# Università degli Studi di Napoli Federico II

19
numero 2 anno 2019



# Università degli Studi di Napoli Federico II

**19** numero 2 anno 2019

New Green Deal: Towards Ecological and Human-centred Urban Development Strategies





Via Toledo, 402 80134 Napoli tel. + 39 081 2538659 fax + 39 081 2538649 e-mail info.bdc@unina.it www.bdc.unina.it

Direttore responsabile: Luigi Fusco Girard BDC - Bollettino del Centro Calza Bini - Università degli Studi di Napoli Federico II Registrazione: Cancelleria del Tribunale di Napoli, n. 5144, 06.09.2000 BDC è pubblicato da FedOAPress (Federico II Open Access Press) e realizzato con Open Journal System

Print ISSN 1121-2918, electronic ISSN 2284-4732

#### Editor in chief

Luigi Fusco Girard, Department of Architecture, University of Naples Federico II, Naples, Italy

#### Co-editors in chief

Maria Cerreta, Department of Architecture, University of Naples Federico II, Naples, Italy Pasquale De Toro, Department of Architecture, University of Naples Federico II, Naples, Italy

#### Associate editor

**Francesca Ferretti**, Department of Architecture, University of Naples Federico II, Naples, Italy

#### **Editorial board**

Antonio Acierno, Department of Architecture, University of Naples Federico II, Naples, Italy Luigi Biggiero, Department of Civil, Architectural and Environmental Engineering, University of Naples Federico II, Naples, Italy

Francesco Bruno, Department of Architecture, University of Naples Federico II, Naples, Italy Vito Cappiello, Department of Architecture, University of Naples Federico II, Naples, Italy Mario Coletta, Department of Architecture, University of Naples Federico II, Naples, Italy Teresa Colletta, Department of Architecture, University of Naples Federico II, Naples, Italy Ileana Corbi, Department of Structures for Engineering and Architecture, University of Naples Federico II, Naples, Italy Ileana Corbi, Department of Structures for Engineering and Architecture, University of Naples Federico II, Naples, Italy

Livia D'Apuzzo, Department of Architecture, University of Naples Federico II, Naples, Italy Gianluigi de Martino, Department of Architecture, University of Naples Federico II, Naples, Italy Stefania De Medici, Department of Civil Engeneering and Architecture, University of Catania, Catania, Italy Francesco Forte, Department of Architecture, University of Naples Federico II, Naples, Italy Rosa Anna Genovese, Department of Architecture, University of Naples Federico II, Naples, Italy Fabrizio Mangoni di Santo Stefano, Department of Architecture, University of Naples

Department of Architecture, University of Naples Federico II, Naples, Italy

Luca Pagano, Department of Civil, Architectural and Environmental Engineering, University of Naples Federico II, Naples, Italy

Stefania Palmentieri, Department of Political Sciences, University of Naples Federico II, Naples, Italy Luigi Picone, Department of Architecture, University of Naples Federico II, Naples, Italy Michelangelo Russo, Department of Architecture, University of Naples Federico II, Naples, Italy

Salvatore Sessa, Department of Architecture, University of Naples Federico II, Naples, Italy

#### Editorial staff

Mariarosaria Angrisano, Martina Bosone, Antonia Gravagnuolo, Silvia Iodice, Francesca Nocca, Stefania Regalbuto, Interdepartmental Research Center in Urban Plannig Alberto Calza Bini, University of Naples Federico II, Naples, Italy

#### Scientific committee

University of Naples (SUN), Naples, Italy Eugenie L. Birch, School of Design, University of Pennsylvania, Philadelphia, United States of America Roberto Camagni, Department of Building Environment Science and Technology (BEST), Polytechnic of Milan, Milan, Italy Leonardo Casini, Research Centre for Appraisal and Land Economics (Ce.S.E.T.), Florence, Italy Rocco Curto, Department of Architecture and Design, Polytechnic of Turin, Turin, Italy Sasa Dobricic, University of Nova Gorica, Nova Gorica, Slovenia Maja Fredotovic, Faculty of Economics, University of Split, Split, Croatia Adriano Giannola, Department of Economics, Management and Institutions, University of Naples Federico II, Naples, Italy Christer Gustafsson, Department of Art History, Conservation, Uppsala University, Visby, Sweden Emiko Kakiuchi, National Graduate Institute for Policy Studies, Tokyo, Japan Karima Kourtit, Department of Spatial Economics, Free University, Amsterdam, The Netherlands Mario Losasso, Department of Architecture, University of Naples Federico II, Naples, Italy Jean-Louis Luxen, Catholic University of Louvain,

Roberto Banchini, Ministery of Cultural Heritage

and Activities (MiBACT), Rome, Italy
Alfonso Barbarisi, School of Medicine, Second

Belgium
Andrea Masullo, Greenaccord Onlus, Rome, Italy
Alfonso Morvillo, Institute for Service Industry
Research (IRAT) - National Research Council of Italy
(CNR), Naples, Italy

Giuseppe Munda, Department of Economics and Economic History, Universitat Autònoma de Barcelona, Barcelona, Spain

Peter Nijkamp, Department of Spatial Economics, Free University, Amsterdam, The Netherlands Christian Ost, ICHEC Brussels Management School, Ecaussinnes, Belgium

Donovan Rypkema, Heritage Strategies International, Washington D.C., United States of America Ana Pereira Roders Department of the Built Environment, Eindhoven University of Technology, Eindhoven, The Netherlands

Joe Ravetz, School of Environment, Education and Development, University of Manchester, Manchester, United Kingdom

Paolo Stampacchia, Department of Economics, Management, Institutions, University of Naples Federico II, Naples, Italy

**David Throsby**, Department of Economics, Macquarie University, Sydney, Australia



## Indice/Index

233	Editoriale Luigi Fusco Girard
245	Implementing the circular economy: the role of cultural heritage as the entry point. Which evaluation approaches?  Luigi Fusco Girard
279	Towards a circular governance for the adaptive reuse of cultural heritage Martina Bosone, Serena Micheletti, Antonia Gravagnuolo, Cristina Garzillo, Allison Wildman
307	Il modello di città circolare come modello di sviluppo per le città di piccola, media e grande dimensione Luigi Fusco Girard e Francesca Nocca
337	Da wastescape a risorsa: approcci multimetodologici per la rigenerazione dei paesaggi di scarto Maria Cerreta, Fortuna De Rosa, Pasquale De Toro, Pasquale Inglese, Silvia Iodice
353	Cultural heritage adaptive reuse: learning from success and failure stories in the city of Salerno, Italy  Raffaele Lupacchini e Antonia Gravagnuolo
379	Percorsi di riuso del patrimonio rurale nel contesto urbano: il caso della cascina Roccafranca a Torino Erica Meneghin

- 395 Dismissione e riuso degli spazi del sacro Mariateresa Giammetti
- 417 Processi di rigenerazione per la decarbonizzazione dell'ambiente costruito. progettualità in transizione: Parma, Capitale Italiana della Cultura 2020 *Maria Rita Pinto e Serena Viola*
- 441 Un approccio di rigenerazione place-based per il territorio dei fari: il "MA" degli edificilanterna
  Selene Amico, Maria Cerreta, Paola Galante,
  Roberto Serino
- 473 Genius loci: the evaluation of places between instrumental and intrinsic values

  Luigi Fusco Girard e Marilena Vecco
- 497 Valutazione circolare degli interventi di riuso adattivo: il caso della città di Torino *Marta Bottero e Mattia Lerda*
- 515 Adaptive reuse strategies for a regenerative design: a multi-methodological decision-making process for Montalbano Jonico Maria Cerreta, Antonella Falotico, Giuliano Poli, Giorgia Grazioli, Francesca Laviola
- 537 Storia delle pendici della rupe di Pizzofalcone: adattamento e identità per una rigenerazione urbana

  Maria Teresa Como
- 559 Patrimoni in rete tra spazio analogico e spazio digitale

  Mariangela Bellomo e Antonella Falotico

## CULTURAL HERITAGE ADAPTIVE REUSE: LEARNING FROM SUCCESS AND FAILURE STORIES IN THE CITY OF SALERNO, ITALY

Raffaele Lupacchini, Antonia Gravagnuolo

#### Abstract

Cultural heritage is considered as a resource for sustainable development in cities and regions. Local governments such as municipalities and provincial bodies are often owners of cultural heritage assets that are not listed as national or World Heritage properties, but are recognized as relevant cultural heritage for the local communities. However, they lack the necessary financial and human resources to recover and maintain this "minor" cultural heritage. Thus, decisions on the financing and management of cultural heritage owned by local governments highly depend on the availability of the public owner to create partnerships with third parties. This paper analyses and compares success and failure cases in cultural heritage adaptive reuse in the city of Salerno, Italy, in order to identify decision-making criteria for public owners of "minor" cultural heritage assets based on the characteristics of different heritage properties and context conditions.

Keywords: cultural heritage, adaptive reuse, management models

# RIUSO ADATTIVO DEL PATRIMONIO CULTURALE: LEZIONI DA STORIE DI SUCCESSO E INSUCCESSO NELLA CITTA' DI SALERNO, ITALIA

#### Sommario

Il patrimonio culturale è considerato una risorsa per lo sviluppo sostenibile delle città e delle regioni. Comuni e Provincie sono spesso proprietari di beni culturali "minori". Tuttavia, tali enti non dispongono delle risorse finanziarie e umane necessarie per recuperare e mantenere questo patrimonio culturale. Pertanto, le decisioni sul finanziamento e la gestione del patrimonio culturale di proprietà dei Comuni dipendono fortemente dalla disponibilità e capacità dell'ente pubblico a creare partnership con soggetti terzi. Questo articolo analizza e confronta i casi di successo e di insuccesso nel riuso adattivo del patrimonio culturale nella città di Salerno, al fine di identificare criteri decisionali basati sulle caratteristiche dei diversi beni e sulle condizioni del contesto.

Parole chiave: patrimonio culturale, riuso adattivo, modelli di gestione

#### 1. Introduction: local government's perspective in cultural heritage adaptive reuse

Cultural heritage is considered as a resource for sustainable development in cities and regions (Bandarin and van Oers, 2012; Fusco Girard and Nocca, 2019; Gravagnuolo *et al.*, 2017, 2019; Ost, 2009; Pereira Roders and Van Oers, 2015; Throsby, 2016).

Local governments such as municipalities and provincial bodies are often owners of cultural heritage buildings and sites that are not listed as national or World Heritage properties, but are recognized as relevant cultural heritage for the local communities since they represent the local history, art and identity. However, local governments lack the necessary resources to recover and maintain this "minor" cultural heritage, due to public budget constraints (Boeri *et al.*, 2016; Ost, 2016; UNESCO, 2016). Thus, decisions on the financing and management of cultural heritage owned by local governments highly depend on funding availability by national and regional governments or on the availability of the public owner to create partnerships with third parties for the use and management of heritage sites (Bullen and Love, 2010).

Decision-making in the adaptive reuse of cultural heritage can be controversial due to conflicting interests and multiple criteria to be taken into account in a holistic perspective (Bottero *et al.*, 2019; P. Bullen and Love, 2011; Mısırlısoya and Günçe, 2016; Morkūnaitė *et al.*, 2019; Oppio *et al.*, 2017; Oppio and Bottero, 2017; Torrieri *et al.*, 2019). The impacts of cultural heritage conservation have been object of several studies to support decision-making processes taking into account the effects of different conservation scenarios in a sustainable development perspective (Berg, 2017; CHCfE Consortium, 2015; European Commission, 2014, 2015; European Parliament, 2017; Fusco Girard *et al.*, 2015; Fusco Girard and Gravagnuolo, 2018; Gustafsson, 2019; Gustafsson and Stanojev, 2019; Kee, 2019).

Different financing and management models have been identified in various contexts to finance cultural heritage adaptive reuse projects for public owned heritage assets, with diverse degrees of private actors' contribution in the adaptive reuse project:

- Public-driven: financial contribution from European or national sources, covering the
  whole or main part of the cost for restoration and maintenance of cultural heritage;
  public-driven finance can include also tax credit instruments such as the Art Bonus
  initiative in Italy, Land Value Finance, as well as "Bond" instruments for city
  development depending on the local legislation;
- Public-private: partnerships between public bodies and private investors and operators, both for-profit and "non-profit", which can include agreements with (for example) building construction companies, energy service companies, local development agencies, foundations, cooperative and social enterprises - for the recovering and reuse of the building/site;
- Community-driven: initiatives advanced by citizens and civil society organizations, often with the support of "mission-driven" organizations such as foundations, religious bodies, international associations, social and ethical banks, philanthropic investment funds which provide funding and expertise to support local communities in realizing their projects for the regeneration of cultural heritage; "pacts of collaboration" between citizens and the municipality are more and more used to provide an institutional framework for the adaptive reuse of public owned buildings and sites led by local communities.

The financing and management model influences also the uses of the cultural heritage in the adaptive reuse project. "Public-driven" projects are more likely to include "public" functions such as museum, social housing, universities and research centres, public offices, schools, hospitals, that are usually supported by public finance also in the operations phase. This occurs because the extensive use of public finance for heritage renovation and maintenance, which original source is taxation, must be related to public "services" offered to citizens.

On the other side, a "private" driven project on public asset implies that certain conditions are reached: (1) a return on the private investment comparable to other investments in the market ("opportunity cost"); consequently, (2) the use of the asset by private actors for a number of years sufficient to generate the expected return, and thus the choice of uses/functions that have a potential in the market of services and goods; (3) the recovery of the heritage asset that should be "given back" to the owner in the same or better conditions, ensuring upgrade and maintenance to conserve and enhance its cultural value for future generations. The type of "private" actor involved in cultural heritage adaptive reuse influences the uses of the site. A "for-profit" company is typically oriented to enhance the financial performance of the investment and to reduce risks by sharing them with other partners (public bodies, other territorial partners). Thus, projects driven by private for-profit companies are more likely to introduce uses linked to more 'secure' economic sectors such as tourism, housing and commerce (hotels, restaurants, housing units, commercial centres, wellness centres, etc.) (Corte dei Conti, 2016; Gentile and Lupacchini, 2008).

"Non-profit" bodies are usually more willing to introduce "socially-oriented" uses of cultural heritage, in line with their mission: cultural and creative activities, community hubs, support to local craftsmen, artists and micro enterprises, support to women, elderlies, children, minority cultures, migrants and marginalised social groups. These categories of uses can be indirectly supported by the public sector through reliability of services conducted by private non-profit bodies (e.g. nurseries, rest homes, different types of public funding for cultural and social activities), and by making available heritage structures for free during a number of years or for a rental price lower than market prices. These mechanisms of indirect support are usually justified by the recognition of the social value of the uses and services provided by non-profit bodies.

Finally, "community-driven" projects are typically launched by citizens, social activists and civil society organizations that express their intention to "save" abandoned heritage assets and "take care" of them through recovery, maintenance and socially and culturally oriented activities. Community driven projects can contribute to the recovery and maintenance of sites through volunteering, donations, crowdfunding campaigns, fundraising activities, and diverse in kind contributions. Differently from 'intangible' activities not linked to the management of buildings and sites, community activities linked to cultural heritage need to take into account the costs for the recovery and maintenance of the places. Therefore, this management model is often linked with public funding for the initial recovery of the building/site, or to heritage assets that are already in medium state of conservation and can be adapted to new uses without need of large initial investments. Temporary uses are also preferred for community driven adaptive reuse, since it does not imply relevant investments for the owner and for the 'temporary' community managers. In the same time, temporary uses can enhance the attractiveness of the place and unlock the market interest for the assets, attracting private investors in a second phase for a longer-term project.

The Horizon 2020 CLIC research project adopts a circular economy perspective in cultural heritage adaptive reuse, identifying evaluation criteria for ex-post and ex-ante evaluation to support "circular governance" and effective decision-making (Fusco Girard and Gravagnuolo, 2017). Evaluation criteria inspired to circular economy models can orient choices to reach the global goals of sustainable development (SDGs, New Urban Agenda, and the European Green Deal), leveraging public and private investments in cultural heritage based on financial performance "blended" with net positive social and environmental impacts (Gravagnuolo *et al.*, 2017).

The aim of this paper is to analyse and compare success and failure cases in cultural heritage adaptive reuse in the city of Salerno, Italy, in order to identify decision-making criteria for public owners of "minor" cultural heritage assets based on the characteristics of different heritage assets and context conditions.

The following sections describe the methodology and the heritage assets selected for the analysis (section 2), followed by the in-depth analysis of a "failure case" considering the many attempts to define a viable project for the adaptive reuse of four heritage buildings in the historic city centre (the so-called "Edifici Mondo" including Palazzo San Massimo) (section 3). The analysis of financing and management options for the public owner of cultural heritage is discussed (Section 4) identifying a "dashboard" of criteria and financing / governance models for diverse types of cultural heritage (Section 5). Finally, the results of the analysis are discussed and conclusions on further work are drafted (Section 6).

## 2. Methodology: analysis and comparison of cultural heritage adaptive reuse success and failure cases in the city of Salerno, Italy

The aim of this work is to identify decision-making criteria for the adaptive reuse of cultural heritage to support municipalities that own various heritage assets, relevant at local level, to identify viable projects that involve the local community and stakeholders to respond to local needs. Municipalities own various heritage buildings and sites. However, their financial resources are scarce and the budget constraints of public bodies limit the access to debt finance that would be needed to carry out ambitious renovation and reuse projects. Pressed by the limited financial opportunities, municipalities are more and more becoming "enabling platforms" for different partners, instead than direct managers of their owned assets. This includes third parties' investments for the recovery and restauration of municipal cultural heritage, as well as management models based on the reliability of buildings/sites to third parties. These solutions enable the municipality to maintain heritage buildings and sites in good state of conservation in the long-term avoiding the risk of irreversible loss of cultural heritage, while providing "charismatic" spaces for housing, communities' activities, enterprises, social services.

However, the reliability of assets owned by public bodies is not exempt from risks. Allowing third parties to "take care" of the public good may increase the risk of implementing uses/functions that do not respond to strategic policy choices and to the "public interest", making a "private" use of public goods and biasing the market introducing excessive facilitations for the private actors available to invest in the adaptive reuse (Bullen and Love, 2011; Bullen and Love, 2010; Leadbeter, 2013). Dealing with public owned assets, which must be dedicated to satisfy societal needs - focusing on the concept of "public benefit" in laws and regulations, it is clear that the different "risks" for the private and the public actor must be carefully evaluated and balanced. Thus,

transparency and clear rules for engagement are needed, in line with national and regional regulations on the management of public goods (Leadbeter, 2013). Different cases apply for private "for-profit" bodies and private "non-profit" organizations, based on the substantial differences in their stated "mission".

In Italy, the "horizontal subsidiarity" principle is stated in the art. 118 of the Constitution, which tells that "State, Regions, Provinces, Metropolitan Cities and Municipalities favour the autonomous initiative of citizens, individually and associated, to carry out activities of general interest, on the basis of the principle of subsidiarity". Stimulated by the pressures of financial constraints of public bodies and by this constitutional article, citizens and civil society organizations gave rise to various movements in Italian cities in the last decade, proposing spontaneous initiatives for "taking care" of abandoned and underused places that are not anymore financially accessible and operationally manageable by their public owners.

#### 2.1. Methodological approach adopted

This paper adopts a mixed inductive and deductive methodology to identify practical decision-making criteria for the adaptive reuse of cultural heritage owned by public bodies, specifically municipalities.

Considering the financial and regulatory constraints for local governments and the different typologies of actors that can be involved, decision-makers have a bunch of financing and management options for the adaptive reuse of public heritage assets. The methodology adopted is based on four steps:

- 1) selection and analysis of most relevant cultural heritage adaptive reuse cases in the city of Salerno, that represent different characteristics, financing and management models;
- 2) in-depth analysis one "worst" case to identify specific barriers and failure factors;
- 3) development of a "dashboard" of the available governance and financing models, applied in the city of Salerno;
- 4) development of practical decision-making criteria for cultural heritage adaptive reuse, identified based on empirical evidence from past attempts in the case study of Salerno.

The dashboard of governance and financing models for cultural heritage adaptive reuse in Salerno is developed to support decision-makers to "navigate" between the many possibilities, according to national and regional regulations.

The analysis of one "worst" practice referred to the *Palazzo San Massimo* in Salerno, that is one of four abandoned heritage buildings in the historic city centre, allows to take into account specific barriers and bottlenecks factors that could hinder the success of adaptive reuse projects in the future. Learning from past failures becomes thus critical also for identifying decision-making criteria that can guide the Municipality and experts to take more informed choices on cultural heritage adaptive reuse.

#### 2.2. Selection, analysis and comparison of cultural heritage adaptive reuse cases

Starting from the mapping of more than 30 cultural heritage assets owned by the Municipality of Salerno, five heritage assets have been identified for analysis and comparison of cultural heritage adaptive reuse financing and management models.

Table 1 – Analysis and comparison of cultural heritage adaptive reuse cases in Salerno

Characteristics	Ave Gratia Plena	Garden of Minerva	Santa Sofia	Monte dei Morti	Edifici Mondo (including Palazzo San Massimo)
Heritage typology	Religious (convent)	Garden	Religious (convent)	Religious (church)	Religious (convent) / Civil (noble palace)
Current use	Tourism (hostel)	Tourism and education Entrepreneurship (headquarter, coworking)	Entrepreneurship (headquarter, coworking)	Civic and cultural activities	
Dimensions (sqm)	ю	200 (1,000 external)	4	150	70
Investment for the adaptive reuse (Euro)	1,500,000	920	800	100	100,000,000
Management model	Rental contract	Permanent use contract Rental contract for free to a public Foundation, which in turn engages a civic Association for the reuse	Rental contract	Temporary use contract for free for 8 months to the University, which in turn engages a civic collective for the reuse	
Managing body (formal)	Private for profit	Public Foundation	Private for profit	University	,
Managing body typology (operational, day-to-day	Private for profit	Civic association	Private for profit	Civic collective of activists	
State of use	Fully in use	Partial use	Fully in use	Partial use	Abandoned

The selected projects are: the ex-Convent Ave Gratia Plena, the Garden of Minerva, ex-Convent of "Santa Sofia", the Church of "San Sebastiano del Monte dei Morti", and the complex of "Edifici Mondo" that includes four buildings: the noble palace "Palazzo San Massimo", the ex-Convent "San Francesco", Ex-Convents "San Pietro e Giacomo", ex-Convent "Santa Maria della Consolazione".

Current uses and details on the management of the buildings and sites have been explored further. The data collected are based on a survey on more than 30 cultural heritage properties developed within the Horizon 2020 CLIC project involving the Municipality of Salerno. Additional information on the management and financing model has been collected through in-depth semi-structured interviews conducted in person with 5 municipal officers and 3 managers of the heritage buildings / sites, in the period between October 2018 and June 2019.

Table 1 summarizes the characteristics of the selected cases analysing the typology of heritage assets, current use, dimensions, initial investment required, management model, managing body distinguishing between the organization that formally takes the responsibility for the management and the organization that actually takes care of the day-to-day management of the building/site, and finally the current state of use.

#### 2.2.1. The ex-Convent Ave Gratia Plena

The ex-Convent Ave Gratia Plena has been a convent for poor girls since 1650. The building has a rectangular courtyard, arranged on five levels with a main staircase with four flights on a rampant barrel vault and with columns dating back to 1400 in the mighty hall. In the entrance hall, there are remains of an apse with traces of early medieval frescoes dating back to the 11th century. Currently in reuse as a Youth Hostel, it has about 20,000 visitors per year. The manager of Ave Gratia Plena used the structure of the Convent for hospitality (hostel), exploiting the position of Salerno in synergy with city investments for the development of the tourism sector. The initial recovery was supported by public funding, while ordinary maintenance is ensured by the private company. During the 17 years of management, the results have proven to be right in the choice of adaptive reuse. About 15 workers are engaged and employed in the management, with fluctuations between high and low season periods. The location in the historic city centre and in the ancient structure represent a strong fascination for the guests. At the same time, the new tourist function has brought an excellent effect on the local economy. The structure is always open to the city and hosts many cultural activities organized by the Administration and the City Cultural Associations.

## 2.2.2. The ex-Convent "Santa Sofia"

The ex-Convent of "Santa Sofia" was built at the end of the 10th century as the first monastery of the Benedictine Order dedicated to Saint Sophia, from which it takes its name. It includes the former church of St. Sophia, also known as the Church of Our Lady of Sorrows. In 1592, the monastery of St. Sophia was occupied by the Jesuits called to Salerno to take care of youth education. The church was completely restored in neoclassical style by Archbishop Marino Paglia in 1850. It has hosted many functions, up to the latest adaptive reuse as digital health enterprise headquarter, business incubator and co-working space. Differently from the ex-Convent Ave Gratia Plena, the company managing Santa Sofia invested about 800.000 € for the renovation of the building, which is used partially as its

own headquarter – this allows to pay the rent of 6.000 € per month to the municipality. In the other parts the building hosts a co-working space and incubator for startups in digital health sector, with a bar/kitchen and facilities for the enterprises. The place offers free educational events on entrepreneurship and digital innovation each week, opening-up its doors for interested citizens. This activity is part of its marketing strategy, linked to the consulting services offered for the enterprises of the territory. The success of these initiatives lies in the balance of private and public interest. The uses / functions are in line with the city strategic policies, and an additional benefit for the municipality is the private investment that the companies allowed to repair and maintain the buildings, which could not be funded by the municipality. Also, the spaces are partially open to citizens, which ensures that the enjoyment of the heritage value is not completely lost for the local community, despite the private use.

#### 2.2.3. The Garden of Minerva

The Garden of Minerva is the first historic botanical garden in Europe for the cultivation of plants for therapeutic use. The garden consists of five rooms that are arranged around a double-height space called the Winter Garden. The staircase that connects the different levels was built on the medieval walls. The theme linked to the botanical tradition of Salerno has as its first important educational element the representation of the ancient system of plant classification.

The adaptive reuse of the Garden started with an intuition of the municipality, which recognized a high cultural value to the place that was hosting the ancient Salernitan Medical School in the middle-age, one of the most unique historic bothanic therapeutic gardens worldwide. The municipality, together with local experts and activists, looked for a viable formal solution to ensure a smooth process recovery and management of the Garden and make the ancient place come to life again. In fact, the constraints of action of a municipality made the process too slow in the early stages. Thus, the Salernitan Medical School Foundation was created to conserve and valorise the ancient Salernitan medical tradition, linked to Hippocrates medical school. Historic studies were funded and the cultural value of the place and the tradition that it represented was re-discovered. Public funding was sought at local, regional and national level to recover, piece by piece, this ancient garden. Moreover, the Foundation agreed to sub-contract a local civic Association that shared the mission of "rediscovering" ancient treasures of Salerno, to ensure day-today management and autonomy of budget spending for small repairs, gardening, ticketing, organization of educational activities. After more than 15 years, the Garden of Minerva has 40.000 visitors per year and hosts educational laboratories, meetings and exhibitions focused on the ancient Salernitan Medical School and therapeutic botany. It also hosts a bar and shop with local bio-products, managed by an association. The Garden of Minerva has received numerous international awards and has constituted the first network of historical therapeutic botanical gardens in Europe. Recently, the Garden of Minerva has received significant funding of over 3 million Euro which will enable it to recover the rooms on the upper floor and extend the surface area of the garden itself.

The Garden of Minerva with the City of Salerno has started the procedure for the candidature at European Cultural Route of the Council of Europe, liaising with other therapeutic bothanic gardens linked with Hippocrates medical school. The success of this experience lies in the strategic long-term vision of the municipality, which created effective

synergies with Universities for historic studies, local association for the valorisation of the place, local experts for specialist studies, effective engagement of citizens and communication. However, the Garden has few people working compared to its needs for growing and scaling-up, which cannot be increased due to the limited budget coming out from ticketing and laboratories. In this sense, even if a civic association is managing the site, a more strategic and entrepreneurial approach by the municipality would be highly beneficial, to ensure that this potential is fully exploited.

#### 2.2.4. The Church of Monte dei Morti

The Church of Monte dei Morti (the so-called "Morticelli" Church) has a recent adaptive reuse story. was built in 1530 to a design by the architect Antonio da Ogliara and represents a rare example of 16th century architecture with an octagonal plan. Until the eighties of the twentieth century it was used for worship and hosted the congregation of San Bernardino. Following the earthquake in 1980, the church was entrusted to the Municipal Service Authority and finally closed due to extensive damage to the structure that made it necessary, over time, two restoration campaigns, the last completed in 2010. Reopened for a few days in 2011, the church was then definitively closed. The general interest for the place, closed since 30 years, started with heritage studies conducted by university students, who later formed a collective of activists named "BLAM" calling for the re-opening of the Church (Cerreta et al., 2019). The Church has a small surface, not interesting for private companies. The conservation was ensured by a partial restauration intervention conducted by the local heritage authority (Soprintendenza) with public funding for about 100,000 €, which allowed to maintain the ground floor and the secondary entrance. An additional investment of about 300,000 € is estimated to complete the restauration of the first floor and main entrance of the Church, however the place can be used even if not completely. The University of Naples (Department of Architecture) promoted a Memorandum of Understanding with the municipality as owner of the building, with an 8 month validity (temporary use). This was considered the best possibility to directly give the Church in custody for launching the adaptive reuse process. In fact, agreements between public bodies follow quicker procedures than agreements with private actors, which must clearly identify the public interest in the negotiation, and go through public call procedures with longer times and higher costs. Moreover, informal groups of activists which could have the energy and motivation to give new life to abandoned places have not the formal requirements to participate in public calls for tender, and are generally less trusted to manage heritage buildings, which have cultural attributes that could be damaged by improper use. Therefore, the solution of entrusting the University through a temporary Memorandum of Understanding was allowing a smooth process for the adaptive reuse, avoiding to get "trapped" in bureaucracy, and in the same time it did not engage the municipality with long term contracts, leaving it the possibility to decide later about a more permanent use and management model. In this way, the risk of improper uses of the place remained low. After almost two years of management by young activists, the Church of "Morticelli" has recovered its place in the "imagination" of citizens, who participated to meetings, co-design workshops, art exhibitions, theatre, concerts, movies projections, and city games. The success of this experience lies in the 'light' and temporary agreements taken between the owner and the managers, and the energy that young people put in taking care of the place as a "community hub". However, this "temporality" represents also its limitation, since a longer term project cannot be developed at the current conditions. Public funding has been sought by the municipality for the recovery of the place, but uncertainties about timing could undermine the potential of this experience.

#### 2.2.5. The "Edifici Mondo" with Palazzo San Massimo

Finally, the four abandoned buildings (ex-Convent San Francesco, Palazzo San Massimo, Ex-Convents San Pietro e Giacomo, ex-Convent Santa Maria della Consolazione) are commonly known as "Edifici Mondo", for their dimensions in the historic city centre of Salerno. These buildings (three convents and one noble palace) are in abandonment since more than 30 years, despite many attempts of the municipality to find a use and the necessary funding / investments for their recovery and adaptation. The Edifici Mondo represent the greatest challenge for the adaptive reuse of cultural heritage in Salerno, with an estimated investment of more than 100 million Euro for about 70.000 square meters of surface. This case is worth to be investigated more in-depth in the next section, with particular focus on Palazzo San Massimo, that was included in many different initiatives for its recovery, as single building or as part of the Edifici Mondo.

#### 3. The case of Palazzo San Massimo, a story of 30 years' abandonment

The restoration project of *Palazzo San Massimo*, a monumental building founded between 861 and 865, is considered by the Municipality of Salerno as a fundamental cultural heritage that should be recovered and reused to strengthen the potential of the historical centre and allow the city to create a cultural centre of tourist attractiveness and social aggregation.

Its millenary history has been characterized by several changes of ownership and changes of destination, starting from the original Monastery, built as the seat of Benedictines monks annexed to the Hospice, and the Church of *San Massimo* founded by the Longobard prince *Guaiferio* in honour of the saint. In 1620, the Benedictine order accepted the offer to transfer the property of *Palazzo San Massimo* to the brothers *Abbate Matteo* and *Francesco Antonio Granito*, Bishop of Cava de' Tirreni, in the hope that the restoration work they had promised would save it from becoming a ruin, as well as taking on the obligation not to demolish the Church.

In 1664 the Abbey of Cava de' Tirreni once again sold the property of the complex to *Bartolomeo Mauro Seniore*, who made it the home of his family. The residential use of the complex began.

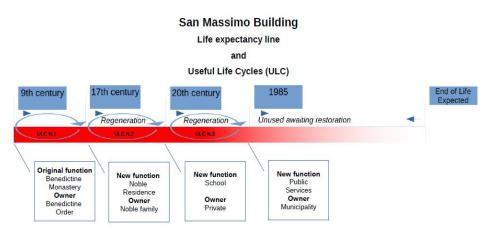
At the beginning of the 20th century, the building was used as a school, hosting first the *Convitto Genovese*, then the *Liceo Artistico Andrea Sabatini* of Salerno, and finally the *Liceo Classico Tasso*. In these years the structure was heavily damaged by major interventions causing alterations of the original structure.

The property remained private until the 80s, when the *Palazzo San Massimo* was bought by the City of Salerno. After some attempts of recovery and enhancement, currently the building is abandoned, waiting for restoration works (Fig. 1).

The building currently covers a total area of approx. 4,200 square meters on four levels. It is divided into two buildings, one of which is older, set on the original site of the palace of Prince *Guaiferio*, of approx. 3,300 square meters (body A and body C). The other part, more recent (body B) has a surface of approx. 900 square meters. The ancient part, which is on two levels, consists of a central core, represented by the Chapel (the ancient Church of

San Massimo) on the ground floor, and a monumental staircase that leads to areas of great historical and artistic value placed on the first level.

Fig. 1 – Palazzo San Massimo life expectancy line



The building has followed many phases of management during its long history. The last phase, after the acquisition by the Municipality as a cultural heritage of the city, passed through diverse renovation and reuse projects, none of them achieving the result of reusing the building, for many reasons. The following section describes the adaptive reuse attempts led by the Municipality, identifying the reasons for their failure and the evaluation criteria adopted by the public decision-maker to develop a project for the reuse of the historic building.

#### 3.1. The public management phase of the building

The many attempts carried out by the Municipality of Salerno for the adaptive reuse of *Palazzo San Massimo* are described below.

#### 3.1.1. Call for Ideas

In 1997, the Municipality of Salerno organized an international competition of ideas for the recovery of the "Edifici Mondo", among which the Palazzo San Massimo was included. The winning project by architects Kazuyo Sejima and Ruye Nischizawa included, specifically for this building, the restoration with the implementation of functions of "public interest" such as: exhibition hall, restoration school, observatory on the development of the historic city centre. At the end of the competition, the Municipality started a fundraising phase, whose main difficulty was related to the size of the investment in relation to the possible dynamics of exploitation and the expectation of public utility of the functions imagined. The fundraising was not successful, with the result of abandonment of the adaptive reuse project due to lack of private investments for its development.

#### 3.1.2. Public-Private Partnership (PPP)

In 2008, during the programming cycle of European structural investment funds 2007-2013, the City of Salerno, as an intermediate body for the implementation of a programme of urban regeneration of the historic centre called "PIU EUROPA" (Urban Integrated Programme), carried out a phase of listening of the local community for the definition of a programme of interventions to be submitted to the Campania Region for funding. During this procedure, a private company presented a proposal to the Municipality for a public-private partnership for the recovery and enhancement of "Edifici Mondo". The proposal provided for a total investment of about 70 million Euro to realize, in the various buildings/spaces available, two possible destinations:

- 1. mainly for public use, with provision for the immediate return of the works to the Municipality at the end of the restoration; the main functions proposed were: museums, street furniture, roads, parking;
- 2. economic exploitation, under the concession of the surface right or through transfer of the property; in this case, the main functions proposed were: social housing, restaurants, beauty centre, hotel, swimming pool, underground parking, shops, offices.

In the case of *Palazzo San Massimo*, the proposal provided for the structural recovery and the creation of museum spaces with immediate return to the Municipality of what should have been realized.

The evaluation of the proposal turned out to be negative at the end of the investigation, as the "public interest" of the project related to the mix of functions was not fully satisfied, considered excessively unbalanced with respect to the constraint of use for social purposes of some of the *Edifici Mondo* (constraint not present on the San Massimo).

The evaluation of this alternative, carried out by the Municipality, can be summarized as follows:

- Financial return on investment (financial NPV): positive
- Socio-economic impact: positive (low)
- Management model: Public-private partnership
- Main risk area for the Municipality: availability risk

#### 3.1.3. Public Use as Museum

In 2009, the Municipality participated in a call for proposals from the Campania Region for the disbursement of grants from European funds ERDF 2007/2013. The project, entirely public, provided for the recovery and functional adaptation of *Palazzo San Massimo* for the development of tourist and museum activities, training and conferences related to the enhancement of the city and with particular reference to the great medieval botanical tradition of Salerno. The positive socio-economic return was mainly guaranteed by the tourist development triggered by the proposed intervention. The expected impact, therefore, was considered as the increase in the average stay of tourist flows.

The investment estimated by the Administration was Euro 9.995.590 while the management of the work would have been directly guaranteed by the municipal administration. At the end of the regional investigation, the project was suitable but scored too low to be eligible for funding.

The evaluation of this alternative, carried out by the Municipality, can be summarized as follows:

- Financial return on investment (financial NPV): negative

- Socio-economic impact: positive (high)
- Management model: public management
- Main risk area for the Municipality: operational risk

#### 3.1.4. Alienation (sale) of property

In 2012, the Administration decided to put the property on sale, free and in poor condition, with a base auction value of Euro 7.419.430. At the end of the procedure the property was unsold.

The evaluation of this alternative, carried out by the Municipality, can be summarized as follows:

- Financial return on investment (financial NPV): not estimated considered ex post low/negative due to the absence of purchase proposals
- Socio-economic impact: not estimated
- Management model: private management
- Main risk area for the Municipality: availability risk

#### 3.1.5. Luxury Hotel proposal

In December 2018, ACEN, the building construction companies' association of the province of Naples, published a study connected to the valorisation of some historical buildings in Campania, including *Palazzo San Massimo*, for which a Public-Private-Partnership transaction was hypothesised, involving the sale of the property to private individuals, or in alternative the use concession for the construction of a luxury hotel, with a total investment of 7,5 million Euro (Discepolo and Verde, 2018).

This proposal resulted as a pre-feasibility study for scientific use, which was not followed by any proposal or discussion with the Municipality and therefore, since it was not evaluated, it is here simply mentioned without reporting any further data or indicators.

## 3.2. Evaluation of project alternatives: barriers and failure factors, and ways to overcome them

The process of design and evaluation of adaptive reuse attempts on Palazzo San Massimo can be synthesized in the chart below, which represents the socio-economic return of the project (Economic Net Present Value) and the financial convenience of the investment (Financial Net Present Value) (Fig. 2).

Three attempts have been considered: the PPP proposal (reuse through private intervention); alienation of the property; and the pure public project considering the reuse of the building as a Museum.

The three alternatives for the adaptive reuse of the building are described below, identifying the barriers and failure factors, as well as potential ways to overcome them.

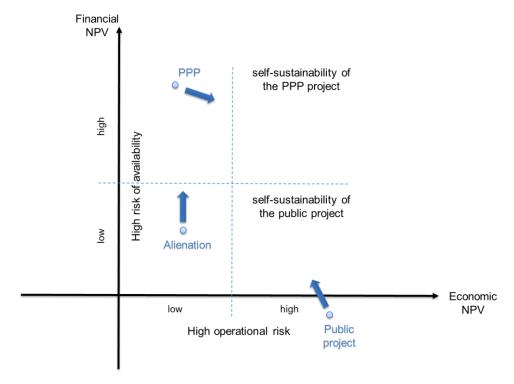


Fig. 2 - Impact/risk relationship associated with the way a public project is managed

Alternative 1: Public-private partnership. As shown in the chart (Fig. 2), the proposal of PPP resulted in a high financial return for the private proponent, while the socio-economic impact of the project was considered too low compared with the notion of "public interest". The proposal was evaluated as not eligible, considering also the high risk of availability of the property for the Municipality in case of partnership with private bodies. In such cases, to make the adaptive reuse proposal acceptable for the public body, the financial return of the investment for the private subject should be reduced.

The reduction of the expected financial return of the investment in the adaptive reuse of cultural heritage can be possible only in case that the investment risk is also reduced. However, a certain financial risk for the private subject will remain. To this end, the instruments a body can use for a balanced proposal are, for example, the extension of contract duration, the introduction of a price, flexible price-adjustment mechanisms, fees and shadow tariffs.

Alternative 2: Alienation of the property. In the case of alienation (sell) of the property in favour of a new private owner, the real estate auction was not successful, since the market considered the estimated starting price too high compared with the limitations of use functions allowed by heritage regulations. In the current regulatory conditions, the potential of economic use of the property for a private subject has been considered too low. In this case, there are very few instruments that the public owner can introduce to stimulate market

actors to acquire the cultural heritage property. In fact, the public body cannot sell the property at a price lower than the average market price, since this would be considered as a damage to public finances. On the other side, the Municipality has scarce power to reduce the limitations of use and transformation of the building, since these limitations are linked to the heritage historic-cultural value and are mostly enforced by higher-level heritage authorities.

Alternative 3: public project – reuse as Museum. The project presented by the Municipality excluded the recovery of the investment through the economic exploitation of the work, guaranteeing the coverage of the expenditure through the non-refundable European grants. In any case, the financial plan provided for a cash flow deriving from the sale of entrance tickets to the museum area, however the plan barely covered operating expenses on an annual basis. This type of option, essentially linked to a management model based on public expenditure in the investment and operations phase to support the management and maintenance of the structure, certainly responds more to the expectations of the local community, however it exposes the Funding Authority to a high operational risk connected to possible fluctuations in demand or supply and a rigidity of management structure with little capacity to adapt to market dynamics.

Although the project has been assessed as suitable by the Managing Authority of European funds, it has not obtained the required contribution, probably too high for a call for proposals procedure where typically resources are limited and there is a tendency to favour the greatest possible territorial coverage of public financial support to cities.

In cases like this, when the functional characteristics of the adaptive reuse works allow the evaluation of alternative funding sources, it may be appropriate to assess different options for economic exploitation and financing of the adaptive reuse project, including for example sponsorship contracts, crowdfunding and other financial instruments in the sector of impact investment, to increase the ability to recover, albeit partial, the investment and to cover the management needs in a fair compromise with the expectations of the community, which remain guaranteed by the strength of the public role.

# 4. Financing and management intersections and risk assessment in cultural heritage adaptive reuse

The useful life of any asset, regardless of catastrophic unforeseen events or a very strong dedication to care, can be traced back to a sequence of phases which, starting from creation, inevitably leads to end of life. However, while the point of origin of the line that traces the life path of the asset is univocal, the end of life can be postponed through "circular" interventions. Recovery, refurbishing and adaptive reuse are some of the circular economy strategies that can be adopted to enlarge the life time of goods (*Foster*, 2020; *Kirchherr et al.*, 2017).

If we turn to the specific case of cultural heritage, the plurality and intensity of the values attributed to them (cultural, aesthetic, social, economic, etc.) widens the opportunities for use and motivates efforts to regenerate its life by delaying its end as much as possible, given the natural internal (material) and external (context) factors of deterioration (Foster, 2020; Gravagnuolo *et al.*, 2017).

The strategic and managerial approach adopted for cultural heritage conservation highly influences its useful life.

Through the observation of success and failure cases in the city of Salerno, and with respect to additional case studies analysed within the Horizon 2020 CLIC project<sup>1</sup>, it was developed the chart of "Financing and management intersection and risk assessment for cultural heritage adaptive reuse" (Fig. 3).

The chart synthesizes the available financing and management options for the public owner of cultural heritage, highlighting the risks linked to each configuration. The available options are described below.

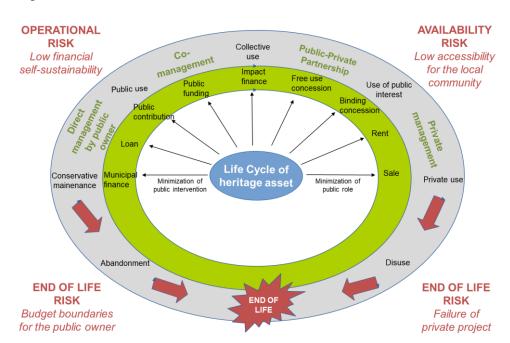


Fig. 3 – Financing and management intersection and risk assessment for cultural heritage adaptive reuse

## 4.1. Conservative maintenance without reuse project vs. Pure private exploitation

The choices of conservative maintenance and private use are supposed to be 'borderline' choices, apparently the simplest or less demanding ones. They are linked to the 'minimization of public intervention' in terms of management effort in the case of conservative maintenance, and the 'minimization of the public role' in the case of pure private use with the sale of the heritage asset to private subjects.

In the case of conservative maintenance, an exclusively conservative choice is adopted, linked only to the maintenance of the heritage asset without identifying a specific adaptive

Additional cultural heritage adaptive reuse projects have been collected and published on the Horizon 2020 CLIC platform "Knowledge and Information Hub" www.clicplatform.eu

reuse and management project. This choice favours the "minimum use" as an extreme attempt of protection of its cultural-historic values for future generations. It means triggering a repetitive and routinary process of planned interventions to maintain a good state of conservation, the only "public interest" to which the asset itself has been allocated, the cost of which, as current expenditure, year after year has to be covered in the ordinary municipal budget, mostly among the items with a generic destination. This creates a risky linkage between the state of the asset and the budgetary constraints of the Muncipality that owns the heritage asset, a link that is all the more fragile, the more austerity and expenditure restraint policies are adopted. This option, while it could be seen as a 'protective' choice, in reality exposes the heritage asset to the risk of end of life again after few years, due to the absence of a reuse project and thus triggering further abandonment.

On the opposite side, a Municipality that is aware of the risks and difficulties in finding year after year the resources necessary for the maintenance of an unused heritage asset may, as *extrema ratio*, also decide to transfer its use rights and/or ownership, still maintaining restrictions on its use. In this way, the Municipality can transfer the risk of end of life to third parties. However, it loses the decision-making right in favour of an exclusively private use, with management choices that do not provide for any form of public monitoring and control in the interest of all citizens, and whose possible failure could trigger an acceleration of the degenerative process of the heritage asset itself.

It is understood that both of the choices described above are in the legitimate decision-making right of the Municipality. However, in the case of cultural heritage they are to be considered the riskiest ones, also because they can be traced back to the absence of an adaptive reuse project by the public owner.

It follows that all the possible alternatives in-between those described above require evaluation capacity and management ability at municipal level to seize opportunities related to heritage assets, defining an adaptive reuse project capable of reducing financial and operational risks for the municipality and to generate benefits for the local community.

In this case, the project design and management capacity of the public action is key and requires, more than in other cases, a degree of maturity in project management to minimize the risk of incorrect planning or poor management that can cause the failure of the project itself, undermining the attempts of regeneration with the risk of a sudden return to abandonment.

## 4.2. Public-private partnership and public-private-people alternatives for financing and management of cultural heritage adaptive reuse

Starting from the minimization of public intervention, the Municipality is able to activate forms of financing or non-refundable contributions (grants) for the realization of cultural heritage adaptive reuse projects, opting for the direct management or, in the case of projects with a high social impact and collective use, also choosing forms of indirect management, for example through the involvement of non-profit sector subjects.

In order to understand the operational risk of this option, we must consider the difficulty of financially isolating the investment as a prerequisite of the adaptive reuse project, providing for sufficient revenue flows to guarantee the coverage of (at least) operational costs. This is particularly important when considering public-based functions such as Museum or Community centre. It follows that an insufficient or overestimated assessment of the expected financial flows could cause losses in the operational phase, for which no coverage

is foreseen. Therefore, if not consolidated over time, the adaptive reuse project can turn to be unsustainable, leading to the premature closure of the activity and thus of the heritage. In the presence of certain characteristics of the asset that enable a development project of public interest capable of generating sufficient cash flows to remunerate the invested capital as well as to cover the operational costs, a Municipality should always also consider the option of Public-Private Partnership (PPP) (Allegro and Lupu, 2018). This is a choice of "risk sharing" through enhanced management efficiency, most often not found in the internal resources of the administration, thanks to the involvement of the private sector to guarantee the financial self-sustainability of the project.

In this case, the organisational model intercepts an area of risk connected with the availability of the heritage for the local community, which could, due to Municipality's lack of specific skills or lack of bargaining power, lead to an excessively profit-oriented agreement to the benefit of the private dealer that can be legally questioned as "not ensuring the public interest".

## 4.3. Lessons learned from *Palazzo San Massimo* and *Edifici Mondo* adaptive reuse attempts

Comparing the results of the analysis conducted on Palazzo San Massimo to the "Financing and management intersection and risk assessment for cultural heritage adaptive reuse" (Fig. 3), it is possible to reconsider the range of choices available to the public owner for the adaptive reuse of cultural heritage with a higher probability of success.

In the case of a historical asset in a high deterioration state, such as to require a high investment for the recovery and re-functionalization with respect to city finances, the choice of the 'minimization of the public intervention' is to be excluded, since it is evidently insufficient to guarantee a long-term sustainability of the adaptive reuse intervention. In the same time, the choice of 'minimization of the public role' related to the sale needed to be excluded as well in the case of Palazzo San Massimo, since it was difficult to reach an attractive price for investors.

Given the size of the investment related to a "minor" cultural heritage, the possibility of intercepting a public contribution covering 100% of the investment is also limited in the case of a selective tendering procedure launched by higher level public institutions like the regional government.

A third path to the public intervention is linked to the possibility for the Municipality to negotiate the programming of public funds in advance, as in the case of the urban regeneration programmes PIU EUROPA financed with ERDF 2007/13 funds or PICS programmes financed with ERDF 2014/20 funds. In this case, the Municipality was able to choose a set of urban investments within the limits of the constraints imposed by the financing body (in this case, the regional government responsible for the ERDF funds), on the basis of an assessment of the socio-economic impact of the single interventions. In this case, careful attention must be paid to the self-sustainability of the interventions in the management phase, in order not to incur again in the degenerative process of abandonment of the asset.

Excluding the options described above, it can be useful to consider alternative financing models such as those introduced by impact finance or public-private-partnerships in all their possible forms, evaluating mainly two aspects: the conservation of the "intrinsic value" of the asset as a cultural heritage, and its potential for economic exploitation. The

first step is to change the point of view from that of the investor to that of the community, which is the final beneficiary of the intervention. To this end, a phase of listening of the territory and eventually participative and co-design processes are appropriate instruments in order to understand communities' expectations and perceptions, co-exploring possible new uses of the asset, capable of generating added value for all stakeholders, adopting a "winwin" approach.

The case of *Palazzo San Massimo* supports the hypothesis that adequate attention has probably not been paid to the preparatory phase of listening and planning, going down different paths over the years because under the pressure of the urgent recovery of the asset and, in any case, essentially solicited more by external inputs, as in the case of the PPP proposal and the opportunity of participation in the ERDF call for proposals, rather than driven by a strategic and shared design strategy.

# 5. Decision-making criteria for "circular" financing and management models in the adaptive reuse of cultural heritage

According to the analysis carried out in the previous sections, derived from the empirical evidence of success and failure stories of cultural heritage adaptive reuse in the city of Salerno, a set of decision-making criteria for cultural heritage adaptive reuse has been developed. Table 2 synthesizes the success and failure factors in the five case studies analysed in the city of Salerno.

Table 2 – Success and failure factors in selected cultural heritage adaptive reuse cases

Case study	Success factors	<b>Barriers and Failure factors</b>
Hostel Ave Gratia	High market demand of the hostel	Short term of the agreement
Plena	function;	between municipality and the
	Effective private management;	private management;
Depending on:	Localization;	Perceived risk of availability;
	State of conservation;	
	Management capacity;	
Historic Garden of	Strategic vision shared by the	Difficulties in the governance
Minerva	municipality and the managing body;	structure;
	Effective private management (non-	
	profit association);	
	Fundraising capacity for	
	extraordinary activities thanks to the	
	synergy between the public owner	
	and the private manager;	
Depending on:	Capacity of valorising the uniqueness	Lack of responsibility of the
	of the cultural heritage;	formal contractor;
	Management capacity;	Lack of ordinary financial
	High level of trust between the public	resources of the public owner;
	owner and the private manager;	
Co-working Santa	Less charges for the municipality	Low market demand of the co-

Sofia thanks to private investment; working function (economic); Income for the municipality thanks to Low access to the local the renting agreement; community (social); Innovative activities / functions available in the city; Depending on: Good state of conservation of the Scarce innovation ecosystem asset thanks to previous public funded development; interventions; Business model scarcely oriented High investment and management to community use; capacity of the private manager; Community hub High community engagement; Short term of the agreement Monte dei Morti New opportunities for culture and between municipality and the social interactions: private management; Difficulties in the governance structure - necessity of intermediate actor (University) to allow students and young professionals to take care of the place, opening it to the community; Depending on: Local community involvement in co-Scarce financial resources design processes; available; Good state of conservation of the Low revenue flows expected; asset thanks to previous public funded Perceived risk of availability; interventions; Lack of trust; Temporary use; Capacity of valorising the uniqueness of the cultural heritage; Edifici Mondo -High costs of recovery; Palazzo San Lack of strategic vision shared by potential public and private Massimo (no use) investors, as well as by the community; Difficulty in clearly defining the "public interest"; Depending on: Very bad state of conservation of the assets; Uses limitations; Localization (low accessibility); Scarce evaluation and management capacity of the public owner; Lack of involvement of the local community in co-design processes; Perceived risk of availability;

Based on the analysis carried out, a set of practical decision-making criteria for cultural heritage adaptive reuse have been identified, which influence choices at municipal level. Moreover, circular economy specific criteria were identified to integrate current decision-making trajectories, stimulating better design and procurement choices.

Physical characteristics of the heritage asset

- Size
- State of conservation
- Localization

The above three factors influence the investment cost, which is a key element of any decision on cultural heritage adaptive reuse.

#### Regulatory factors

- Uses limitations
- Level of protection / adaptability

#### Governance factors

- Presence of a shared strategic vision
- Engagement of the local community in participatory and co-design processes
- Human capital availability (strategic design, evaluation and management capacity)
- Level of trust between owner, (potential) manager and the local community

#### Sustainability factors

- Financial self-sustainability (estimated net present value)
- Socio-economic impact
- Circular economy environmental impact (energy, water, materials, wastes, soil, biodiversity, nature-based solutions)

#### Risk factors

- Risks for the general interest linked to irreversible loss (further abandonment)
- Risks for the general interest linked to improper use (loss of cultural values)
- Risks for the general interest linked to scarce accessibility to the local community (loss of social value)
- Entrepreneurial risk linked to absent or volatile market demand

The above practical criteria can guide decisions of public institutions on the adaptive reuse of cultural heritage. They were identified following a mixed inductive and deductive methodology based on the selection and in-depth analysis of relevant and diversified case studies in the city of Salerno, linked to circular economy specific criteria (Gravagnuolo *et al.*, 2017). For example, the environmental impact was not explicitly considered in the choices adopted by the Municipality of Salerno, however this criterion should be put in a central place considering the climate change issues and the strategic policy orientation at European and national level. Also, the "level of trust" is introduced as a key element of successful partnership between the public owner and the private subject entitled to reuse the heritage building/site. This element is a key component of circular economy models, which are strongly driven by synergic and symbiotic relationships between multiple actors (public bodies, businesses, civil society organizations, citizens and final users...) (Fusco Girard *et al.*, 2019).

#### 6. Discussion and conclusions

What is the importance of a project related to the adaptive reuse of cultural heritage? Design, financing and management choices are influenced by a set of factors that can be

analysed in a transparent way to justify decisions on cultural heritage adaptive reuse. Cultural heritage adaptive reuse is characterized by specific objectives, among which there is the perfect conservation state of the asset after the reuse phase. This objective needs the existence of a strategy, i.e. the ability of the Municipality to analyse risks and threats related to the conservation of the asset, transforming them into opportunities for exploitation. A high level of maturity in the Municipality's project management guarantees the possibility of capturing the added value of an adaptive reuse phase/experience that has come to an end, as a basis for evaluating new initiatives adapted to evolving needs and context, activating the desired continuous regenerative process in the life cycle of the asset (Bullen and Love, 2011; Misirlisoy and Günçe, 2016).

In the absence of a shared strategic vision, temporary uses can trigger the demand of new uses/functions, and effectively reduce the entrepreneurial risk of investing in a deprived or remote area by attracting "users" in the heritage building/site before the adaptive reuse investment strategy is clearly defined.

A reflection must be made also on the role of those "private" bodies that align to a clear circular economy model and that voluntarily respond to "human-centred" social corporate responsibility principles. In fact, according to a "human-centred" circular economy paradigm, (ideally) all private for-profit organizations should adopt business models that do not harm nature and that are able to generate social, economic and environmental benefits, while reducing environmental and social costs of their productive activities. In this sense, the "mission" of 'for-profit' and non-profit organizations tends to become convergent, since both entities share the "general interest" for present and future generations in a circular economy perspective as final objective of their activities.

"Circular procurement" rules for public bodies can be a viable solution to enhance transparency and effectiveness of choices in the adaptive reuse of cultural heritage, especially for the cultural heritage sector which is typically perceived as a "common good" to be conserved for the "general interest".

This paper identified a set of practical criteria for public decision-makers for cultural heritage adaptive reuse choices, based on the physical characteristics of the heritage assets, as well as regulatory, governance, sustainability and risk factors.

This study presents some limitations due to the number of cases analysed, which do not represent the complete cultural heritage sample in the city of Salerno. However, the selected cases are representative of common governance models "categories", which are present also in other Italian and European contexts.

Since Municipalities often own many cultural heritage properties and mostly lack financial and human resources to effectively conserve and manage them, it is worth to continue exploring the decision-making process of local governments under a financing and management point of view. Clear and relevant ex-ante evaluation criteria can stimulate the adoption of circular models to enhance the effectiveness and success of adaptive reuse projects, reducing costs and risks and in the same time enhancing the economic, social, cultural and environmental impact of cultural heritage adaptive reuse towards "circular cities".

**Funding:** This research has been developed under the framework of Horizon 2020 research project CLIC: Circular models Leveraging Investments in Cultural heritage adaptive reuse. This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 776758.

**Acknowledgments:** The article is the result of the joint work of both authors. Within this collaboration, it should be acknowledged the writing of section 1, 2, and 5 by Antonia Gravagnuolo and section 3 and 4 by Raffaele Lupacchini. Conclusions have been developed by both authors.

#### References

- Allegro I., Lupu A. (2018), "Models of Public Private Partnership and financial tools for the cultural heritage valorisation". *Urbanistica Informazioni INU*, 278si, pp. 1–6.
- Bandarin F., van Oers R. (2012), *The historic urban landscape: managing heritage in an urban century*. Wiley-Blackwell, Hoboken, USA.
- Berg S. K. (2017), "Cultural heritage as a resource for property development". *Historic Environment: Policy and Practice*, vol. 8, n. 4, pp. 304–322.
- Boeri A., Gaspari J., Gianfrate V., Longo D., Pussetti C. (2016), "The adaptive reuse of historic city centres. Bologna and Lisbon: Solutions for urban regeneration". *TECHNE*, n. 12, pp. 230-237.
- Bottero M., D'Alpaos C., Oppio A. (2019), "Ranking of Adaptive Reuse Strategies for Abandoned Industrial Heritage in Vulnerable Contexts: A Multiple Criteria Decision Aiding Approach". *Sustainability*, vol. 11, n. 3, pp. 785.
- Bullen P. A., Love P. (2011), "A new future for the past: a model for adaptive reuse decision-making". *Built Environment Project and Asset Management*, vol. 1, n.1, pp. 32-44.
- Bullen P. A., Love P. (2011), "Adaptive reuse of heritage buildings". *Structural Survey*, vol. 29, n. 5, pp. 411-421.
- Bullen, P. A., Love P. (2010), "The rhetoric of adaptive reuse or reality of demolition: Views from the field". *Cities*, vol. 27, n. 4, pp. 215-224.
- Cerreta M., La Rocca L., Elefante A. (2019), "San Sebastiano del Monte dei Morti Living Lab (SSMOLL): un processo di riuso adattivo community-driven". LVII Incontro Di Studi Ce.S.E.T. "Sviluppo Sostenibile, Economia e Città Circolare: Processi e Metodi Di Valutazione", Napoli, 12-13 December 2019.
- CHCfE Consortium (2015), *Cultural Heritage Counts for Europe. Final report.* International Cultural Centre, Krakow, Poland.
- Corte dei Conti (2016), *Iniziative di partenariato pubblico-privato nei processi di valorizzazione dei beni culturali*. Sezione centrale di controllo sulla gestione delle Amministrazioni dello Stato, Delib. n. 8/2016/G, Roma, Italy.
- Discepolo B., Verde F. (2018), *Palazzo San Massimo a Salerno. Casi studio nella Regione Campania: consistenza, criticità e opportunità legate ai patrimoni immobiliari pubblici e privati*. Edizioni Graffiti, Napoli, Italy.
- European Commission (2014), *Towards an integrated approach to cultural heritage for Europe*. COM(2014) 477 final, Brussels, Belgium.

- European Commission (2015), *Getting cultural heritage to work for Europe. Report of the Horizon 2020 Expert Group on Cultural Heritage*. Directorate-General for Research and Innovation, Brussels, Belgium.
- European Parliament (2017), European Parliament TEXTS ADOPTED P8\_TA-PROV(2017)0140 European Year of Cultural Heritage. European Union, Brussels, Belgium.
- Foster G. (2020), "Circular economy strategies for adaptive reuse of cultural heritage buildings to reduce environmental impacts". *Resources, Conservation and Recycling*, vol. 152, pp. 104507.
- Fusco Girard L., Gravagnuolo A. (2017), "Circular economy and cultural heritage/landscape regeneration. Circular business, financing and governance models for a competitive Europe". *BDC. Bollettino Del Centro Calza Bini*, vol. 17, n.1, pp. 35–52.
- Fusco Girard L., Gravagnuolo A. (2018), "Il riuso del patrimonio culturale religioso: criteri e strumenti di valutazione". *BDC. Bollettino Del Centro Calza Bini*, vol. 18, n. 2, pp. 237-246
- Fusco Girard L., Gravagnuolo A., Nocca F., Angrisano M., Bosone M. (2015), "Towards an economic impact assessment framework for Historic Urban Landscape conservation and regeneration projects". *BDC. Bollettino Del Centro Calza Bini*, vol. 15, n. 2, pp. 1-29
- Fusco Girard L., Nocca F. (2019), "Moving Towards the Circular Economy/City Model: Which Tools for Operationalizing This Model?". *Sustainability*, vol. 11, n. 22, pp. 6253.
- Fusco Girard L., Nocca F., Gravagnuolo A. (2019), "Matera: city of nature, city of culture, city of regeneration. Towards a landscape-based and culture-based urban circular economy". *Aestimum*, vol. 74, pp. 5-42.
- Gentile F., Lupacchini R. (2008), "La finanza di progetto nella pianificazione degli interventi", in Forte E. (ed.), *Trasporti, Logistica, Economia*, CEDAM, pp. 555-570.
- Gravagnuolo A., Angrisano M., Fusco Girard L. (2019), "Circular Economy Strategies in Eight Historic Port Cities: Criteria and Indicators Towards a Circular City Assessment Framework". *Sustainability*, vol. 11, n. 13, pp. 3512.
- Gravagnuolo A., Fusco Girard L., Ost C., Saleh R. (2017), "Evaluation criteria for a circular adaptive reuse of cultural heritage". *BDC Bollettino Del Centro Calza Bini*, vol. 17, n. 2, pp. 185-216.
- Gustafsson C. (2019), "Conservation 3.0 Cultural heritage as a driver for regional growth". *SCIentific RESearch and Information Technology*, vol. 9, n. 1, pp. 21-32.
- Gustafsson C., Stanojev J. (2019), "Economic spillovers of cultural heritage adaptive reuse at regional level", Horizon 2020 CLIC Deliverable 2.1, Uppsala University, Uppsala, Sweden.
- Kee T. (2019), "Sustainable adaptive reuse economic impact of cultural heritage". Journal of Cultural Heritage Management and Sustainable Development, vol. 9, n. 2, pp. 165-183.
- Kirchherr J., Reike D., Hekkert M. (2017), "Conceptualizing the circular economy: An analysis of 114 definitions". *Resources, Conservation and Recycling*, vol. 127, pp. 221–232.

- Leadbeter P. (2013), "Adaptive reuse of heritage buildings Do current planning and heritage controls support the concept?". *Environmental and Planning Law Journal*, vol. 30, n. 6, pp. 491-507.
- Misirlisoy D., Günçe K. (2016), "Assessment of the adaptive reuse of castles as museums: Case of Cyprus". *International Journal of Sustainable Development and Planning*, vol. 11, n. 2, pp. 147-159.
- Misirlisoy D., Günçe K. (2016), "Adaptive reuse strategies for heritage buildings: A holistic approach". *Sustainable Cities and Society*, vol. 26, pp. 91–98.
- Morkūnaitė Ž., Kalibatas D., Kalibatienė D. (2019), "A bibliometric data analysis of multicriteria decision making methods in heritage buildings". *Journal of Civil Engineering and Management*, vol. 25, n. 2, pp. 76-99.
- Oppio A., Bottero M. (2017), "Conflicting Values in Designing Adaptive Reuse for Cultural Heritage. A Case Study of Social Multicriteria Evaluation", in *Lecture Notes in Computer Science*, vol. 10406, LNCS, Springer Verlag, pp. 607-623.
- Oppio A., Bottero M., Ferretti V. (2017), "Designing Adaptive Reuse Strategies for Cultural Heritage with Choice Experiments". In *Green Energy and Technology*, Springer Verlag, pp. 303-315.
- Ost C. (2009), A Guide for Heritage Economics in Historic Cities Values, Indicators, Maps, and Policies. ICHEC Brussels School of Management, Brussels, Belgium.
- Ost C. (2016), "Innovative financial approaches for culture in urban development", in UNESCO (ed.), *Global Report on Culture for Sustainable Urban Development*. UNESCO, Paris, France.
- Pereira Roders A., Van Oers R. (2015), "Cultural heritage management, sustainable development and communities". *Journal of Cultural Heritage Management and Sustainable Development*, vol. 5, n. 1.
- Throsby D. (2016), "Investment in urban heritage conservation in developing countries: Concepts, methods and data". *City, Culture and Society*, vol. 7, n. 2, pp. 81–86.
- Torrieri F., Fumo M., Sarnataro M., Ausiello G. (2019), "An integrated decision support system for the sustainable reuse of the former monastery of "ritiro del carmine" in campania region". *Sustainability*, vol. 11, n. 19.
- UNESCO (2016), Culture urban future: Global report on culture for sustainable urban development. UNESCO, Paris, France.

### Raffaele Lupacchini

Municipality of Salerno; University of Sannio – Civil engineering department in "Regulatory, technical and economic aspects in the realization of civil infrastructure"

Via Roma - Palazzo di Città, 84100 Salerno (Italy)

Tel.: +39-089-662818; email: r.lupacchini@comune.salerno.it

### Antonia Gravagnuolo

Institute for Research on Innovation and Services for Development (IRISS), National Research Council (CNR)

Via G. Sanfelice 8, 80134 Napoli (Italy)

Tel.: +39-081-2490997; email: a.gravagnuolo@iriss.cnr.it

