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Urban buildings sustainable adaptive reuse into tourism accommodation establishments: a SOAR analysis

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Abstract
This study, conducted as part of the 'RETOU' research project, aims to provide a holistic understanding of adaptive reuse in the context of transforming heritage buildings into creative tourist accommodation units. To achieve the objective set for the current research, the methodology involved an in-depth exploration of the conceptual and theoretical evidence within the scholarly literature, followed by a SOAR analysis. The results have identified current strengths, and opportunities, as well as future aspirations and results specifically associated with adaptive reuse initiatives leading to tourist lodgings. The findings of this research endeavor contribute to the expanding body of literature on the adaptive reuse phenomenon. They provide valuable insights into the prevalent notion and understanding, particularly in the context of a tourist-centric urban destination. Furthermore, this research lays a solid foundation for sustainable policy measures planning, and practical implementation strategies development towards a circular economy transitioning action plan, well-serving objectives promoted by the agenda for sustainable urban development.

Keywords Adaptive reuse · Building science · Urban planning · Urban regeneration · Sustainability · Destination planning · Cultural heritage · Authenticity · Circular economy · Urban resilience

1 Introduction

Adaptive reuse of urban buildings of cultural heritage (henceforth, for the sake of brevity, referred to as adaptive reuse) is considered a preserving building practice [1]. It is primarily associated with historic or iconic building or site restoration, structure or façade preservation, as well as interior renovation towards adapting an existing establishment to a new use [2, 3]. Although adaptive reuse can sometimes generate controversy due to the nuanced distinctions among renovation, façadism, and other closely related architectural and construction practices [4], it is generally seen as a suitable compromise between (historic) preservation and demolition [5, 6]. After all, such projects address the three pillars of sustainable development, namely the environment, economy, and society, well-serving the principles of the circular economy model [7, 8].

Adaptive reuse practices could be, -by some means- shorted or studied [9, 10] in accordance with the previous (adaptive reuse of former industrial buildings [11], palaces [12], castles [13], mansions [14] etc.) or the new (adaptive reuse

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to house a museum [15], an art gallery [16], a residential complex [17], a shopping center [18] etc.) use. This study will specifically focus on adaptive reuse projects to house tourist accommodation facilities (*i.e.*, hotels). There is substantial evidence as well as certain not-so-apparent reasons as to why the transformation of buildings of cultural heritage into hotels has recently increased worldwide. Notwithstanding the fact that the published scholarly literature has deeply dwelled on the benefits arising from adaptive reuse projects, no studies -to the best of the authors' knowledge- have attempted to identify current trends, strengths, and opportunities associated specifically with the adaptive reuse of urban buildings to make room (pun intended) for tourist accommodation establishments.

At a time when high-density urban centers face uncertain economic conditions in a competitive setting [19–21], the option of new construction is often impractical [22, 23]. Adaptive reuse, by converting old, historic, or iconic but disused properties of cultural heritage (hereinafter simply referred to as 'heritage') into memorable and appealing hotels, has emerged as an increasingly popular strategy and is viewed as the optimum solution [24, 25]. Presently, it is not just hotel owners and developers who advocate for adaptive reuse as an efficient means to secure profitability [26], but also customer demand, as nowadays people (*i.e.*, visitors and tourists) are hooked on the notion of unique travel experiences [27, 28].

But, what is adaptive reuse? Adaptive reuse bears several explicit definitions from a significant number of academic or institutional endeavors [15, 29, 30]. Be that as it may, it is now commonly accepted that the term refers to the use of sites or structures for functions different from those for which originally designed and constructed [31, 32], all with the aim of protecting and preserving their intrinsic value while simultaneously accruing economic, environmental, social, and cultural benefits [33–35]. More particularly, this study adheres to the interpretation originally articulated by [15], subsequently embraced massively by a significant body of studies [36–38], which supports that adaptive reuse is a "*conversion process, to undertake a change of use, retaining as much as possible of the original construction, while upgrading the performance to meet current standards*".

Already since the late 1980s', the adaptive reuse advantages were outlined [39]. Economically, adaptive reuse proved to be more cost-effective as it lowers the cost of construction materials, equipment, and man-hours [40]. Speaking of which, given that adaptive reuse projects have lighter timelines, developers may be more efficient in adjusting to new trends and possible unforeseen events or changes. Short man-hours also serve occupational health and safety sustainability principles [41, 42], as well as other environmental aspects [43]. In addition, short timeframes allow for considerably faster reach in the market [44]. Studies also suggest that there is a progressive development into the diversified tourism economy [26], as well as a significant increase in market (including real estate) prices within a radius of approximately one kilometer of the adaptive reuse project [45, 46], in addition to the direct return of investment and indirect promotion of sustainable business city districts in terms of adding value, creating jobs, captivating investment opportunities, attracting capital, appealing to entrepreneurship, and visitors, and last but not least, the multiplier effect phenomenon [47–49].

Adaptive reuse, perceived as the outcome of the interaction between spatial contexts and material consistency [50], can also contribute towards curtailing urban sprawl [20] and reducing extensive daily commuting patterns. This is achieved by minimizing the number of unoccupied buildings and ensuring sustainable housing and commercial property alternatives within the city center. Furthermore, it stimulates the renovation or adaptive reuse of additional structures and buildings in the surrounding area, thereby yielding broader economic and environmental advantages for the entire region [47, 51].

From an environmental standpoint, adaptive reuse is a priori more ecologically benign compared to new construction, considering that the structure's lifespan is increased [52]. Adaptive reuse initiatives also keep a low environmental footprint as they require less energy and generate fewer pollutants. This stands in contrast to the often substantial environmental impact associated with the deconstruction of old structures and the construction of new ones from the ground up, well so considering the additional machinery required, the transportation of raw materials, etc. [53–55]. Furthermore, adaptive reuse benefits the local ecology by significantly preventing waste production [56, 57].

Provided with vast and complicated potentials for circular economy and urban sustainability models [58–63], adaptive reuse has garnered considerable notice in recent years [5, 7]. According to one of the earliest studies on adaptive reuse, there is a growing consensus that adaptive reuse contributes to the main ideas of sustainability [64]. Indeed, a comprehensive exploration regarding theoretical approaches and practical models suggests that a focus beyond the economic and environmental values entailed is necessary, namely values including -but not limited to- social, cultural, architectural, and historical aspects [65]. In addition, the end-user viewpoint supplements the performance (in terms of success) [17, 66], stressing the usefulness of human-centered adaptive reuse initiatives [67]. Meanwhile, community-led adaptive reuse projects strengthen social networks and preserve unique ways of life [68].

The benefits of adaptive reuse have been evidently widely preached, but evidence of how tourism affects and is affected by remain scarcely explored. One possible option for adaptive reuse of heritage buildings is to convert them into hotels [69]. Heritage buildings are frequently one-of-a-kind and feature high-quality architecture and design [70–72], making them an appealing tourist destination [73]. Additionally, tourists are often willing to pay a premium for the opportunity to stay in such distinctive accommodations [74, 75]. Urban buildings of cultural heritage, in particular, are an integral and valuable part of cultural and local history [76–78]. After all, cultural heritage tourism stands as one of the fastest-growing sectors drawing millions of tourists from all over the world [79–81]. The demand for heritage-based tourist accommodation establishments not only increases spending by tourists looking to engage with history and culture but also provides an ideal backdrop for leisure activities [82–84]. Therefore, with the increased interest in heritage tourism [85–87], destinations and hospitality service providers have lately committed significant resources to the redevelopment of heritage buildings [88, 89]. When heritage buildings undergo adaptive reuse to house tourist establishments, in addition to bringing the obsolete building stock back to life and guaranteeing its upkeep and preservation [38, 90], and in addition to the understood economic and environmental opportunities [91, 92], a tourism resource opportunity is presented towards transforming cities into an appealing tourist destination [32]. This 'cultural hybridization' [93], is partly linked with symbolic interactionism [94] and actor-network theory [95, 96] offering insights into the factors affecting visitors' perceptions of architecture in a tourist destination [32]. It is also associated with memory tourism and the hospitality experience concept [97, 98], a consequence of travelers' raising educational level [99] and their growing interest in history, heritage, culture, and art [100]. This trend represents a response to the desire for authentic experiences and a departure from the global 'box hotel' concept, often characterized as 'McDonaldisation' [101, 102] within the hotel sector. As follows, tourists amid an authentic-oriented experience [103–106], gain a deeper understanding of the history and origins of their destination [80, 107, 108]. This promotes stimulating tourism and a strong sense of place, which gave birth to a new trend: the boutique hotel [109–111].

Boutique hotels do not just provide a bed and a breakfast, but a stylish and comfortable intimate hotel experience of extravagant escapism [111]. The boutique hotel concept refers to distinctive qualities, particularities, and characteristics, including unique architectural design, heritage value, prime location, urban setting, human-scale size, customized leisure services and facilities, single-family ownership status, etc [112, 113] However, albeit boutique hotels''mannerism' per se, such lodgings play an important part in urban regeneration, acting as a potent force that swiftly affects a city's morphological, economic, and social aspects.

The literature on adaptive reuse of heritage buildings as hotels is sparse, and there are significant reasons why it should be further expanded. Among the few attempts, [114] suggested that for many tourist destinations, adaptive reuse for tourist accommodation facilities has become a key historical, cultural, and ethnic urban defining feature. Timothy and Boyd [115] stated that one of the most popular forms of accommodation for tourists is, indeed, adaptively reused heritage buildings. This preference stems from the fact that tourists are increasingly looking for exceptional, memorable experiences combined with access to history, (local) culture, traditions, art, and flavors [98, 116, 117] delved into the community side of the impacts of adaptive reuse projects for hotels, indicating an overall improvement bearing more livable space and increased social engagement as opposed to little disruption. In ref. [29] demonstrated the value of repurposing heritage buildings as tourist attractions and facilities while stressing the necessity of adapting historic structures for use in the hospitality sector in order to ensure sustainability, and meet contemporary user needs and demands, effectively integrated into modern social and cultural modern-day life. Along the same lines, [118] and [119] underlined the sustainability potential for the tourist product and destination, while [120] stressed the importance of fostering a sustainable culture within accommodation facilities [121] examined the tourist potential of historical sites as part of a comprehensive planning strategy and tool that supports regional growth. While, in a rare attempt, [122] explored the dimensions for (dis)satisfaction among customers of heritage hotels, supporting the fact that satisfied customers mentioned -among others- the tangible features of the hotel. There are thus only a few attempts, bearing numerous (de)limitations, assumptions, practical cases and studies that examine the impact of these particular building transformations, *i.e.*, how these re-functions affect the economy, society, culture, and environment of the surrounding area, and how tourism serves these components through adaptive reuse of heritage buildings for tourist accommodation. Hence, this study aims to fill that gap and shed some light on the subject, discussing the economic, social, environmental, and cultural implications of transforming historic buildings into hotels through the study of certain exemplary cases.

2 Materials and methods

This study aims to establish a comprehensive understanding of adaptive reuse within the context of transforming heritage buildings into innovative tourist accommodation units. To achieve this, it adopts a multifaceted approach, both conceptual and empirical.

The conceptual framework of this research predominantly draws upon an extensive review of scholarly literature within the realms of adaptive reuse, architectural design, building upgrades, tourism accommodation facilities, cultural tourism, tourism destination planning, and tourist behavior.

For the empirical part, the current research adopts an integrated research approach with a specific focus on a carefully selected series of adaptive reuse projects designed to accommodate tourism facilities. The analysis of a series of case studies is not only crucial for understanding a contemporary phenomenon but also effective in developing new theories grounded in real-world contexts. In effect, the selection of these case studies is not arbitrary; rather, it is driven by the need to grasp the complexity of this contemporary phenomenon. Thus, to refine the focus and scope of the current research, a preliminary step involves meticulously compiling a curated list of buildings transformed into hotels across Europe. From this compiled list, cases are shortlisted adhering to specific criteria: (a) prioritizing structures located within urban areas, (b) excluding buildings that are entirely or partially owned by governmental agencies, (c) targeting buildings converted into 4 and/or 5 star (boutique) hotels, and (d) limiting to reconstructions completed within the last two decades. Furthermore, cases from the same European country were excluded for representative purposes, keeping the most recent adaptive reuse case among the available. The resulting list comprises of eight diverse cases that span the European continent, namely; The S. Marcos Hotel in Porto, Portugal, the Ned Hotel in London, England, the At Six Hotel in Stockholm, Sweden, the Brunelleschi Hotel in Florence, Italy, the Electra Metropolis Hotel in Athens, Greece, the Nobis Hotel in Copenhagen, Denmark, the Banke Hotel in Paris, France, and the Indigo Hotel in Larnaca, Cyprus.

The culmination of this research entails a meticulous and strategic comparative analysis of the original characteristics of these case studies, conducted with a focus on identifying the Strengths, the Opportunities, the Aspirations, and the Results (SOAR) associated with repurposing buildings into hotels. The SOAR analysis, deeply rooted in the concept of appreciative inquiry, serves as a robust analytical tool that facilitates the creation of strategic objectives. It does so by directing attention toward existing strengths (with a focus on strengths and opportunities in the present) and envisioning future outcomes (centering aspirations and results for the future). Notably, SOAR analysis has witnessed a substantial increase in its application within the context of formulating strategies and action plans for sustainable tourism development [123–126].

3 Results

Built heritage has been studied in terms of sustainable tourism, particularly in terms of the monumental buildings that are evident in the midst of tourism massification. As evidenced by adaptive reuse strategies, historic buildings may perform different tasks and actually be valuable for tourism. The issue of sustainable tourism in relation to adaptive reuse is studied through the following case studies, recognizing urban growth and hence the engagement and benefit of numerous stakeholders.

The S. Marcos Hotel, Portugal: the adaptive reuse of the former S. Marcos hospital in Braga, Portugal, dating back to the sixteenth century, is studied. The hospital was founded by Archbishop D. Diogo de Sousa. The site chosen for the hospital was of historical significance since there was a hermitage devoted to St. Mark, a refuge, and a monastery that, following his disappearance in 1312, was transformed into a leprosarium. It was converted into a hospital with additional amenities in 1910. Braga, with a population of over 17,000 people, was the second most important city in northern Portugal at the time. The hospital underwent a serious reform during the Estado Novo dictatorship and was enlarged with a contemporary pavilion. In 2015, a number of the satellite facilities were demolished [127]. The establishment functioned as the city's main hospital until the inauguration of a new hospital in 2011, when it was decommissioned. Recently, a part of the old S. Marcos Hospital building was renovated into a 4-star hotel by Vila Galé. The adaptive reuse restored the old structure, considering contemporary needs and standards as well as sustainability. The other part is to undergo adaptive reuse transformation to house a contemporary health care unit. Three previously inhabited hospital buildings (central, paediatric, and orthopaedic units) were modified to meet contemporary tourist accommodation needs. The formerly occupied by waiting and examination rooms, offices,

surgeries, and rehabilitation and physiotherapy spaces required extensive renovations to accommodate the intended hotel rooms and services. The building structure, the main façade, and certain historical architectural decorative features have been preserved and/ or re-revealed (Appendix A: Fig. 1). The result was a 123-rooms hotel with various amenities, such as meeting and event spaces, restaurant, bar, cellar, spa, fitness center, and innovation center, incorporating new technology and digital practices to address sustainability concerns. This project was nominated for an architectural award in 2018 in the area of best tourism business, and it was awarded in 2019 in the tourism category for urban restoration. The hotel also won the 2018 Portuguese National Property Award in the Tourism and Building Restoration categories.

The Ned Hotel, England: a former bank in London, originally designed by the British architect Edwin Ned Lutyens in 1924, was converted into a luxury hotel, club, and dining venue. The Portland stone building was designed in 1924 and completed in 1939. The building was left in 1992 following the bank's acquisition from a bigger banking institute. In its new form, the Ned includes nine restaurants, 252 bedrooms, a spread of men's and women's grooming services, and a social and fitness center that features a rooftop heated pool, gym, spa, steam bath, and late-night lounge bars. The design team's goal was to modernize the building while preserving the grandeur of the original areas. Historical features such as walnut paneling and chandeliers were restored throughout, while furniture and materials were created to further complement them. The guestrooms are designed with vintage brass and mahogany furniture, chandeliers, lavishly patterned furnishings, hand-knotted carpets, and rainforest showers. The original strongroom has been transformed into a cocktail bar and a lounge lined with 3800 security lockers, in which one enters through a 20-ton round door (Appendix A: Fig. 2). The lounge is dominated by an 18th-century chandelier and a walnut-paneled room with a pastoral tapestry that was the largest of its kind ever produced in England when it was created. The hotel was awarded 'European Hotel of Year' 2017 at the AHEAD Awards (www.aheadawards.com), an initiative dedicated to the relentless pursuit of the exceptional.

The At Six Hotel, Sweden: the award-winning Universal Design Studio (www.universaldesignstudio.com) transformed a 1970s brutalist-designed bank into a 5-star, 343-room, high-end hotel, combining the building's raw architecture with one of the most ambitious hotel art collections in Europe. The property, located on Stockholm's Brunkebergstorg Square, a central but high degraded neighborhood of the city center at the time, was abandoned until it was bought in 2015 and transformed into a luxury destination offering a challenging, contemporary version of a metropolitan grand hotel (Appendix A: Fig. 3). The plan comprises ten levels of guest rooms, a penthouse suite, a 100-seat restaurant, a wine bar, a cocktail bar, and a 2000 square meter event and flexible work space, in addition to a thorough interior refurbishment. The "European Hotel of Year" 2017 AHEAD Award was presented to this project that transformed a brutalist office building into a boutique hotel with elegance while mindfully preserving the building's original features.

The Brunelleschi Hotel, Italy: from a Byzantine tower and a medieval church to a buotique hotel (Appendix A: Fig. 4). Located within the historic heart of Florence, this property is an adaptively reused and reconstructed 6th-century Byzantine tower and a medieval church dating back to the 1400 s. Converted in 2013 into a 96-room boutique hotel with premium views of the Duomo Cathedral and Signoria Square, a shopping district and near a train station, in the heart of Florence, Italy. The renovation of the two old buildings offers guests a timeless experience. The recently transformed structure bears rooms and suites decorated with a blend of historical and contemporary elements. In addition, it offers conference rooms seating from 5, up to 100 persons, a restaurant for exclusive dining, and a museum of historical exhibits found during the reconstruction. On the one hand, the hotel is harking back to Renaissance times, and on the opposite hand, it recalls the architecture of the nineteenth century.

The Electra Metropolis Hotel, Greece: electra Metropolis is a brand new retro-chic 8-floor 5-star hotel completed in 2016 in one of the most touristic cities in the world, Athens, Greece. The original building was built in 1959 to house the Hellenic Ministry of Education. The Ministry was relocated in 2007, leaving a urban building abandoned right in the middle of the city center (Appendix A: Fig. 5). The adaptive reuse project was carried out in accordance with the latest international standards; structural reinforcements, energy upgrading, materials and systems ensuring excellent operating conditions of the premises, low consumption and high efficiency in water management, improvement of the quality of the indoor and outdoor environment, etc., which clearly contributed to the certification with LEED v3 for New Construction and Major Renovation, thus achieving the milestone of the first ever LEED Hotel in Greece. In its first year of operation, it has also clinched awards for Best City Hotel, Best Green Hotel, and Diamond of Greek Economy, and counted more than 100,000 visitors. The new hotel adds value to the entire neighborhood, contributes greatly to the local economy, creates new jobs, and brings life to the troubled urban center of the capital city. It has more than 130 employees to support 216 fully equipped rooms and suites, also featuring spa facilities, a swimming pool, business and meeting rooms, and dining areas.

The Nobis Hotel, Denmark: the majestic 75-room Nobis Hotel in Copenhagen is housed in a 5400-square-meter, 1903 historic landmark building, originally built to house the Royal Danish Conservatory of Music (Appendix A: Fig. 6). The elegant boutique hotel features rooms and suites with high ceilings, deep arched window niches, and an environment that mixes modernism with neoclassicism. Inspired by Scandinavian design, there are bespoke steel headboards, wooden floors with a chevron pattern, and marble bathrooms. Within the hotel, there is gym equipment, a relaxation area with a contemporary design sauna and a marble hot stone vapour bath, running trails within the immediate vicinity of the hotel, a chef-led culinary experience restaurant, a bar offering an exclusive experience with a Scandinavian twist, and unique drinks created to invigorate the five human senses of touch, smell, taste, sight, and hearing. Nobis Hotels was awarded in 2018 and 2021 as the Denmark's Leading Boutique Hotel by the World Travel Award (www.worldtravelawards.com).

The Banke Hotel, France: Hotel Banke is a sublime five-star hotel located within the Opera neighborhood, home to one of the city's most luxurious shopping centers, just steps from Place Vendôme and twenty minutes from the Louvre. Occupying the premises of a former bank headquarters and renovated as a hotel in 2009, Hotel Banke is housed in an early twentieth-century building. The hotel makes a bearing with its impressive lobby (see Appendix A: Fig. 7) crowned with a glass dome and also the refined taste found in each of its 91 rooms and suites: reminder cream and chocolate, purple curtains, braided leather carpets, damask leather headboards, marble bathrooms, and designer furniture. A decor that mixes original architectural elements with contemporary design to allow a twenty-first century touch. The gourmet restaurant offers innovative Mediterranean cuisine and shares space with the bustling bar.

The Indigo Hotel Larnaca, Cyprus: the only branded boutique hotel in one of the most popular tourist hotspots worldwide, Cyprus, the Hotel Indigo Larnaca, promises a unique and intriguing tourist experience. Through its design, the 4-star hotel combines the old with the new. The development, with its 40 rooms, is uniquely designed to reflect Cyprus' artisan heritage and crafts style in a way that appeals to modernity, luxury, sophistication, and convenience. The adaptive reuse project involves joining two existing seaside traditional residencies, and making a few new additions (Appendix A: Fig. 8). The captivating balconies are fitted with yellow shutters that evoke classic Mediterranean architecture. The property's amenities also include spas, a rooftop pool and bar where visitors can enjoy panoramic sea views and views of the city, a ground-floor restaurant, and a wine bar (Table 1).

Hotels are regarded as a valuable asset in every city. Thus, city authorities may grant incentives to encourage hotel development. Developers, though, are resorting to adaptive reuse in order to meet the persistent problem of providing heritage-oriented, unique, accessible, and affordable accommodations for tourists -often in abandoned or unused heritage structures. However, while adaptive reuse has many benefits over new construction [128, 129], it often has unexpected consequences and difficulties; therefore, this footpath might be a novel approach or it could be a tactic that causes unneeded urban stress. Project success depends on setting expectations early on and assisting interested parties in understanding the benefits and drawbacks involved. As a result, assessment is required, and it is suggested that it should take a number of aspects into account:

A SOAR analysis, shown in Table 2, was used to identify the potentials involved and develop a future vision for developing strategic adaptive reuse projects for tourism accommodation facilities.

The SOAR analysis offers a comprehensive understanding of the potential benefits and outcomes associated with adaptive reuse projects for tourism accommodation facilities. One of the primary strengths of adaptive reuse in the hospitality sector is its contribution to a sustainable built environment [130, 131]. By repurposing existing structures, developers

Table 1 Case studies characteristics

a/a	Current hotel	Country	Original use	Reconstruction year	N. of rooms	Stars	N. of employees	Tripadvisor score
1	S. Marco	Portugal	Hospital	2017	123	5	70	4
2	The Ned	England	Bank	2012	252	5	135	4
3	At Six	Sweden	Bank	2015	343	5	190	4.5
4	Brunelleschi	Italy	Byzantine Tower Medieval Church	2013	96	4	65	4.5
5	Electra metropolis	Greece	Ministry of education	2016	216	5	130	4.5
6	Nobis	Denmark	Conservatory	2017	75	5	60	4.5
7	Banke	France	Bank	2009	91	5	65	4.5
8	Indigo	Cyprus	Traditional residents	2020	40	4	35	5

Table 2 SOAR model analysis

SOAR analysis matrix		
	Positives to be exploited	Outcomes and goals
Current	Strengths	Aspirations
	• Sustainable built environment • Circular buildings • Infrastructure reuse • Social balance • Community recreation • Local identity value added • Link to the roots of the community and its people • Proximity to large population centers • Reduced waste (from demolition) • Reduced energy (from new materials)	• Increase the income of the area, not only of the hotel but also of the surrounding shops and businesses • Admiration to hotel brand (owner) • Livability • Enhancing the sensory experience of residents, visitors, and tourists • Protecting the authenticity • Motivation for renovation in the community
Future	Opportunities	Results
	• Sustainable tourism • Tourism economy • Tourist product enhancement • Memorable tourism promotion • Tourist/hospitality experience enriched • (Cultural) Beacon development • Nearby properties value increase	• Tourist sector boosted • Destination/urban regeneration • City branding • Cultural revitalization • Economic revitalization • Return of investment • Better looking destination • Heritage preservation

can reduce the environmental footprint associated with new construction [132]. This aligns with the global shift towards sustainability and circular building practices [38, 52]. Furthermore, infrastructure reuse is a significant strength, as it taps into existing utility systems and transportation networks, saving resources and reducing costs [133, 134]. Social balance is strength, as these projects can breathe new life into neglected areas, foster community recreation, and add value to local identity [135, 136]. Additionally, the proximity of many historic structures to large population centers presents an advantage for attracting tourists. Adaptive reuse also contributes to waste reduction, as it minimizes the demolition of existing buildings and saves energy by reducing the use of new construction materials [54, 137].

Adaptive reuse projects in the hospitality sector are well-positioned to tap into the growing trend of sustainable tourism [138]. This aligns with the increasing demand for authentic and memorable tourist experiences, as exemplified by the S. Marcos Hotel in Portugal, which seamlessly blends historical significance with modern amenities. Adaptive reuse initiatives have the potential to boost the overall tourism sector of a region by providing distinctive lodging options and cultural points of interest [139]. The Nobis Hotel in Denmark, for instance, offers a blend of modernism and neoclassicism, providing guests with a distinctive sensory experience. Moreover, adaptive reuse endeavors have the potential to function as cultural catalysts, fostering the revitalization of neighboring properties and boosting their overall value [135, 140]. This is evident in the case of the At Six Hotel in Sweden, which transformed a brutalist office building into a high-end hotel while preserving its original features.

The aspirations associated with adaptive reuse projects in the hospitality sector are multi-faceted. First and foremost, adaptive reuse projects are designed to bolster the revenue of the region, offering advantages not only to the hotel itself but also to the adjacent retail establishments and enterprises [117]. This is exemplified by the Brunelleschi Hotel in Italy, which offers premium views and conference facilities in the heart of Florence. Additionally, adaptive reuse projects aspire to enhance the reputation of hotel brands [98], such as the Ned Hotel in England, which transformed a historic bank building into a luxury hotel and won prestigious awards for its efforts. Livability is also an aspiration, as adaptive reuse projects aim to create an environment that enriches the sensory experience of residents, visitors, and tourists [141]. Furthermore, adaptive reuse projects seek to protect the authenticity of historic structures while motivating further renovation in the community, ensuring the preservation of heritage [65]. This is evident in the case of the Electra Metropolis Hotel in Greece, which contributed to the revitalization of the urban center.

The results of successful adaptive reuse projects in the hospitality sector are manifold. They contribute to the boost of the tourist sector and drive destination and urban regeneration [139, 142], as demonstrated by the Ned Hotel in England, which transformed a former bank into a bustling hotel, club, and dining venue. Have a crucial impact on city branding, the rejuvenation of culture, and economic revival [142]. Yield a financial return for developers and craft visually captivating destinations that draw in tourists while elevating the overall aesthetics of the region [11]. Moreover, heritage preservation is a tangible outcome, as adaptive reuse projects breathe new life into historic structures, allowing them to stand as a testament to the past while serving the needs of the present and future [36]. This is evidenced by the success of The Banke Hotel in France, housed in a former bank headquarters.

All in all, adaptive reuse projects in the hospitality industry offer a wealth of strengths and opportunities, aligning with the aspirations of income generation, brand enhancement, and community revitalization. Adaptive reuse initiatives yield results that include economic growth, cultural preservation, and the creation of unique and sustainable tourist destinations. By carefully considering these factors, stakeholders can ensure the success of adaptive reuse projects in the tourism accommodation sector.

4 Discussion

Adaptive reuse should be seen as a way of recycling or as a process that integrates buildings into an innovative cycle of uses within modern societies [38]. In other words, adaptive reuse should be preserved as a path towards sustainability through the principles of the circular economy [8, 31].

Adaptive reuse is a type of historic preservation or conservation [1]. Such undertakings are highly prestigious and valued by today's public, which highly values historic architecture [4]. However, adaptive reuse does not only concern the physical components but also symbolic concepts, mechanisms, and values seen as social, cultural, and -perhaps- spiritual resulting from the links among the people, the destination, the spatial, the historical, the cultural, and the social contexts associated therewith [36]. Restoring culturally significant sites in destinations strengthens the tourist product, enriching the overall tourist experience beyond the walls of the new hotel and breathing new life into the heritage structure [36].

The adaptive reuse of a heritage building to house a tourism accommodation establishment, followed by its integration into modern-day social and cultural life, fosters social balance and a sustainable built environment [32]. With the establishment of the new hotel through adaptive reuse, the tourism sector will most likely experience a boost [35]. First, as a natural corollary to the revitalization of the destination, as well as those direct and indirect -short and long-term- benefits that will be generated from consumers at the new hotel (i.e. room revenue, food and beverage revenue from restaurants and banquets, the spa or parking lot, total payroll paid to hotel employees), stimulating wider economic advantages beyond the return of initial investment [24].

Adaptive reuse of heritage buildings into modern-day tourist accommodation facilities does not detract from their historical and cultural significance. Quite the opposite, such projects help towards developing a unique hotel [32]. These initiatives contribute to the local and national tourism industry by broadening the tourist product [139], and emphasizing the available cultural assets of the destination [36]. At the same time, they are meant to promote heritage building conservation, direct and indirect monetization, social values and harmony, cultural ramifications, environmental and spatial sustainability [1]. Heritage buildings are frequently woven into the urban fabric and existing neighborhoods, thereby promoting accessibility and stimulating engagement [1]. Hence, the 'location, location, location' real estate maxim [143] is applied especially to adaptive reuse prospects for hotel establishments.

It is also noted that adaptive reuse of heritage structures of every type, design, and size for tourist accommodation facilities is a growing trend, mostly because the juxtaposition of sleek modern-day interiors within an old(er) building envelope is proven to be quite popular, especially among social-media-enjoyer visitors, which is a growing segment of travelers [144]. Adaptive reuse could therefore be considered a robust competitive tool for tourist destinations, attracting locals, tourists, and investments [36]. Heritage structures are an asset for local communities and can serve educational, recreational, leisure, and tourism purposes, reflecting a link among heritage buildings, history, culture, architecture, and the tourist and hotel industry [38].

Nevertheless, every modern hotel design comes across challenges, since architects must satisfy not only the hotel owner but also the investor, the guests, and the standards or guidelines [70]. These challenges become even greater when trying to include contemporary design elements in a heritage building [4]. Some of the most common challenges involve establishing escape exits, disability access, load-bearing walls, narrow structural openings [145, 146], passive fire safety [147, 148], energy efficiency [149], thermal comfort [149], etc. Furthermore, each project has its own unique set

of obstacles in addition to the common preservation limits. Successfully addressing the deficiencies of the old buildings could be a key requirement for any adaptation of historic buildings into a hotel [38, 150, 151].

A successful hotel business using an adaptively reused building of cultural heritage may have many positive effects on the (historic) city, including profitability for multiple parties and key players, such as tour operators, travel agents, and facility owners. However, the overall perception of the result of an adaptive reuse project to house a tourist accommodation establishment is associated with a fundamental change in the way of thinking, diverting the focus from the significance of the heritage value of the building to the values associated with the user, as well as a wider view of the destination.

Adaptive reuse emerges as a powerful mechanism for breathing new life into heritage structures, aligning them with the principles of sustainability and circular economy. By transforming these buildings into modern tourist accommodation facilities, we not only preserve their historical and cultural value but also create unique and vibrant destinations. This evolution promotes social balance, stimulates the tourism sector, and contributes to the overall economic growth of the region. While adaptive reuse presents challenges, including the need to meet contemporary design and safety standards, the rewards are abundant, benefiting local communities and the broader tourism industry. These endeavors signify a shift in perspective from solely valuing the heritage aspect of buildings to a holistic approach that considers user experiences and the destination's cultural richness.

5 Conclusion

The findings of the current research provide important implications for the adaptive reuse phenomenon, particularly for the management of ongoing and upcoming initiatives associated with the tourist sector. First, this research thoroughly examines the theoretical aspects associated with adaptive reuse and tourism in the context of heritage tourism. Second, based on well-established theoretical considerations, it identifies current strengths and opportunities, as well as future aspirations and results associated specifically with the adaptive reuse of urban buildings to house tourist accommodation facilities. Finally, the results of this study, through improving the prevalent notion and understanding of adaptive reuse in the context of a tourist destination, provide a solid foundation for sustainable policy measures planning and implementation strategies development towards a circular economy transitioning action plan, well serving the agenda for sustainable growth.

When comparing the findings of this study with prior research, a clear and significant emphasis emerges on the critical importance of heritage conservation, authenticity, and community engagement in the context of adaptive reuse for tourist destinations. Previous research has consistently highlighted heritage conservation as a central concern when repurposing historic buildings for tourism-related purposes. These findings corroborate the notion that preserving the cultural and historical significance of these structures is paramount. The adaptive reuse of such buildings not only conserves tangible heritage but also fosters a deeper connection to the past, enriching the visitor's experience. Authenticity emerges as another pivotal aspect, consistently emphasized in earlier literature. These results reinforce the idea that maintaining the authenticity of heritage buildings plays a pivotal role in visitor satisfaction and the overall success of adaptive reuse initiatives. Authentic experiences, rooted in the genuine history and character of these buildings, resonate with tourists seeking a deeper connection with the past. Previous studies have also consistently highlighted the importance of involving local communities in adaptive reuse projects. This study echoes this sentiment, emphasizing that community engagement is not only essential for gaining local support but also for ensuring the long-term sustainability of these initiatives. Engaging the community fosters a sense of ownership and pride, transforming historic buildings into assets that benefit both residents and tourists alike.

The present study has provided valuable insights into the realm of adaptive reuse in the context of tourism. Nevertheless, it is essential to acknowledge certain limitations. Firstly, the study's geographic scope is potentially limiting the broader applicability of the findings. Secondly, data availability constraints may have impacted the depth of analysis and generalizability of the results, as the study relied on existing literature and data sources. Thirdly, the research approach adopted may entail inherent limitations related to data analysis and interpretation. Fourthly, the study's timeframe may have failed to capture the long-term effects of adaptive reuse initiatives. Additionally, the potential for researcher bias in data interpretation and literature selection must be considered. External factors such as economic fluctuations, policy changes, or unforeseen events could influence adaptive reuse projects differently and may not have been comprehensively accounted for. Lastly, while the study provides valuable insights, its findings may be context-specific and not

universally applicable to all adaptive reuse projects or regions. These limitations underscore the need for future research to address these constraints and further enhance our understanding of adaptive reuse in heritage tourism contexts.

For future research, it is also recommended to explore adaptive reuse practices in diverse cultural contexts, conduct long-term impact assessments, undertake comparative analyses of urban and rural settings, and investigate the effectiveness of sustainable tourism policies. Additionally, understanding visitor perspectives on authenticity and heritage conservation, integrating innovative technologies, examining circular economy strategies, and developing community empowerment models can advance the field. Case studies showcasing successful projects and fostering cross-disciplinary collaboration among experts are crucial steps toward enhancing heritage conservation, authenticity, and sustainable tourism in adaptive reuse initiatives.

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Author contributions Ioannis Vardopoulos devised the project, the main conceptual ideas and proof outline, developed the theoretical and methodological framework, performed the analysis, derived figures and models in consultation with Maria Gkoussia-Rizou, Efthimios Karymbalis, and Despina Sdrali, which also verified the theoretical concepts and analytical methods. Ioannis Vardopoulos for his tasks was supported by Konstantinos Giannopoulos, Effimia Papaefthymiou, and Eleni Temponera. Ioannis Vardopoulos took the lead in writing the manuscript with input from all authors. Ioannis Vardopoulos with help from Paris Tsartas and Despina Sdrali supervised the work and the findings of this work and were in charge of the overall direction. Georgios Chatzithanasis and Christos Michalakelis were tasked with diffusing the research progress and results by means of software on the internet (https://retou.hua.gr/) with input from Ioannis Vardopoulos. Ioannis Vardopoulos revised the manuscript during the peer-review process. All authors contributed providing expertise, and critical feedback that helped shape the research, and the finally accepted and published version of this manuscript. All authors have read and agreed to the published version of the manuscript.

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Data availability The datasets generated during and/or analysed during the current study are available from the corresponding author on reasonable request.

Code availability Not applicable.

Declarations

Competing interests The authors declare no conflict of interest. The funders had no role in the design of the study; in the collection, analyses, or interpretation of data; in the writing of the manuscript; or in the decision to publish the results.

Appendix A

See Figs. 1, 2, 3, 4, 5, 6, 7, 8

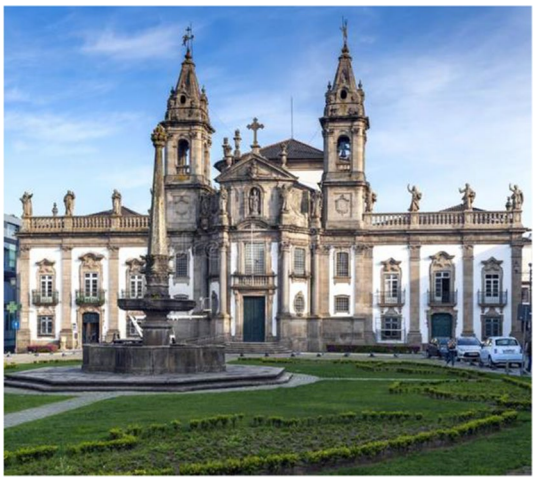

Fig. 1 The S. Marcos Hotel, Portugal front view

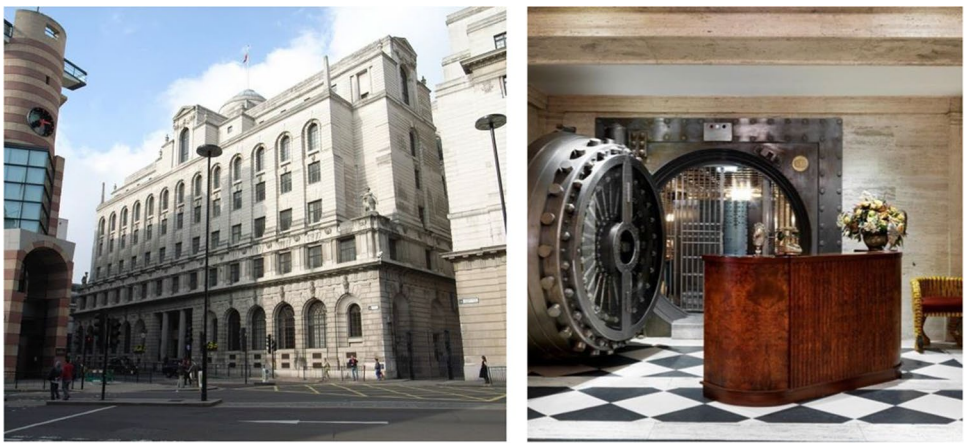

Fig. 2 The Ned Hotel, London Left: Street view|Right: The vault-bar and lounge

Fig. 3 The At Six Hotel, Sweden Left: View from Brunkebergstorg Square|Right: Lobby

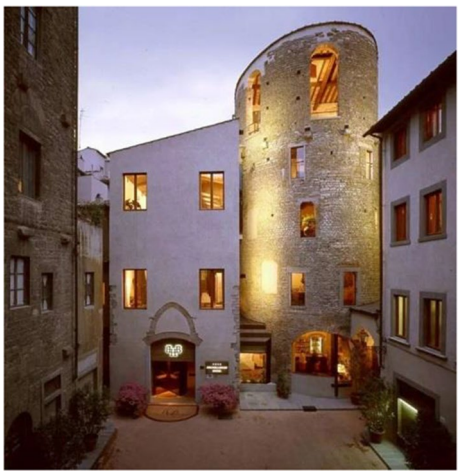

Fig. 4 The Brunelleschi Hotel in Florence, Italy

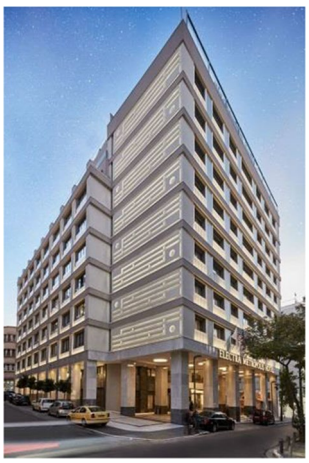

Fig. 5 The Electra Metropolis Hotel in Athens city center

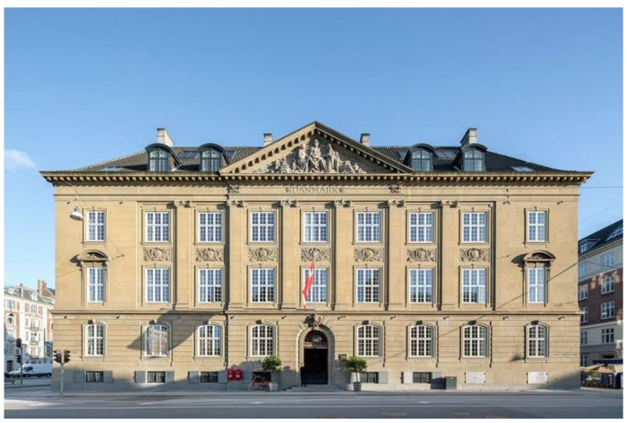

Fig. 6 The Nobis Hotel Copenhagen, Denmark façade

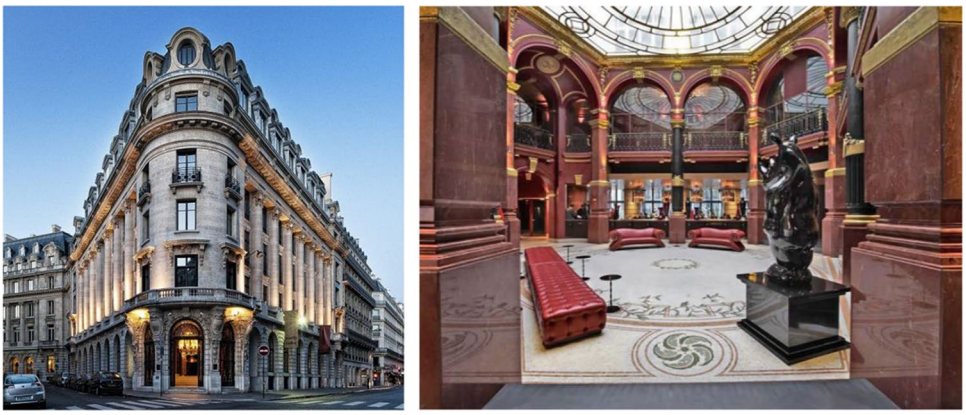

Fig. 7 Hotel Banke, Paris, France Left: Façade|Right: Lobby

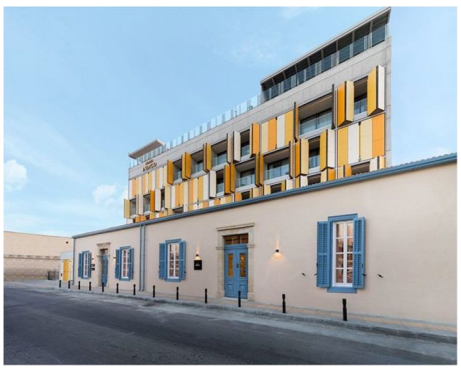

Fig. 8 Hotel Indigo Larnaca, Cyprus exterior design

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