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Industrial Heritage Routes and Accessibility: Assessing the Imperial Shipyard Route in Gdańsk

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ABSTRACT

Industrial heritage represents an important component of cultural heritage, reflecting the technological, social, and economic transformations that have shaped modern societies. Despite this significance, many industrial heritage sites remain difficult to access due to their large scale, fragmented spatial organisation, and the gradual loss of their original functions. Consequently, these areas often remain physically and perceptually disconnected from everyday urban life. In response, industrial heritage routes have emerged as a tool for reconnecting dispersed sites and enabling their interpretation and use within contemporary urban contexts. The Imperial Shipyard Route in Gdańsk offers a valuable case through which these dynamics can be examined. This research draws on a literature review and field observations conducted in 2023, during which the route was experienced and documented in situ. The individual sites along the route were analysed in terms of their cultural significance, accessibility, and spatial position within the broader shipyard landscape. The results indicate that the route improves accessibility by linking fragmented industrial elements and enhancing the spatial legibility of the area. At the same time, physical barriers and ongoing redevelopment continue to limit full spatial continuity. These findings highlight the broader potential of industrial heritage routes to support access to and integration of industrial heritage within evolving urban environments.

1. INTRODUCTION

Industrial heritage can be understood as a layered constellation of places, people, and practices shaped by the long-term impacts of industrialisation [1]. Over the past three centuries, industrialisation has been a central force behind major economic and social change, facilitating the transition from agrarian societies to new forms of production and prosperity [2]. These processes have left enduring traces on urban environments and cultural landscapes, making industrial heritage an important reference point for understanding the formation of modern cities and societies [1, 2].

Beyond its tangible remains, industrial heritage holds considerable social and cultural significance as a record of collective experience and everyday life [1, 3]. It plays a key role in shaping a sense of history and identity, often providing communities with a distinctive character and giving places a recognisable presence. Such values are embedded not only in industrial buildings, machinery, and spatial settings, but also in documents, memories, traditions, and practices [1]. In this way, industrial heritage offers insight into how industry once structured social life and sustained the economic and cultural foundations of many towns and cities [4]. In this broader sense, industrial heritage represents a distinct category of heritage, encompassing the physical and cultural traces of industrial activity that possess historical, technological, social, architectural, or scientific significance [5].

The conservation of industrial heritage is widely recognised as challenging due to its scale and complexity, as such sites often comprise interconnected buildings, infrastructures, and production systems rather than isolated structures, which can limit the effectiveness of conventional preservation approaches [6]. Industrial heritage areas often remain spatially fragmented and difficult to access, particularly in post-industrial cities where former industrial zones are gradually being reintegrated into urban life. While existing literature extensively discusses industrial heritage in relation to conservation, adaptive reuse, and tourism, accessibility is rarely addressed as a planning concern at the scale of routes and spatial networks. Studies on heritage routes tend to emphasise interpretation, identity, and visitor experience, leaving a gap in understanding how routes can actively contribute to improving access within industrial heritage areas. This study explores the potential of industrial heritage routes as a planning tool for improving accessibility within living industrial areas. Using the Imperial Shipyard Route in Gdańsk as a case study, it examines how route-based approaches may contribute to physical continuity, spatial legibility, and everyday access, while also revealing the opportunities and limitations of such routes beyond their conventional framing as heritage or tourism-oriented interventions.

2. INDUSTRIAL HERITAGE ROUTES AND ACCESSIBILITY: A CONCEPTUAL FRAMEWORK

An industrial heritage route integrates the conservation of industrial sites with the concept of cultural routes, framing industrialisation as a shared historical and cultural process through the combined interpretation of tangible elements, such as factories, machinery, and infrastructure, and intangible dimensions including workers' experiences, skills, and local traditions that have shaped regional identities over time [4, 7, 8].

As a prominent initiative within the field of industrial heritage routes, the European Route of Industrial Heritage (ERIH) moves beyond the notion of a linear, physically continuous route and instead operates as a transnational network linking industrial heritage sites through shared themes and narratives [9]. The network is structured around thematic routes developed across Europe, which aim to support learning, interpretation, and tourism related to industrial history. Inclusion within ERIH is based on a set of criteria, requiring sites to demonstrate historical and symbolic significance within the context of European industrial development, alongside tourism potential and accessibility through multiple modes of transport [9, 10]. Earlier experiences such as the German Route Industriekultur, established in 1999, demonstrated how dispersed industrial sites could be organised into a coherent heritage route, later informing the development of ERIH and offering a transferable model [11].

Industrial heritage routes function as organisational and spatial mechanisms that connect former industrial sites into a coherent heritage system, enabling them to be experienced beyond their individual boundaries. By aligning infrastructure, mobility networks, and visitor services, these routes facilitate access to post-industrial areas while structuring visitor movement across extensive and historically complex industrial landscapes [12]. In doing so, industrial heritage routes support the transformation of large-scale post-industrial environments into legible and accessible heritage settings.

3. METHODOLOGY

This study adopts a qualitative case study approach to explore how routes within industrial heritage areas may function as planning tools for accessibility in transforming post-industrial contexts (Figure 1). Rather than assuming the existence of a fully established industrial heritage or cultural route, the methodology is designed to critically examine the extent to which a given route aligns with key principles discussed. The analysis therefore focuses on potential, limitations, and spatial implications, rather than on measuring performance through predefined quantitative indicators.

In this study, accessibility is understood as a multidimensional concept rather than solely as physical entry to heritage sites. It includes four complementary dimensions: (1) physical accessibility, referring to the possibility of moving along the route and reaching heritage elements without physical barriers; (2) spatial legibility, referring to the clarity with which visitors can understand and navigate the spatial organisation of the industrial landscape; (3) interpretive accessibility, referring to the availability of information and interpretive tools that enable visitors to understand the historical and cultural significance of the sites; and (4) everyday accessibility, referring to the extent to which the route is integrated into the surrounding urban environment and usable by both visitors and local communities.

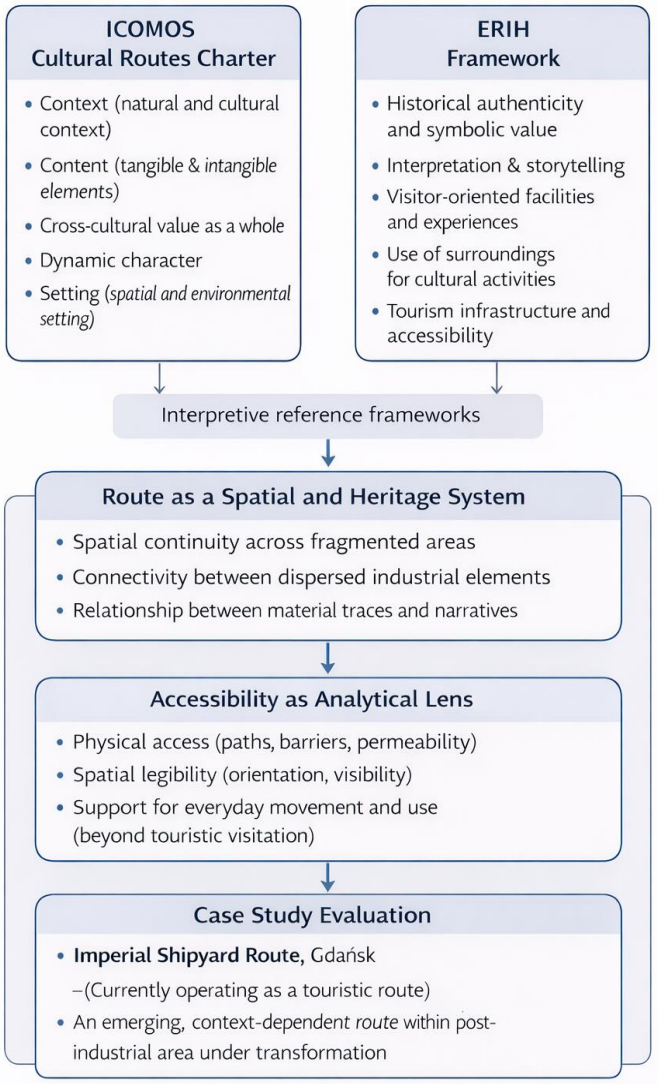

Figure 1. Analytical framework for assessing the Imperial Shipyard Route through accessibility

The Imperial Shipyard Route in Gdańsk is selected as an illustrative case due to the scale of the former shipyard, its layered industrial and socio-cultural character, and its ongoing regeneration process. These characteristics also make the shipyard particularly suitable for examining how accessibility challenges emerge in large-scale post-industrial heritage landscapes undergoing urban transformation. These conditions provide a suitable context for examining how a route, currently functioning primarily as a touristic itinerary, may be interpreted and assessed within an industrial heritage setting. The case is not presented as a completed or exemplary model, but as a context-dependent configuration through which broader questions regarding routes, heritage, and accessibility can be explored.

The analytical framework draws on the principles outlined in the International Council on Monuments and Sites (ICOMOS) Cultural Routes Charter and the European Route of Industrial Heritage (ERIH), which are used as interpretive reference points rather than prescriptive standards [7, 13]. Accessibility is positioned as the central analytical lens of the study and is understood in a broad sense, encompassing

physical access, spatial continuity, legibility, and the capacity of the route to support everyday movement and use beyond occasional visitation. This approach allows the route to be examined not merely as a touristic construct, but as a potential cultural route embedded within a complex industrial landscape.

The evaluation focuses on how the Imperial Shipyard Route connects dispersed industrial elements, facilitates movement across fragmented spaces, and contributes to the readability of the industrial environment for different user groups. In doing so, the route is assessed as an emerging and evolving planning tool shaped by spatial fragmentation, governance arrangements, and ongoing redevelopment processes. This methodological approach enables a critical discussion of both the opportunities and constraints associated with route-based strategies, without positioning the case as a fixed or normative solution. Field observations conducted in 2023 formed an important part of the analysis and supported the qualitative evaluation of the route.

To reduce subjectivity and provide a clearer analytical structure, the qualitative observations were supported by a simple ordinal scoring rubric applied to key accessibility dimensions. A three-point scale (0–2) was used to evaluate pedestrian continuity, the presence of physical barriers, spatial legibility, and interpretive accessibility. Within this framework, a score of "0" indicates limited or absent accessibility; "1" indicates partial accessibility; and "2" indicates clearly accessible conditions**.** This scoring approach complements the qualitative observations derived from fieldwork and contributes to a more transparent evaluation of accessibility conditions along the route.

4. CASE STUDY: THE IMPERIAL SHIPYARD ROUTE IN GDAŃSK

4.1 Historical and spatial background of the Imperial Shipyard

The origins of the Imperial Shipyard in Gdańsk date back to the mid-nineteenth century, when the modern shipbuilding industry began to develop in this location [14]. Initially established as the Royal Shipyard and later renamed the Imperial Shipyard following the Franco–Prussian War, the site expanded rapidly in response to industrialisation and technological advances in ship production [14]. Over time, the shipyard evolved into a large and complex industrial area composed of ship halls, workshops, cranes, transport infrastructure, and extensive open yards, organised according to the functional and logistical requirements of industrial production [14, 15]. These elements formed an interconnected spatial system rather than a collection of isolated buildings, shaping both the physical structure of the city and its industrial identity [15].

From the late twentieth century onwards, the Imperial Shipyard entered a period of gradual decline. Large-scale shipbuilding activities were reduced and ultimately ceased, culminating in the bankruptcy of the shipyard in 1997 [14]. This marked a major turning point, as industrial functions were abandoned and ownership structures became increasingly fragmented. Following the collapse of production, extensive parts of the former shipyard were sold to private investors, while others remained vacant or underutilised [16]. The loss of industrial activity was accompanied by a weakening of spatial coherence and public accessibility, as previously integrated production spaces became disconnected and partially closed off from the surrounding urban fabric [16].

Today, the Imperial Shipyard can be characterised as a post-industrial heritage area under transformation. The site retains a high concentration of historically and symbolically significant industrial structures, including places associated with the Solidarity movement, while simultaneously accommodating new development initiatives, temporary uses, and cultural interventions [14, 16]. This coexistence of preserved industrial fabric, vacant land, and new construction has resulted in a spatially heterogeneous and fragmented environment [14]. Despite its central location between the historic city centre and emerging waterfront districts, physical and perceptual barriers, such as restricted access areas and discontinuous pedestrian networks, continue to limit everyday access and spatial continuity [16]. Consequently, the former shipyard represents a layered industrial landscape whose scale and complexity underpin its heritage value while also posing significant challenges for its integration into contemporary urban life [15, 17].

4.2 Structure and characteristics of the Imperial Shipyard Route

The Imperial Shipyard Route was introduced in 2018 as a walking route across the former Imperial Shipyard in Gdańsk, to make the industrial heritage of the site accessible to the public [18]. The route provides a structured path through the shipyard, allowing visitors to move between historically significant buildings and understand how the site functioned as an industrial production environment (Figure 2).

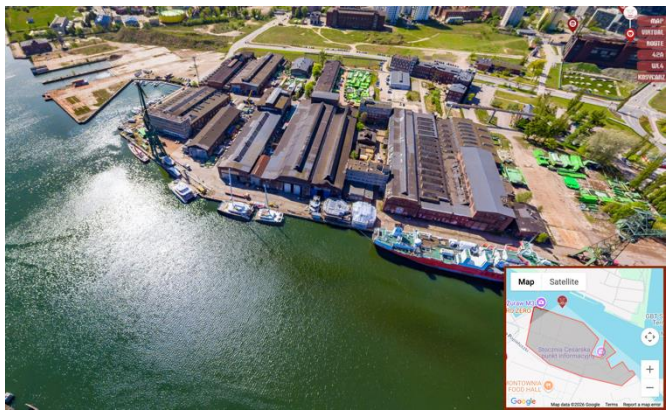

Figure 2. Aerial view of the Imperial Shipyard
Source: Stocznia Cesarska virtual map [19]

The route consists of thirteen main stops, each corresponding to key structures associated with shipbuilding activities, including workshops, production facilities, administrative buildings, and waterfront infrastructure [19]. The selection and arrangement of these stops reflect the original spatial organisation of the shipyard, where different stages of ship production were distributed across the site in relation to the dock basins and waterfront. The route is designed as a pedestrian walking route and is supported by interpretive panels installed at each stop, which provide historical and functional information about the individual structures [18]. These panels explain the role of each building within the shipyard's operational system and help visitors understand the industrial processes that took place there. During field observations, the route could be followed

continuously on foot, allowing direct engagement with the preserved industrial environment.

The shipyard area in which the route is located has been owned and managed by Stocznia Cesarska Development since 2017, as part of an ongoing revitalisation process that combines heritage preservation with new urban uses [20]. Within this context, the route serves as a tool for presenting the industrial history of the site while supporting its gradual reintegration into the contemporary urban structure. In addition to the physical route, an interactive virtual map provides further access to spatial and historical information, allowing users to locate individual stops and understand their distribution within the shipyard area [21]. Together, these elements establish the Imperial Shipyard Route as a structured system through which the industrial heritage of the site can be accessed, understood, and experienced.

Table 1. Components of the Imperial Shipyard Route and their cultural significance and accessibility characteristics

No.	Site Name	Original Function	Current Function/ Condition	Cultural Significance	Accessibility Characteristics	Scale*	Spatial Role
1	OHS Building 	Occupational health and safety administration	Preserved building within regenerated shipyard	Historical and social significance related to worker welfare and shipyard operation	Directly reachable from the pedestrian route without physical barriers and clearly identifiable as an entry and orientation point within the shipyard area, contributing to spatial legibility	2	Entry and orientation point
2	Imperial Shipyard 	Core shipbuilding and industrial production complex	Revitalized mixed-use district with heritage and urban functions	Industrial, historical, and technological significance as primary ship production site	Publicly accessible area integrated into pedestrian circulation routes and the surrounding urban environment, supporting both physical accessibility and everyday accessibility	2	Central industrial heritage core
3	Dyrekcja 	Shipyard administrative headquarters	Office building and public square	Historical and architectural significance reflecting management structure	Located at a publicly accessible square and connected to surrounding pedestrian routes, making the building easily identifiable within the spatial organisation of the shipyard landscape	2	Administrative and spatial reference node
4	Fire Station 	Shipyard fire brigade and emergency services	Planned adaptive reuse for public and commercial functions	Industrial and technological significance related to operational safety	Accessible building within the pedestrian circulation network of the redevelopment area and visually identifiable as part of the industrial heritage route	2	Supporting infrastructure node
5	“S” Departments 	Engine construction and ship component production	Revitalized district with new cultural and urban uses	Industrial and technological significance representing ship production processes	Reachable through pedestrian pathways within the revitalised district and visually recognisable as a key production area, contributing to spatial legibility of the industrial landscape	2	Major industrial production node

6	Locksmith 	Metalworking and repair workshop	Partially preserved industrial structure	Industrial and technological significance reflecting repair and maintenance functions	Direct physical access is limited due to restricted areas; however, the structure remains visible from the route, supporting spatial legibility within the industrial setting.	1	Secondary industrial node
7	Dock Basin 	Ship assembly and launching basin	Public waterfront and marina space	Industrial, technological, and landscape significance related to shipbuilding processes	Open waterfront area accessible through pedestrian routes and providing clear views of shipbuilding structures, supporting both physical accessibility and spatial legibility.	2	Major spatial landmark and destination
8	Milch Peter 	Shipyard operational wharf and industrial area	Cultural and artistic use including studios and creative spaces	Industrial, cultural, and adaptive reuse significance reflecting transformation	Public cultural space integrated into pedestrian circulation and used for creative activities, supporting everyday accessibility within the regenerated shipyard area	2	Cultural and adaptive reuse node
9	Forge 	Metal forging facility	Planned cultural and heritage use	Industrial and technological significance representing heavy industrial production	While the site can be identified through interpretive information along the route, the forge itself is not clearly visible from the main path and requires entering the abandoned building, which limits both physical accessibility and spatial legibility.	1	Industrial production reference node
10	Foundry 	Metal casting facility	Planned adaptive reuse for offices and creative industries	Industrial and technological significance representing manufacturing processes	Former metal casting facility visible along the route; however, direct access is limited and the structure currently plays a restricted role in everyday use and visitor interaction	1	Key industrial production node
11	Shipyard and the people 	Site associated with workers' social and cultural life	Interpretive heritage site	Social, historical, and symbolic significance related to shipyard community	Interpretive stop presenting the social history of shipyard workers through visual panels; while physically reachable along the route, its role in spatial orientation and everyday use remains limited	1	Social interpretation node

12	August 1980 	Site associated with Solidarity movement and historical events	Preserved commemorative heritage site	Historical, political, and symbolic significance linked to labour movement	Commemorative interpretive stop related to the Solidarity movement, accessible along the route but functioning primarily as a symbolic reference rather than a spatial node	1	Symbolic and historical landmark
13	Imperial Shipyard Manifesto 	Site representing shipyard identity and political history	Interpretive heritage location	Historical and symbolic significance representing shipyard legacy	Symbolic interpretive element visible along the route, contributing to the understanding of the shipyard's identity; however, its role in spatial orientation and everyday use remains limited	1	Interpretive and symbolic node
A	Guardian 	Industrial sculpture	Preserved industrial artefact	Artistic, cultural, and symbolic significance reflecting industrial identity	Industrial sculpture located in an open and publicly accessible space, functioning as a visual landmark that supports spatial orientation along the route	2	Orientation and visual reference point
B	M3 Crane 	Shipyard crane and industrial machinery	Preserved industrial structure	Industrial, technological, and visual significance as iconic shipyard element	Industrial landmark visible from the route but with limited direct physical access within the shipyard area	1	Major spatial reference element
C	Imperial Marina 	Shipyard waterfront infrastructure	Redeveloped marina and public waterfront	Industrial, landscape, and urban regeneration significance	Public waterfront area integrated into pedestrian circulation routes and accessible for everyday recreational use	2	Waterfront connection node
D	WL4 Art Space 	Former industrial building	Cultural and exhibition venue	Cultural and adaptive reuse significance reflecting transformation of industrial heritage	Public cultural venue accessible through pedestrian pathways and hosting exhibitions and cultural activities that support everyday accessibility and interpretive engagement	2	Cultural and interpretive node

Notes: This table is based on official interpretive panels, relevant literature, and field observations conducted by the author in 2023. During the field visit, the author personally experienced the route and documented the sites through original photographs. The cultural significance, accessibility characteristics, and spatial roles were assessed through the combined interpretation of literature and in situ observations. * Scale indicates the level of accessibility according to the ordinal rubric defined in the methodology section: 0 = limited or absent accessibility; 1 = partially accessible; 2 = clearly accessible. The score reflects observed conditions related to pedestrian continuity, physical barriers, spatial legibility, and interpretive accessibility.

The data presented in Table 1 are derived from official interpretive panels along the Imperial Shipyard Route and supplemented by field observations conducted in 2023. Based on this material, each site was analysed in terms of its cultural significance, accessibility characteristics, and spatial role within the route. This analytical classification supports the evaluation of the route as a spatial and interpretive framework influencing accessibility to industrial heritage.

4.3 Evaluating the Imperial Shipyard Route as a cultural route

The idea of cultural routes emerged in the 1960s with the notion of rediscovering cultural heritage through travel and was further developed through European initiatives in the following decades. The concept gained greater recognition after the adoption of "cultural landscapes" as a heritage category by the United Nations Educational, Scientific and Cultural Organisation (UNESCO) World Heritage Committee in 1992, and the recognition of heritage routes as a category eligible for inscription on the UNESCO World Heritage List in 2005. These developments expanded heritage approaches beyond monument-based perspectives by incorporating dynamic systems, cultural exchanges, and intangible elements that give meaning to heritage places [22, 23].

Cultural routes, therefore have the potential to reflect the identity of accumulated cultural heritage while enabling routes to be explored not only physically but through their wider cultural, social, and historical components. In this sense, the various values of a region should be addressed through an integrated approach, where they function as complementary and mutually reinforcing elements [8]. The defining characteristics of cultural routes are described in the ICOMOS Charter on Cultural Routes as including the natural and cultural context, tangible and intangible elements supporting the route, cross-cultural significance, dynamic character, and environmental context [7]. Cultural routes are also increasingly associated with cultural tourism, which has evolved from simply visiting historic sites to more experience-based forms of engagement [24].

In the context of industrial heritage, one of the most prominent route systems is the European Route of Industrial Heritage (ERIH). Established in 1999 and later developed as a European initiative, ERIH connects industrial heritage sites across Europe through thematic routes in order to support their conservation and increase public awareness [9]. Through this network, industrial sites are interpreted not as isolated monuments but as interconnected elements of a broader industrial landscape and historical process.

Table 2. Evaluation of the Imperial Shipyard Route according to ICOMOS Cultural Routes Charter and ERIH framework

Framework	Selected Provision from the Relevant Framework	Evaluation in the Context of the Imperial Shipyard Route
ICOMOS Cultural Routes Charter	"Cultural Routes occur in a natural and/or cultural context upon which they exert an influence…"	The route is embedded in the historic waterfront of the shipyard. The industrial halls, cranes, and dock basins remain in their original maritime setting, and the walking sequence makes this relationship visible and readable.
ICOMOS Cultural Routes Charter	"A Cultural Route must necessarily be supported by tangible elements that bear witness to its cultural heritage… and intangible elements serve to give sense and meaning…"	The route is built around preserved production halls and dock infrastructure, which provide direct physical evidence of shipbuilding activity. At the same time, references to workers' lives, labour organisation, and the Solidarity movement and related labour struggles introduce social and political meanings that extend beyond the material fabric of the site.
ICOMOS Cultural Routes Charter	"The concept of Cultural Route implies a value as a whole which is greater than the sum of its parts…"	The route links separate industrial buildings into a continuous experience. Seen together, these elements reveal how the shipyard operated as a unified industrial system rather than as isolated structures.
ICOMOS Cultural Routes Charter	"Cultural Routes include a dynamic factor that acts as a conductor… through which reciprocal cultural influences have flowed."	The Imperial Shipyard was more than a production site. It was a place where shipbuilding knowledge circulated, workers moved across networks, and political change emerged. By including both industrial structures and locations linked to the Solidarity movement, the route reflects this interaction between technology, labour, and social transformation.
ICOMOS Cultural Routes Charter	"The Cultural Route is closely linked to its setting and forms an inseparable part of it."	The route follows the original spatial organisation of the shipyard along the waterfront. Its meaning depends on this setting, and it cannot be separated from the industrial landscape in which it is located.
ERIH	"The site should be a historically authentic location with symbolic value and significance for Europe's industrial history."	The shipyard retains a high degree of material authenticity, and its association with industrial production and the Solidarity movement gives it clear symbolic value. However, ongoing redevelopment and adaptive reuse projects introduce new architectural layers that partially alter the original industrial character.
ERIH	"The site recounts its history through imaginative interpretation and exhibitions."	Interpretive panels provide clear historical explanations, yet the presentation remains largely text-based. Opportunities for more interactive or immersive interpretation appear limited, particularly in relation to the social history of the workforce.
ERIH	"The site offers up-to-date visitor facilities such as guided tours, demonstrations, and multimedia installations."	Basic visitor information is available on site, and the route can be followed independently. However, permanent visitor-oriented facilities such as dedicated interpretation centres or structured guided programmes are not consistently visible across the entire route.
ERIH	"The site uses its surroundings for exhibitions and cultural events."	The broader shipyard area hosts cultural and commercial activities, suggesting an active reuse of the industrial environment.
ERIH	"The site fulfils visitor expectations through adequate tourism infrastructure and accessibility."	The route is accessible on foot and connected to the urban transport network. At the same time, certain areas remain under redevelopment, and continuity may be affected by construction phases or restricted access zones.

Within this framework, the Imperial Shipyard Route can be examined as a cultural route that integrates industrial structures, historical narratives, and social meanings within a unified spatial system. The following table evaluates the route

according to the principles of the ICOMOS Cultural Routes Charter and the ERIH framework. The route is evaluated according to the principles of the ICOMOS Cultural Routes Charter and the ERIH framework, as presented in Table 2.

4.4 Evaluating the Imperial Shipyard Route as a tool for accessibility

In heritage studies, access to cultural heritage is increasingly associated with the broader right to participate in cultural life [25]. Access therefore extends beyond physical entry and includes opportunities to learn, experience and engage with heritage places [26]. From a spatial perspective, accessibility can be understood as the opportunity for individuals or groups to participate in activities at a specific location [27]. In the case of industrial heritage, this dimension becomes especially significant, as former industrial sites often undergo complex transformation processes when adapting to new cultural and social uses [26]. Within this framework, successful heritage revitalisation projects are generally expected to be visitor-friendly and physically accessible while responding to the needs of both tourists and local communities [28]. Revitalised industrial heritage sites may also reinforce local identity by preserving and presenting the material traces of industrial history, thereby contributing to a renewed sense of belonging [28]. In this study, accessibility is examined through four complementary dimensions: physical accessibility, spatial legibility, interpretive accessibility, and everyday accessibility, as outlined in the methodology section.

Industrial heritage routes can be understood not only as interpretive tools, but also as spatial mechanisms that help reorganise fragmented industrial landscapes into more accessible and legible heritage environments [9, 12]. Rather than presenting industrial structures as isolated monuments, cultural routes connect individual heritage elements within a wider spatial network, allowing them to gain additional meaning through their relationships with one another [29]. In urban contexts, such routes may also link dispersed heritage sites and create structured corridors that assist visitors in navigating and understanding spatial relationships between cultural assets [30]. These characteristics are particularly relevant to the Imperial Shipyard route, where the former production landscape has been reorganised into a sequence of publicly accessible heritage spaces.

At the Imperial Shipyard, the route opens areas that were once restricted and enables movement across the former production zone. The walking sequence and on-site panels provide orientation and guide visitors through the shipyard's spatial structure, making the organisation of the industrial landscape more readable. Pedestrian mobility plays a crucial role in shaping visitors' spatial perception, comfort and access to supporting services [31]. At the same time, continuity is not always consistent. Ongoing redevelopment and construction occasionally interrupt the route or blur transitions between stops. These observations are also reflected in the ordinal accessibility scores presented in Table 1, which illustrate the varying levels of accessibility among the different sites along the route.

The organisation of the route strengthens spatial legibility: production halls, dock basins and cranes remain visible within their original waterfront setting, allowing visitors to grasp the industrial logic of the site. However, accessibility should not be understood solely in terms of distance. The quality of the surrounding environment and the spatial conditions through which visitors move also influence walkability and overall experience [31]. In certain sections, new architectural interventions and the scale of the area may weaken historical coherence and affect the clarity of interpretation.

Interpretive content connects the material remains of shipbuilding with labour history and the Solidarity movement, supporting cognitive access to the site's social and political dimensions. Access to cultural heritage has also been described as the ability to know, understand, visit and benefit from heritage resources without physical or social barriers [25]. Nevertheless, the reliance on predominantly text-based panels limits the depth of engagement when compared with more interactive or immersive interpretive approaches. The route increases public access to the former shipyard and contributes to enabling individuals to engage with and benefit from cultural heritage as part of their participation in cultural life [25]. At the same time, its accessibility remains shaped by redevelopment dynamics and by the ongoing balance between preservation and contemporary use. In this respect, the Imperial Shipyard route demonstrates both the potential and the limitations of industrial heritage routes as spatial tools for enhancing accessibility within complex post-industrial landscapes.

5. DISCUSSION

Industrial heritage routes can be interpreted through the broader framework of cultural routes, which, according to the ICOMOS Cultural Routes Charter, encompass both "tangible heritage assets related to the functionality of a historic route (…) and intangible heritage elements that testify to processes of exchange and dialogue along its path." This perspective encourages the interpretation of heritage landscapes as interconnected systems rather than isolated monuments. In industrial contexts, such an approach is particularly relevant because the significance of industrial heritage often lies not only in individual structures but also in the relationships between production spaces, infrastructures, and historical processes.

The Gdańsk Shipyard represents a heritage landscape where these relationships are especially visible. As noted by Lorens and Bugalski (2021), the shipyard is associated not only with shipbuilding activities but also with political memory, social struggle, and collective identity [14]. The site gained global significance as the birthplace of the Solidarity movement, which played a central role in the political transformation of Eastern Europe. Consequently, the heritage of the shipyard cannot be understood solely through its industrial architecture; it also includes symbolic places, workers' experiences, and narratives related to labour movements and social change. Interpreting such a complex environment therefore requires an analytical framework capable of accommodating multiple layers of meaning simultaneously. Within this context, the cultural route approach offers a useful perspective for interpreting the Imperial Shipyard area. Cultural routes allow dispersed heritage elements to be understood as parts of a broader narrative system, linking buildings, infrastructures, and symbolic sites within a shared spatial framework. Although the Imperial Shipyard Route currently functions primarily as a touristic walking itinerary, its spatial organisation and thematic content suggest the potential for a more comprehensive cultural route that reflects the multi-layered heritage of the shipyard landscape.

This perspective is particularly relevant for large-scale industrial heritage areas. As emphasised in the ICOMOS Cultural Routes Charter, "the concept of Cultural Route implies a value as a whole which is greater than the sum of its parts and gives the Route its meaning" [7]. Industrial heritage landscapes rarely function as collections of isolated monuments; rather, their significance emerges from the technological, spatial, and social relationships between different components of industrial production. In such contexts, route-based approaches can help reconnect fragmented heritage elements and reveal the broader systems that once structured industrial activity.

The Gdańsk Shipyard illustrates both the opportunities and challenges associated with this approach. Previous research has noted that official regeneration initiatives often focused on selected landmark structures while paying less attention to the broader industrial system of the shipyard [16, 17]. Parts of the industrial landscape risk being interpreted as isolated heritage objects rather than as components of a historically interconnected production environment.

Figure 3. "Castaways" by Czesław Podleśny
Source: Author's photograph, 2023

Figure 4. "It's complicated" by STIK
Source: Author's photograph, 2023

Alternative forms of heritage interpretation have emerged within the shipyard through cultural and artistic initiatives. Artists' collectives operating in the area have organised exhibitions, performances, installations, and public events that reinterpret the industrial environment and bring new attention to its historical meanings [16]. These practices illustrate how industrial heritage landscapes can be activated through cultural engagement even when formal heritage frameworks remain limited. Field observations conducted during this study highlight several examples of such practices. The artwork "Castaways" by Czesław Podleśny (Figure 3) reflects the maritime identity of the shipyard and symbolically engages with the transformation of the industrial waterfront. Similarly, the mural "It's Complicated" by the artist STIK (Figure 4) introduces contemporary artistic expression into the former industrial environment, visually connecting present-day cultural activity with the historical narratives associated with labour and solidarity. These interventions demonstrate that industrial heritage landscapes are not interpreted solely through preserved buildings but also through cultural practices that reinterpret industrial space. Artistic initiatives can therefore complement heritage routes by expanding how visitors engage with the industrial environment.

The presence of major heritage institutions in the surrounding area further reinforces this interpretive framework. The European Solidarity Centre (Figure 5), located adjacent to the shipyard, functions as a museum and educational institution dedicated to the history of the Solidarity movement and democratic transformation in Europe. Its proximity to the Imperial Shipyard Route strengthens the connection between industrial heritage and political memory, linking the spatial experience of the former shipyard with broader historical narratives. Taken together, these observations suggest that the Imperial Shipyard Route already performs several functions typically associated with cultural routes, even though it has not yet been formally recognised as such. The route connects industrial structures, symbolic sites, artistic interventions, and historical narratives within a shared spatial framework. In doing so, it contributes to the interpretation of the shipyard not merely as a collection of industrial buildings but as a complex cultural landscape shaped by technology, labour, and social change.

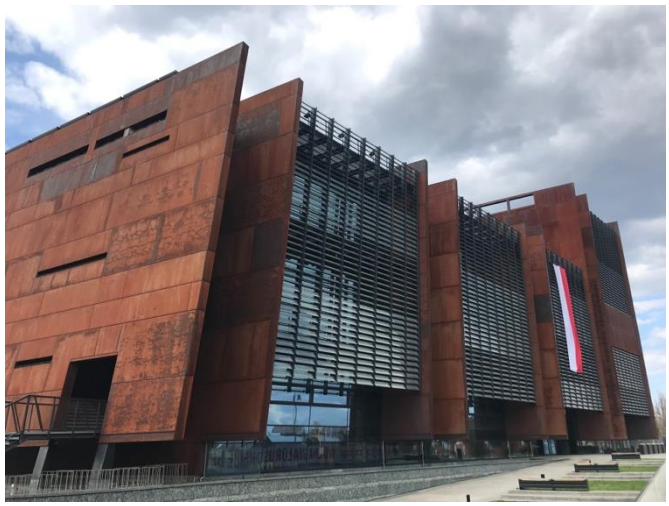

Figure 5. The solidarity museum
Source: Author's photograph, 2023

However, the case study also reveals certain limitations. Spatial fragmentation, ongoing redevelopment processes, and varying levels of accessibility continue to affect how effectively the route can operate as a coherent heritage system. While the route improves spatial legibility and facilitates access across parts of the shipyard landscape, its long-term effectiveness will depend on how future urban development strategies integrate heritage interpretation, public accessibility, and cultural programming. In this sense, the Imperial Shipyard Route illustrates both the opportunities and the constraints associated with applying cultural route principles to large post-industrial landscapes. Route-based approaches can help reconnect dispersed heritage elements and enhance the

interpretability of industrial environments, yet their success ultimately depends on broader planning frameworks capable of balancing heritage conservation, urban regeneration, and public accessibility.

6. CONCLUSIONS

This study examined the Imperial Shipyard Route in Gdańsk in order to explore how route-based approaches may contribute to accessibility within large post-industrial heritage areas. The analysis shows that the route plays an important role in making parts of the former shipyard publicly accessible and in connecting dispersed industrial structures within a coherent spatial sequence. By linking production buildings, dock basins, commemorative sites, and cultural spaces, the route helps visitors navigate the complex industrial landscape and better understand the historical organisation of the shipyard.

At the same time, the case study reveals that accessibility within the shipyard remains uneven. Ongoing redevelopment processes, fragmented property structures, and temporary construction zones occasionally interrupt the continuity of the route and limit full spatial integration with the surrounding city. As a result, the route currently functions as a partial framework for accessing the industrial heritage of the area rather than a fully continuous heritage system. Despite these limitations, the Imperial Shipyard Route illustrates how industrial heritage routes can contribute to reconnecting former production landscapes with contemporary urban life. When combined with heritage interpretation, cultural activities, and broader urban regeneration strategies, such routes have the potential to improve both the visibility and accessibility of industrial heritage in post-industrial cities. Future research may further investigate how route-based approaches can be integrated into urban planning and heritage management practices in order to strengthen long-term accessibility and public engagement in large industrial heritage landscapes.

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