

Article

Circular Economy of Cultural Heritage—Possibility to Create a New Tourism Product through Adaptive Reuse

Elena Rudan 

Faculty of Tourism and Hospitality Management, University of Rijeka, Primorska 46, 51410 Opatija, Croatia; elenar@fthm.hr

Abstract: Cultural heritage is a particularly significant resource in creating tourism. When a local community recognizes its cultural heritage (small historic towns, buildings, castles, and forts), it is possible to create new value to meet the needs of tourists, using the principles of a circular economy. Adapting, reusing and restoring heritage sites can contribute to the revitalization of the local economy by creating jobs (increased employment), increased spending, economic development, etc. Adaptive reuse, as one of the principles of a circular economy, represents how the circular economy can pave the way to create new tourism products. The three basic principles of sustainable waste management are reduce, reuse, and recycle (3R). This paper tackles the reuse principle by analyzing case studies involving the application of a circular economy to cultural heritage in the Kvarner tourism destination (Croatia) in the context of reusing resources to create a sustainable destination. The goal is to determine to what extent the reuse of heritage sites makes them useful for the local community, and for tourists to stay in the destination. The research showed positive examples in the Kvarner tourism destination, primarily of a cultural tourism nature and that were achieved in the last ten years; however, the conclusion is that this is still insufficient. By aggregating knowledge and research results, the paper emphasizes the importance of applying the concept of the circular economy to cultural heritage in tourism destinations, with special emphasis on the role of all stakeholders in creating sustainable heritage tourism (local self-government, destination management, local population, and entrepreneurship).



Citation: Rudan, Elena. 2023. Circular Economy of Cultural Heritage—Possibility to Create a New Tourism Product through Adaptive Reuse. *Journal of Risk and Financial Management* 16: 196. <https://doi.org/10.3390/jrfm16030196>

Academic Editor: Colin Michael Hall

Received: 25 January 2023

Revised: 28 February 2023

Accepted: 5 March 2023

Published: 13 March 2023



Copyright: © 2023 by the author. Licensee MDPI, Basel, Switzerland. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (<https://creativecommons.org/licenses/by/4.0/>).

Keywords: circular economy; tourism; cultural heritage; adaptive reuse; Kvarner

1. Introduction

Cultural heritage is an important resource in contemporary tourist destinations. It represents a significant link in the development of a destination's tourism industry, is an integral part of various types of tourism, and is especially important in the creation of heritage tourism. As has become one of the destination's most important attractions, a cultural heritage site is increasingly burdened by different influences (tourist influences, climate, etc.). Often, there is material heritage in destinations (buildings, industrial heritage, historic towns, castles, and forts) that is not maintained, and has been abandoned and negatively impacted in various ways. Such facilities can become interesting for cultural tourism. Furthermore, in creating a tourist attraction based on cultural heritage, tourist destinations recognize various uses for material cultural resources, primarily in relation to the research, protection and presentation of the cultural heritage site without altering its primary function (i.e., in relation to its preservation and protection). Another application relates to preservation through restoration, where the tourism offer consists of original resources without the use of new materials or changes to their purpose. The third application relates to that part of the cultural heritage site that can be reused through some new purpose, i.e., gaining a new useful function. In that direction, opportunities are created for the sustainable development of cultural heritage destinations, but also for the realization of sustainable tourism. This paper attempts to provide answers to the

following research questions: is it possible to apply the principles of a circular economy to cultural heritage, and how are (administrative) stakeholders involved in the process of implementing reuse strategy. The aim of this research is to determine the willingness and ability of a local community to recognize the value of cultural heritage, and create new value based on the principles of a circular economy. This represents new value for tourists, but also new, sustainable, and quality value for the local community. Local stakeholders (local administration and self-government, entrepreneurs, population, and destination management) must be involved in the future deliberations of repurposing cultural heritage destinations because it is only through a common, systematic approach that cultural heritage can be converted into new value for the destination where the changes will take place. The paper is structured as follows: an overview of the theoretical features of a circular economy and tourism is provided, followed by heritage and tourism in the creation of the tourism product, and the importance of adaptive reuse in tourism. The Methodology and Discussion chapters tackle specific use cases concerning the application of the adaptive reuse strategy in the Kvarner tourism destination (Croatia), while the Conclusion provides the final explanations, limitations of the research conducted, and recommendations for further research.

2. Literature Review

2.1. Circular Economy and Tourism

In recent years, the circular economy has occupied development creators, national politics, entrepreneurs, associations, and legislators, with more researchers in different fields dealing with the issues of the circular economy from different aspects (Murray et al. 2017; Korhonen et al. 2018; Lewandowski 2016; Vukadinović 2018; Appendino et al. 2021; Šverko Grdić et al. 2019, 2020). The circular economy is the basis for achieving sustainable development, which should provide solutions for the problems of living environments and the lack of natural resources, based on three principles: reduce, reuse, and recycle (Zhao et al. 2012; Tišma et al. 2017). More recently, the concept of the circular economy has expanded to a 6R principle (reuse, recycle, redesign, remanufacture, reduce, recovery) (Jawahir and Bradley 2016; Šverko Grdić et al. 2020). According to Foster (2020), when it comes to renovating buildings with a cultural-historical value, other principles may be added: refurbish, repurpose, and refuse. In its theoretical basis, the current economic model is defined as ‘linear’; it is based on access to resources, and reaching the maximum exploitation of those resources, which, in a linear process following production and consumption, eventually become waste. According to Andabaka (2018), the advantages of a circular economy are manifested in an increase in resource productivity, a reduction in harmful effects on the environment, a reduction in dependence on raw material imports, the creation of new jobs, an increase in the competitiveness of the economy, and the stimulation of sustainable economic growth. Furthermore, according to Girard (2019), the circular economy model is a hybrid model between the economy of nature and the economy of man: between economy and ecology. The circular economy is also a model between competition and cooperation—between the market economy and the social economy. In its postulates, the circular economy is about the preservation of existing values in the creation of material and intangible values. Furthermore, Girard et al. (2019) defined the circular economy model as a “regenerative model” that is able to regenerate the resources necessary for its own functioning, not only the material (food, water, energy, materials for industrial production, construction materials etc.), but also the intangible (regeneration of knowledge, relationships, cultural values, etc.). According to Mhatre et al. (2021), the concept of a circular economy is based on the premises of the minimization of waste and pollution, the extension of the useful life of products and materials, and the regeneration of natural systems.

Based on various observations and the possibilities of applying the principles of circular economy, authors Rudan et al. (2021) state that such activities are also imperative in tourism. The goal is to achieve sustainability that will reduce environmental degradation

in tourist destinations, correct and prevent negative impacts on the resource base, but also achieve financial savings for entrepreneurs. Transition from a linear economy to a circular economy ensures, in addition to ecological safety, higher quality of life for the local population, while also increasing the quality of tourists' stay in the destination. It is the goal of every tourist destination that considers its development in a sustainable way to achieve this based on the principles of circular economy, which must in no way reduce regional development. The importance of circular economy in tourism is the subject of many papers (mostly papers referring to energy and water consumption, waste generation, etc.), but there is also a noted lack of research in other areas related to tourism, such as the application of circular economy as a model for achieving the sustainable development of the local economy through synergies with tourism, or using circular economy as a model for achieving inclusiveness and sustainable tourism with local development (Rodríguez et al. 2020), the circularity of tourism destinations, etc. Due to the complexity of relationships and the influence of circular economy, not enough papers exist in the field of circular economy and tourism, so every paper may contribute to a better understanding of the issues and help in the application of the circular economy in a modern economy.

2.2. Heritage and Tourism in the Creation of the Tourism Product

Cultural heritage is an important part of every region, forming its cultural identity and representing an integral element of the destination's tourism product. Pančić Kombol (2006) states that cultural resources become tourist attractions through planned design, and become products through the process of interpretation, which includes selection and design. Today, many world destinations are developing heritage tourism, which, in principle, represents a connection with the past, its interpretation, and representation. As the most significant form of cultural tourism, heritage tourism encompasses visits to or experiences of tangible and intangible remains of the past (Dela Santa and Tiatco 2019). Relying on built and living cultural elements in natural, cultural or urban contexts, it encompasses past heritage, such as resources that frequently have exceptional value from a historical, artistic or cultural perspective. The development of cultural heritage tourism is not only concerned with the identification, management, and protection of the value of the heritage, but also affects communities through economic and social benefits, the securing of financial resources, as well as marketing and promoting the destination product (Chong and Balasingam 2019). Chong and Balasingam (2019) further state that heritage tourism contributes to the sustainability of tourism in an economic perspective by increasing tourist arrivals and income, stimulating multiple effects in the industry and creating employment opportunities. In this direction, cultural heritage must be viewed as a resource of current and future generations, that can be used on the principles of circular economy in order to achieve the goals of sustainable development.

The goal must be to achieve sustainable heritage tourism, which represents the security and upgrade of a valuable resource base put to work towards the different needs of tourists and for the pride of the local community. Dias et al. (2022b) state that local communities should be observed as a source of knowledge as they can provide insight into traditions, principles, people, as well the market and its needs. Sustainability is very important since it is focused on the cultural-historical heritage, and all the activities that are carried out in order to preserve and present it in an appropriate manner, with the support of a proper heritage management system through the inclusion of all stakeholders involved in the process. All stakeholders are important in creating a circular tourism economy—local government, the tourism sector, destination management, the management of cultural institutions, population, entrepreneurs, and tourists. In such projects, different partnerships are important, so Renfors (2022) states that local partnerships at different levels and encouragement from the bottom up are considered important, since the transformation will depend on initiatives and ideas from entrepreneurs, managers, and employees. Local ties (a long-term connection with the community and local stakeholders) result in changes in entrepreneurial behavior in the sense that community-focused activities benefit entrepreneurs by serving as the basis

for distinctive products and experiences (Duarte et al. 2023). A lack of cooperation between sectors in projects applying the circular economy model in tourism often leads to unwanted outcomes, such as abandoned projects, insufficient quality, delays in the project execution time, administrative difficulties, etc.

Farjami and Turker (2019) highlight the realization of the pillars of sustainability through the ecologically sensitive preservation and adaptive reuse of heritage buildings for cultural tourism that create opportunities for regions and communities. In this way, they can develop a balance between socio-cultural, economic, and environmental issues. Lerario (2022) states that determining the possible implications of built cultural heritage on all 17 sustainable development goals (adopted at the 70th UN General Assembly in 2015) shows its cross-sectoral nature and its potential as a priority channel in defining action strategies for the fulfilment of the goals of the 2030 Agenda. The restoration of cultural and historical heritage (old buildings, historic towns, industrial complexes, etc.) is not only a fundamental model for thinking about tourism development, but it is also the value of the local community, i.e., its pride, which actually protects the heritage, the local community obtains a better living environment, the quality of life in a certain area improves, and regional development is enabled. Furthermore, Foster and Saleh (2021) state that “culture and cultural heritage buildings are established drivers of socioeconomic development, urban landscape, and identity strategies”. In this direction, mutual positive cooperation and communication between the stakeholders participating in the reconstruction is necessary since the development goals can only be achieved through the involvement and cooperation of all stakeholders.

2.3. Adaptive Reuse in Tourism

On the basis of circular economy, abandoned, often in poor condition, and insufficiently used, various kinds of cultural heritage sites can once again become interesting, valuable and innovative buildings that form an integral part of the tourism offer of destinations. In addition, authors Girard and Nocca (2017) point out that through new functions, it is possible to reduce the use of new materials, new land, and the construction of new buildings as existing assets are regenerated through new functions and serve as encouragement to keep them “alive”. The author Foster (2020) states that the adaptive reuse of a cultural heritage project is the reconstruction, restoration and reuse of one or more buildings that reflect the changing needs of communities. Although the building does not continue in its original purpose, the goal of the project is to maintain its special historical and cultural character. Adaptive reuse is a way to ensure the circular economy leads to the creation of a new tourism product. This approach opens the way for focusing on the sustainability of tourism. Girard (2019) states that circular reuse contributes to the actualisation of man and nature, where nature is considered the most important infrastructure: to meet the needs of this generation and future generations, and also offers the opportunity to introduce a “reset” of the relationship between people, nature and ecosystems. Gravagnuolo et al. (2017) point out that the reuse/recycling/renovation/recovery/repurposing of abandoned heritage buildings, sites and landscapes contributes in a practical way to the circular urban-territorial economy, extending the lifespan of heritage assets, providing new uses, economic opportunities and jobs. The author Tu (2020) states that regional characteristics and visitor needs should be important bases for assessing the feasibility of adaptive reuse of heritage and ensuring sustainable development. Authors Bosone et al. (2021) state that the adaptive reuse of abandoned and underutilized sites of various forms of cultural heritage can be a strategy for improving heritage conservation, encouraging sustainable development processes through new uses of old buildings and sites, co-creating new meanings and reactivating neglected heritage resources, transforming them into the area’s new living cultural heritage. Tu (2020) further states that the process of reuse is one of the most sustainable forms of urban development, since it avoids demolition and reconstruction, and combines environmental benefits, energy savings, carbon reduction, and social and economic benefits. Adaptive reuse includes the repurposing of a building to undertake a

change of purpose as required by the new or existing owners, i.e., their adaptation for its use in the present and transfer into the future (Arfa et al. 2022; Bullen and Love 2011; Joudifar and Olgaç 2020). Arfa et al. (2022) defined a conceptual model that represents the adaptive reuse process of heritage buildings in 10 steps: 'initiative', 'analysis of heritage buildings', 'value assessment', 'significance level mapping', 'definition of adaptive reuse potential', 'design strategy definition', 'final decision-making', 'implementation', 'maintenance', and 'assessment after years'. The implementation of the model can be considered a rounded operating principle of the circular economy in the reuse of buildings. An adaptive reuse program is the most difficult approach, but the most useful approach in maintaining the value and rejuvenation of heritage sites. (Chong and Balasingam 2019).

Adaptive reuse is not a new approach in heritage conservation, it was established in the 19th century. According to Chandrakar and Singh (2022), the reuse of heritage sites is economically justifiable as it is a reasonable way to preserve architectural heritage. Adaptive reuse gives new life to the structure by turning it into something useful for communities, such as hotels, hospitals, restaurants, and schools. Adaptive reuse is particularly important because it preserves the cultural heritage (otherwise the sites would be doomed, demolished) and gives new value and quality of life to the local population. According to various authors (Chandrakar and Singh 2022; Čopić and Tumarić 2015; Thi and Nguyen 2021), the advantages are cultural (increased awareness of cultural heritage and preservation of cultural identity), social (future generations will benefit from preserved and protected cultural heritage), economic (using existing buildings has lower costs than the construction of new ones), and ecological. Although Bullen and Love (2011) point out that the yield of heritage buildings to the three principles of sustainability has not been comprehensively researched, and as a result, there is a conflict of interest between the preservation of the heritage value and the advancement of a sustainable urban design plan. In some cases, it appears that the heritage requirements of buildings may hinder the use of new materials (especially in old historic towns) or techniques (construction methods) required for adaptive reuse. When assessing the reuse plan of heritage buildings, criteria should also be included to ensure that such reuse will not affect the building's heritage value. There are many very positive examples when it comes to the realization of the reuse of heritage buildings, but in such a project, the requirements of conservators who define the methods of realization and materials most frequently create problematic situations and often delay the realization process. For this reason, the administrative process and the requirements of renovation and construction should take place in simpler forms. Farjami and Turker (2019) point out that in terms of socio-economic sustainability, the preservation of heritage buildings creates a way for heritage tourism, while tourism serves as a financial support tool for preservation. Likewise, unplanned tourism development can threaten the heritage values, authenticity, and quality of heritage elements that are tourist attractions. There must be a balance in tourism development between ecological sustainability (which reduces the depletion of raw materials, transport, energy consumption and dispersion, the ecological footprint of waste and landfills, and the production of carbon emissions), socio-cultural (involvement of the local community in protection and conservation, quality of services), and economic sustainability (creation of jobs, attraction of new investments, development of creative enterprises, and regeneration of urban tissue) (Farjami and Turker 2019; Gravagnuolo et al. 2017).

The conservation and adaptive reuse of heritage buildings require the development of awareness of the value of heritage and the dissemination of knowledge to the general public. Authors Rodríguez et al. (2020) state that governments, tourist companies and individuals must actively participate in the process, and that information campaigns could increase the degree of social awareness needed for the transition to a circular economy model. In addition, government sectors must invest more in the efforts to educate destination management and young generations about the values of historic buildings (Ariffin et al. 2020). The knowledge and collaboration of all actors are important for the application of

circular economy to heritage buildings, as only in this way is it possible to implement a successful project of adaptive reuse in tourism.

3. Methodology

In order to determine the theoretical assumptions, this paper used the analysis of case studies of historical heritage that has been renovated and repurposed for the function of cultural attractions that draw tourists, but certainly local residents as well. The case study analysis in this research can be tied to previous research by [del Vecchio et al. \(2022\)](#), which explored the circular economy business model for smart tourism, as well as [Chen \(2022\)](#), who studied the circular economy by researching two case studies in the Netherlands. [Donmoyer \(2000\)](#) states that case studies, more so than other methods in social sciences, facilitate generalization because they enrich the evidence obtained for both theory and practice. [Miočić \(2018\)](#) states that a case study involves an in-depth and holistic approach to researching a specific and limited social phenomenon (case), while using different methods and sources of data to contribute to building a comprehensive description and understanding of the case.

Secondary data for the case studies were collected from various available sources, namely tourist boards (their websites), magazine and newspaper articles by local publishers, but also the websites of the facilities themselves ([Yin 2007](#)). The author herself participated in the third practical case study, while for the other case studies she engaged with the stakeholders involved in the adaptive reuse projects in order to obtain the data required for the research. For each case study, the research focused on the information available to the local population and tourists about projects involving applied adaptive reuse, as well as their visibility in the tourism offer. The goal is to determine to what extent the reuse of heritage sites makes them useful for the local community and tourists staying in the destination. The piece of research presented in this paper can be outlined in three steps, as per [Kraus et al. \(2022\)](#): identifying and defining the historical sites and landmarks where the adaptive reuse strategy is applied; selecting, analyzing and interpreting three case studies with regard to local population, tourists, and other stakeholders in the Kvarner tourism destinations; evaluating the three case studies.

The analysis of the practices of applying the circular economy model of cultural heritage was researched in the region of the Kvarner tourist destination (Primorje-Gorski Kotar County) in Croatia. The diversity and specificity of cultural and natural attractions (sea, mountains, and islands) are the basis for the development of the destination's tourism offer. In 2019, before the coronavirus pandemic, according to the data of the State Bureau of Statistics ([Državni zavod za statistiku 2023](#)), the Kvarner destination achieved 2,966,489 tourist arrivals and 15,314,671 overnight stays. Kvarner is a tourist destination with the same problem of seasonality faced by other Mediterranean destinations, so in 2019, 61% of the overnight stays were realized during the months of July and August. The problem of marked seasonality and the focus on summer holiday tourism provides incentive for the development of other forms of tourism, including heritage tourism and cultural tourism.

As there are no statistical sources that track the number of renovated or repurposed architectural heritage sites, the examples of adaptive reuse analyzed in this paper include buildings in Kvarner that were built in the last ten years. In the earlier period, due to the aforementioned problematic situations, such projects were insignificant, while the inclusion of the possibility of applying for financing from European funds has encouraged the restoration of valuable cultural and historical heritage.

In talking about heritage buildings, it must be pointed out that Kvarner's situation is the same as that stated by the authors [Rudan et al. \(2021\)](#) for Croatia, and according to the Ministry of Culture and Media ([Ministarstvo kulture i medija 2022](#)), it is the poor condition of valuable architectural heritage with many contributing factors such as unresolved proprietary and legal relationships, lack of care and maintenance, insufficient financial resources, non-compliance with legal regulations and non-application of sanctions, insufficient awareness of the value of heritage, in addition to which heritage is often restored

via building interventions that lack expertly verified conservation and technical documentation. In Croatia, old medieval towns (castles) are particularly endangered, mainly due to their location, difficult accessibility, and poor documentation. It is important to design appropriate programs and facilities for the heritage of historical entities outside inhabited areas and, if necessary, to include plans for tourism development, i.e., to base the future on a circular economy in the creation of cultural and tourism offers.

In the region of Kvarner, there are significant elements of restoration within the framework of the new cultural-tourist route “The Routes of the Frankopans—Primorje-Gorski Kotar County”, where the old castles and buildings located on the route have been partially restored. The Frankopans were an old Croatian noble family, originally known as the Princes of Krk, founded in the 12th century and active until the 17th century, leaving behind significant cultural and historical heritage on the territory of Croatia. Connecting the Kvarner tourist destinations was realized through 17 Frankopan castles and 3 sacral sites. As part of the route, 8 interpretive centers thematically related to the Frankopans were created, five of which are located on the coast: Kraljevica, Bribir, Bakar, Trsat, and Grobnik, one on the island of Krk, and two in Gorski kotar in Brod na Kupi and Čabar. The county began the first project in the period from 2005 to 2008, preparing the documentation for the restoration of the Frankopan castles together with the local self-government units in whose jurisdictions the buildings are located. The restoration was financed with funds from European projects, as well as national and local financing. In addition to these recognizable cultural tourism routes, the number of cultural heritage sites that are again being reused as new spaces has grown. The cultural tourism route has received numerous awards, and in 2022, it was named the second best sustainable cultural tourism destination (awarded by the European Cultural Tourism Network—ECTN). In 2022, the cultural tourism route “The Routes of the Frankopans—Primorje-Gorski Kotar County” was declared the most successful county EU project in Croatia. In this paper, we will investigate some of the sites that have gained new functionality following their restoration through circular economy, and have been repurposed towards the cultural tourism offer.

Thus far, the most significant example of the circular economy on the cultural tourism route is the castle “Nova Kraljevica—Frankopan”, which has become a multifunctional cultural center. The landscaping of Frankopan Castle was completed in 2021. In addition to the visitor’s center, the “black room”, and the interpretation centre, the castle has been renovated and repurposed as a multimedia hall. Nova Kraljevica is also home to various associations, the “Ana Katarina” gallery, the City of Kraljevica shell collection, as well as the tourist board and the Kraljevica information center, while the castle also houses the Fran Krsto Frankopan Tavern, which, in addition to the standard offer of food and drinks, also organizes weddings (Kršovnik 2021). The castle and its surroundings were renovated using European funds, the City of Kraljevica, the County of Primorje-Gorski Kotar and the Ministry of Regional Development, and European Union funds (Grad Kraljevica 2021). This location renovation allows for the growth of employment, increased tourist satisfaction, but also an increase in the quality of life of the local population. Information for the local population and tourists can be found on the websites of the route that includes the castle (Primorsko-goranska županija 2022) and the Tourist Office of the City of Kraljevica, both in Croatian and English. No connection was found between the castle and tourist agency packages and offers. The shortcomings established through the research are: insufficient information for potential visitors and tourists, i.e., lack of marketing activities aimed at tourists and defining the site in the destination’s integral offer (not only within the cultural tourism route “The Routes of the Frankopans”), while the potential of the site is much greater. A lack of inclusive tours to the abovementioned heritage site was also found. The castle is primarily intended for the local population’s activities and represents part of the destination’s cultural identity, with the potential for a more significant cultural and tourist offer.

Interpretation centers with different topics related to the Frankopan family have been equipped in the other Frankopan castles, and have definitely become an integral

part of the cultural tourist destination. From abandoned or poorly maintained sites, they have certainly connected into a new tourist offer through the interpretation centers. The restoration project and the use of interpretation centers was encouraged at the county level, in cities and municipalities with valuable Frankopan heritage, with the goal of creating cultural value, not only for the tourism offer, or reducing seasonality, but also to increase the quality of life of the residents in the destination. Although the local self-government units do not have the potential to coordinate and manage the tourism product of the route, it is necessary to additionally define a way to manage the heritage that has been restored on the basis of circular economy.

An example of circular economy in the Kvarner destination region is the city of Rijeka, which was the European Capital of Culture in 2020 (*Europska prijetolnica kulture 2020*), and where the concept of circular economy is actively implemented through the adaptive reuse and regeneration of buildings for new purposes. As part of the project, former factories and devastated buildings were transformed into new spaces for museums, libraries, etc. In 2020, for example, the Sugar Refinery Palace (in the former Benčić industrial complex) thus became the new home of the Rijeka City Museum. The museum's website is both in Croatian and English and provides information about exhibits and events primarily for the local population, but for tourists as well (*Muzej grada Rijeke 2022*). No connection was found between the museum and tourist agency packages. Organized tours of the museum are aimed at children and youth. These spaces no longer possess their former economic value, but within the framework of circular economy, they are aimed at meeting the cultural needs of the local community. Also, the industrial spaces that were created and were active during socialism were not used after their plants closed down, and were, thus, unrecognizable in the cultural and, consequently, the tourism offer. In any case, abandoned industrial spaces offer opportunities to be equipped and converted for various tourist purposes. Such projects contribute to the city's visibility, the satisfaction of the population, but also the satisfaction of the tourists.

In the Kvarner region, there are also examples of smaller projects in which individual buildings were renovated within the framework of other projects, such as the European maritime heritage preservation project "Mala barka". Thus, for example, within the framework of this project, the old residential space in the port of Mošćenička Draga, owned by the municipality, no longer had a residential function, but stood unused. This site has become the Interpretation Centre of fishing and maritime heritage of the Eco-Museum Mošćenička Draga "House of the Sea" (opened in 2016), which presents the material heritage of the local area in an innovative way. According to *Dias et al. (2022a)*, innovation facilitates the search for new ideas and opportunities because it involves introducing new techniques, products and/or systems, as well as new competitive strategies into the market. The local population is connected with the interpretation center displays because it shows the history of fishing and seafaring as activities that preceded the development of tourism, while the fishermen later actively participated in it. The interpretation center does not have its own website, it can be found on the tourist board's website with no description of an offer (*Tourist Board of Mošćenička Draga 2023*). The website only contains photographs, while the local population received information about the center through local newspapers and local television channels. Events that take place in the interpretation center are aimed at the local community. The "House of the Sea" is not sufficiently integrated into the destination's tourist offer, and additional marketing activities are needed in order to utilize the potential offered by the interpretation center with the site of the port, which is an integral part of the eco-museum.

4. Discussion

In the case studies of the Kvarner area, it can be determined that there are positive examples of adaptive reuse of historic buildings. Various events are often organized in these facilities, which are primarily intended for the local community, not tourists. It is unclear if the facilities' offer is used in tourist packages, while the website does not mention

two examples of how the facilities are reused. All the examples mentioned in this paper refer to the repurposing of historical buildings primarily into a cultural tourism offer and all of them have been realized in the last ten years, i.e., they are new, innovative facilities provided by the cultural heritage of the destination. Previously, there were no initiatives to give old buildings a new purpose, i.e., new possibilities of use on the basis of the circular economy. In most cases, interpretation centers are built in old buildings.

Kvarner has a number of small medieval towns with buildings and a cultural landscape that can be converted for different purposes, but in many cases, problems of ownership, administration and regulatory frameworks are encountered. The current situation indicates the problem of “apartmanisation” of the old medieval cores of small towns, that is, the conversion of residential buildings into buildings for renting to tourists, rather than the creation of new and innovative offers in existing buildings. The local population often leaves such environments, and the buildings become dormitories. In local communities, the most important role is played by the municipalities and cities in whose areas such a resource base is located, and they are the initiators/coordinators of such projects. The adaptive reuse of historic buildings is an important strategy for including cultural and historical heritage in the tourist offer, and local administration (cities, municipalities, and counties) is very often the owner of such heritage. Such units and sites are most often under a certain level of protection by the Ministry of Culture, i.e., conservators. It is necessary to speed up the administrative procedures that must be undertaken before starting the strategy of adaptive reuse of historic buildings. Adapted heritage is part of the cultural identity of the local population because, in addition to being a connection and point of pride in their heritage, it is also a driving force enabling the development of an innovative tourist offer. Figure 1 shows the process of creating an innovative tourism product using circular economy with emphasis on the adaptive reuse strategy. It defines the relationships between stakeholders when applying the strategy. The reuse strategy in cultural heritage buildings represents a specific strategy for each tourism destination, both from the perspective of stakeholder participation, and from the perspective of administrative and legal regulations.

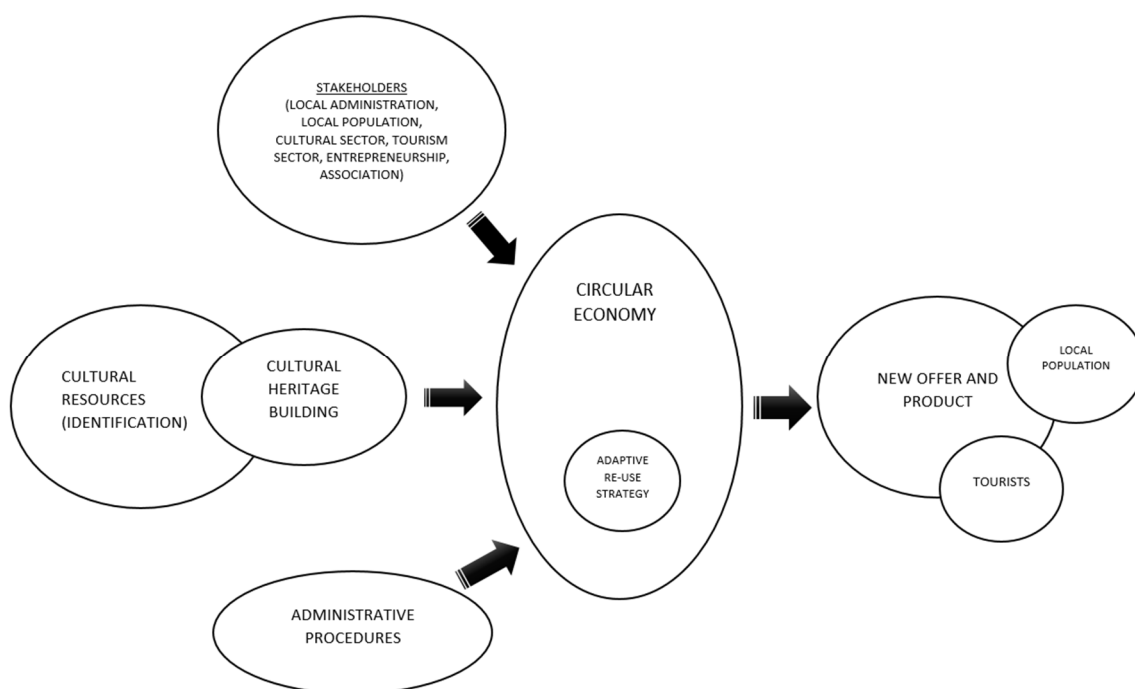


Figure 1. The reuse strategy for cultural heritage buildings. Source: author.

This kind of offer ensures the satisfaction of local communities, new employment opportunities, and the growth of consumption in the facilities and the destination (Necissa 2011), but it can also affect the reduction of seasonality of the Kvarner destination, which is pri-

marily focused on the sun and the sea, i.e., summer holiday tourism. Such offers enable the development of other forms of tourism. The implementation of adapted heritage requires the synergetic action of all stakeholders (local administration, destination management, tourism sector, local population, entrepreneurs, associations, etc.) and can often be realized through public–private partnerships. Further continuous development of the cultural-tourism product is required within the scope of adapted cultural heritage. Authors [Gao et al. \(2020\)](#) thus propose that unique heritage (e.g., traditional and modern) should be emphasized by marketing in order to spark the interest of potential visitors. Secondly, a nostalgic atmosphere is important (use of multi-sensory channels). Thirdly, relevant agencies should continue to take authenticity into consideration, but also connect it to a nostalgic experience. [Chhabra et al. \(2003\)](#) also emphasize that the process of implementing adaptive reuse in buildings is gradual.

A limitation of this research is a lack of research on the attitudes of the local population about the meaning of circular economy in the process of reusing old buildings, and the attitudes of tourists concerning the tourism offer that includes the adaptive reuse of heritage.

5. Conclusions

The concept of circular economy encourages the restoration and reuse of cultural and historical heritage, which is a valuable resource in the development of the cultural offer of tourist destinations. Adapted cultural heritage can be used for various purposes, including tourist and cultural (interpretation centers, catering facilities, accommodation facilities, museums, libraries, etc.). The development of such products requires the synergetic action of all those involved in the restoration, especially those involved in tourism product development. Without the synergy of culture and tourism, there is no development of heritage tourism. Destination development needs to be defined based on circular economy principles, with the aim of achieving sustainable tourism. Optimal use of the resource base and its revitalization encourages the economic development of the destination, affects employment, increases consumption, and ensures satisfaction with the stay and life in the destination. Based on scanned web and other sources (newspaper articles, online portals, and interviews), Kvarner's insufficiently restored heritage is included in the tourist offer. Because of the new values that have been achieved, it is necessary to intensify its inclusion in the integral tourist product of the destination and integrate the offer into existing tours. The contents of the renovated facilities may contribute to the reduction of the seasonality of the destination, i.e., the redistribution of existing overnight stays. A limitation of this paper lies in not having explored the attitudes of specific stakeholders involved in the adaptive reuse strategy of circular economy and the development of the tourism offer. This primarily concerns the local population, tourists, and visitors. The aim of circular economy is to satisfy human needs within the scope of change and create new values. Nevertheless, the research shows positive examples in the field of the Kvarner tourist destination, which are primarily cultural and touristic, and which have been realized in the last ten years, although it is concluded that they are insufficiently included in the cultural and tourist offer. For further research, it is recommended to explore the attitudes of tourists and visitors, which can provide great insight for tourism destination managers when making decisions about more intensively utilizing the potential of restored heritage. It is concluded that only with the joint action of all stakeholders is it possible to achieve sustainable tourism in the future, and thereby increase the quality of life in the towns, i.e., tourist destinations.

Funding: This research received no funding.

Institutional Review Board Statement: Not applicable.

Informed Consent Statement: Not applicable.

Data Availability Statement: No new data were created or analyzed in this study. Data sharing is not applicable to this article.

Conflicts of Interest: The author declares no conflict of interest.

References

- Andabaka, Ana. 2018. Potencijali i ograničenja primjene kružne ekonomije u kontekstu održivoga razvoja Hrvatske. In *Zbornik Radova Znanstvenog Skupa: Modeli Razvoja Hrvatskog Gospodarstva*. Edited by Goran Družić and Ivo Družić. Zagreb: Faculty of Economics and Business, University of Zagreb, pp. 427–58.
- Appendino, Federica, Charlotte Rouxb, Myriam Saadé, and Bruno Peuportier. 2021. The circular economy in urban projects: The circular economy in urban projects. *Transactions of the Association of European Schools of Planning* 5: 71–83.
- Ariffin, Adlin Baizura, Mohd Salehuddin Mohd Zahari, and Mohd Hafiz Hanafiah. 2020. Adaptive reuse of historic buildings: Connecting the links between tourist appreciation and visitation. *Property Management* 38: 531–41. [CrossRef]
- Arfa, Fatemeh Hedieh, Hielkje Zijlstra, Barbara Lubelli, and Wido Quist. 2022. Adaptive Reuse of Heritage Buildings: From a Literature Review to a Model of Practice. *The Historic Environment: Policy & Practice* 13: 148–70.
- Bosone, Martina, Pasquale De Toro, Luigi Fusco Girard, Antonia Gravagnuolo, and Silvia Iodice. 2021. Indicators for Ex-Post Evaluation of Cultural Heritage Adaptive Reuse Impacts in the Perspective of the Circular Economy. *Sustainability* 13: 4759. [CrossRef]
- Bullen, Peter, and Peter Love. 2011. Adaptive reuse of heritage buildings. *Structural Survey; Bradford* 29: 411–21. [CrossRef]
- Chandrakar, Shreya, and Sandeep Singh. 2022. Adaptive reuse of heritage building. *International Journal of Creative Research Thoughts* 10: 329–36.
- Chen, Yawei. 2022. Participatory Approaches in the Adaptive Reuse of two Dutch Private-Led Cultural Heritage Projects. Paper presented at REAL CORP 2022: Mobility, Knowledge and Innovation Hubs in Urban and Regional Development: Proceedings/Tagungsband, Vienna, Austria, November 14–16; pp. 553–61.
- Chhabra, Deepak, Robert Healy, and Erin Sills. 2003. Staged authenticity and heritage tourism. *Annals of Tourism Research* 30: 702–19. [CrossRef]
- Chong, Kar Yee, and Ann Selvaranee Balasingam. 2019. Tourism sustainability: Economic benefits and strategies for preservation and conservation of heritage sites in Southeast Asia. *Tourism Review* 74: 268–79. [CrossRef]
- Ćopić, Sonja, and Aleksandar Tumarić. 2015. Possibilities of Industrial Heritage Reuse as Tourist Attractions—A Case Study of City of Zrenjanin (Vojvodina, Serbia). *Geographica Pannonica* 19: 44–49. [CrossRef]
- del Vecchio, Pasquale, Caterina Malandugno, Giuseppina Passiante, and Georgia Sakka. 2022. Circular economy business model for smart tourism: The case of Ecobnb. *EuroMed Journal of Business* 17: 88–104. [CrossRef]
- Dela Santa, Edieser, and Sir Anril Pineda Tiatco. 2019. Tourism, heritage and cultural performance: Developing a modality of heritage tourism. *Tourism Management Perspectives* 31: 301–9. [CrossRef]
- Dias, Álvaro Lopes, I. Cunha, Leandro Pereira, Renato Costa, and Rui Gonçalves. 2022a. Revisiting Small and Medium-Sized Enterprises' Innovation and Resilience during COVID-19: The Tourism Sector. *Journal of Open Innovation: Technology, Market, and Complexity* 8: 11. [CrossRef]
- Dias, Alvaro Lopes, Marta Figueiredo Marques Gomes, Leandro Pereira, and Renato Costa. 2022b. Local Knowledge Management and Innovation Spillover: Exploring Tourism Entrepreneurship Potential. *International Journal of Service Science, Management, Engineering, and Technology* 13: 1–14. [CrossRef]
- Donmoyer, Robert. 2000. Generalizability and the single-case study. In *Case Study Method: Key Issues, Key Texts*. Edited by Roger Gomm, Martyn Hammersley and Peter Foster. London: SAGE, pp. 45–68.
- Državni zavod za statistiku. 2023. Turizam—Pregled po županijama. Available online: <https://podaci.dzs.hr/hr/statistika-u-nizu/> (accessed on 10 January 2023).
- Duarte, Miquel, Álvaro Dias, Bruno Sousa, and Leandro Pereira. 2023. Lifestyle Entrepreneurship as a Vehicle for Leisure and Sustainable Tourism. *International Journal of Environmental Research and Public Health* 20: 3241. [CrossRef]
- Europska prijetolnica kulture. 2020. Rijeka. Available online: <https://rijeka2020.eu/> (accessed on 10 January 2023).
- Farjami, Elnaz, and Özlem Olgaç Turker. 2019. Integrating adaptive reuse of heritage buildings with environmental rating systems. In *Value of Heritage for Tourism: Proceedings of the 6th UNESCO UNITWIN Conference*. Edited by Dominique Vanneste and Wesley Gruijthuijsen. Leuven: University of Leuven, pp. 75–85.
- Foster, Gillian. 2020. Circular economy strategies for adaptive reuse of cultural buildings to reduce environmental impacts. *Resources Conservation & Recycling* 152: 1–14.
- Foster, Gillian, and Ruba Saleh. 2021. The Adaptive Reuse of Cultural Heritage in European Circular City Plans: A Systematic Review. *Sustainability* 13: 2889. [CrossRef]
- Gao, Jun, Shiting Lin, and Chaozhi Zhang. 2020. Authenticity, involvement, and nostalgia: Understanding visitor satisfaction with an adaptive reuse heritage site in urban China. *Journal of Destination Marketing & Management* 15: 100404.
- Girard, Luigi Fusco. 2019. Implementing the circular economy: The role of cultural heritage as the entry point. Which evaluation approaches? *BDC Bollettino Del Centro Calza Bini* 19: 245–77.
- Girard, Luigi Fusco, and Francesca Nocca. 2017. From linear to circular tourism. *Aestimum* 70: 51–74.
- Girard, Luigi Fusco, Francesca Nocca, and Antonia Gravagnuolo. 2019. Matera: City of nature, city of culture, city of regeneration. Towards a landscape-based and culture-based urban circular economy. *Aestimum* 74: 5–42.
- Grad Kraljevica. 2021. Uređenje okoliša dvorca Nova Kraljevica—Frankopan. Available online: <https://www.kraljevica.hr/uredenje-okolisa-dvorca-nova-kraljevica-frankopan/> (accessed on 9 January 2023).

- Gravagnuolo, Antonia, Luigi Fusco Girard, Christian Ost, and Ruba Salek. 2017. Evaluation criteria for a circular adaptive reuse of cultural heritage. *BDC* 17: 185–215.
- Jawahir, Ibrahim S., and Ryan Bradley. 2016. Technological Elements of Circular Economy and the Principles of 6R-Based Closed-Loop Material Flow in Sustainable Manufacturing. *Procedia Cirp* 40: 103–8. [CrossRef]
- Joudifar, Farnaz, and Özlem Türker Olgaç. 2020. A 'Reuse Projection Framework' Based on Othello's Citadel and Cultural Tourism. *Historic Environment: Policy and Practice* 11: 202–31. [CrossRef]
- Korhonen, Jouni, Antero Honkasalo, and Jyri Seppala. 2018. Circular economy: The concepts and its limitations. *Ecological Economics* 143: 37–46. [CrossRef]
- Kraus, Lucija, Bojana Bojanić Obad Šćitaroci, Zlatko Karač, and Ivan Kraus. 2022. Disappearance and Sustainability of Historical Industrial Areas in Osijek (Croatia): Three Case Studies. *Buildings* 12: 196. [CrossRef]
- Kršovnik, Jakov. 2021. Dvorac nova kraljevica Dio kulturno-turističke rute Putovima Frankopana. *Novi list*. Available online: <https://www.novilist.hr/rijeka-regija/rijeka/dvorac-nova-kraljevica-dio-kulturno-turisticke-rute-putovima-frankopana/> (accessed on 10 January 2023).
- Lerario, Antonella. 2022. The Role of Built Heritage for Sustainable Development Goals: From Statement to Action. *Heritage* 5: 2444–63. [CrossRef]
- Lewandowski, Mateusz. 2016. Designing the Business Models for Circular Economy—Towards the Conceptual Framework. *Sustainability* 8: 43. [CrossRef]
- Mhatre, Purva, Rohit Panchal, Anju Singh, and Shyam Bibyan. 2021. A systematic literature review on the circular economy initiatives in the European Union. *Sustainable Production and Consumption* 26: 187–202. [CrossRef]
- Ministarstvo kulture i medija. 2022. Nepokretna kulturna baština. Available online: <https://min-kulture.gov.hr/izdvojeno/kulturna-bastina/vrste-kulturne-bastine/nepokretna-kulturna-bastina/369> (accessed on 5 January 2023).
- Miočić, I. 2018. Fleksibilnost studije slučaja: Prednost ili izazov za istraživače? *Ljetopis socijalnog rada* 25: 175–94. [CrossRef]
- Murray, Alan, Keith Skene, and Kathryn Haynes. 2017. The circular economy: An interdisciplinary exploration of the concept and application in global context. *Journal of Business Ethics* 140: 369–80. [CrossRef]
- Muzej grada Rijeke. 2022. Otvorena Palača šećera, novi dom Muzeja grada Rijeke. Available online: <https://www.muzej-rijeka.hr/otvorena-palaca-secera-novi-dom-muzeja-grada-rijeka/> (accessed on 8 January 2023).
- Necissa, Yamina. 2011. Cultural heritage as a resource: Its role in the sustainability of urban developments. The case of Tlemcen, Algeria. *Procedia Engineering* 21: 874–82. [CrossRef]
- Pančić Kombol, Tonka. 2006. Kulturno naslijeđe i turizam. *Radovi Zavoda za znanstveni rad HAZU Varaždin* 16–17: 211–26.
- Primorsko-goranska županija. 2022. Putovima Frankopana. Available online: <https://frankopani.eu/> (accessed on 2 January 2023).
- Renfors, Sanna-Mari. 2022. Circular Economy in tourism: Overview of recent developments in research. *Matkailututkimus* 18: 48–64. [CrossRef]
- Rodríguez, Carlos, Carmen Florido, and Marta Jacob. 2020. Circular Economy Contributions to the Tourism Sector: A Critical Literature Review. *Sustainability* 12: 4338. [CrossRef]
- Rudan, Elena, Marinela Krstinić Nižić, and Zvonimira Šverko Grdić. 2021. Effect of circular economy on the sustainability of cultural tourism (Croatia). *Ekonomia i Šrodovisko* 76: 120–38.
- Šverko Grdić, Zvonimira, Marinela Krstinić Nižić, and Elena Rudan. 2019. Kružno gospodarstvo—Model održivog ekonomskog rasta. In *Znanje in poslovni izzivi globalizacije v letu 2019: Zbornik referatov 8. mednarodne znanstvene conference*. Edited by Tatjana Kovač and Marijan Cingula. Celje: Fakulteta za komercialne in poslovne vede, pp. 190–98.
- Šverko Grdić, Zvonimira, Marinela Krstinić Nižić, and Elena Rudan. 2020. Circular Economy Concept in the Context of Economic Development in EU Countries. *Sustainability* 12: 3060. [CrossRef]
- Thi, H. L. V., and Quan Nguyen. 2021. Adaptive reuse of local buildings in Sapa, Vietnam for cultural tourism development towards sustainability. *IOP Conference Series: Earth and Environmental Science* 878: 012032. [CrossRef]
- Tišma, Sanja, Ana-Maria Boromisa, Marina Funduk, and Helena Čermak. 2017. *Okolišne politike i razvojne teme*. Zagreb: Alinea.
- Tourist Board of Mošćenička Draga. 2023. Mošćenička Draga. Available online: <https://www.tz-moscenicka.hr/> (accessed on 5 January 2023).
- Tu, Hung-Ming. 2020. The Attractiveness of adaptive heritage reuse: A theoretical framework. *Sustainability* 12: 2372. [CrossRef]
- Vukadinović, Predrag. 2018. Ekologija između linearne i cirkularne ekonomije. *Ecologica* 90: 231–36.
- Yin, Robert. 2007. *Studija slučaja—Dizajn i metode*. Zagreb: Fakultet političkih znanosti Sveučilišta u Zagrebu.
- Zhao, Yiqing, Li Zang, Zhongxue Li, and Jiexuan Qin. 2012. Discussion on the Model of Mining Circular Economy. *Energy Procedia* 16: 438–43. [CrossRef]

Disclaimer/Publisher's Note: The statements, opinions and data contained in all publications are solely those of the individual author(s) and contributor(s) and not of MDPI and/or the editor(s). MDPI and/or the editor(s) disclaim responsibility for any injury to people or property resulting from any ideas, methods, instructions or products referred to in the content.