Europe, some disadvantaged areas, despite criticism, offer fertile ground for developing new cultural approaches for learning and sharing instruments to face some relevant conflicts related to unemployment, industrial abandoned areas, deprived historical centers, different interests of the public and private,

and inclusion of foreign citizens. To counter these kinds of conflicts, the creative cultural enterprise [2, 3], with its multidisciplinary nature is considered a key actor for attracting and implementing a new workforce and innovative forms of experimentation on multicultural identities, knowledge economies, and innovative territorial services. Indeed, creative capital could be able to optimize local cultural resources for rebuilding relationships among communities, values, and places [4–7] in a productive way, thereby enhancing culture-led urban regeneration processes locally embedded [8, 9]. Within this processes, especially the reuse of cultural heritage [10] is strictly linked to new forms of welfare that consider the proximity of services, activities, and places [11] such as a new model of social, territorial development.

In this perspective, cities become laboratories where to test innovative and culture-led approaches, in which cultural factors are catalysts in the production and regeneration processes, and where particular attention can be dedicated to “waste heritage,” considered as abandoned, unused, or underutilized heritage that needs new approaches and models for use and management. Indeed, culture as an engine for urban economic growth has become part of the new orthodoxy with which cities try to improve their competitive position by aiming for greater attractiveness in close correlation with their identity. A sustainable, regenerative development model for cultural heritage can, therefore, be achieved by introducing culture as a strategic investment sector. At the same time, there is a need to activate and promote processes capable of enhancing cultural heritage by making use of approaches and tools that include innovation and cooperation as essential components. In this context, collaborative decision-making processes that consider multi-methodological approaches and are based on the methods proper to gamification represent an interesting opportunity to make these components operational. New decision-making contexts are emerging, capable of generating different forms of value, which include not only economic values but also intrinsic, social, and shared values. Identify and assess “complex shared social values” [12, 13] also mean to explore the cultural demand and the creative production, in order to adopt new decision-making tools and new economic actors, recognizing the crucial role of cultural and creative enterprises.

In this perspective, our key research questions are how building a creative cultural enterprise for cultural heritage enhancement able to implement innovative evaluation and management models in terms of business value proposition [14]? How can gamification improve collaborative decision-making processes for the enhancement of cultural heritage?

Taking into account our research questions, the contribution was structured as follows: an introduction to cultural demand and creative production, where evaluation and monitoring frameworks are analyzed (Section 1.2); a presentation of legal framework for the intellectual property strictly linked to cultural and creative enterprises and their original creative content (Section 1.2); the description of the methodological approach based on collaborative decision-making processes and gamification for cultural heritage enhancement (Section 2), considering two sections (Sections 2.1 and 2.2), respectively, related to complex social shared values in a co-evaluation approach and a game-thinking-centered approach for cultural creative enterprises; the results about the articulation of Play ReCH platform experiment conceived as innovative model of cultural creative enterprise, where the methodological approach proposal was tested (Section 3), articulated in two sections, the first that concerns the description of the Play ReCH platform, and the second, the activation of a new model of cultural creative enterprise for cultural heritage enhancement; and the last section is dedicated to the discussion and conclusions on the whole process (Section 4).

1.1 Cultural demand and creative production: evaluation and monitoring frameworks

In the last decades, the “demand of culture” has grown, and the cultural heritage is seen as a territorial system of complex values [5], goods, services, and relationships, which become part of the local identity, through art, history and landscape, and immaterial culture as food and wine, crafts, and traditions [15].

In different contexts, there is a need to build new common identities [16, 17], generating a closer relationship between the third sector, public administration, private actors, and citizens toward the definition and implementation of innovative urban policies [18], in which cultural heritage plays a key role [10, 13].

Indeed, the new European economic strategy, from the “Lisbon Strategy” to the “Horizon 2020” programs and their future developments, aims to achieve three main shared objectives: smart growth, sustainable growth, and inclusive growth. Within these three objectives, culture becomes a strategic priority [19], and it is also recognized the key role of cultural and creative enterprises [20–24] able to generate new knowledge and culture through creativity, skills, and talent, building new forms of wealth and jobs and transforming some critical issues into opportunities. Such forms of enterprise produce goods, services, and assets that are recognized not only for their economic value [25] but also and above all because of their intrinsic value [26], and for their capacity to activate value chains [27]. Most cultural enterprises are supported by public funds and produce cultural goods for use (e.g., museums, archives, etc.) [28], while creative enterprises are supported by the market and produce goods (e.g., design products, architecture, and fashion) for consumption. In Italy, the definition of cultural and creative enterprises [23] is particularly related to the historical-architectural and artistic heritage, to entertainment, music, and contemporary arts. At the same time, information and communications are taken into account, integrating ICT in the production of cultural services and goods.

The common characteristic of the different definitions and models of enterprise is the ability to create shared value [29] functional to a company’s competitive position. Shared value optimizes and uses specific resources and skills to build economic value through the creation of social value, not only generating employment opportunities but also building process and product innovation [11] through new models of shared responsibility: from Corporate Social Responsibility and Community Social Responsibility to Territorial Social Responsibility [30] for building complex shared social values [12, 13, 26].

The ability to build complex shared social values demonstrates the role of culture in implementing sustainable development as also analyzed by UNESCO Global Report on Culture for Sustainable Urban Development [31].

At the global level already in 2009, UNESCO developed “The 2009 UNESCO Framework for Cultural Statistics (FCS)” as a tool to measure the social and economic dimensions of the cultural phenomenon through a “culture cycle model” [32] of creation, production, dissemination, transmission, and consumption. This framework defines “culture” as a set of distinctive spiritual, material, emotional, intellectual, and emotional characteristics of a social group or society that include value systems, ways of life, traditions, and beliefs [32].

Subsequently, UNESCO also developed the “Culture for Development Indicators (CDIS)” project, which proposes a new methodology to demonstrate the role of culture as a driver of sustainable development processes, based on empirical data [33]. This project is based on the “Convention on the Protection and Promotion of the Diversity of Cultural Expressions” [25], which implements the integration of culture and the promotion of the diversity of cultural expressions in development policies at all levels. The CDIS project addresses culture in terms of values

and norms that guide human action and not only as a productive or leisure sector. The CDIS project aim is assessing the multidimensional role of culture in sustainable development, so it encourages an inclusive view of culture's interactions in development by exploring not only economic benefits but also intangible benefits such as inclusion, tolerance, and social cohesion. In particular, the seven key policy dimensions examined by the CDIS methodology are (1) Economy, (2) Education, (3) Governance, (4) Social participation, (5) Gender equality, (6) Communication, and (7) Heritage. Some examples of core indicators are presented in **Table 1** and are useful to understand the different ways for describing and assessing cultural activities and processes.

At the same time, at the European level, the ESSnet-Culture framework [34] is being developed to help EU countries in building their specific cultural framework by identifying the different areas covered by cultural statistics. Each country adopts UNESCO FCS definitions of cultural domains, and this allows international comparability of countries' data (**Figure 1**).

The ESSnet update for European cultural statistics—previously defined in 2000 by the LEG-Culture framework—is the first step toward a common framework useful for the production of comparable European data on different culture-related topics [35]. The ESSnet-Culture structure is based on three key concepts: cultural domain, function, and dimension.

There are 10 cultural domains, and they consist in a set of cultural activities, practices, and products focused on artistic expressions: Heritage; Archives; Libraries; Book and Press; Visuals Arts; Performing Arts; Audiovisual and Multimedia; Architecture; Advertising; and Art crafts. The six functions identified concern a mapping of the main cultural activities identifiable with existing statistical and economic classifications: creation, as the elaboration of original cultural content and ideas; production/publishing, as a part of the economic cycle of the creative idea inserted in the production as original content (cultural product or service) that becomes reproducible also for other users through advertising; dissemination/trade, which makes the product/service available online and offline to consumers; preservation, a phase that includes both activities to protect and restore cultural heritage and digitalization; education, as the transfer of skills and abilities within cultural activities; and management/regulation, intended as a set of activities able to create an enabling environment for operators, spaces, and cultural services [34]. Finally, the third key concept for the ESSnet framework concerns dimensions, intended as approaches closely linked to cultural activities, such as social practices and participation, employment, and consumption.

A further crucial definition introduced by this European framework is the concept of cultural activity as an activity based on cultural values and/or artistic expressions, including both market-oriented and noncommercial activities. Such activities may be carried out by individuals, companies, organizations, groups, or professionals within a specific cultural field and according to the function necessary for its realization. Furthermore, within the definition, the framework introduces statistical classifications, mainly economic NACE Rev.2 [36] for the production of data and the measurement of these activities through NACE codes representing the cultural production sector. At the national accounting level, there is also a differentiation between market and nonmarket sectors.

Another European study that has become crucial for the connection of cultural sectors to urban development is the “Cultural and Creative Cities Monitor” [37], which aims to assess and monitor the performance of European “cultural and creative cities” in terms of jobs and economic growth. The tool is based on 29 indicators organized in nine dimensions, reflecting three key dimensions of cultural and creative cities (Cultural Vibrancy, Creative Economy, and Enabling

Key policy dimensions	Indicators	Unit of measure
1. Economy	1.1 Contribution of cultural activities to GDP	Percentage of the contribution of private and formal cultural activities to Gross Domestic Product
	1.2 Cultural employment	Percentage of persons engaged in cultural occupations within the total employed population
	1.3 Household expenditures on culture	Percentage of household final consumption expenditures on cultural activities, goods, and services
2. Education	2.1 Inclusive education	Index of average years of schooling of the population between the ages of 17 and 22, adjusted to reflect inequalities
	2.2 Multilingual education	Percentage of instructional hours dedicated to promoting multilingualism in relation to the total number of instructional hours dedicated to languages (Grades 7–8)
	2.3 Arts education	Percentage of instructional hours dedicated to arts education in relation to the total number of instructional hours (Grades 7–8)
	2.4 Professional training in the culture sector	Index of coherency and coverage of technical and vocational education and training (TVET) and tertiary education in the field of culture
3. Governance	3.1 Standard-setting framework for culture	Index of development of the standard-setting framework for the protection and promotion of culture, cultural rights, and cultural diversity
	3.2 Policy and institutional framework for culture	Index of development of the policy and institutional framework for the protection and promotion of culture, cultural rights, and cultural diversity
	3.3 Distribution of cultural infrastructures	Distribution of selected cultural infrastructures relative to the distribution of the country's population in administrative divisions immediately below state level
	3.4 Civil society participation in cultural governance	Index of the promotion of the participation of cultural professionals and minorities in the formulation and implementation of cultural policies, measures, and programs that concern them
4. Social participation	4.1 Participation in going-out cultural activities	Percentage of the population who have participated at least once in a going out cultural activity in the last 12 months
	4.2 Participation in identity-building cultural activities	Percentage of the population who have participated at least once in an identity-building cultural activity in the last 12 months
	4.3 Tolerance of other cultures	Degree of tolerance within society toward people from different cultural backgrounds
	4.4 Interpersonal trust	Degree of interpersonal trust
	4.5 Freedom of self-determination	Median score of perceived freedom of self-determination

Table 1.
Culture for development indicators (CDIS).

Environment) using comparable quantitative and qualitative data [38]. The 2017 edition covered the monitoring of 168 cities in 30 European countries.

At the same time, other studies are oriented to build a set of ad hoc indicators to measure the creativity of EU Member States such as the KEA European Affairs European Creativity Index (ECI) [39], which takes into account a number of factors

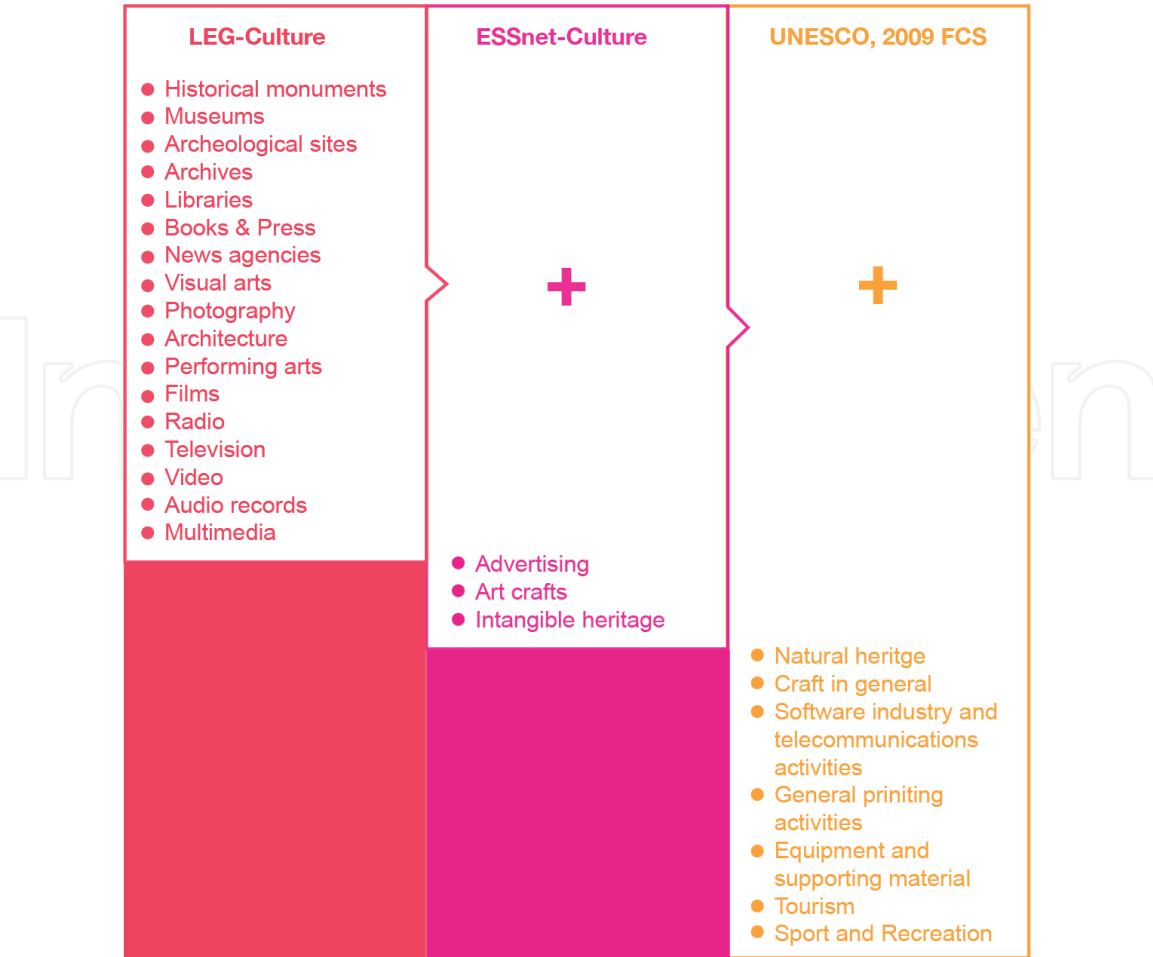


Figure 1.
Cultural domains covered by European and UNESCO frameworks for cultural statistics (source: [34]).

on the cultural dimension, often not included in the other indices, such as the study of art subjects in schools, cultural supply, participation in cultural events, financial support for creativity, and the role of technology. ECI is based on 32 indicators structured in six pillars: Pillar I—Human Capital; Pillar II—Openness and Diversity; Pillar III—Social Environment; Pillar IV—Technology; Pillar V—Institutional Environment; and Pillar VI—Products of Creativity (**Figure 2**).

In Italy, the main data sources on culture, creativity, participation, and cultural employment concern the following surveys:

- ISTAT survey *Aspects of everyday life* (annual frequency since 1993);
- ISTAT survey *Citizens and leisure* (regular frequency: 1995, 2000, 2006, and 2015);
- ISTAT *Culture and leisure survey* (regular frequency: 2017, 2018, and 2019); and
- Symbola Foundation and Unioncamere survey *I am culture—the Italy of quality and beauty defies the crisis* (annual frequency: 2017, 2018, and 2019).

In 2018, compared to 2017, cultural participation increased from 64.1 to 64.9%, with growth concentrated among those who claim to have participated in more than four events in the last 12 months (from 23.2 to 24.5%). In particular, the increase mainly concerns visitors in archeological sites and monuments and who have attended music concerts (not classical music) [40].

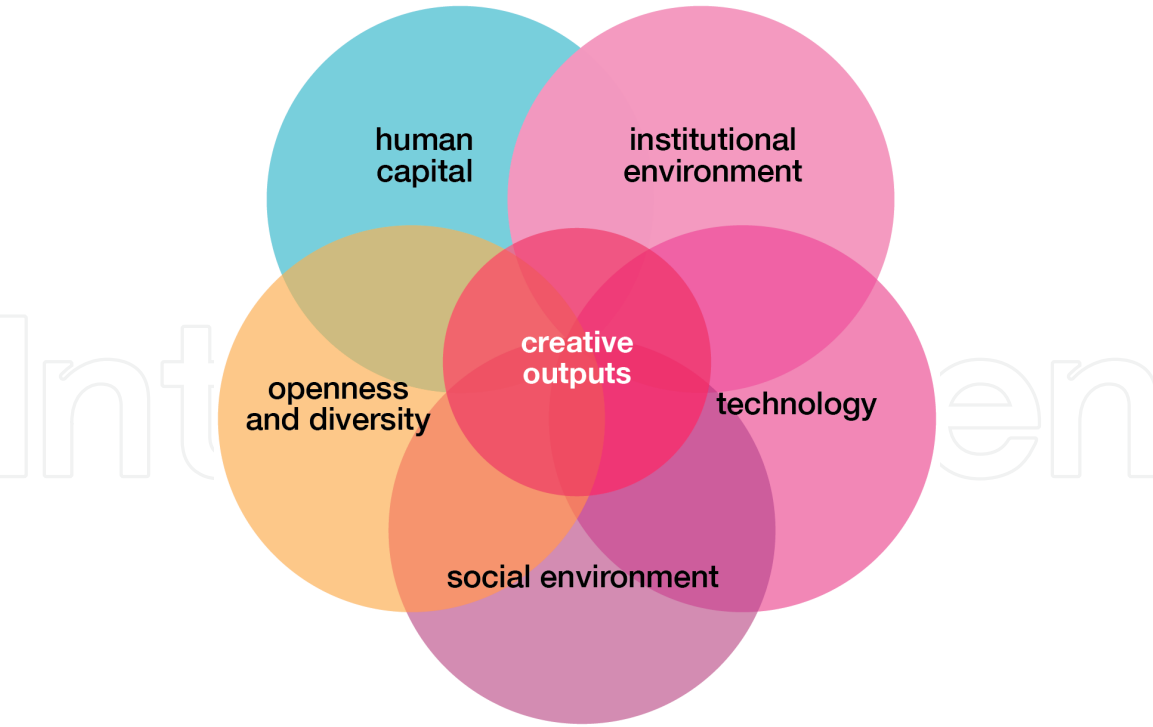


Figure 2.
The ECI six pillars (source: [39]).

Despite the European ESSnet framework, research at the national level on the types of indicators is still not exhaustive to frame the phenomenon, as shown by the culture and leisure survey whose indicators mainly concern: Cinema places; Number of museums, theaters, and cinemas; and Demand of museums, theaters, and cinemas (measured with the number of visitors to exhibitions and performances). On the other hand, already from the definition of the issue, it is clear that the analysis dimensions should be expanded: the cultural offer favors social contacts, develops new interpersonal networks, and offers leisure activities. Culture and leisure also include associations and sports centers [40].

In Unioncamere and Symbola’s research, a step forward in terms of measurement was made by dividing the cultural system into five macro domains, but analyzing the phenomenon mostly from an economic point of view: creative industries (architecture, communication, and design), cultural industries (cinema, publishing, videogames, software, music, and press), companies working with historical-artistic heritage (museums, libraries, archives, archeological sites, and historical monuments), those working with performing or visual arts and creative-driven companies, not directly related to the sector, but employing cultural professionals or using cultural heritage as input to increase the symbolic value of their products and their competitiveness [20].

In 2018, there was an increase in this type of companies, the sector counts 416,080, the number that accounts for 6.8% of the total Italian economic activities and produces a turnover of about 96 billion euros (4 billion more than in 2017). There are 289,792 companies directly linked to cultural and creative activities, of which 129,533 are creative industries, and 147,153 are cultural; the other creative-driven companies are closely linked to the “Made in Italy” sectors. Overall, the performance of the individual sub-sectors is the following: companies operating in the communication sector grew by 1.3%, those operating in the performing arts by 2.7%, those operating in the historical-artistic heritage by 4.9%, those in design by 2.1%, those in video games and software by 2.7%, and the only sector to show a negative result is publishing, which is down 2.0% compared to 2017 [20].

On the basis of this theoretical framework, it is clear that the Italian context needs to be declined within the complex dimensions and interrelationships that culture can trigger, generating social, economic, and environmental impacts and effects. A first attempt was made in 2010 by the Association for the Economy of Culture and Federculture, which have developed a synthetic index of creativity starting from the ECI reference [39], in order to draw the first atlas of Creative Italy. It is a first descriptive tool on the strong commitment to supporting youth creativity by the various Italian Municipalities [41].

From the above considerations, it highlights the need of defining a framework of dimensions, criteria, and indicators able to measure, monitor, and evaluate successful practices from a sustainability point of view (social, economic, and environmental), taking into account the multidimensional approach that cultural activities and cultural heritage need and express.

1.2 The key role of intellectual property for cultural creative enterprises

According to the Baumann definition of a company, we are living “totally liquid” with continuous transformations that affect every process and tool, changing our perception of reality [42]. Digital natives have a different perception of the world around them and inevitably perceive it according to the mechanisms of digital transformation. The concept of “material” has also changed: it is perceived differently by people who obtain information, data, images, and videos immediately with different multimedia tools. The contents today are available instantly, in different formats and usable by various devices, in the metro, at the supermarket or in a bank. We are active spectators of what Rifkin [43] called “Age of Access,” which entails a profound transformation of our society and experiencing the relationships between us and with products. Moving with a playful dimension on the web does not lead the legislator to consider any activity lawful and to ignore the legal implications of the online circulation of materials. The user asks whether it is always lawful to share and use files, images, programs, contents, and texts found on the Internet with author copyright and what are the strategies offered by technology in protecting the intellectual property and economic exploitation of a creative idea.

Copyright refers to the legal institution that protects the product/service of intellectual activity by recognizing a series of rights (moral and property nature) to the original author of the idea. The exercise of these rights by the author allows him to remunerate himself for a limited period through the commercial exploitation of the work. Copyright was born with the creation of the idea.

The author of the business idea automatically has the exclusive right to use it, and he can authorize or refuse its reproduction, distribution, execution, or representation. The lack of authorization and explicit consent by the author does not allow the potential user to hold and disseminate the work, even if it is present on the network. When the copyright is violated, there are some penalties, both criminal and civil, depending on the type of violation committed.

Copyright, with the emergence of the combination between digital technologies and internet, has lost the territorial dimension; in a globalized world in which physical distances between states and geographical and economic obstacles are reduced, a circulation of business ideas is very fast. Texts, images, videos, and audio tracks are made public freely and, above all, without any kind of intermediation.

This rapid data circulation makes copyright protection more complicated and has weakened enforcement actions to detect infringements. Copyright was born in England in the sixteenth century [44], thanks to the spread of the first automatic printing machines. The copyright was intended as the publisher’s right and not as a recognized right of the author. The crisis of the traditional copyright model, no

longer able to protect the authors' needs thanks to the information shared online, has implemented the creation of new web solutions allowing authors more direct protection of their products or services.

This type of model is the "guarantee threshold" in which the author communicates in advance the economic amount necessary to carry out the work. This economic amount will be the threshold.

Only when the total of the guarantees collected reaches the established threshold, the intermediary will enter into a contract with the author of the work in which the accumulated guarantees will participate. With the total amount of money to carry out the work, each subscriber of the guarantee has to pay for the guarantee and after the intermediary will advance a part to the author, as written within the contract.

When the work is completed and made available not only to the subscribers of the threshold but also to people who have not signed the guarantee, the intermediary will pay the remaining amount due to the author.

In Italy, the legal system recognizes copyright and the creation of an intellectual work thanks to creativity; the rights belong exclusively to the author. The web has made it necessary to adapt copyright protection to meet new requirements. The network becomes the place to search these creative works when the user decides to use products/services, and he becomes a communication tool and not a "mass point." New transnational regulatory sources are added to the Italian law by defining a regulatory system articulated on three levels: International treaties, specifically the Berne Convention for the Protection of Literary and Artistic Works, and the two WIPO Copyright Treaty (WCT) and the WIPO Performances and Phonograms Treaty (WPPT) of 1996.

Thanks to the signing of the Berne Convention, the ratifying countries have committed the creation of a unique discipline for the copyright and, by virtue of the principle of assimilation of Art. 5, the original works from ratifying country must enjoy in the other countries the same treatment guaranteed by national law to their citizens, in addition to the minimum ones provided by the Convention. On January 1, 1995, the Agreement on Trade-Related Aspects of Intellectual Property Rights was adopted, attached now to the deed of establishment of the World Trade Organizations (WTO), ratified in Italy with the law of December 29, 1974, no. 747, and dedicated copyright and related rights.

The EU Directives and Regulations deserve particular mention, in particular the Directive 2001/29/EC of the European Parliament and of the Council of May 22, 2001 on the harmonization of copyright and related rights in the information society (implemented with Legislative Decree no. 68/2003), have multiplied and accelerated the technological development of communication vectors, from production to exploitation.

Furthermore, the recently approved directive by the European Parliament on digital copyright, which contains safeguards for freedom of expression, allows news creators and editors to negotiate the payment of fees with the giants of the web for the use of copyrighted content.

The open model tries to open everything that the copyright would have kept closed through the authorization, a priori, of the use of the work. The diffusion of the open model in the field of artistic works is ascribable to the Creative Commons model, which has allowed, in an intelligent way, the diffusion of licenses designed for all types of intellectual works. It was born thanks to some researchers from Cambridge and Massachusetts, supported by many intellectuals, located in 70 countries around the world, and Creative Commons is a noncorporate body profit. In Italy, Creative Commons is based in Turin, at the Naxa Center for Internet and Society at the Politecnico di Torino. The main objective of this project is to promote

a worldwide debate on the management of copyright and the dissemination of legal and technological tools that affirm a new model in the distribution of cultural products. Creative Commons [45] uses existing copyright to free creative works and disseminate them in a “certain rights reserved” regime, as opposed to the classic “all rights reserved” type. A challenge represented by an image in which the Creative Commons model appears as an intermediate model between the classic one (“all rights reserved”), typical of traditional copyright, and the “no reserved rights” model, typical of the integral public domain or a sort of “no-copyright.” Creative Commons licenses (“CC licenses”) consist in the granting by the licensor, free of charge, to the licensee for a period equal to the applicable copyright, of an authorization to perform, respecting conditions that vary depending on the license used, the reproduction, distribution, communication, and making available to the public. The main peculiarity of CC licenses consists in the fact that the licensor grants the licensee free of charge, for the entire duration of the applicable copyright (or for 30 years pursuant to Art. 1573 of the Civil Code, in the event that it is preferred to trace the Creative Commons Public Licenses CCPL in the case of leases) the authorization to perform, subject to conditions varying according to the specific CCPL used, some of the acts that the copyright rules reserve for the rights holder, including the reproduction, distribution, and communication to the public. Creative Commons licenses offer six different sections of copyright (“Attribution”). Cultural heritage, as defined by law, is the subject of public law and interest; to be usable by the community, they meet copyright and property rights, in which there is the right of the respective owners to the availability and even economic use of these goods, mostly intellectual works, by the collectives for cultural purposes or third parties for profit or profit. The relationship between cultural heritage and the copyright is set by the code, which explicitly saves the discipline of copyright, thus sanctioning a sort of double track between the private and individualistic protection of intellectual works and the protection of cultural assets, responding to a collective interest.

Subsequently, the regime evolved and the notions, as mentioned, partly overlapped. Indeed, there is a legislative evolution that starts from the 1939 law on cultural heritage, which excluded “works by authors living or whose execution does not go back more than fifty years.” We can, therefore, say that without the explicit consent of the author, it is possible to prohibit their use by third parties. We speak, in fact, of copyright as authorship and possession of essential rights that allow not only to dispose of the product as you see fit but also the possibility of exploiting it for your economic gain. An exception is represented by “fair use,” which becomes a possibility for third parties to use a work without requiring prior and explicit consent from the owner.

The lawful use of creative work and its enhancement through gamification, in order not to incur infringements of copyright, in addition to the prior consent of the author, must exclude that the use is only for commercial and profit. However, there are some critical issues relating to the absence of a common regulation for all the States that avoid the reproduction of different applications and situations based on the legislative system considered.

2. Materials and methods: collaborative decision-making processes and gamification for cultural heritage enhancement

2.1 Complex social shared values in co-evaluation approach

The Faro Convention [46] explains two particularly significant concepts on the value of cultural heritage for society: cultural heritage and economic activity,

related to the need to involve every individual in the ongoing process of defining and managing cultural heritage, and the need to raise awareness of the economic potential of cultural heritage itself. Hybrid entities [47] called to produce economic value for cultural heritage, need to build heritage communities around it through collaborative social innovation processes that no longer respond to the ordinary structure of business projects.

Those organizations, which make relationality one of the drivers of their “doing business,” expand the social perimeter to the point of becoming a strategic asset capable of overcoming the dichotomy between economic and social dimensions, profit and nonprofit. They feed on sociality, relationships, social capital present in the territories and through their activity they regenerate and nourish it, so that it is the lifeblood of their entrepreneurship and that of the territory.

These organizational models are increasingly linked to the community and the territory as an essential engine of their actions characterized by systemic, collaborative, human-centered approaches. Indeed, the community and the territories become at the same time, the beneficiaries of the offer of social enterprises, and their co-producers [48]. Between profit and nonprofit, the new hybrid organizational models dialog with public and private, merging economic and social value into shared value [29], traditional enterprise and social enterprise, producing communities and connections [49] in real urban laboratories, where the value of gift and market, as the result of entrepreneurship and participation, are hybridized. For these organizations, the passage from a design vision to a procedural one, from the restitution of service to its co-production, from the spatial concession to the co-management of the heritage, from a generalist market to territorial strategies, requires an essential reflection on the ways of eliciting values [50], which are particularly significant when the “waste heritages” are at the center of the valorization process. With the terms “waste heritages,” we identify those abandoned or under-utilized urban places or buildings, the forgotten intangible cultural heritages, which in some way deny citizens the right to participate in the process of defining and managing heritage [46]. For these assets, whose value in the absence of a market cannot be assessed with traditional economic measures, evaluation techniques, and the articulation of the decision-making process plays a central role. The value of waste heritages can be interpreted as a set of complex values [5, 51] deriving from social interaction through the active involvement of informal and/or formal groups that cooperate with to restore or enhance value in use and value independent of use [52]. The evaluation that tries to keep together the individual and the social/community dimensions [53] has, therefore, the need to explore in-depth the Complex Social Value concept (CSV) [12], considering the different points of view, the complexity of the process in terms of contexts, resources, approaches, scales, stakeholders, and the coexistence of tangible and intangible values, intrinsic and economic at the same time, connected to heritage and community, to heritage and its potential use.

In order to identify and assess the different values that characterize waste heritage, the Collaborative Decision-Making (CDM) processes [54, 55] can be considered as the suitable context where it is possible to involve community members and share knowledge about the decisions to be made and together agree on the approach and decision-making principles to activate. Although the difficulties encountered by this type of process (cultural and linguistic differences, different preconceptions, incompatible political, and economic orientations) [55], there are considerable advantages in their implementation in complex processes. Collaborative decision-making processes succeed in bringing out and resolving conflicts, certainties, ambiguities characteristic of community-driven processes [54], combining the valuable contribution of all parties involved in a decision that,

through collaborative and creative thinking, in a team of heterogeneous expert and nonexpert evaluators, can provide innovative and shared choices strongly rooted in the needs of the local community. In the evaluation processes, the preferred solutions are those that fall within the field of public-private-social negotiation, allowing the interpreters of the processes to achieve the maximum benefits, thanks to win-win-win strategies, which reflect models typical of the circular economy [56–58]. The more the choice will be supported by a collaborative process, the more creative the alternatives will be and the higher the possibility that they will become operational, as they can manage conflicts and involve both “stakeholders (stakeholders) and asset-holders (resource bearers)” [59].

The real challenge, therefore, becomes that of succeeding in eliciting and evaluating, through deliberative techniques [60], complex social shared values related to cultural heritage. The objective for social enterprises is to demonstrate to produce economic value starting from intangible values, so that the latter can be a driving force in the valorization strategies and become decisive in the organizations’ and territories’ strategic choices.

In order to expand the internal dimension of new hybrid enterprises (change management, soft skills, labor productivity) and their external dimension (engagement/co-production, reputation, financing, negotiating power) [61], the measurement of impact through open innovation [62] processes is strategic. The theory of change expressed by the impact value chain [63, 64] represents a useful tool to produce and assess small changes in the short term that are reflected through existing systems and lead to significant long-term change and impacts [65] (**Figure 3**).

The impact value chain [66–68], following the definition of the inputs, that is, the tangible and intangible resources available to the organization, consists of two main phases. In the first one “performance measurement,” the activities and outputs (outcomes in terms of goods or services generated by the activities) are defined; in the second one “impact measurement,” the outcomes (medium-long term effects generated by the outputs) and the impact, defined as a long-term sustainable change in people’s conditions or the environment, are determined. At the European and global levels, there are currently several methodologies and tools for the measurement of outputs, outcomes, and social impact, which reconfigure the general structure according to its characteristics, territories, and communities of reference, identifying appropriate criteria and indicators [69].

Through this and other integrative tools, evaluation is not intended as a uniform metric but as a shared process built with and for the community [61, 70], like a participatory act that overturns the ordinary one-way evaluation paradigm,

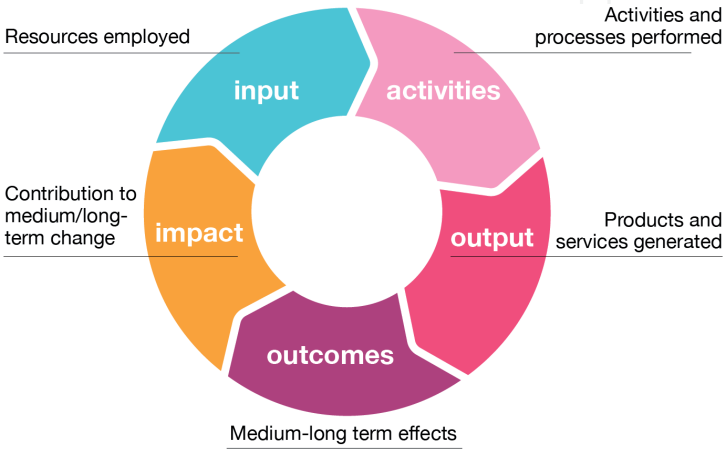


Figure 3.
Proposal for a new impact value chain (authors’ elaboration) (source: [66–68]).

integrating evaluators and stakeholders and different skills in the process. The co-evaluation, more widespread in the teaching fields [71], in these complex processes is thus outlined as a systemic application of the evaluation process [72] that concerns a common good, experimenting the ability to evaluate together, each with its own different skills, to reduce conflicts and bring out common benefits, a tool capable of including the stakeholder, better defined as an “asset-holder,” in the whole project process and at the same time evaluation.

By borrowing the application in the field of didactics, co-evaluation allows the user to learn from the activities of others, and developing the ability to discern between positive and negative aspects, to identify ways to improve, increase, and explore individual and collective opportunities, contributing to the user’s empowerment included in the process. The action, connected to the evaluation through the whys and how, goes beyond the individual expression of a judgment, rather encouraging cooperation and the genesis of relational values and shared preferences, associated with interpersonal relationships and relation articulated by political and social norms [73].

According to the above perspective, the approach of co-evaluation is particularly significant in order to configure the structures of hybrid enterprises internally and to measure the social and cultural impact generated in actions for enhancing all intangible and tangible forms of cultural heritage.

2.2 A game-thinking-centered approach for creative cultural enterprises

The frontier of possible languages to build multi-group decision-making processes has widened very often through game thinking [74], and it is particularly relevant to analyze its potential for cultural organizations that activate processes of heritage enhancement through the formation of heritage communities. Indeed, the behavioral dynamics translated from the world of gaming bring different benefits:

- they facilitate the engagement of users with the activities of the company;
- they broaden how values are disseminated to the related cultural heritage, as well as the target audience;
- they allow to increase productivity, relationships, and co-production of goods and services through multi-stakeholder co-evaluation processes, facilitating the recognition of objectives and values, weights and preferences in a transversal way; and
- they offer enormous potential for the promotion of active and responsible forms of citizenship, as well as the co-design process promotion [75].

It is relevant to highlight the substantial differences between some of the different possible techniques:

- gamification: it is configured as the use of video games mechanics and dynamics within nongaming contexts, to create engagement, loyalty, improving a process or solving a problem [76]. More simply, “it is the use of game design elements in non-gaming contexts” [77]. Thus, a series of schemes experimented in videogames are used to invite the user to perform specific actions, make choices, to reward him in an intrinsic (triggering emotions in it) or extrinsic (points, prizes, etc.) way;

- pontification: it is a subcategory of gamification [78] and uses a basic points/reward scheme to move the user from point A (personal sphere) to point B (company sphere of interest);
- serious games [79]: they are virtual environments designed to develop skills and competencies transferable to the real world [78]; and
- serious urban games: they are playful and organized offline practices that take place in urban environments with some kind of technological/digital support, which serve social and cultural purposes [75] and transform urban spaces into a sort of playful interface.

Recent successful experimentations, one of which is the “Father and Son” project by Fabio Viola, for the National Archeological Museum of Naples [80] have shown how the application of game design to the experiences of heritage enhancement can be particularly appropriate not only in terms of engagement and dissemination, but also in terms of the reputation of the organization. After 11 months since the launch of the game “Father and Son” on digital stores, 2 million downloads have been exceeded by an international audience with an average age of 30 years, of which less than 10% are Italian. More than 18,000 people from all over the world visited Naples and the Archeological Museum unlocking the additional content of “Father and Son,” and in general, the perception of Naples and the Museum, analyzing data from tens of thousands of reviews, has increased significantly thanks to the game. It should come as no surprise that, according to Google data for 2017, Naples is the most sought-after city on the search engine, while the MANN recorded for the first time in its history the goal of 500,000 visitors in 2017, with a growing trend [81].

From the virtual to the real dimension, from storytelling to storydoing [82], the world of the game offers new perspectives and ways of interaction to know, modify, evaluate, and influence people’s behavior through their active involvement in processes, in the cultural sector too. A game is a system of interesting choices [83] and highlights one of the fundamental aspects drawn from the logic of gaming: that of structured choices in front of which players are led to reflect on what they have done and whether the best choices have been made. Brice Morrison designs the architecture of structured choices starting from four main pillars [84], for which the choice must be conscious, that is, critical thinking; the bearer of consequences, with immediate or long-term impact; comparable, the choices have a more significant impact than those of other people according to a psychological principle called “social influence.” Finally, structured choices are permanent choices, that is, those that induce the user to consider a weight that cannot be erased, stimulating the search for the best possible solution [85].

In this way, the dynamics of the evaluation process find new conditions around which to structure itself and different times to implement, if we compare the ordinary timing of an evaluation process with those suggested by the game world, which has always accustomed the user to a constant and instantaneous evaluation [86]. Therefore, take into account the substantial difference between a game, designed to involve the user with his emotions, and real everyday life, which is often not structured with people’s emotional involvement in mind. To this end, the use of intrinsic logics and behavioral structures, mechanics (product framework generally associated with some actions that allow achieving business objectives), and dynamics (needs and desires, studied by behavioral psychology, which are rooted in people) deduced from the world of the game becomes particularly effective for organizations engaged, through the enhancement of tangible and intangible cultural heritage, to build communities through collaborative processes.

Starting from the outlined process, the research aims to build a methodological approach (**Figure 4**) for rethinking the social enterprises as a creative cultural enterprise engaged in the reuse and enhancement of cultural heritage, exploring the role that game thinking can assume for them.

By identifying the thought of the game as a toolbox with technical and psychological, mechanical, and dynamic tools extracted from the game world, we investigate how it can be considered functional to the development of hybrid enterprises that aim and overcome globalization through strong territoriality.

A field of action of these organizations is identified in the intersection between the territories and the communities, and more specifically between the cultural heritage, tangible and intangible, and the heritage communities that surround it. The circularity between these two dimensions defines a symbiotic relationship between people, places, and traditions thanks to the relationships. Social enterprises engaged in the cultural field cannot disregard the relational and social character; on the contrary, it is precisely the social impact that represents their positioning element. If a generic capital company interfaces strictly with the value and economic impact of its actions, the social enterprise, not only aimed at the product as much as at the processes, has to confront itself with the production and evaluation of complex values because its impact is not only economical but also, and above all, environmental, social, and cultural.

In this perspective, it is of crucial importance to rethink evaluation techniques that can take into account these complexities, social innovation in the participatory component, and multi-stakeholder approaches that characterize the production of the collaborative enterprise.

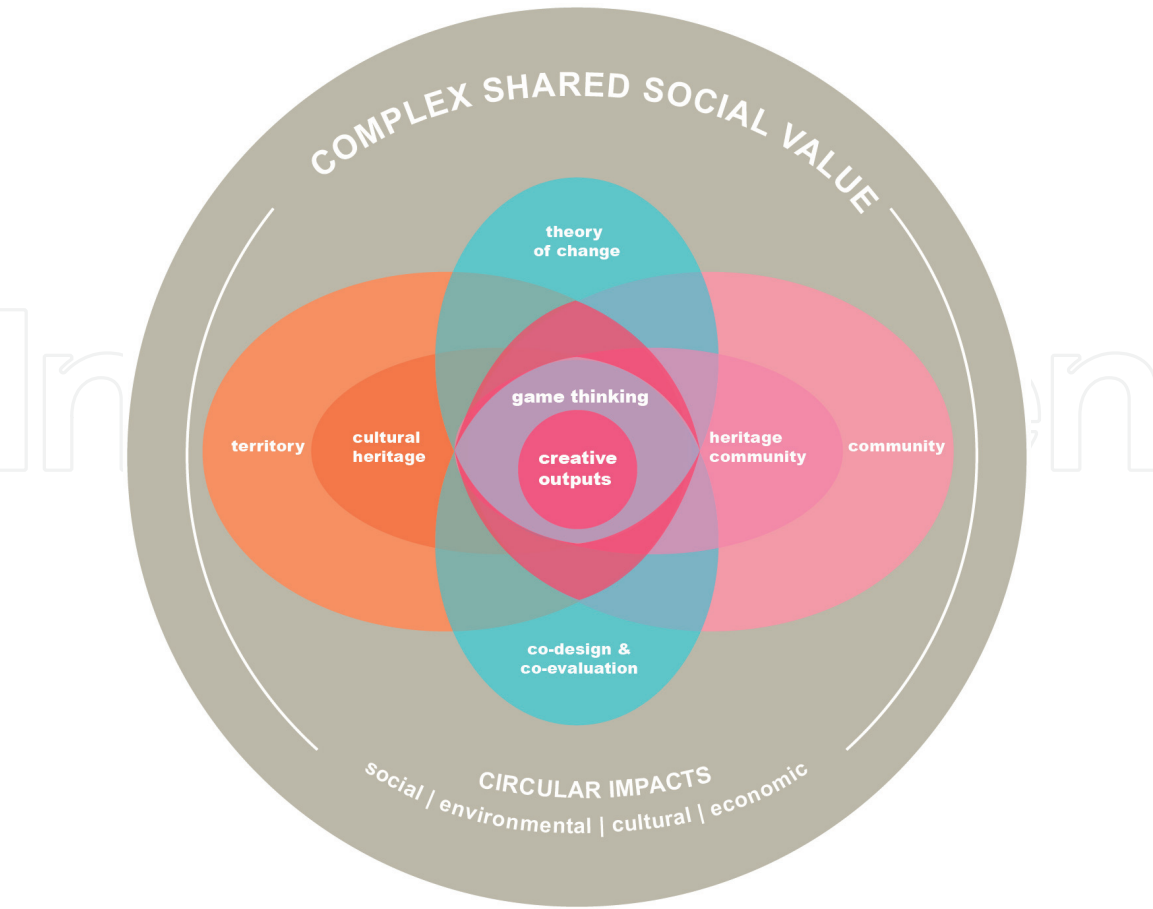


Figure 4.
A game-thinking-centered approach for creative cultural enterprises in the field of cultural heritage enhancement.

By co-evaluation, we mean a multi-group evaluation approach across the entire production process, in which everyone, with their skills, overcomes individual judgment to achieve common benefits by planning change together. To this end, the methodology of change theory expressed through the impact value chain is particularly significant for social enterprises. It is an approach to design and planning through a participatory process that allows the planning and evaluation of the change produced. The methodological approach thus defined places “game thinking” (**Figure 4**), with all its declensions, central in the internal and external development of the company, as it offers languages and behavioral structures in engagement, co-production, and social influence practices useful to polarize the field of action, through gamification, serious, and urban game. In social, cohesive, relational, and territorial enterprises, where processes and collaboration are the real challenges to change in value, the rules and languages transformed by the game world, by their human-centered nature, are significant to facilitate and simplify co-design and decision-making processes.

3. Results

3.1 The Play ReCH platform

The “San Sebastiano Monte dei Morti” Living Lab (SSMOLL) activated in 2018 from Blam in Salerno, in the South of Italy, through the adaptive reuse of the former sixteenth-century church abandoned for over 30 years, releases significant data about the perception of culture in the city of citizens.

Questionnaires and interviews carried out in the co-exploratory phase of the SSMOLL project claim that 43% of respondents expressed a lack of an integrated cultural offer and 75% dissatisfied with the quality of the offer and the poor communication; on the other hand, 90% see culture as the starting point for a process of urban regeneration.

Among the direct beneficiaries, based on the real experiences of SSMOLL, are schools and universities (5/year) with at least 25 students/month, artists and artisans (70/year), citizens (150/month), associations and foundations as partners already involved (20), with positive effects in economic terms and visibility. Indirect beneficiaries are the tourists involved in actions of “community tourism” and local authorities, facilitated by projects of cultural heritage valorization that include an expansion of the offer and a comprehensive communication campaign. The indicators for monitoring the project concern: subjective well-being (e.g., % satisfaction with leisure time), creative economy (e.g., number of people employed in cultural and creative work), cultural participation, and attractiveness (% satisfied population of cultural services in the city); social relations (e.g., % voluntary activity), social and civic participation.

From these premises, Play at Reuse of Cultural Heritage (Play ReCH) was born, a project of the social enterprise Blam, organization committed to the reuse and enhancement of cultural heritage, which promotes the idea of a game-thinking-centered hybrid enterprise.

The virtual platform, not yet made available to the public, offers, through a logic of gamification and pontification, cultural experiences of heritage enhancement structured on the model of serious urban games to connect, through social innovation processes, the virtual world with the real one thus transformed into a sort of playful interface. The main objective is to transform the citizen into the protagonist of his or her territory, leading him or her to face interactive cultural experiences transformed into “missions” able to break down the boredom found in the common standardized offer and to make the under-used heritage places more attractive and interactive.

Starting from the methodological approach, previously described, Play ReCH is configured both as a creative technological and as a real-life output.

The digital platform becomes the tool through which activating real actions, defined “missions”, to produce circular impacts on the territories eliciting and evaluating the complex social values shared by communities through collaborative decision-making processes. Within the Play ReCH value chain model, the Blam organization divides the actions into five macro phases (Figure 5): (1) create a heritage community, (2) explore the cultural heritage, (3) co-design the Play ReCH missions, (4) co-evaluate the Play ReCH missions, and (5) generate the circular impacts. Each of these steps corresponds to the actions required by the users, intended as co-producers of the value chain. Taking into account the described actions, the interactive technology platform is designed. The citizens become protagonists of their city and “human sensors” of urban problems related to the cultural heritage enhancement through the selection of experiences/missions.

1. “Create a heritage community”. To understand how people interact with their cities and cultural heritage, and therefore to customize the cultural offer on target users, the social enterprise needs to know it in depth. The social enterprise added value is ensuring that individual user-stakeholders enter into relationships with others, thus generating a relational community and a stakeholder-map. To achieve this goal, Play ReCH adopts some game rules in the moment of user registration, where in addition to building their profile with personal data, the citizen releases other sensitive data relating to their interests and their territory. By building his or her character through the use of avatars and other engage devices, the player turns into a real urban sensor within a storytelling process in which he or she becomes the protagonist and collaborates with a community of friends and strangers to reach the final goal: to solve the problems of contemporary cities and a disused or abandoned heritage.
2. “Co-explore the cultural heritage”. Starting from the methodological approach typical of living-lab to build collaborative processes based on the phases of

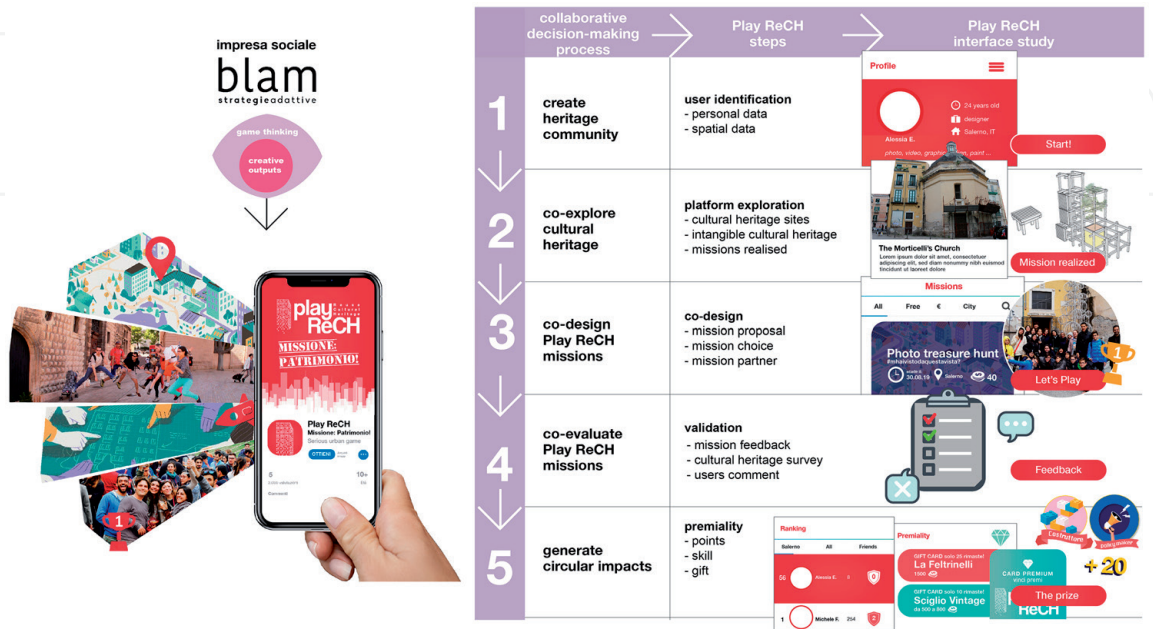


Figure 5.
The play ReCH (reuse cultural heritage) process.

co-explore, co-design, co-test/co-evaluate, Blam deeply analyzes the territories with communities, through collaborative processes. On the one hand, the Play ReCH platform leads the user during the registration phase to express his or her connection with the territory for establishing different starting perspectives; on the other hand, it stimulates the player to create deep links with the territory and with disused or under-utilized heritage. The co-exploration phase is therefore crucial, and it is expressed in the platform through the possibility of knowing the places interested by the single mission, or suggesting cultural heritage places in which the missions will be active. By choosing each site-specific mission, it is thus possible to view a digital showcase with a detailed description of the asset concerned, whose textual and photographic content can be produced collaboratively with experts in the sector, local realities, local associations, thematic social groups, owners or managers of the assets, and so on. The co-explore and community user profiling phase allow defining an input component useful to the value chain of the company's impact.

3. "Co-design Play ReCH missions". The experiences' design phase to enhance the cultural heritage, tangible and intangible, is the moment when the main goal of Play ReCH is synthesized into sub-goals, focused on specific places (in the case of site-specific missions, e.g., in a city, neighborhood, museum, etc.), or on specific experiences that can be replicated in different "clusters" of places (in the case of site-specific missions where the required actions can be carried out in all territories, e.g., in all museums, in a favorite cultural heritage place, etc.). The first type of mission becomes relevant as a connection between the enterprise and the communities in the territories where regenerative strategies are being carried out. The second type of activity, on the other hand, represents the moment when the enterprise becomes scalable, thanks to the technological infrastructure that finds a global level in which to bring out the strong territoriality of its strategies, as well as the realization of a network between people and places. In this framework, the co-design activities of the impact value chain have a key role within the collaborative decision-making process activated. The registered user can choose among the available "missions" in which activate the place or the skills required.

Each experience releases the following information: (1) definition of the problem of the single mission; (2) determination of the objective of the challenge to be faced and of the time limit for its realization; (3) regulation to be respected in order to reach the objective; (4) knowledge of the physical and theoretical context of what is faced in the mission (through digital material disseminated on the platform), in order to provide tools and information useful to increase the user's capabilities; (5) points and credits that can be acquired by reaching the objective; (6) possibility to invite friends to "play" together for collaborating as a team; and (7) skills to collect by facing the challenge. The skills, interpreted in the game as character medals or abilities, are the skills required by the player to participate in the mission, or those that can be acquired at the end of the experience, thus leveraging the users' "achievement" feature.

The registered user can also view the missions carried out so far geo-located on a shared mission map. For each experience, he/she can know the places involved in the game, the partners who have collaborated in the initiative, the users who have carried it out and the results obtained; the player can propose a mission by suggesting it on the platform through the completion of the seven fields previously identified. Moreover, it is possible to indicate places in the city where the player wants to intervene. In this way, the digital platform also

becomes a repository of the various voluntary data collected, encouraging the direct involvement of citizens and making them protagonists of the intervention choices.

The experiences' co-design can take place with the different actors of the city: from citizens, administrations, local organizations to the cultural actors of the territory (artists, associations, museums, foundations, galleries, etc.). In this way, the platform concretizes and shows the networking work that a social enterprise engaged in the construction of territorial strategies. The app and the website thus become open contexts for stakeholders who collaborate in the construction of the missions who promote their implementation and who come into contact with other realities on a national scale.

Storytelling and the variety of media needed to solve the challenges become fundamental to involve the citizen in a continuous role play.

4. "Co-evaluate Play ReCH missions". The mission performance in real life is crucial because of territories, and communities meet and create links in real life. The validation of the experiences carried out, according to the receipt of the award, becomes a critical issue both for the game and for the choice of evaluation methods. In order to co-evaluate personal experiences and their impact on the territory, Play ReCH requires the user to provide ex-ante and ex-post feedback on the acceptance of the challenge, to analyze the variation in knowledge of the places involved in the mission and the degree of satisfaction of the completed experience compared to the initial expectations placed in it. Besides, Blam favors users' ability to work together for defining creative solutions to urban problems. Therefore, the platform favors the possibility to comment, in a structured and constructive way, the actions carried out by the other players and to evaluate the comments received, in order to start virtuous debates and produce links between the participants. In this way, the registered player will be able to view the open profiles of other users and their content, and the missions carried out, the media produced, the points and skills acquired.

Co-evaluation assumes a strategic role in the impact value chain under construction, since it allows, through a basic set of criteria and indicators, to renew and assign weights in order to measure the outputs of the single experiences concluded, that is, the products and services generated by the activities, as well as, in the medium-long term, the outcomes produced by "clusters" of actions.

5. "Generate circular impacts". In order to contribute to building social, cultural, and economic networks and to generate circular impacts, Play ReCH activates gamification processes with related scores, skills, and awards. Through a premium fidelity card, the registered user can also accumulate credits necessary to win real prizes. Play ReCH cultural partners, in the "prizes" section of the digital platform, dedicate gifts and bonuses to premium players divided by credit bracket. The more expensive prizes, the higher the number of credits. The player can choose which rewards collect based on its score.

Play ReCH prefers the distribution of prizes useful to increase the player's capabilities: cultural experiences, museum access, workshop activities, training courses, eco-design products, and so on.

User-experience and engagement dynamics become fundamental in this game-thinking-based ecosystem structured as follows. Specifically, Play ReCH is built around the mechanics and dynamics of the game, using the techniques of gamification for the

construction of the platform and its sub-category “pontification” for the awarding of points, skills, prizes, etc.; the model of serious games for the realization of the mission purely online; and the structure of serious urban games for the missions’ design spread thanks to the platform.

Blam’s final goal is using Play ReCH data and considers reality as a playground in which building heritage communities that share structured regeneration strategies, for identifying new ways of evaluating the complex shared social values and the effects generated in the impact value chain.

The experiences are designed according to the serious game model used by Jane McGonigal in his “Evoke” experiment [87]:

- definition of the problem of the single mission;
- determination of the objective of the challenge to be faced;
- regulation to be followed to achieve the goal; and
- knowledge of the physical and theoretical context of what is faced in the mission, in order to provide tools and information useful to increase the user’s capabilities.

The mission, which takes the player to the real places of the territories, puts the user in contact both with a community of people and with places of cultural heritage probably never known before.

Experiences activated in Salerno demonstrated, during the day dedicated to a site-specific mission that involved a city museum with an average number of daily users equal to 10, how the flow of visitors increased up to 60 in a single afternoon.

The mission validation, through feedback from the player, triggers the assignment of the score and then the repositioning in an overall ranking where you can compare with all other users or join the team with them. The score also increases according to the ability to share one’s experiences and comment constructively on other users’ contributions, thus encouraging the citizen not only to achieve results by producing creative answers to the problems of contemporary cities but also to collaborate in order to identify possible shared solutions. The construction of relationships and sociality is rewarding values compared to the quality of individual proposals [88].

Indeed, communities are involved through gamification as an online and offline co-production process for the creation of cultural and creative services coming from the bonds generated in the network.

The Play ReCH players can always be informed and become co-producers of a specific action to enhance heritage by taking part or proposing new experiences, in the logic of healthy competitiveness that stimulates collaboration and innovation. The data collection of the players and their actions helps the continuous re-definition of the value proposition of this social enterprise.

Through a premium subscription, which it is possible to access through the purchase of a fidelity card, the player accumulates credits and access prizes made available by cultural partners. The aim is to provide real rewards aimed at increasing players’ capabilities, in terms of training, experience, and creativity.

Play ReCH is configured as the technological infrastructure of the project. Based on integration and interactivity criteria, it is a concrete support tool for the digital strategy. The web/mobile platform will be developed in-house with Open Source technologies to ensure full management autonomy in the long term. It will contain valuable Call to Action, Gamification, Geolocation, and Data Collection modules

to guide the project strategies. An E-Commerce section will be dedicated to the purchase of cards and premium activities. It will integrate fb + ig social platforms for mass sharing, participation in gaming mechanisms, and social marketing operations to amplify engagement.

In this way, the enhancement of heritage becomes not only conservation and transmission of cultural heritage to future generations but also a continuous experience of re-discovery and re-writing by experts and non-experts, in a dynamic participatory process called to constantly elicit and co-evaluate emerging complex values. Play ReCH thus aligns itself with the 2005 Faro Convention, which establishes how cultural participation has a significant impact on people's quality of life.

3.2 Toward a new model of creative cultural enterprise for cultural heritage enhancement

One of the primary purposes of Play ReCH is to implement an integrated cultural offer and accelerate the spread of virtuous behavior in the reuse and enhancement of cultural heritage, generating new jobs in the creative field and forming an active, creative community. Belonging to a membership that gives access to dedicated services helps to strengthen the territorial identity and generate the empowerment. At the same time, the promotion of cultural and creative services supports local actors and improves the degree of user satisfaction with the existing cultural offer.

If in the short term it is possible to evaluate an immediate increase in the number of visitors, an increase in the monetization of the cultural heritage, and a more widespread recognition of the goods affected by the experiences, in the medium to long term, it is possible to see how the degree of involvement in the consumption of cultural experiences allows to strengthen the link with the territory, produce greater social cohesion, and contribute to the reduction of cultural poverty.

MarketsandMarkets is showing a significant growth trend for the use of applications, platforms, and methodologies based on the logic of the game, going from a turnover of 1.65 billion in 2015 to over 11 billion dollars in 2020. Virtual reality and game thinking, in general, are now closely connected to the business, able to consolidate business relationships with existing customers and create new ones with those not yet loyal. The #PlayOriginal campaign launched by Original Marines in 2015, which stimulated customers to face offline and online missions at the stores in order to earn bonuses and awards, in just 4 months has recorded 300,000 visits to the site, 30,000 subscribers of which 85% from the web and 15% from stores, 10,000 photos received to participate in the missions, 10 million impressions of the campaigns, and more than 2000 sales generated in stores thanks to the contest [89].

In the field of cultural heritage, the application of game design mechanics and dynamics is still not very widespread. It is still considered by organizations that see its potential only in experiences intended as an output of the organizations themselves, as concluded packages that emerge with a discontinuous offer (on commission) and with a little interactive technology (web site and social page). In 2015, the experience of CriticalCity Upload also ended, an Italian non-profit organization, which in 4 years has promoted experiences of urban creative transformation and civic activism based on fun theory, co-designed or totally proposed by users through an interactive web platform where it was possible to propose missions, take part, accumulate points and climb the ranking.

Since 2011, thanks to the support of foundations and cooperatives, 1092 hours of game days have been accumulated, 21,064 missions carried out in Italy and around the world, reaching 13,901 international players.

From the analysis of competitors, Play ReCH Blam supports the idea of a hybrid social enterprise that integrates profit and non-profit to provide a continuous cultural offer thanks to an interactive technology platform/app.

To this end, a freemium B2B and B2C business model is structured. The core of the BM is represented by the potential franchising of the platform, which is the possibility to resell it to entities (municipalities, regions, schools, etc.) in order to create geographically divided substructures capable of disseminating site-specific missions for their territories: on one hand, if this guarantees the promotion and an unprecedented involvement of their tangible and intangible cultural heritage, and on the other hand, it guarantees loyalty from players, local or not, who intercede with it in order to overcome missions and earn points, learning and promoting solutions to their critical issues. Other interlocutors of B2B Play ReCH, with whom the player can co-design site-specific missions, are as follows:

- the cultural organizations in the area (museums, churches, archeological parks, etc.);
- cultural associations and creative people who can find in the platform a national showcase for their activities, and in Blam a team of experts to co-design cultural experiences with a high degree of involvement; and
- the commercial actors of the territories, which are part of the cultural missions with locations, products, and corporate mission.

Added to these are the Play ReCH cultural partners, who are those guarantee user rewards on a national scale (chains of bookshops, publishing houses, newspapers, training centers, etc.), and the other urban game designers, for whom Play ReCH becomes a marketplace with a commission percentage.

Through online/offline gamification tools, it is ensured that the process of knowledge and enjoyment of cultural heritage is able to generate regeneration “experiences” based on sustainability, equity, and protection of creative expressions. Considering the high unemployment rate in Italy between 15 and 34 years old (17.8% on a national scale and 16.2% in the South, with a figure almost double the national average, according to ISTAT data as at December 12, 2019) and more specifically the unemployment rate among artists and creative people in general (26.8% for those under 30 and 36.3% between 31 and 40 years old, according to Inps 2017 data), we want to overcome the gap with the use of the web as a multiplier of projects, capable of generating new forms of collaboration and training. An expected number of new employees in the social enterprise (among partners, working partners, and collaborators) of 6 is expected, where 5 are women from Campania, all under 35 of which 3 NEETs. It is hypothesized that, starting from these opportunities for contract work or consultancy, the project will be able to build new jobs in the cultural and creative field for actors and users involved.

The user-centric enterprise formulated in this way expands the rigid perimeter of the canonical closed and polarizing for-profit organizations concerning the urban and social context, considerably reducing its index of centrality to open up to the relational dimension in which, more than the top of relationships, it becomes the producer of polycentric relationships. The user is no longer just a stakeholder of interest, but an asset-holder of resources [47], co-producer of content, and co-evaluator of impacts. The ReCH players can always be informed and become co-producers of a specific action to enhance heritage by taking part or proposing new experiences, in the logic of healthy competitiveness that stimulates collaboration

and innovation. The data collection of the players and their actions helps the continuous re-definition of the value proposition of this social enterprise.

Personal user registration, continuous feedback, choices, and proposals allow Blam to have a dynamic and continuously updated pool of information to better understand the relationship between citizens and their heritage and reformulate the offer in real time. With Play ReCH, citizens become urban sensors that bring and produce value.

4. Discussion and conclusions

The Country Brand Index 2018 highlights that Italy is the first country in the world in terms of cultural influence. In the same year, the Federculture statistics include Italy among the worst in the world in terms of cultural heritage valorization. This paradox emerges in the 2018 European Year of Cultural Heritage, on the real opportunities for reuse and enhancement of Italian Heritage, if it is true that all museums, monuments, and national archeological sites bill in a year as much as one French museum, the Louvre [90].

All these translate into two main critical factors: the loss of earnings for owners and managers of a vast under-utilized asset on the one hand, and the continuing growth of educational poverty in Italy on the other hand.

The Play ReCH web-platform, winner of the 2019 Welfare Che Impresa call, can be the tool for rethinking the management model of cultural heritage reuse through gamification processes in combining technology and reality, involving city users within creative processes co-designed with different local actors.

The experience on the Play ReCH platform starts with profiling to become part of the community, releasing at the same time necessary information to customize the offer. Starting from an overall macro-mission that from the beginning puts the user in front of a global challenge, different issues related to the cultural, social, economic, and environmental crisis of the territories, expressed in daily missions, site-specific experiences, or generically addressed throughout the country, are declined. Each mission has a precise time to be accomplished, releasing skills based on the skills to be put into play or to be acquired with the specific experience, and points useful to climb positions in a general ranking.

The networking of community-actors-places accelerates the production of regenerative actions, thus transforming fragile urban heritage into catalysts of new energies. Indeed, by purchasing the Play ReCH card, the various players, members of the network, access the dedicated services, accumulate the points and receive the prizes, participating in creative cultural experiences useful for enhancing the cultural heritage and implementing the urban regeneration processes.

The project aims to respond to the social need of culture as welfare demand, identifying young people and cultural heritage, disused or under-used, as crucial resources for triggering new projects. Through the online/offline gamification tools, the process of knowledge and valorization of cultural heritage can generate “experiences” of urban regeneration, based on sustainability and protection of creative expressions, overcoming the gap with the use of the network as a multiplier of projects, able to generate new forms of collaboration in the game. The Play ReCH project has the potential to redesign the relationship among territories and entrepreneurship starting from processes of hybridization and contamination between profit and nonprofit, between formal economy and new economies, and leveraging the potential provided by technologies and gamification processes. The Play ReCH platform, for better understanding social complex dynamics to consider, intends experimenting the proposed approach in different territories in order to test how gamification can improve a real cultural valorization process.

The proposed methodological approach allows answering the first of our research questions by identifying how it is possible to build a creative cultural enterprise for cultural heritage enhancement able to implement innovative evaluation and management models in terms of the business value proposition.

At the same time, experimentation with the Play ReCH platform represents the way to test how gamification can improve collaborative decision-making processes for the enhancement of cultural heritage.

Through the analysis of the methodological approach, it is possible to highlight how some issues remain open which only direct experimentation will allow to explicitly explain, by reviewing the articulation of the phases and the ways of implementing the game.

If we analyze the first phase, “Create a heritage community,” it is possible to highlight that it represents a real opportunity to activate and make protagonists, citizens who progressively establish relationships and ties with the cultural asset, becoming part of the same community, in coherence with the indications of Faro’s declaration on heritage communities.

The second phase, “Co-explore the cultural heritage,” allows promoting collaboration between the different players, facilitating interaction and allowing to identify shared missions capable of generating a chain of values and impacts that affect both the community and the assets.

The third phase, “Co-design Play ReCH missions,” allows to identify the missions and select the preferable actions. This phase represents the most complex moment of the decision-making process, in which it becomes essential to be able to define the feasible missions, shared and able to improve the conditions of cultural heritage without compromising their characteristics. In this phase, the management of the game is crucial for the outcome of the missions.

The fourth phase, “Co-evaluate Play ReCH missions,” clearly introduces a collaborative evaluation process, which allows the different players not only to self-assess their missions and their results but also to evaluate those of the other players. In this phase, players’ awareness of the missions’ objectives is fundamental, respecting and valuing the other players. Furthermore, how co-evaluation is carried out is decisive, which must be open, democratic, and inclusive.

The fifth phase, “Generate circular impacts,” includes the ability of each mission to determine impacts on the cultural heritage and the territory consistent with the principles of the circular economy. In this phase, it is possible to verify the validity of the mission, its ability to influence the behavior of the players and to involve new players, to activate a chain of values and positive impacts. It is not evident that missions can generate circular impacts and the selection of actions that are capable of doing so can be one of the criteria to be taken into account in identifying missions.

By observing the stages of the process, it can be highlighted how the role of the cultural and creative enterprise that manages the Play ReCH platform is determined and requires skills both on the enhancement and management of cultural heritage and on multidimensional assessment, processes focused to conflict management.

The application of the Play ReCH platform will allow to test the decision-making model focused on game-thinking and to verify in operational terms how much the gamification process will contribute to improving strategies for enhancing cultural heritage.

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Within the unitary work, Gaia Daldanise developed a literature review on Cultural creative production evaluation/monitoring frameworks (Section 1.1) and

Paolo Di Lauro developed a framework about intellectual property regulations for creative business ideas (Section 1.2). Ludovica La Rocca developed materials and methods on collaborative decision making, gamification, and co-evaluation (Section 2), and Maria Cerreta developed the introduction (Section 1) and the discussion and conclusions on the whole process (Section 4). All authors developed the results of the Play ReCH experiment (Section 3).

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