

Luigi Fusco Girard  
Antonia Gravagnuolo *Editors*

# Adaptive Reuse of Cultural Heritage

Circular Business, Financial and  
Governance Models

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*Editors*

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*To Marilori Cataldi Fusco Girard*

# Preface

Cultural heritage is a driver for sustainable development in cities. As an economic and cultural asset, it boosts economic growth, enhances urban livability and contributes to environmental adaptability. In addition, the reuse of abandoned and under-used cultural heritage and landscapes is a practical substitute to demolition, bypassing the wasteful processes of demolition and new construction prolonging the cultural heritage lifespan. Adaptive reuse of cultural heritage can thus be instrumental to circularize the flows of energy, raw materials, and human and cultural capital, and hence, it plays a significant role in the transition towards circular economy. Complementary to its environmental benefit, adaptive reuse brings forth substantial economic, social and cultural advantages by reusing historic buildings, sites and landscapes attached meanings and values by a wide range of citizens and actors.

The existing governance structures and operational systems concerning reuse of cultural heritage and landscapes are still highly limited in the involvement of relevant stakeholders to the decision making process. Regulatory and planning tools are not flexible enough to allow sustainable and circular transformation processes, and are restricted in the financial resources and funding arrangements that mostly rely on public funds. Therefore, to turn cultural heritage and landscapes into a resource, instead of a cost for the collectivity, the structures of authority, institutions and financial arrangements should be adjusted. This adjustment needs to ensure larger stakeholders' involvement in decision-making, to attract private investments and to facilitate cooperation between community actors, public institutions, property owners, informal users and producers. In addition, to manage change, flexible, transparent and inclusive tools are required, thus leveraging the potential of cultural heritage to foster adaptive reuse practices.

This timely book thus aims to address this gap in existing knowledge from a circular economy and sustainable development perspective, and to introduce innovative economic, environmental and governance models and evaluation tools tested and validated for adaptive reuse within the “CLIC—Circular models Leveraging Investments in Cultural Heritage Adaptive Reuse” project funded by the European Horizon 2020 Research & Innovation Action Program. The CLIC project is a trans-disciplinary research project bringing together expertise from disciplines such as

heritage studies, regeneration and urban development, business management, economics, ecology and social sciences. This research responds to the European Societal Challenge 5 “Climate action, environment, resource efficiency and raw materials”, aimed at achieving resource efficient and climate change resilient economy and society through systemic innovation. The CLIC project also aims to unlock public and private investments in solutions for a more resource-efficient, greener and more competitive economy as a key part of smart, inclusive and sustainable growth strategy for Europe and worldwide.

In this context, this book comes to fore as a fundamental key reading for scholars, professionals and policy makers, towards demonstrating how the adaptive reuse of cultural heritage, in a systemic perspective, has the potential to stimulate growth, sustainable development, social regeneration, welfare, jobs, income and livability of urban/territorial settings: to implement the circular economy model. It also provides innovative models and a circular toolkit for financing, reusing and managing cultural heritage based on research outcomes and implementation of experimental models in four pilot European territories covered as case studies.

Naples, Italy

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# Chapter 17

## Business Models for Cultural Heritage Adaptive Reuse



Immacolata Vellecco and Assunta Martone

### 1 Introduction

Literature on business models is a pillar of management research and its recent contributions have broadened traditional frameworks to include sustainability and circular economy issues. However, contributions focused on business models of cultural heritage have always been scarce; moreover, most of the studies on adaptive reuse of cultural heritage are based on the analysis of individual assets. A few studies make in-depth analysis of the business model and they hardly produce generalizable results, due to the idiosyncratic nature of cultural heritage and its link with the cultural, social, environmental and economic context, that makes it difficult to replicate the process and decisions of reuse (in structural and managerial terms).

A wide literature in business and management sciences applied the business model conceptual framework to different industries companies. Recent research tried to apply the concepts developed in business model studies to circular economy, mainly focusing manufacturing industries and new waste management strategies but Business Model perspective and circular economic approaches are completely absent in Cultural Heritage adaptive reuse, while on this issue the perspective of the public economy appears very relevant.

Cultural heritage recovery and maintenance has traditionally been in charge of the public sector, which used public resources to maintain heritage “public goods” in optimal state of conservation and accessibility. Moreover, the public sector (Institutions) has the role of setting the “rules” for heritage conservation, maintenance and reuse, especially to avoid destructive interventions, especially on heritage goods owned or managed by private actors.

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Public investments have mainly focused on the evaluation of cultural heritage adaptive reuse projects highlighting social and environmental costs and benefits. However, traditional public funding sources and in general public financial resources are decreasing. In this context of fragile public finance, business model and economic sustainability of reuse projects are increasing their importance in order to leverage private investment and to ensure economic self-sustainability, with the main goal to avoid waste of public resources.

An increasing overlapping of perspectives has recently attained to Cultural Heritage, some of them within the theories of New Public Management, merging business service approach and governance issues, as cultural heritage management has to comply legal, economic and organizational specificities. Furthermore, the value generated by reuse initiatives has ambiguous definitions and a plurality of stakeholders and the presence of network economies make the decision-making processes very complex.

The study of Misirlisoy and Günçe (2016) offers holistic approach and unified factors for the successful implementation of Cultural Heritage adaptive reuse projects, paying attention to the decision making process and on the role and involvement of different stakeholders. The study also recommends deep analysis of the existing fabric, which includes original function, physical characteristics, adaptive reuse potentials and needs of the district. The decision of the new function according to the needs of the region is important in terms of the life of the adaptive reuse project.

Conservation actions should be decided and adaptive reuse potentials of the architectural for the new use should be evaluated. The main aim should be preserving the values and originality of the building and its context; however, the economic sustainability of the building is important for the future of the built heritage.

A relevant stream of research focus on the role of Private Companies in the whole Project Cycle, as private partners may contribute at different stages (i.e. Project design, Finance, Build, Operate) and with different roles (Promoter, Sponsor, In-kind contributor, Evaluator). Furthermore, their role may vary from delivering non-core/outsourced services to a full project cycle involvement. Nevertheless, institutional PPP differ from public procurement as well as from privatizations (Macdonald 2011; Macdonald and Cheong 2014), and imply risks and responsibility sharing, often strictly regulated by national (country specific) laws.

The majority of research efforts have focused on case studies. Although this research design prevents findings generalizability to different industries, contexts, or countries, it is still appropriate to study the early state of art of circular business models in Cultural Heritage Adaptive Reuse (CHAR).

The following part of the work offers a literature review of the evolving concept of business model toward sustainability and circularity paradigms, which caused new element addition to the old frameworks in order to enlarge the analysis to determinants and impacts of the business model, which can be studied at enterprise and/or at network level.

A further paragraph describes a set of European reuse projects, starting from the typology of building and location and exploring the new possible use, mainly

focusing on the new use function given to heritage buildings of different typologies and set in rural or urban area of different countries. New uses are the base to pitch some typologies of business models and for some generalization that are proposed in a separate further paragraph.

Conclusions remind some limitation of the analysis, suggesting further avenues of research.

## 2 Literature Review

In business disciplines, business model (BM) is a unit of analysis to explain how value is created and delivered. BM is seen as an antecedent of heterogeneity in firm performance; specifically, BMs are argued to be an important factor contributing to firm performance. As some types of BMs are found to outperform others, successful BMs are seen as examples to be imitated or replicated.

The most well-known and widely used framework is the Business Model Canvas (Osterwalder and Pigneur 2010), based on nine elements: key partners, key activities, key resources, value proposition, customer relationships, channels, customer segments, cost structure, and revenue streams.

Fielt (2014) also notes that it is hard to comprehend a definition of business model without a better understanding of the value concept. He explicitly includes the customer value (or use value) where other definitions are less clear by referring to value in general or include business value (or exchange value). The focus is on the value creation from the customer perspective and linking value creation to value capture. Moreover, while the focus is on the organization, the business network needs to be included as well, when it plays a critical role in creating and capturing customer value. However, a more strategic perspective is required to fully understand value capture and business value.

The emphasis given to organizational, market and societal transformations distinguishes the discourse on business models for sustainability from their conventional antecedents, which focus on organizational value appropriation, that is, one-dimensional profit maximization, without considering the consequences for the wider social and ecological contexts. In the emerging field of sustainable business model (SBM), an increasing number of scholars and practitioners go beyond value creation in economic or financial terms and explore the potential of business models to solve ecological and social problems. (Bocken et al. 2014; Lüdeke-Freund and Dembek 2017; Schaltegger et al. 2016). Several authors describe iconic cases of companies that aim at reducing the pressure on ecological and social systems through their business models (e.g., Boons et al. 2013; Stubbs and Cocklin 2008). Some of these cases and business model types bear the potential to provide inspiration or even useful solutions for established companies and start-ups facing similar challenges.

Taking a “strongly sustainable” perspective, Upward and Jones (2016) formulate four propositions:

1. A strongly sustainable business model creates ecological, social and economic value and takes its embedding value network into account, which implies an extended understanding of the value that is proposed, delivered and finally created.
2. The concept of value itself broadens to forms of value that meet the needs of actors in aesthetic, psychological, physiological, utilitarian and/or monetary terms.
3. This extended perspective on a business model's value network and extended understanding of value requires a systemic conception of business models as being embedded within wider ecological, societal and economic contexts.
4. A new kind of metric, "tri-profit", is required to integrate all forms of value creation into one single measure, instead of measuring these in parallel, as with traditional triple-bottom-line approaches.

Joyce and Paquin (2016) suggest the Triple Layered Business Model Canvas as a tool for exploring sustainability-oriented business model innovation. A holistic impact approach is proposed, linking economic impacts to social and environmental ones. It also creates two new dynamics for analysis: horizontal coherence and vertical coherence. This tool fits a decision-making approach, both in a business and in a policy maker perspective.

Furthermore, the business model perspective is particularly interesting in the context of sustainability because it highlights that new value creation logic of an organization potentially allows (and calls) for new internal governance forms such as cooperatives, public private partnerships, or social businesses, thus helping transcend narrow for-profit and profit-maximizing models (Schaltegger et al. 2016).

Circular Economy oriented BM also add uncertainties and complexity to conventional BM. Firm activities play an important role in the various conceptualizations of business models that have been proposed. New variables have to be considered, for instance, reverse on top of forward logistics; quality, quantity and timing of returns of resources; customers perceptions and preferences for 'as new' (Bocken et al. 2018). This requires a systemic and transdisciplinary view, which has been reflected in recent publications exploring the interfaces of CE-oriented Business Model Innovation (BMI) with other innovation perspectives, such as product design, value chain and digital technologies (Bocken et al. 2016; Foss and Saebi 2017; Geissdoerfer et al. 2018).

Pieroni et al. (2019) provide a review of approaches for business model innovation for circular economy and/or sustainability, finding opportunities to seize synergies from the intersection of both streams. They acknowledge resource efficiency, resources longevity and economic growth at the intersection of Circular Economy and Sustainable Development approaches.

Urbinati et al. (2017)'s taxonomy suggests three available modes of integrating CE principles in BMs: *downstream circular* (altering value capture and delivery, through new revenue schemes and customer interface e.g. pay-per-use models), *upstream circular* (changing value creation systems, e.g. reverse logistics), or *fully circular* (combining upstream and downstream principles).

Circular business models may be also studied taking into account:

- Business ecosystem level (Antikainen and Valkokari 2016): (i.e. Trends and Drivers, Regulation; Financing or technology opportunities; consumers consciousness as well as stakeholders involvement and policy commitment);
- The Adoption factors (Lewandowski 2016), as transition towards circular business model must be supported by various organizational capabilities and external factors.

According to this view, circular business models in Cultural Heritage adaptive reuse require a wider perspective, overcoming the focus on the micro-business perspective and enlarging the view to an extended stakeholder's network, as the value proposition is the result of a negotiation process among different stakeholders both in decision making and in financing, building and operating.

The impact of the circular economy models and sustainability should measure value creation for all stakeholders and, then, the challenge of re-designing business ecosystems is to find the “win-win-win” setting that balances the self-interests of involved actors and sustainability impacts.

### 3 Methodology

This work investigates 34 case studies of cultural heritage adaptive reuse.

As the typologies of building were considered relevant in the decision and success of the reuse projects, the analysis focuses on coastal buildings (lighthouses), religious buildings (monasteries and churches), forts and castles, industrial buildings, and minor buildings. Furthermore, some rural and urban cases highlight connections between reuse initiatives, new functions of the buildings and local (contextual) needs.

Building theory from case studies is a research strategy that involves using one or more cases to create theoretical constructs, propositions and/or midrange theory from case-based, empirical evidence (Eisenhardt 1989). The central notion is to use cases as the basis from which to develop theory inductively. The theory is emergent in the sense that it is situated in and developed by recognizing patterns of relationships among constructs within and across cases and their underlying logical arguments. Central to building theory from case studies is replication logic (Eisenhardt 1989). That is, each case serves as a distinct experiment that stands on its own as an analytic unit. Like a series of related laboratory experiments, multiple cases are discrete experiments that serve as replications, contrasts, and extensions to the emerging theory (Yin 1994).

According to Lambert (2015), it is widely recognized that classification is a necessary step in understanding a research area, however throughout history there has been continuous debate about the best way to classify objects, what criteria to use, and what purpose the classification can serve.

Each of the many classifications is conceived to meet the specific needs of the researcher, and they vary considerably in terms of purpose and the scientific rigor used in their development. Some classifications are constructed using a large number of business model characteristics and potentially serve a relatively wide range of purposes and others are based on a small number of business model characteristics, serve specific purposes and, consequently, facilitate only a limited range of generalizations.

Furthermore, according to Ritter and Lettl (2018), business model can be seen as a theoretical mechanism for combining different literature streams. As such, business-model research is positioned as a central connecting component in the further development of strategic management field of Cultural Heritage Reuse.

Then, the following analysis mainly focus the pattern of “original use”/“new use”, studying connections between typologies of buildings (as resources) and new functions, chosen in the view of market need, users and forecasted demand, which includes the respect of the four pillars of sustainable conservation (economic, social, environmental, cultural).

## 4 Old Buildings and New Uses: An Overview

### 4.1 Coastal Buildings—Lighthouses

The traditional economic analysis considered the lighthouse as a classic example of public good: those who don't pay cannot be excluded from consuming it, and one's consumption does not reduce the consumption of others. So, general taxation funds public production (Stuart Mill, 1848). This old vision was questioned by Ronald H. Coase (1991 “Nobel prize”) in “The lighthouse in economics” (1974), he outlined that in the lighthouses system, in England and Wales, sixteenth to nineteenth century, private individuals embarked on financing, building, and maintaining numerous lighthouses.

Nowadays lighthouses are often decommissioned. They become obsolete due to changes activated by new technologies like GPS and sonar. Therefore, lighthouses are at risk of deterioration while rehabilitating them is a difficult challenge also because represent an ancient heritage.

There are several experiments of adaptive re-use of buildings and maintenance projects. The lighthouses positioned close to urban agglomerations sometimes turn in clock towers (Old Colombo Lighthouse in Colombo, Sri Lanka).

Some turn in art studio—as an “artist in residence” program operating in Port Bickerton lighthouse in Nova Scotia—or art space as Lighthouse in Maryport in the northwest of England, which in 2009 was used as a gallery space by an arts collective. In other cases, natural scientists develop lighthouses into animal observatories or wildlife refuges (Low Light Lighthouse on the Isle of May in Scotland; Seahorse Key lighthouse in Florida).



The Northern Lighthouse Board (NLB) responsible for Scotland and the Isle of Man and the General Lighthouse Authorities (GLAs) of the United Kingdom and Ireland developed a new initiative for the Scotland's Outstanding Lighthouses. The initiative aims to promote and drive tourism to Scotland's coastal communities and increase awareness of the role and history of NLB's unique heritage.

Exploitation of lighthouses through tourist activity contributes to their protection and revitalization. Their involvement in tourist offer would not obstruct their primary role in assuring the safety of sailing. The Croatian lighthouses are an example on how they can contribute to Croatian tourist offer as a unique tourist category.

Palagruža is the most attractive site in this group. Due to equipment expenses, regular maintenance, transport and staff, tourism rent fee is usually high and increases due to the transfers to and from the site. Maintenance expenses are very high, as lighthouse inventory decays rapidly because of exposure to weather conditions and salt and this affects profit gain. Distance from the mainland and nearby inhabited villages affects operating costs. Connection to the mainland and to local water supply network allows having water supply costs significantly reduced. Water supply expenses for Palagruža island lighthouse take up to 50% of the income, while these expenses for lighthouses on the mainland take up only 15–20% of the income. Then, lighthouses may be a fruitful field for development of circular economy as eco-innovation, applying water saving application and green energy technologies.

Lighthouses enhancement attempts to prevent their falling into a state of decay, regenerating the places and helping the activation of local economies in favor of citizenship, enriching the public heritage of refurbished structures for the community.

In recent years, the Italian Agenzia del Demanio (State Property Agency) together with Ministero della Difesa, through Agenzia Difesa Servizi Spa, has activated the "Valore Paese Fari" initiative, currently being implemented, with the aim of increasing the economic and social value of the assets and territories in which the lighthouses are sited, thus contributing the competitiveness of the entire Country. The aim is to recover public assets, owned by the State and local authorities, so that it is no longer just a cost for the community, but also a lever for territorial and social development, based on public-private partnership in management and/or financing reuse initiatives.

The Genova lighthouse is the only one in the world to be a symbol of a city and repository of a large part of its history. The construction of the base seems to date back to 1128, an age in which Genova was a maritime independent republic and one of the powerful cities in the Mediterranean. The historic value of the lighthouse and its symbolic value made it a cornerstone of the old waterfront reuse project. The result is a leisure and meeting area for citizens and tourist, where the ancient maritime identity of the city finds new ways to increase the social capital. The case suggests a light stress on direct economic returns on the single building reuse, adequately considering also indirect economic effects, due to the social and economic regeneration of the surrounding area.

As point of interest in environment education and research, lighthouses similar to Capo d'Orso may catalyze environmental cultural change and sharing. More

generally, lighthouses are well suited to a request for tourism that is attentive to the environment and culture, connected to unspoiled places and places of landscape-environmental interest.

## **4.2 Religious Heritage**

The religious real estate patrimony presents countless properties with high historical and artistic value which, also due to the current period of vocation crisis, have not received the attention necessary for optimal conservation, and which, in many cases, have been closed and abandoned.

The religious structures are embedded in the collective memories of the members of a society and are a source of identity; therefore, the public becomes concerned with maintenance the integrity of these edifices and conserving their cultural heritage symbols. Therefore, over time the protection of the religious architectural heritage has been increasingly recognized as a cultural obligation.

The proper reuse of buildings is one of the best ways to ensure their survival and a change of the original function has to keep the intangible meaning in the suitable reuse. Then, it is difficult to manage the limits and opportunities in the adaptive reuse of this type of heritage, while preserving its social and cultural significance.

In recent years, the decline of religious practices and the economic crisis have led to the abandonment of countless structures, often sold and privatized.

Cases show different uses of religious building, not only because they may be different in their structures (monasteries, churches) or in their state of conservation, but also because different communities may need different services and may feel different sensitivity to the aesthetic and/or authentic features.

Monasteries structures usually fit to hospitality function and the reuse as hotel has to question to what kind of customer targets address the services, choosing appropriate marketing channels, adequate and sustainable price for value, also profiting from other contextual attractive. Nature-based hospitality may be more adequate for rural areas or coastal zones, while high class hospitality may occur in urban historic areas, but alternatives are also offered if the religious owner also manages the site as a social business, hosting students or supporting social tourism.

Churches offer a larger number of reuse opportunities; some of these are very unusual, others are foregone, as the use as concert hall, museum or as art/handicraft showroom.

The Dominicanenkerk (Dominican church) is a Gothic monastery church situated in the city centre of Maastricht. The church was built in the thirteenth century while in 1796 the church's ecclesiastical function ended, and in 2006 got a new destiny. A bookshop was established inside the church. The major renovation went smoothly, thanks to a successful public-private partnership between the municipality, monument care, project developer and the new user Selexyz. The architect Merx + Girod from Amsterdam won the Lensvelt Architectuur Prijs in Holland in

2007. The sacral elements such as the stained-glass windows, fresco's, vaults and the incidence of light have been saved.

Partnerships with important cultural players (as a University) can keep the mission of the building fitting to the original goals, enhancing human cultural and spiritual wellbeing, and educational scope.

The Charterhouse of Avigliana was founded as a Franciscan monastery in 1515. Over time, had several destinations and the community of Carthusian nuns who lived there decided to leave it. The Abele Group took action for the purchase and restoration, which ended in September 2011. The Certosa di Avigliana is currently owned by the Social & Human Purpose Fund of REAM sgr of Turin and managed by the social cooperative Binaria 1515 scs. Today it is a place of hospitality, education and location for events.

A very important question is limitation to new use that religious owner can impose both in the property transfer contract and in the rent or free use agreement. Uses in open contrast with the original and sacred function of the building are usually not admitted. Although limitations bear only the users or the first buyer, they reduce the typologies of entrepreneurial ventures which can settle in the site, and social enterprises seem the most adequate initiatives to be hosted, mainly in temporary use agreement.

Nevertheless social enterprises, even able to ensure the economic self-sustainability of their service delivery system, rarely can arrange a large amount of economic resource for the large investment required to restore or renovate a church. So, when the latter is in a very bad state, further partners might be necessary in order to provide financial support, preferably as grants (crowdsourcing community, social responsible corporation, private foundation), in order to prevent the burden of a loan repayment on social enterprises venture, usually having a fragile economic balance.

### ***4.3 Forts and Castles***

Forts were usually military buildings, aiming at defending the territory against enemies. They are robust and very large structures which have been surviving many centuries. They usually have high historical value as their storytelling is the narrative of wars changing people history and culture. This is the reason why they are usually state owned, although charging public finance with high restoring and maintenance costs.

Reuse projects are a great challenge as they need to keep historical and cultural meaning furthermore producing direct and/or indirect economic impacts.

In the following cases show how forts can be turned into cultural tourism attractions, saving historic heritage buildings for next generations.

The Hotwalls Studios are an enviable location with access to the waterfront and harbour views located in Old Portsmouth, UK; the reuse project as studios combined social goals with tourism attraction, reusing the site as a creative art district.

Fort Vechten and Fort Resort Beemster alongside the 85 km long “New Dutch Waterline defence system”, in Netherlands. These forts are included in the same cultural route and base their attractive on same natural resource: water. Fort Vechten seems to target families and children as visitors, offering didactic and virtual experiences; this business model—high revenue oriented- may produce better economic results but may also conduct toward a Disneytization of the cultural heritage resources. Fort Resort Beemster uses water as a cultural and natural resource, adding wellness services to cultural ones.

Fort Monostor, that is part of the system of historic forts situated on opposite banks of the Danube River. It is a shared heritage resource across state borders, and its reuse project, still ongoing, is under the management of a Special (Project) Company, which may (or may not) manage the running phase when the building will be full readapted.

Suomenlinna, a former naval military fortress system (eighteenth century) near to Helsinki, Finland, and it is now a tourism attraction for over one million of visitors per year, and the success has been reached due to a Governance body very attentive to save the beautiful landscape and the precious natural environment from overexploitation.

Forts and Castels reuse have to manage a system of goals, saving cultural value and producing direct and indirect economic impacts. Most of them are turned into tourism attraction, and the package of services can include accommodation, entertainment, and wellness services, as well as museum areas, live performance. Large spaces can be also rent for conferences, meeting and other social and cultural events. Most of them are listed buildings, others are going to be.

All these cases show a certain awareness of circular economy fundamentals, and social and economic impacts seem more to guide reuse projects, also taking into account cultural values, landscape quality protection and natural resources saving.

#### ***4.4 Industrial Heritage***

Buildings for industrial production were usually located near provisional areas of raw material, near ports or near densely populated settlements where it was easy to hire cheap workers. Then factories and their surrounding areas (with workers houses, schools, hospital, churches, municipal building, open spaces and other facilities) gained a visual identity according to building materials and technologies of the time.

The economic development of western economies, the decline of industrial production and the contemporary transition toward a service economic system often left industrial quarters or cities largely disused, as a consequence of a decreasing population and of people migration to more vibrant and modern cities, searching new working opportunities.

Large disused building or whole city quarters have become a great resource and opportunity to reuse and regenerate, strengthening new social and economic place

identities. The success of the reuse initiatives also depends on appropriate decisions regarding the core and ancillary services the building has to provide, according to urban planning, based on visionary forecasting of the emerging demand.

Industrial buildings (and mainly ex manufactures), although considered historical heritage, are usually not listed and provide wide room to be adapted, at affordable cost and without constraints to restore as it was. Thus, architects can choose to mix original structures, materials and style with contemporary ones, also adding new modern spaces to old structures and profiting of advanced technologies in the project and operation phase, as well as new materials and solutions, that increasingly boost resource saving and green technologies.

New uses can aim at tourist attraction, as the cases of Le Grand Hornu and C Mine, large complex in ex coal districts, in Boussu and Genk (Belgique), small towns in need for economic regeneration and a new image.

Le Grand Hornu is a neoclassical former mining complex, recently reused as a cultural centre for innovation and design. C Mine was a mining complex too, reused as a recreational and educative site, also boosting artistic entrepreneurship. Both the cases are well-known practices of cultural and economic regeneration in heritage tourism (at C Mine largely based on the tourism experience paradigm), creative economy and art development, with indirect economic impacts in terms of new business ventures and jobs. It should be noted that both the regeneration projects were managed by a Special (Project) Company, able to fully integrate the regeneration phases and the network of partners in the project.

Other reuse projects of ex industrial buildings aim at creating innovation centers, fostering social networks, innovation partnerships and new entrepreneurial ventures. This business model frequently named as Hub, is supportive of the local development, offering services addressed to main local industries. Some examples are:

- Simonsland, former textile industry in Borås (Sverige) reused as a multifunctional fashion center;
- Inredia, and old shirt fabric whose new mission is linking furniture industry with interior design;
- The Lichttoren (Light tower) a factory for Philips, a light bulb manufacturing company in Eindhoven which has been adapted as a living, working and leisure complex;
- Brew House, a former brew fabric in Göteborg, recently reused as a “culture fabric”, as a venue for musical events and as business support for creative start-ups.

Simonsland and Inredia address the needs for design and innovation of local manufacture (furniture and textile). Brew House is a culture oriented hub; it couples the mission of talent incubator for cultural and creative industries with commercial high rewarding activities in hosting and organizing event and concerts; this is the typical hybrid model of non-profit organization as it is. The site owes the success to the ability in managing a wide network of service providers and customers.

The Lichttoren has more conventional goals of residential, working and leisure complex, although the concept of “loft” as spatial module to rent or buy was very innovative at the time of its reuse project.

Further reflections can also be proposed on all the cases: alliances and strong partnership are fundamental drivers of the success both in the project concept and operation phase and in the delivery of the new services the building was re-functionalized to.

#### **4.5 *Minor Heritage Sites***

The lack of financial resources together with the constraints on interventions on the built cultural heritage are threatening the survival of the buildings with the risk of losing the benefits that they can potentially offer. When the built heritage is no longer able to fulfil its initial functions because they are no longer useful or because it is too expensive to provide them, the risk of the structures being abandoned becomes high. Nevertheless, demand for new spaces and for new services may result into unexpected solutions, both in the choice of spaces to reuse and in the services they offer.

Some interesting cases need to be cited:

- The case of Cavallerizza Reale used as stables at the Royal Palace in Turin, stands out as a valuable example of civic commitment towards cultural heritage, as a community anticipated a privatization decision limiting the use of heritage, taking a bottom-up action to revitalize the building through innovative financing (crowdfunding).
- Dynamo was an historic abandoned space underneath near the central train station in Bologna; it is a valuable example of circular economy in reusing a neglected space to promote sustainable mobility by bike sharing.
- The Bourbon Pheasant standing inside the Royal Park of Capodimonte in Naples was reused during Covid-19 emergency as vaccine hub, also offering users cultural information about the Museum collections and a coupon for free entrance to the next temporary exhibition. In this way, the use during the Covid-19 phase was turned into a chance to renew the attachment of the citizens to one of the most precious museum and park of the city. The initiative is also a lesson about the use value of minor heritage buildings, as their lower artistic importance enables more flexible and quick reuse solutions.
- The reuse of the historic gardens and greenhouse of Regina Margherita in Bologna show how gardens reuse can accelerate social innovation and creative community’s start-ups, also highlighting the role social enterprises (in this case, a social cooperative) as partners and managers of reuse projects aiming at creating social value.

## 4.6 *Rural Heritage*

Rural buildings are often set in wider rural areas, and both may be object of reuse projects, with the aim of increase the value produced by these resources. Reusing local buildings and areas for recreation and leisure can activate economic dynamics owed to the attraction of tourism, generating new jobs and profits, as tourists demand for goods and services generates new jobs and profits.

Building reuse can also benefit social ties, as cultural initiatives can catalyze local inhabitants, providing space for young and old people, increasing young people place attachment and encouraging an active aging of the old ones.

Place attachment and social ties are a key resource in rural environment, moving people to cooperate, and acting bottom-up, bypassing bureaucracy and procedure to obtain financial resource. Some reuse initiatives described below have been carried out by local communities only relying on its own work. This cultural mind-set can also avoid external speculative incoming actors which in the medium or long term can totally change local identity and landscape.

Different reuse initiatives in the following examples highlight different options and drivers of rural building and landscapes. Some of them are based on local community cooperation and work and they clearly aim at improving people wellbeing while further economic goals can be reached without being stressing priorities. Small, personal and in-kind investments are sufficient resources to reach the projects goals. The following example can be indicated:

- Lanckorona Ecomuseum, creating a museum network spreading on four rural municipalities near Cracow;
- the project “Adopt a terrace” in the Brenta River Valley, reusing a former system of intensive tobacco cultivation, by assigning free use of small pieces of land to local applicants for cultivation and gardening, in order to maintain and enhance the landscape;
- Škratelj Homestead, a ruined stable reused as cinema and social hub;

More ambitious projects are ReDock and H-Farm projects, applying leading edge green technologies to minimize the impact on the landscape, albeit the extension of the complex and the large and knowledge intensive community which has settled in the area.

ReDock reused a medieval village as tourism attraction, fruitfully applying the best eco-innovation technologies, in the view of creating a sustainable eco-friendly community. The village aims to be a blueprint for a sustainable future in the countryside. As circular economy strongly promotes natural resource saving and reuse, this project could be more in depth analyzed to learn more about problems and solutions in applying leading edge technological eco-innovation in a medieval village. Furthermore, an interesting field of research is the evaluation of middle-long term social impacts of the project on the local community, with a special attention to migrations and demographic trends.

H-Farm is a case of fast-growing, fast-changing area, reusing an ex rural building surrounded by the agrarian land near Venice and Treviso. Cooperation between Municipality, University and High tech industry transformed the place into a Hub for digital technologies where innovation, education and entrepreneurship are designing a new era.

#### **4.7 Urban Sites**

Heritage building reuse needs to consider the surrounding framework and, especially in urban context, heritage building reuse projects need to connect past and future identities that cities have experienced. Sustainability, as a function of increasing quality of life of urban residents is a driving force of social and ecological innovation inspiring cities planning and urban development at national and international level. So, the reuse project for a single building must set multiple contextual goals but standing alone rarely induces a leap forward for the entire City, toward ecological and social values. On the other hand, although multiple reuse and conservation initiatives can result as sustainable at a micro-level, a change in the view is ongoing at urban level, linking sustainability goals of the area and their monitoring to massive use of ICTs. Nevertheless, an adaptive reuse project needs to take into account previous historical artefacts when they are of exceptional value, and repurpose ideas can be changed if communities acknowledge the importance to keep memory of the past. Some metropolitan initiatives described in the following can give examples or inspiration.

The House of Vans, a former underground tunnels, near London Waterloo station, has fruitfully reused a neglected space which can be precious in high dense urban context where any square meter of soil can reach skyrocketing prices. Keeping the old visual identity, the project has reinforced the uniqueness of the new space and functions.

Pianofabrik is the reuse project of an ex industrial building (an old laboratory of piano makers) now complementing with the existing cultural offer of the city of Bruxelles. The project aimed at creating a space playing the role of multifunctional hub for the intercultural and international community of Bruxelles, fostering social networks, innovation partnerships and new entrepreneurial ventures. A leading edge cultural offer and events couples with support to arts, entrepreneurship and bottom-up initiatives. The site owes the success to the ability in managing a wide network of service providers and customers, also promoting diversity and inclusiveness as social values.

The Kultur-Token (KT) is one of the Vienna's Smart City initiatives to enhance city life whilst addressing the global challenge of climate change with local greenhouse gas/air pollution reductions. By targeting culture and cultural heritage as rewards, the Kultur-Token business model recognizes and celebrates culture and cultural heritage's role as a multi-faceted and valued "commodity" in the future sustainable city.



El Mercat del Born, an historical market in Barcelona, now hosting a cultural center, is a case of a very long “stop and go” rehabilitation process, offering important elements to comment. Different ages of the city history have found connection in the site due to the last reuse project, which is able to show different historical layers from XII century to the siege of the city of Barcelona in 1714, to contemporary age. Furthermore, the meaning of the site strictly connects city history and past events to current civic proud, and this connection is supported to last by the current reuse functions of the site as a cultural and memorial centre. The case also offers a fruitful field for social research to study the link of community action in cultural heritage reuse to community awareness and knowledge of its history.

## 5 Patterns of Reuse as Business Models

Case studies analysis shows the importance of the building typology in enabling new reuse functions, supporting the study of Misirlisoy and Günçe (2016) and highlighting some typical (and replicable) patterns and business models.

Reuse models seem strictly linked to the context needs and local development trends. Tourism destinations often reuse heritage building to offer new attractions able to increase tourist flows or to increase the staying of tourists. Projects of reuse may be highly costly and often require specialized designer to make into practice new ideas, while high level marketing have to promote the attraction through different tourism channels. Investment costs couple with high running cost, making public private partnerships riskily and heavy.

Forts and castles, like the lighthouses, are often reused as tourism attractions, although they offer a larger mix of services; virtual experience and historic narratives can couple with different leisure and entertainment services, fostering more frequent access both by residents and nearby inhabitants. The goal of economic self-sustainability can be easily reached when a flexible renting of spaces for single events increases revenues. Monasteries can be easily reused as hospitality structures, targeting social goals and accessible tourism and/or rural tourism, profiting of their remote and wild location. Otherwise, building reuse projects can target high class experience enhancing the original features of the built environment coupled with the excellence of the service delivery system.

Churches structures offer a larger set of choices in the activities they can host, albeit limits can be imposed to initiatives in open contrast with the original sense of the place.

The Multifunctional hubs, located in industrial heritage or other sites (rural, urban, etc.), provide spaces for people networking and entertainment. This general trend is usually conceived according to the history and the evolving needs of the local community, delivering business services complementing historic industrial specialization of the local “milieu”, otherwise fostering new business start-up in cultural and creative industries, or technological ones. An efficient planning of use and renting of the space is the mean to reach (and overcome) economic

self-sustainability, hosting high revenue initiatives alternated with low profit or social ones.

Projects involving clusters of buildings need an area based strategy: residential use needs to be supported by services and infrastructures, while office uses need to take into account different facilities and the evolving occupational trends. Clusters of building may also support tourism and cultural industries, creating networks of museums or branded hospitality, profiting of shared distribution channels.

Nevertheless, reuse supporting tourism development needs to consider modern success factors of tourism destinations (branding, themes, experience, online booking) as well as a life-cycle approach to the destination itself. These uses also require an adequate supply of hospitality services and infrastructure and a high-quality context (architectural and relating to landscape).

Therefore, although the building typology plays a very important role enabling, or sometimes hindering, adaptive reuse and new functions, local context matters too. Rural buildings can give local communities space to create and manage new ventures, also fostering social cohesion through entertainment, hobbies, cultural initiatives as cinema and museums. Heritage building reuse in rural areas near large towns or metropolises enhances rural areas attraction, also equipping them with residential or leisure services, aiming at people living, enjoying and wellbeing in a natural and green environment. Some initiatives can also bring about a rapid turnaround in development, as new players can provide ideas and financial resources to change the local milieu, provided they find some consensus and support at the local community level.

Some reuse cases within urban contexts are generating economic and social value by neglected buildings or spaces, in high dense populated and built context; a strong demand for space and soil makes more spaces and building attractive to renovate and reuse, also allowing limited economic and financial risks, as foreseen demand for new uses is high.

Renovation and reuse projects also support urban identity and urban strategy, targeting one or more goals as tourism development, social networks and innovation partnership, social inclusion, leisure and entertainment, quality of life, sometimes addressing the global challenge of climate change with local greenhouse gas / air pollution reductions.

## **6 Conclusions**

Although structural rehabilitation and new services are the backbone of the reuse projects, they do not fully describe the business models. The core of projects is the value proposition, a multiple-level player field ranking and balancing economic, social, cultural, environmental goals. Local communities and different stakeholders co-create a valuable project, not only taking into account present needs but also sharing a long-term vision of local development. This phase is the very critical black box of the reuse project, as legitimacy, leadership, competencies, and financial

resources may fall into a never-ending negotiation, missing the main goal of governing the commons. This result is achieved only if local stakeholders are able to find an effective self-organization.

High skilled facilitators of local decision could speed the process, avoiding unworkable or unfeasible initiatives, and raising awareness of constraints and opportunities. Therefore, while enabling local communities to build strongly sustainable business models, constraints and incentives should also be re-defined as new priorities emerge for a common future of people and the planet.

The cases herein described do not allow to validate circular business models as detailed by theory and research (Bocken et al. 2018 Upward and Jones 2016; Joice and Paquin 2016). Nevertheless, most of the cases fit circular economy as a general perspective (see Pieroni et al. 2019; Urbinati et al. 2017) of resource efficiency, shared use and economic growth.

The model of Urbinati et al. seems the best responsive to frame the results of case studies, highlighting upstream, downstream and fully circular models. Upstream circular models mainly involve innovation in building technologies (i.e. energy saving or green energy). Indeed, some cases of reuse aim at eco-innovation, and fit the concept of circular economy as efficient use of natural resources. Downstream circular models mainly refer to social or multifunctional uses, while fully circular models involve both of the perspectives including, of course, efficient economic management.

It is unquestionable that circular economy principles, mainly in the sense of eco-innovation and natural resources saving, must scale up both at urban planning and at citizens' level. This leapfrog requires updated knowledge and the use of leading-edge technologies, including ICT-based solutions for smart mobility and smart environment supported by municipally based partnerships.

Economic sustainability is now receiving much more attention than in the past, challenging other sustainability goals and paying more attention to management abilities both in project design and operation phases. Therefore, multifunctional reuse is common to many projects, as core services or attractions and ancillary services or facilities enable longer staying of users as well as customer satisfaction and repeated visits.

Nevertheless, cultural heritage is not a mere space to use and profit. Frequently projects lay on a wider concept of circularity, based on the sustainable development paradigm and targeting social, economic, cultural goals, in the view of use cultural heritage for people and next generations, not too burdening public finance for renovation and maintenance.

Cultural heritage produces many intangible and long-term benefits: the education of young people, the strengthening of the identity processes, the inclusion of disadvantaged social groups or minorities and immigrants, the development of tolerance and human dignity based on the knowledge and protection of cultural diversity. It also enables network and learning economies. Therefore, cultural heritage is the main input and enabling infrastructure of culture.

Culture nourishes the human personality and it is the basis of educational processes. It enriches the endowment—concepts, images, information,

emotions—available to individual and community, thus facilitating reasoning, logic and semantic associations, analogies and contamination.

Therefore, culture provides people with more opportunities and a general ability to find solutions to problems as well as a flexible attitude in dealing with the “new”. That is the reason why culture is assuming an increasingly strategic role as a synergistic agent that provides other sectors of the production system with contents, tools, creative practices, increasing value added.

These patterns induce many local systems to invest more heavily in allowing a deeper integration between culture and the various aspects of social everyday life. By this way, cultural heritage adaptive reuse turns a stock of historical resources into an engine able to mobilize the best energies of the community, and to leverage human and social capital.

This perspective renews the role of financial resources and financial policies, as both of which may be a serious constraint toward a complex value enhancement which grounds on the sustainability paradigm.

A similar critical role has the choice of the management at the end of the structure rehabilitation: at this stage, social entrepreneurial ventures could provide a level player field of new business model toward social innovation and sustainability.

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