

ADAPTIVE REUSE OF HISTORICAL BUILDINGS THROUGH CULTURAL HERITAGE CONSERVATION; THE WAREHOUSE OF SIRKECI TRAIN STATION

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Abstract. Commuting daily past a historical building creates lasting memories in our urban lives. The aim of this study is to propose a functional reuse for the warehouse building adjacent to the Sirkeci Train Station in Istanbul. This abandoned historical building in the downtown area has significant potential to connect existing urban spaces. To develop such a proposal, evaluation criteria for the re-functioning of historical buildings have been established. The literature review focuses particularly on industrial buildings, with an emphasis on train station facilities. To support the hypothesis, case studies from various countries with similar functions have been evaluated and a comparative analysis has been conducted. It is anticipated that a food-focused marketplace as a reuse function will contribute positively to the city in both social and physical aspects. Preserving urban memory and ensuring historical and cultural continuity are the primary determinants in selecting the newly proposed reuse function. Factors such as the building's location within the city, its environmental interactions and its potential for cultural tourism were considered in the selection of these case studies. The new program proposal is introduced along with a site analysis in Section Six. The site analysis indicates that the proposal will enhance pedestrian mobility along the coastline from the Eminönü ferry pier through Gülhane Park. This paper discusses the repurposing of an unused historical building in downtown Istanbul, specifically in the historical peninsula.

Keywords: Adaptive reuse, cultural heritage conservation, Sirkeci Train Station, sustainable development, food-focused marketplace.

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1. Introduction

The development of abandoned industrial sites and urban regeneration are interconnected concepts essential for achieving sustainable urban development, influenced by environmental, social and economic factors. Abandoned industrial sites, often referred to as urban brownfields, pose significant challenges in many cities today due to their detrimental environmental, physical, social and economic impacts, which contribute to gradual land degradation and loss. However, over the past 30 to 40 years, these neglected areas have increasingly been recognized as opportunities for urban development and revitalization, adding new value to previously devalued and low-quality regions. The repurposing of buildings and areas listed on the National Register of Historic Places helps safeguard heritage from the threat of extinction. Through such adaptive reuse, these sites and structures can reintegrate into urban social and physical life, preventing them from becoming abandoned, vacant and unsafe urban spaces (Piran, 2016). The European Environment Agency (EEA) estimates that there are up to three million abandoned industrial sites across Europe, most of which are located near urban

boundaries and present alternatives that can compete with greenfield investments (Bartke, 2013). Achieving sustainable and effective regeneration of these areas requires innovative and holistic approaches, along with the full support of urban planners (Piran, 2016).

There are many historical buildings in Istanbul that have been successfully repurposed and reintroduced to the city, alongside examples of repurposed industrial buildings from around the world. Despite these successful cases, numerous historical buildings remain unused due to various reasons, such as ownership issues, difficulties in identifying appropriate functions and financial constraints. The warehouse building adjacent to the Sirkeci Train Station falls into this category. It holds significant cultural heritage due to its location as the final stop on the European Railway Line and its distinctive architecture, which dates back to the 19th century at the onset of the Industrial Revolution. Some sections of the Sirkeci Train Station have been out of operation since 2013 following the implementation of the Marmaray project; however, part of the station is currently in use as a museum. The warehouse building is one of the abandoned structures from this period.



Figure 1. Partially decommissioned Sirkeci Train Station [(a): (Waldek, 2018)]
[(b) and (c): (photo credit Ilke Ciritci, 2021)]

Ayvaz and Halaç (2023) noted that the customs building within the Sirkeci Train Station complex (Figure 1) has lost its original function and is now operational in a new capacity, while the warehouse building remains unused. Their research aimed to highlight the significance of both the customs building and the adjacent warehouse in the context of industrial heritage, from historical to contemporary times. Through detailed historical research, they sought to identify current conservation challenges through observations and examinations. The authors provided recommendations for the preservation of the building and underscored its importance in the collective memory of the city and its residents. They stressed the necessity of ensuring the building's continuity by assigning it a new function that differs from its original use, which is deemed appropriate. The preservation of its historical, cultural and architectural values is expected to be achieved by considering the socio-economic significance of Istanbul's historical peninsula, which boasts a significantly high level of tourist attraction. In this transformation, they highlighted the importance of maintaining the building's place in the city's memory by integrating its historical traces and significance into its future.

Its location possesses a unique characteristic, as it is situated within the historical peninsula of Istanbul. Furthermore, the construction period of the warehouse reflects a significant era in Istanbul's history. Additionally, the surrounding area is a vital tourist

destination that attracts both domestic and international visitors, creating a vibrant neighborhood throughout the year. In contrast, the warehouse building and its surroundings resemble an urban brownfield, being abandoned and neglected. Its front deck, which overlooks Kennedy Street, is occupied by parking for cars and heavy machinery. The street is lined with advertising boards that obstruct the view of the historical peninsula for pedestrians walking along the coastline. This situation creates an undesirable urban barrier in such an important area. Following the problem definition, the hypothesis of this study is that the warehouse building adjacent to the Sirkeci Train Station can be repurposed by proposing a new architectural program.

Upon initial examination of the conceptual framework, fundamental conservation criteria were established to guide the proposal for the adaptive reuse of the building. The abandoned historical warehouse located in the downtown area exhibits significant potential to integrate with the surrounding urban fabric. To develop a proposal for its refunctioning, evaluation criteria for the adaptive reuse of historical buildings were first determined. In order to formulate an appropriate architectural program, the conservation principles that have emerged to date were reviewed. Additionally, an investigation was conducted into the successful refunctioning of industrial buildings, particularly train station structures, in similar contexts. A comprehensive literature review focused on the adaptive reuse of industrial buildings, with an emphasis on train stations, to inform this process. The findings, in conjunction with an analysis of the warehouse's location and its surrounding environment, underscore its potential to meet social and physical needs. This led to the selection of a food-focused marketplace as the proposed adaptive reuse function for the building.

To substantiate this hypothesis, case studies from five countries with comparable functions were evaluated and a comparative analysis was performed. The primary determinants for selecting the proposed reuse function include the preservation of urban memory and the maintenance of historical and cultural continuity. It is anticipated that the introduction of a food-focused marketplace will significantly enhance the city's social and physical infrastructure. Factors such as the building's location, its environmental interactions and its potential for cultural tourism were integral to the selection of these case studies. The similarities between the proposed warehouse reuse and the Sirkeci Station complex, particularly regarding their social and physical contexts, served as a basis for the case study selection. Based on the analysis of the five case studies, it can be concluded that the proposal for a food and beverage-oriented market-restaurant function is a viable and appropriate strategy for the warehouse adjacent to Sirkeci Train Station.

2. Literature Review

After humanity attained the status of civilized nations, the concept of conservation emerged as a fundamental principle aimed at understanding the civilizations established over the past centuries. This understanding serves to justify their existence and the identities they have created. Furthermore, it ensures that future generations can appreciate and learn from these historical achievements. The structures that have endured from thousands of years ago to the present, crafted by human hands and forming the foundations of contemporary civilizations, are documented and safeguarded. They are regarded as a shared heritage of humanity and common principles are applied in their preservation and intervention.

2.1. International Treaties Regarding the Concept of Conservation

There are several theories and pieces of legislation that shape the concept of change of function worldwide. The idea of change of function was first articulated in the Carta del Restauro (1931). This document not only emphasized principles related to and industrial heritage and industrial buildings as integral components of cultural heritage for the first time. Specifically, this text includes industrial buildings within the context of protection, alongside traditional buildings and monuments. This document established a foundation for an approach that would ultimately encompass industrial buildings within the scope of protection, while also enhancing the understanding of how to protect historical buildings.

Efforts to preserve industrial buildings became increasingly prominent, particularly during the 1970s and 1980s. During this time, buildings remaining from the Industrial Revolution began to be recognized for their architectural and cultural significance, prompting various conservation organizations to take action to protect them. Additionally, this era saw the emergence of the first international initiatives focused on industrial heritage, supported by contributions from United Nations Educational, Scientific and Cultural Organization (UNESCO) and International Council on Monuments and Sites (ICOMOS).

In 1981, the Declaration on Industrial Heritage, adopted by the Council of Europe, marked a significant advancement in the recognition of industrial buildings as cultural heritage. This declaration popularized the notion that industrial buildings warrant protection due to their historical and cultural significance. Consequently, this development reshaped the understanding of industrial heritage.

In its Washington Charter of 1987, ICOMOS defined the elements that should be preserved in the historic environment as both physical and intangible components, including city boundaries, green spaces, functional diversity, form, proportion, materials and design (ICOMOS, 1987). Additionally, the potential benefits of change within historic districts were acknowledged. In 2013, the ICOMOS Turkey Declaration on the Conservation of Architectural Heritage emphasized the importance of maintaining the integrity of heritage and the social and cultural context in which it exists, in order to protect historical buildings as integral components of cultural and environmental development (ICOMOS, 2013). During their regular meetings, international organizations such as UNESCO, ICOMOS and the Council of Europe have established guiding principles that are responsive to evolving conditions. They have fostered a discussion environment focused on issues such as conservation principles, the preservation status of materials based on traditional practices, the role of historical buildings and their surroundings in contemporary life and their contribution to the definition of cultural identity (Ahunbay, 2019).

The inclusion of industrial buildings in international historic preservation laws has evolved since the 1930s. Initially focused on architectural monuments, the understanding of conservation gradually expanded to encompass industrial buildings as well. Among the most significant documents are the Athens Charter (1931), the Declaration on Industrial Heritage (1981) and the UNESCO World Heritage List. These documents and historical developments serve as the cornerstones of the international movement to recognize and protect industrial buildings as cultural heritage.

2.2. Common Assumptions About Conservation

Cenik (2022) examined the international agreements, including new annexes and functional issues, in her thesis. In her 2022 study, Cenik compared all agreements and identified ten evaluation criteria. These criteria are defined as follows: 1) a respectful approach to historical buildings; 2) distinguishability from historical buildings; 3) harmony in terms of mass / form and rhythm; 4) reflection of the technology of the period in which it was constructed; 5) structural and aesthetic value; 6) harmony with spatial organization and composition; 7) harmony with color and material integrity; 8) originality; 9) enhancement of usability and 10) physical, social and cultural sustainability.

Büyükarıslan and Güney (2013), in their article on the refunctioning of industrial heritage buildings, identified several criteria that can be considered during the adaptation of historical buildings. These criteria include: 1) architectural transformation evaluation criteria; 2) spatial transformation evaluation criteria; 3) functional transformation evaluation criteria; 4) structural evaluation criteria; 5) contextual transformation evaluation criteria and 6) economic evaluation criteria (Büyükarıslan & Güney, 2013). While formulating new spatial and functional proposals for a historical building, it is essential to consider the spatial value of conservation, the effectiveness of the environment and human interaction. Evaluations should be conducted within the framework of studies in environmental psychology and environmental behavior (Kaşlı, 2009). Assessing the psychological and social effects of an existing environment, along with utilizing data obtained from site analysis, demonstrates that evaluation is an integral part of the renovation process (Aydınlı, 1993). Based on the criteria established by Büyükarıslan and Güney in their study, it is essential that the contextual relationship between the renovated building's significance in the city and its proposed new function positively influences both tourists and local residents who engage with it, thereby revitalizing and enhancing the value of the region.

The new function proposed in this paper will be discussed theoretically within the framework of the specified criteria. In the subsequent sections of the article, we aim to evaluate these criteria mathematically through workshop groups composed of architecture students, focusing on future vision.

2.3. The Relationship Between Cultural Heritage and Culinary Tourism

Social space, in its various dimensions, is produced through practical and theoretical flows that both contribute to and derive meaning from it, as well as being perceived and directly experienced. Space is a process of social production and serves as a prerequisite for the formation of society (Lefebvre, 1991). In his 2015 article, Lee identified hypothetical relationships among motivation, nostalgia and memorable tourism experiences in a restaurant that was reconstructed from an old train station. Data were collected through face-to-face questionnaires administered to six hundred fifteen individuals at the South Tainan railway station in Taiwan. The results revealed significantly positive associations between culinary appeal, cultural heritage and nostalgia, as well as a correlation between nostalgia and memorable tourism experiences. Structural equation modeling analysis confirmed that nostalgia mediates the impact of personal emotions on memorable tourism experiences. This study demonstrates that participatory and interactive venues play a crucial role in revitalizing historical sites and enhancing the visitor experience.

Eating is an activity that people engage in daily, necessitating facilities to support it. This act not only fulfills the basic need to alleviate hunger but also embodies a significant cultural value that reflects the human condition within society. The practice of sharing meals in both private and public spaces has evolved into a tradition across nearly all cultures worldwide. Therefore, food serves not only as a necessity but also conveys a symbolic message.

Scientific studies have demonstrated that repurposing a historical building as a restaurant significantly influences its economic value due to the psychological effects of nostalgia (Hwang & Hjun, 2013; Lee, 2015). Fajarwati and Hendrassukma (2022) aimed to investigate visitors' reactions to the design of the functional transformation of the former Rumah Macaroni Panggang in Bogor, Indonesia. They drew inferences about the harmony between people, history and the continuum of past, present and future through the adaptive reuse approach. These studies indicate that repurposing historical spaces as restaurants revitalizes customers' emotional nostalgia for past experiences, encouraging them to revisit these locations.

Although the reuse of historical buildings encompasses multiple fields and functions, repurposing these structures for tourism is a primary reason for preserving the value of heritage sites and attracting funding. Similarly, heritage has become an integral component of the development and advancement of leisure and tourism (Tu, 2020). Food and beverage tourism, which highlights the close relationship between food and tourism, has been a focus of tourism research for the past three decades, beginning with Belisle's (1983) study on food and tourism. However, it is only in recent years (2008-2015) that this area has experienced remarkable growth and increased visibility in tourism literature (Ellis *et al.*, 2018). If we summarize the essence of food tourism based on Ellis *et al.*'s article (2018), we can conclude that the key concept is The interplay of authenticity, culture and motivations reflects the origin and history of a place. Therefore, it can be understood that food tourism is closely related to cultural anthropology, as it involves examining tourists' interactions with a location through the lens of food.

Today, food tourism has emerged as a significant option within the tourism industry, particularly in historical cities renowned for their culinary culture. The transformation of food culture into a tourism attraction has not only increased the number of visitors to these cities but has also shaped their cultural identities. According to Hall and Mitchell (2001), food tourism is defined as the visits made by tourists to local food producers, food festivals, restaurants and locations where tasting or experiencing the unique characteristics of a food-producing region serves as the primary motivation for travel (Hall & Mitchell, 2001). As food tourism gains recognition, it is becoming a crucial element in destination marketing strategies (du Rand & Heath, 2006). In their article, Tsai and Wang (2017) examined the experiential value of branding food tourism in a historical region of Tainan, Taiwan. Among their findings, it is noteworthy that tourists with a limited interest in food tourism often engage in food-related activities because these experiences offer something unique. Local cuisine can enhance tourists' perceptions of the authenticity of a historical site by familiarizing them with the destination's historical and cultural characteristics. In this context, even if their experience is primarily focused on food tourism, it becomes even more valuable when it occurs in a repurposed historical setting. This positive interplay, which adds value to both the location and the experience, also infuses vitality and interaction into the city. Tourists who indulge in local food will perceive it as a means of acquiring diverse experiences rather than merely satisfying physiological needs. Adaptive heritage reuse processes can create

opportunities for visitors to participate in activities that enhance the appeal of a location or destination, making this an essential consideration in the planning of adaptive heritage reuse projects. The enjoyment of food, particularly dining in shops located at heritage sites, has been recognized as a key objective for many visitors (Tu, 2020).

Today, in the heart of many historical cities, there are establishments that exclusively serve the region's unique culinary traditions. The repurposing of these buildings for this purpose not only aids in the preservation of historical architecture but also fosters cultural continuity, enhances social interaction and contributes to the local economy.

2.4. Reuse of Industrial Buildings: Train Stations

All around the world, there are historical train stations recognized as cultural heritage sites that have become unused due to changing transportation habits. Bianchi and De Medici (2023) emphasized the need for adaptive reuse in this field and examined examples of repurposed historical railway stations. The method proposed in their study defines a set of selection criteria and evaluates the effectiveness of adaptive reuse projects in terms of their ability to preserve built heritage identity while shifting the regional development orientation towards socio-economic sustainability guidelines. The authors conducted this study to establish criteria for evaluating alternative reuse strategies for abandoned stations in their home country, Italy. The development of the automotive industry since the 1940s and 1950s, along with the introduction of high-speed train routes, has rendered many old train stations obsolete in their respective regions.

After analyzing case studies on transformation, the authors presented a project proposal for the revitalization of the abandoned Roveto Bimmisca train station located in Sicily, Italy. A similar study can be found in the article by Gören and Manisa (2021), which aims to explore the potential for the functional transformation of abandoned railway structures. In this context, the authors examined examples of railway buildings in Europe and Turkey that are considered industrial heritage and have undergone functional changes. They identified the reasons for the preference for re-functionalized railway buildings and examined the relationship between the functions attributed to these buildings and the structural interventions made.

When examining fourteen examples in Europe, researchers found that twelve were classified as railway museums, one was designated as a national museum and one was repurposed to serve as both a restaurant and office space in addition to functioning as a railway museum. In Turkey, seven examples of converted passenger buildings were analyzed, revealing that three were transformed into railway museums, one into a hotel, one into a restaurant, one into a university building and one into a cultural center. In their article, Uzun and Karabeyeser (2018) explored the historical development and architecture of the Gaziantep Train Station, completed in 1959 and evaluated the suggestions and reuse strategies proposed during the workshop. Haştemoğlu et al. (2016) conducted comprehensive research in their article, examining five hundred eighty train stations in Turkey and determining that forty of them are suitable for refunctioning. Based on this research, an action plan for abandoned railway heritage was developed to address existing issues. The proposals for Turkey serve as a guide for many other countries. Giresun (2017) investigated the functional transformation of historical stations within the context of sustainability and identified several criteria for such transformations. According to Giresun (2017), these criteria are categorized into two groups: social criteria and physical criteria (Table 1).

Table 1. Criteria for the transformation of historical train stations

Re-functioning criteria	
Social criteria;	<i>Economical criteria</i>
	<i>Social and cultural criteria</i>
	<i>Urban Memory</i>
Physical criteria;	<i>Location</i>
	<i>Structural criteria</i>
	<i>Architectural concept / building program</i>

Source: Giresun (2017)

3. Case Studies Regarding Food-Focused Marketplaces to Support Program Proposal

In terms of social and physical criteria, efforts have been made to include examples that are similar to the warehouse building adjacent to the Sirkeci Train Station. This section presents case studies, evaluation criteria (Table 2) and a comparative analysis of these case studies. Since the selected case studies have undergone physical renovations, a separate structural analysis is not necessary for this research. Similarly, the structural analysis of the warehouse at the Sirkeci Train Station is excluded from the scope of this article; however, it holds significant potential for future studies. As an architectural concept, the food-focused marketplace proposal is explained in detail in this section, with its justification illustrated through global case studies. Both the social and physical aspects of the case studies are evaluated and each case study is introduced individually.

Table 2. Evaluation criteria used in sample selection

Industrial building	Social criteria			Physical criteria		
	Econom. criteria	Social and cultural criteria		Location	Architect. concept	Structural criteria
			Urban memory			
Chelsea Market, USA	√	√	√	√	√	(in use)
Mathallen, Norway	√	√	√	√	√	(in use)
Groot Vleeshuis, Belgium	√	√	√	√	√	(in use)
Old Market, Hungary	√	√	√	√	√	(in use)
Mercado Central, Spain	√	√	√	√	√	(in use)

3.1. Chelsea Market, New York, USA

Chelsea Market in New York City has become an internationally renowned brand and is now recognized as one of the largest indoor food and retail marketplaces in the world. Situated in the heart of New York's Meatpacking District, Chelsea Market has emerged as a popular destination for both locals and tourists, offering a diverse selection of fresh produce and a variety of local cuisines in its restaurants (Table 3). The region has long been the culinary heart of the city, dating back to the Algonquin Indians who traded in this area along the Hudson River. The trains of the High Line served wholesale butchers who lined the streets beneath the tracks, cooling their supplies with blocks of ice from the Hudson River. In the nineteenth century, the National Biscuit Company

established its factory here to utilize the lard from these butchers, a space that has now been transformed into Chelsea Market. The simple brick architecture of the building imparts a distinctive character to the Market. Attracting six million national and international visitors each year, the Market ranks among the top tourist attractions in New York City. Both local food enthusiasts and international tourists frequently visit Chelsea Market (Chelsea Market, n.d.). The market features a variety of restaurants offering seafood, cheese tastings, Israeli, Japanese, Mexican, Korean and Jamaican cuisine. Additionally, specialty liquor lounges provide opportunities for wine tastings. The recent renovation of the building enhances the experience for visitors, making the historically significant site an essential destination. It contributes to the vibrancy of the city and is consistently highlighted as a top recommendation on personal blogs and websites that feature New York City attractions.

Table 3. Exterior and interior views of Chelsea Market in New York, USA, including historical documents [(a): (photo credit Ilke Ciritci, 2021; Trip Advisor, n.d)] [(b) and (c): (photo credit Ilke Ciritci, 2021 and 2023)]

Visuals of the building	
(a) Exterior views;	
(b) Interior views;	
(c) Historical documents	

3.2. Mathallen, Oslo, Norway

Mathallen, located in Oslo, Norway, is a food market that was renovated and opened in 2012. It is situated in a former industrial hall in Vulkan, along the lower Akerselva River (Table 4). The Vulkan district was developed in conjunction with the establishment of the hall, which was constructed in 1908 for the Vulkan Iron Foundry. The facility encompasses three floors and approximately 3,500 square meters. “Old Broverksted”, a distinctive brick building that now houses Mathallen, has stood next to Akerselva's oldest bridge. In the first five years after its opening, Mathallen welcomed six million visitors. According to local bloggers, around 40% of these visitors are from the local community; however, Mathallen has become a popular destination for all

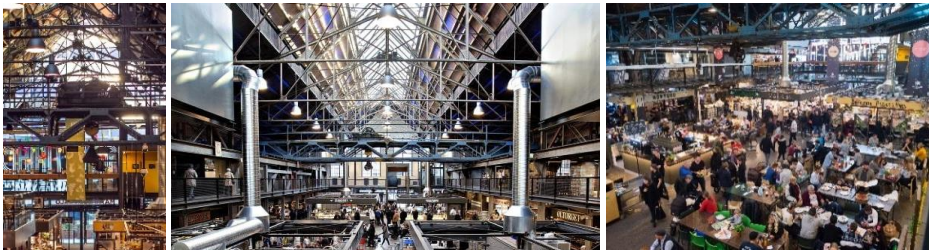
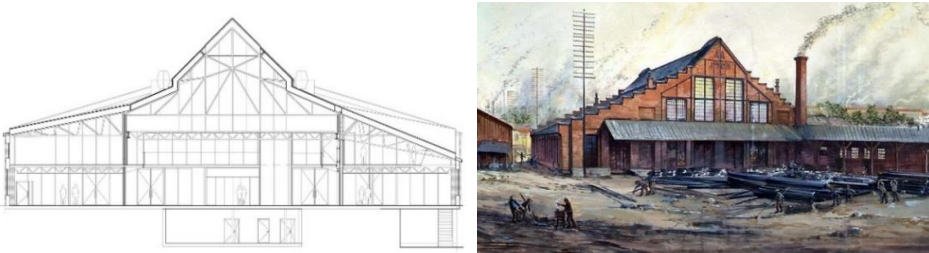
residents of Oslo, particularly on weekends. Additionally, an increasing number of foreign tourists are visiting Mathallen (Peyre, 2017). The center features a wide array of shops that sell products from small-scale Norwegian producers. In 2014, Mathallen was awarded the Norwegian Heritage Olavsrosa label for its successful transformation of an old industrial building into a space that serves a new and sustainable purpose. This venue is designed to cater more to professionals than is typical in shopping centers. The Culinary Academy offers courses at various levels tailored to different target audiences. Mathallen hosts not only significant gourmet delicacies and restaurant activities but also cooking classes and events. For instance, the Årets Kokk (Chef of the Year, Norway's official selection for the international Bocuse d'Or cooking competition) has been held three times at Mathallen (Peyre, 2017).

Table 4. Exterior and interior views of Mathallen Oslo in Norway, along with historical documents

[(a): (Costa, 2019; Beaton, 2017; Delicious Travel, n.d.)]

[(b): (LPO, n.d.; Aktivi Oslo, n.d.; Aspelin Ram, n.d.)]

[(c): (LPO, n.d.; Oftebro, 1986)]

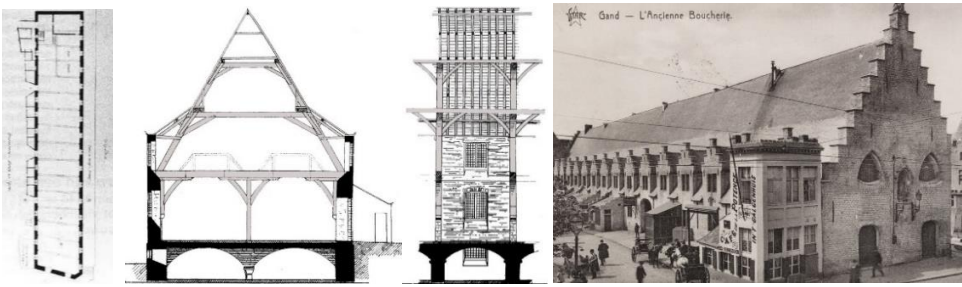
Visuals of the building	
(a) Exterior views;	
(b) Interior views;	
(c) Historical documents	

3.3. Groot Vleeshuis, Ghent, Belgium

Groot Vleeshuis, the impressive medieval Great Butchers' Hall in Ghent, Belgium, has been renovated and now serves as a promotional center for local East Flemish products (Table 5). Every medieval town typically had one or two meat shops. In Ghent during the late Middle Ages, there was a Groot Vleeshuis located on the Vismarkt (now Groentenmarkt) and a Klein Vleeshuis near Brabantpoort. The Klein Vleeshuis likely existed as early as the 14th century. The Groot Vleeshuis, being more centrally located, is mentioned in the city records from 1332-1333. Since the meat house was first referenced in 1251, it must have been in existence for many years prior (De Hert, 2003).

Table 6 presents the section and floor plan of the Groot Vleeshuis in Ghent before 1912, derived from architect P. Langerock's 'Oude Bouwwerken in Vlaanderen' series (De Hert, 2003). Due to the 1913 World Exhibition, it was decided to restore the Groot Vleeshuis and the 'pencil houses' to their pre-1744 condition, following the plans of architect Van Hamme. The Groot Vleeshuis has since been repurposed for various uses, including a fruit and vegetable market, a postal and telegraph office, a parking lot and a partial fish market. The hall building was designated as a protected monument in 1943 and underwent a comprehensive restoration in the late 1990s. Until 2021, the building served as a promotional center for East Flemish regional products, which has since relocated to Gouden Leeuwplein under the name OOOST.

Table 5. Exterior and interior views of the “Grand Butchers Hall / Groot Vleeshuis” in Ghent, Belgium, including historical documents [(a): (Wikimapia 1, n.d.; Wikimapia 2, n.d.; Gerhard, 2021)] [(b): (Stad Gent, n.d.; Potliege Photography, 2019; Walker, 2007; Belgium View, n.d.)] [(c): (De Hert, 2003, p.7; Vandenabeele, L. 2022; Bresser Architecten, n.d.)]

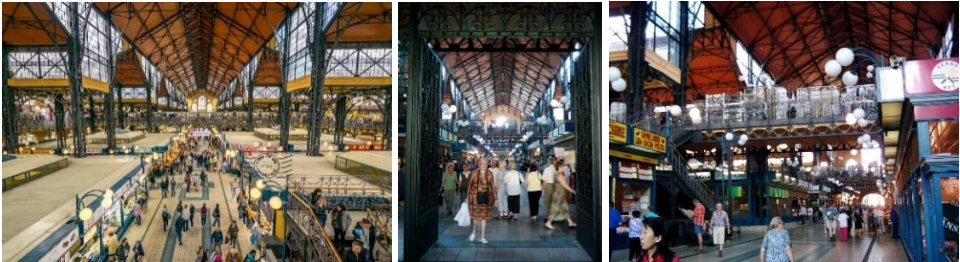
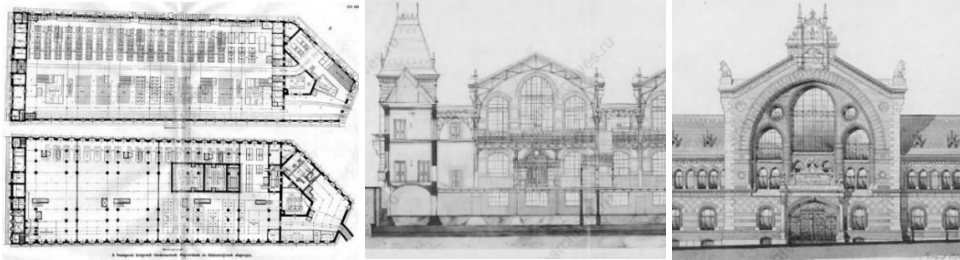
Visuals of the building	
(a) Exterior views;	
(b) Interior views;	
(c) Historical documents	

3.4. Old Market, Budapest, Hungary

Market halls in Hungary, which date back to the 19th century, are based on a spatial scheme that was developed in antiquity. Typically designed in the basilica style, featuring one or three naves, these structures innovatively incorporate structural iron, which allows for the inclusion of large openings (Janicka, 2019). Marketplaces, often referred to as the “core” of the city, play a crucial role in shaping urban patterns due to their size and the necessity for accessible transportation services. Similar to the department stores of the 19th century that catered to the needs of the middle and upper classes, market halls serve

as vital spaces where individuals from lower social classes can purchase essential food items while also enjoying catering services or watching performances by jugglers (Janicka, 2019). As illustrated in Table 6, the centrally located Great Market Hall (Nagycsarnok or Vasarcsarnok in Hungarian) in Budapest, built in 1897, is the largest market hall in the city. This marketplace is significant not only in terms of its physical size but also in various other aspects. Most notably, it serves as the heart of the market, commonly referred to as the Central Market Hall, due to its prime location (just a five-minute walk from the city center) and the substantial volume of trade that occurs there daily. The Budapest Great Market Hall features three floors and offers a wide array of fresh fruits, vegetables, fish and local delicacies, as well as guided tasting tours.

Table 6. Exterior and interior views of the “Great Market Hall / Old Market / Nagycsarnok” in Budapest, Hungary, including historical documents [(a): (Pride, 2004; Pancurak, 2023; Olsson, 2020)] [(b): (Pin, 2020; photo credit Semih G. Yıldırım, 2004)] [(c): Janicka, 2019)]

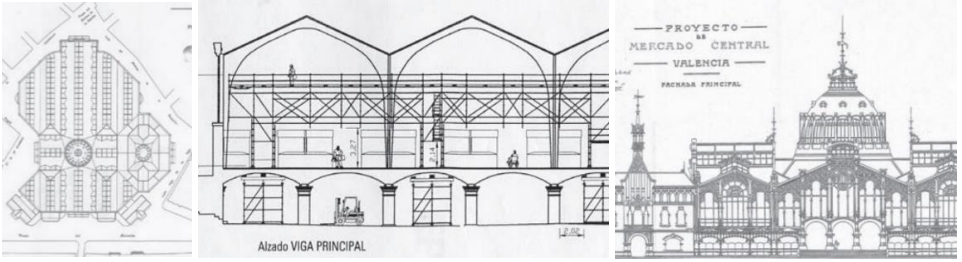
Visuals of the building	
(a) Exterior views;	
(b) Interior views;	
(c) Historical documents	

3.5. Mercado Central, Valencia, Spain

One of the most typical examples of Valencian Art Nouveau, the Mercado Central, or Mercat Central (Table 7), is situated in the heart of Valencia. In 1839, the area was designated for the inauguration of an open-air market known as Mercat Nou. By the end of the century, the city of Valencia organized a competition for the construction of a new covered market. Construction commenced in 1914 and was completed in 1928. Valencia's Central Market is one of the largest markets in Europe, spanning over 8,000 square meters and showcasing a predominantly Valencian Art Nouveau style. The market features an unusual roof adorned with original domes and sloping sections of varying heights. Inside, a diverse array of materials, including iron, wood, ceramics and multi-

colored tiles, contribute to its aesthetic appeal. The beauty and splendor of the building are enhanced by the light that filters in from various points on the roof and through the colored window panels (Wikipedia 1, n.d.).

Table 7. Exterior and interior views of the Mercado Central Market in Valencia, Spain, along with historical documents [(a) and (b): (photo credit Semih G. Yildirim, 2023)] [(c): (Delgado, 2016)]

Visuals of the building	
(a) Exterior views;	
(b) Interior views;	
(c) Historical documents	

The Central Market is widely regarded as one of the most representative examples of Valencian modernism. It is situated in the Mercat neighborhood, right in the historic center of Valencia. Rehabilitation work began in 2004 and was completed in four years, with the building reopening to the public in 2008 (Delgado, 2016). The Central Market of Valencia serves as a sensory cathedral and a cherished shopping destination (Valencia Revealed, 2023). The iron columns, reminiscent of the Eiffel Tower, along with the interior tiles and stained glass, make it a focal point of architectural interest, attracting numerous visitors. Those who visit this immensely popular venue not only appreciate its architectural significance but also immerse themselves in the vibrant colors, aromas and flavors of Mediterranean life. Additionally, traditional products are readily available for purchase during their visit (Visit Valencia, n.d.).

3.6. Comparison on Case Studies

When analyzing the five examples from New York, Oslo, Ghent, Budapest and Valencia, it is possible to draw conclusions about the buildings that possess historical value and are being repurposed. These inferences were evaluated based on specific criteria (Table 8). Upon examining the comparison table, it is evident that the most common characteristics of the case studies include a focus on food and beverage,

historical significance and their locations in downtown areas or vibrant regions of the city. In addition, another important common feature is their proximity to transportation networks. It is evident that these and similar industrial buildings were situated near shipping or railway transportation networks to facilitate the supply of raw materials for processing. Sample analyses indicate that proposing a food-focused initiative for an unused warehouse adjacent to the Sirkeci Train Station aligns well with the criteria outlined in this paper. Renovation not only benefits the preservation of historical buildings but also transforms the surrounding neighborhood in the long run.

Table 8. Comparison table (The top views are sourced from Google Earth, while the street views are taken from Table 4-8)

Building Name	City	Country	Year Built	Initial Function	Structural System	Connection / Link to Urban Transport.	Top View of the Building in Downtown	Street View
Chealsea Market	New York	USA	1890	National biscuit factory	HSS (hot-rolled steel) sections with brick facade for most of the buildings.	Sea, bus and rail transport		
Mathallen-Oslo	Oslo	Norway	1908	Vulkan iron foundry	HSS (hot-rolled steel) sections with brick facade	Bus, rail transport		
Groot Vleeshuis	Ghent	Belgium	1332-1333	Great butchers' hall	HTF (heavy timber framing) with stone facade	River, bus, rail transport		
Old Market / Nagycsarnok	Budapest	Hungary	1897	Market place	HSS (hot-rolled steel) sections with stone facade	River, bus, rail transport		
Mercado Central	Valencia	Spain	1914-1928	Valencia outdoor market	HSS (hot-rolled steel) sections with large windows	See, bus and rail transport		

Within the scope of this article, case studies have been assessed according to the guidelines for constructing new additions to historical buildings, as well as for any structural or non-structural modifications directly related to the building. These guidelines are outlined in the International Agreements based on Cenik's (2022) criteria. All buildings selected as case studies were thoroughly examined and evaluated by the authors using observational methods. According to these criteria, while the buildings were assigned new functions, as illustrated in Table 9, all interventions were deemed to comply with the dimensions specified by the guidelines. Since the warehouse buildings of Sirkeci Train Station, which are the focus of this article, have not yet been renovated and no renovation projects have been proposed to assign them new functions, the evaluations presented are based solely on the case studies examined as examples. Nevertheless, the significance of these criteria should be acknowledged and considered during the renovation of the warehouses at Sirkeci Train Station.

Table 9. Comparison table of case studies based on Cenik's (2022) 'annexes to the historical buildings' criteria

Adaptive Reused Buildings	Cenik's (2022) 'annexes to the historical buildings' criteria									
	respectful approach to historical buildings,	distinguishability from historical buildings	harmony in terms of mass-form and rhythm	reflecting the technology of the period in which it was applied	structural and aesthetic value	harmony with spatial organization and composition	harmony with color and material integrity	originality	increasing usability	physical social and cultural sustainability
Chelsea Market, USA	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Mathallen Oslo, Norway	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Groot Vleeshuis, Belgium	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Old Market / Hungary	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Mercado Central, Spain	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

4. Reuse Program Proposal for the Warehouse of the Sirkeci Train Station

Sirkeci Train Station is well known for its train service, the Orient Express. Founded in 1883 by a Belgian company, the Orient Express was a long-distance passenger train service that operated until 2009. The train traversed continental Europe, connecting the main terminal stations in Paris in the northwest and Istanbul in the southeast (Wikipedia 2, n.d.). The partially dysfunctional Sirkeci Train Station building complex requires reassessment to reintegrate it into urban life. The proposal to repurpose Sirkeci Station as a food-focused market is evaluated based on the criteria outlined in Table 2. First, the social aspects of the region and the building complex are introduced, followed by a physical analysis of the site. Several physical obstacles to pedestrian flow are identified in this analysis. In addition to the criteria for transforming historical train stations, the case studies presented in section five is also aid in understanding and reshaping historical urban patterns with a food-centered function. Based on the analyses presented in this section and the case studies discussed in the previous section, a food-focused marketplace is proposed as a reuse function for the warehouse of Sirkeci Train Station.

4.1. Social Aspect

The proposal aligns with the objectives of tourism, which is a key component of the economic criterion, the first of the social criteria. Tourists not only seek to view the historical monuments they visit and listen to the stories and legends associated with them, but they also desire to experience these sites firsthand (Giresun, 2017). As visitors engage with these locations, they can appreciate the cultural continuity they represent. Additionally, the current economic landscape of the region, within the urban framework, significantly influences the intended use of existing buildings. Sirkeci is situated in the Eminönü district, often regarded as the heart of Istanbul's tourism. In this context, the proximity to museums, historical sites and restaurants - particularly those that cater to the increasingly popular local food tourism - facilitates the potential transformation of the existing tourism route. The socio-cultural criterion plays a significant role in the

transformation of historical train stations. The concept of socio-cultural sustainability encompasses the preservation and transmission of historical, cultural and architectural heritage to future generations, integrating all elements that constitute the city and its environment. Part of the main building of Sirkeci Train Station serves the Marmaray line and the passenger waiting hall has been transformed into a museum that showcases the history of the train station as an urban memory. In addition to this museum, the old train station itself piques the curiosity of visitors and evokes memories of the building's past functions. Currently, the warehouses of Sirkeci Train Station are largely unused and the surrounding area is disconnected from the urban context, as it is primarily utilized for car parking. By repurposing the warehouses of Sirkeci Train Station, the connection between the memory of the station and the city can be strengthened. Food enthusiasts are also drawn to the region in search of local cuisine. Consequently, a food-focused marketplace is proposed to be included in this food tourism route at the heart of Istanbul. As indicated in the site analysis, the warehouse is located to the right of the railway station. This repurposing will enhance the social and physical value of the immediate surroundings and contribute to the city's heritage, memory and architecture.

4.2. Physical Aspect

The field of study is located in Istanbul's Historical Peninsula, which is renowned for landmarks such as Hagia Sophia and the Blue Mosque. The train station offers easy access to these monuments via inland routes; however, it has poor connectivity along the coastline. The most vibrant district during the daytime requires a more organized public space around the warehouse. From Sirkeci Train Station, one can walk to Gülhane Park, but the narrow sidewalk adjacent to the roadway poses challenges for pedestrians. The goal is to eliminate the disconnection between these two areas and to facilitate pedestrian flow from Eminönü to Sultanahmet along the coastline. By publicly repurposing the warehouse along this route, improved pedestrian access can be achieved. In the design process, the relationship between the warehouse and the sea on the coastal side can be enhanced and the visibility of the warehouse can be improved by removing advertising boards.

In their study, Büyükarıslan and Güney (2013) explored the challenges of re-functionalization within the context of industrial buildings and established criteria for the restoration of these structures for alternative uses. The criteria established by Büyükarıslan and Güney (2013) were applied to the analyzed case studies, including Sirkeci Train Station. These criteria assess architectural, spatial, functional and contextual transformations, as well as structural and economic conditions. The evaluated criteria indicate that all of the examined studies are revitalization projects that have achieved significant success in their post-adaptive reuse functions, contributions to tourism and the social benefits they have provided to the city. These criteria suggest that when renovation projects are planned and executed for the Sirkeci Railway Station warehouse buildings, which will feature a food-focused gastro-kitchen function, they are likely to yield highly successful outcomes. The project meets all of the established criteria and due to its strategic location, will also deliver significant social benefits to the city.

The criteria for physical sustainability encompass location, building structure and architectural concept. The relationship between location and urban morphology as components of physical sustainability is illustrated in Figure 2.

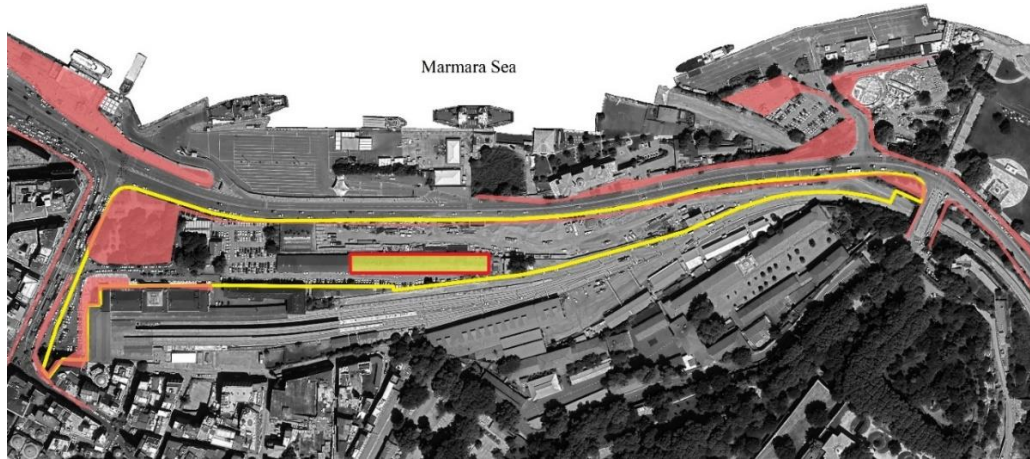


Figure 2. Existing condition of the warehouse and close environment
Source: Retrieved from Google Earth (2023)

The density of the urban pattern in the historical district is evident, particularly where the pedestrian axis along the coastline is congested. Walkability is hindered by the narrow pavements in front of the warehouse and the Sirkeci ferry pier. The food-focused marketplace, proposed as a transformative alternative for the Sirkeci Train Station warehouse, aims to revitalize the Golden Horn-Samatya axis. This revitalization will enhance accessibility and walkability along the Eminönü-Sahilyolu-Gülhane route. The existing condition of the warehouse is depicted in Figure 3.

The old rail tracks in front of the warehouse have been removed, leaving a significant void that has the potential to expand public space between the Sirkeci Train Station and Gülhane Park. The absence of these rail tracks evokes the High Line public park in New York City. Once a 2.33 km long elevated railroad platform of the New York Central Railroad, the High Line has been transformed into a linear park - a green strip that serves as a public space on the west side of Manhattan (Wikipedia 3, n.d.).

State Railways (TCDD) prepared the survey and restoration projects for the building. The project titled “Sirkeci Station Settlement Entrance-Tickets Unit Functional Arrangement” was approved by the Istanbul Cultural and Heritage Conservation Board, Division IV, in 2013. Since the restoration project has already been approved, the building is ready for renovation; however, the restoration plans lack proposals for new functions (Figure 4). Historical drawings of the warehouse from the 20th century are publicly available at the Sirkeci Museum and Figure 4 is adapted from these photographs.

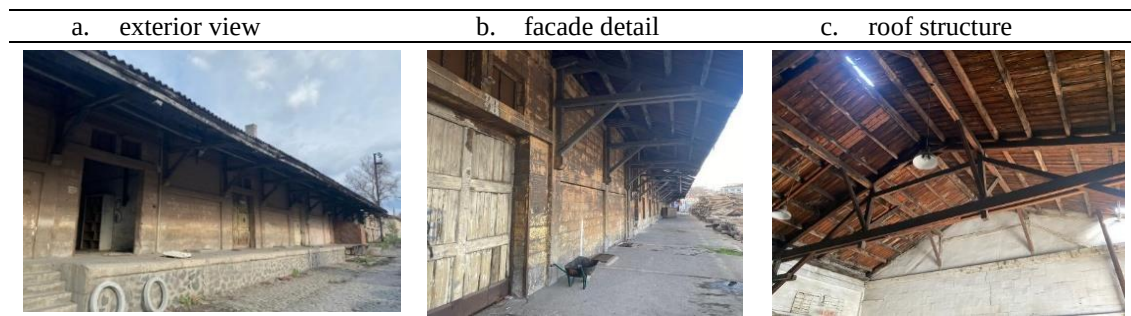


Figure 3. Existing physical condition of the warehouse building (photo credit İlke Ciritci, 2021)

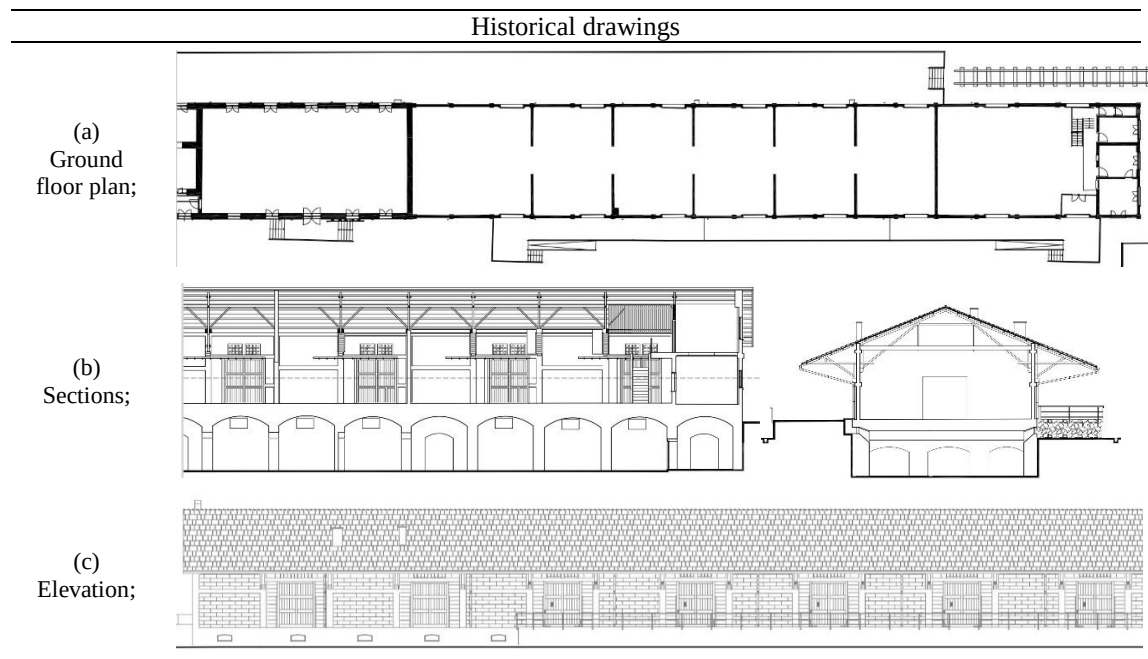


Figure 4. Historical drawings of the warehouse, adapted from photographs taken at the Sirkeci Museum
Source: Photo credit Ciritci (2021)

5. Conclusion

The paper explores various questions related to heritage preservation theory, including the reuse of train stations and the repurposing of food-focused spaces. This study demonstrates how to revitalize an idle historical monument and identifies the methods that should be employed to assign it a new function. The criteria derived from a literature review on conservation and comparable studies worldwide are analyzed and a scientifically grounded proposal for reuse is presented. A common theme in research on the repurposing of historical buildings is the need to ensure both physical and social sustainability. In this context, the function designated as an architectural concept should be one that does not impose structural strain on the building while reinforcing its significance in the city's memory, all while considering the building's inherent potential. Additionally, economic value is another crucial criterion.

Buildings from various continents around the world have been selected as exemplary models in this field, showcasing their social contributions and potential to enhance urban areas. These structures serve as attractions for tourists while simultaneously offering high-quality food and beverage options. The authors conducted observations and collected data regarding the location, function, quality of additions and overall contributions of these buildings to their respective cities. Additionally, the literature review provides inspiration for the transformation of the Sirkeci Train Station warehouse structures proposed in this study. The repurposing of a building situated in the historically significant peninsula of Istanbul will significantly enhance the city's memory, culture and social life.

Considering the evaluation criteria established by the researchers, the Sirkeci Train Station buildings are among the most historically and locationally significant structures in Istanbul, necessitating careful decision-making during the re-functionalization

process. Rather than focusing on immediate concerns such as rental income, it is more appropriate to undertake renovation and re-functionalization efforts in accordance with international standards, ensuring that all necessary analyses are conducted with a forward-looking vision.

Within the framework of these shared values, the proposed reuse function in this article is a food-focused marketplace, which has successful transformation examples worldwide. This function is particularly proposed due to the rapidly growing potential of food tourism in the region examined in this study. The walkability between Eminönü and the Golden Horn has improved significantly, thanks to competitions organized for the Golden Horn and the landscaping initiatives implemented. However, the axis extending to Samatya has yet to be rehabilitated on its own merits. While the seaside walkways are open and offer stunning views, the inland side (facing the warehouse buildings) is obstructed by billboards. Consequently, the physical and visual connection between the inland area and the sea is disrupted. This proposal for the warehouse of the Sirkeci Train Station aims to create a new point of attraction on the Historic Peninsula, one of the most popular tourist destinations. It will enhance interaction between local and international tourists within the city and contribute to urban walkability by increasing mobility along the Eminönü-Samatya axis.

As potential areas for future research, it is important to note that the following topics are relevant to this study:

- An in-depth assessment of the interaction between the train station and the city will be conducted through occupant evaluation and user perception.
- The public spaces in front of the warehouse and Sirkeci Train Station will be redesigned to enhance interaction with the historical district.
- The potential of the existing rail trail, even if the majority of it has been removed, can be re-assessed as was done with the High Line in New York City.
- The warehouse will undergo a structural analysis based on this draft proposal. The re-purposing should not compromise the integrity of the existing building; only necessary reinforcements should be implemented in accordance with international restoration standards.

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