Abstract
There has been an increasing level of recognition of the interaction between cultural mega-events and built heritage in recent years. While research has broadly identified the need to align strategies and visions, as well as involve heritage actors and local communities, there has not been a systematic investigation of the position of industrial heritage within this tableau. This paper examines in depth the European Capital of Culture (ECoC) programme, as it is one of the longest standing Capital of Culture programmes in the world and has a significant record of investment and urban transformation. In this paper, we survey and categorise the inclusion of industrial heritage within the ECoC programme in 36 host cities and regions spread across Europe. This research provides the most comprehensive understanding to date of the specific forms of interaction between industrial heritage and ECoCs to better understand the kinds of relationships that have taken place. We then explore in detail the projects and decisions made in the cases of the 2023 Elefsina, 2017 Pafos and 2008 Liverpool ECoCs.

Keywords Cultural mega-events, Industrial heritage, European Capital of Culture, Adaptive reuse

1 Introduction: Cultural mega-events and cultural heritage
There has been an increasing level of recognition of the interaction between mega-events and built heritage in recent years. Despite the perceived distance between the fields of study, Jones and Ponzini (2018) found that there is a high incidence of research on heritage and mega-events in terms of their particular forms of governance and intended positive secondary effects of economic growth, tourism and broader societal ramifications. This research developed a framework for further exploring the links and interactions between heritage sites and mega-events. The importance of this area of research has grown in recent years as cities have begun to reject traditional approaches to hosting mega-events, such as the Olympics, which in the past mainly required new infrastructure and venues. Instead, the reuse of existing urban spaces has become increasingly common, as seen in the 2022 Beijing Olympic Games; such reuse is also a key component of the proposals for the 2024 Paris and 2026 Milan-Cortina Olympic Games. Looking beyond sport mega-events, Jones (2020) demonstrated that cultural mega-events, such as the European Capital of Culture (ECoC) programme, have long implemented such strategies and have had significant impacts on their host cities, generating potential synergy or friction with urban heritage areas. Although often smaller in scale and expense than events such as the Expo, the Olympics and the World Cup, these events can still have an equally important impact on the development of their local contexts and heritage.

From 2018 to 2021, the Heritage Opportunities/Threats within Mega-events in Europe (HOMEE) research project specifically explored this intersection of mega-event planning and heritage policy/management (Ponzini et al. 2020). This research project primarily focused on cultural mega-events such as the Expo, the ECoC programme...
and the UK City of Culture programme and uncovered a range of emerging issues in six case studies carried out across Europe. This research ultimately resulted in the Charter for Mega-events in Heritage-rich Cities (Ponzini and Jones 2021), which serves as the first set of guidelines and recommendations for aligning the planning of events with wider strategies and visions. However, this work adopted a broad perspective in its investigation of cultural heritage and did not necessarily distinguish or differentiate between various kinds of tangible and, where relevant, intangible heritage. While the existing research has clearly established the correspondence between cultural mega-events and cultural heritage more widely, there is now a need for more detailed and precise investigations into these issues. The role of industrial heritage within mega-events is a critical area that has been under-explored until recently, although some prominent examples are well known. When Turin hosted the 2006 Winter Olympics, Dora Park was created in conjunction with the Olympic Village, with the notable retention of former industrial features that have since become the defining elements of this new public space in the city (Bravi 2006). During the 2010 Essen for the Ruhr ECoC, the UNESCO-listed Zollverein Coal Mine Industrial Complex in Essen served as one of the key venues for events and activities that had been restored and reopened during the preceding decade (Trettin, Neumann, and Zakrzewski 2011).

1.1 Critical views of the adaptive reuse of industrial heritage

Although individual examples such as Turin and Essen, among others, have been recognised, comprehensive knowledge and an understanding of the true scale and involvement of industrial heritage within mega-events are lacking. The degree to which industrial heritage is being systematically either overlooked or instead restored, revitalised and reused through programmes such as the ECoC can provide critical insights. For example, does the ECoC programme contribute to only the temporary activation of industrial heritage during the event, or do we observe the long-term reactivation and reappreciation of its heritage value? These findings can significantly contribute to broader discussions of the existing state of the art. The recognition, and particularly the adaptive reuse, of industrial heritage has become increasingly studied and debated in recent years, as shown by Zhang et al. (2020). With the recent recognition and protection of industrial heritage, the concept has become nearly synonymous with adaptive reuse, in part as a way to add value to these sites capable of generating economic outputs and promoting local development (Alavi, Sobouti, and Shahbazi 2022). These tactics often set industrial heritage apart from traditional approaches to recognising and protecting built heritage that tend to prioritise the memorialisation or monumentalisation of heritage. Adaptive reuse is framed as especially promising for industrial heritage because it can help to overcome perceptions as being less valuable or important than other kinds of cultural heritage (Bottero, D’Alpaos, and Oppio 2019). It is hoped that finding new uses can help to retain their symbolic value while inserting them into local circular economies. Community engagement is often framed as a key component of these processes to guarantee their successful integration and realignment with urban development or tourism goals (Della Lucia and Pashkevich 2023; Firth 2011).

Beyond these value- and economic-based explanations, Kisiel (2020) proposed several important and interesting hypotheses for this close connection between industrial heritage and adaptive reuse. From his point of view, although many industrial sites are technically ‘preserved,’ they are ultimately far removed from their original context and meaning in a way that would not be permissible when dealing with other kinds of cultural heritage sites. He suggests that this may be in part due to industrial heritage belonging to different social and political classes than those of elite people who have long championed other forms of cultural heritage. This friction also derives from the perception that the modern conservation movement in part originated from the fight against modernisation and industrialisation (Oevermann and Mieg 2015). The overall approach to handling industrial heritage aligns much more with the commodification and commercialisation of these spaces than with other kinds of cultural heritage. Industrial heritage has long been underappreciated and underrecognised within the European context through schemes such as the European Heritage Label and European Heritage Award (Kisiel 2020).

Further exploration of the literature reveals a tendency to frame and discuss industrial heritage using negative connotations. Terms such as ‘obsolete’ have become attached to industrial heritage as a way of justifying their commercialisation and economisation (Della Lucia and Pashkevich 2023). These tendencies are not limited to only the European context but can also be observed across Asia (Cho and Shin 2014; Chow et al. 2017). While historic palaces or castles no longer retain their traditional use in our contemporary political and economic systems, they are not typically described with the same terminology and are instead referred to as being ‘in need of repair’ or ‘in a state of disuse’. The language used in relation to industrial heritage reinforces the need to convert these spaces to productive spaces before focusing on their conservation or preservation first and foremost. While the adaptive reuse of industrial heritage sites has
many well-documented successful examples, it does not come without risk. Firth (2011) found that the adaptive reuse of an industrial heritage site in Sydney, Australia, succeeded in generating a new tourist destination, but only 10% of the visitors surveyed understood that the site had historical significance and had been regenerated. While the reuse of industrial structures can succeed in regenerating them, it can also clearly jeopardise their unique value and heritage by prioritising their new functionality over the history of the site. A recent review of the literature confirmed an embedded focus on reuse and reconstruction as one of the main tenets of industrial heritage (Han and Zhang 2022). There has been little questioning as to whether such widespread approaches are in fact responsible for overshadowing or even erasing ‘industrial culture’ and the wider intangible aspects attached to physically built elements (Harfst, Wust, and Nadler 2018).

Within these processes, Lusiani and Panozzo (2016) framed cultural activities as being functionally deterministic by treating industrial heritage as empty containers to be filled with predefined uses to achieve certain goals, such as attracting tourism, regenerating an urban area, creating jobs, etc. These goals may not necessarily refer to or promote the values and meanings associated with the industrial heritage site being used. Of course, one of the main arguments in support of the adaptive reuse of industrial heritage is the implied sustainability of activating existing structures and spaces rather than constructing new structures. In Europe, the idea of culture as a potential force of urban regeneration has been strongly promoted over the last three decades and has played a key role in transitioning out of postindustrial cities to the development of service-oriented economies (Bianchini and Parkinson 1993). Several cities have also actively used their industrial heritage as a key part of their bid to or promotion of hosting events such as the ECoC, either as an element that they have already begun to valorise or to highlight their intention to use the occasion of the event to initiate these processes (Trifa 2018). This review of the existing state of the art highlights the complex nature of industrial heritage and diverse reflections on the appropriate way to protect and potentially reactivate such heritage. While we do not posit a dichotomy between the restoration and adaptive reuse of industrial heritage, we take note of these challenges and use them to explore and better understand the current contribution of cultural mega-events to these trends.

1.2 Exploring industrial heritage criticalities in the ECoC programme

The ECoC programme is an important event to study because it is one of the longest standing Capital of Culture programmes in the world and has a significant record of investment and urban transformation (Green 2017). The programme represents one of the longest running continuous EU policies and is the flagship cultural programme for the European Commission. Beginning in 1985, the event has operated for nearly 40 years and has been hosted by more than 70 cities across Europe. A key component of the programme is the promotion of a distinctively ‘European culture’ (European Commission 2014). Ponzini and Jones (2015) identified four common interpretations of a ‘European city’, namely, as a traditional historic city, a city defined by culture-led urban regeneration, a melting pot of diversity and being interconnected within a macroregional framework. There have also been three distinct phases of the ECoC programme that have determined which countries are eligible to participate. Between 1985 and 1996, only existing EU member states could participate. In the second phase that lasted until 2004, two accession countries (Poland and Czech Republic), as well as two non-EU members, participated (Norway and Iceland). The third phase, which ranged from 2005 to 2019, focused on including nine new EU member states, as well as, once again, two non-EU countries (Norway and Turkey). The current regulatory framework that is in place until 2033 previews the possible involvement of accession countries, but only after a required waiting period of 7 years has been met. This far-reaching approach that reaches across the EU and Europe has inspired several spinoff events worldwide at the regional, national, and even city scales. These include regional programmes such as the Culture City of East Asia City and Ibero-American Capital of Culture programmes, along with national programmes such as the UK City of Culture and the Italian Capital of Culture, and intricate initiatives such as the London Borough of Culture.

This global expansion of cultural events and mega-events highlights the relevance of this research beyond the context of Europe. However, this initial study focuses solely on the ECoC programme to ensure greater coherence, as there are many differences in terms of scale, cost and focus between the different programmes worldwide. The provision of consistent and comparable data in the form of the required candidate files and evaluation documents also guarantees the availability of similar data across cases. There are many differences between ECoC events; for example, budgets may range from a couple million to hundreds of millions of euros being invested in the programme and associated infrastructure. Despite these differences, recognition as an ECoC typically represents not only a significant period of investment for host cities and regions but also a key moment in developing
new strategic visions (García and Cox 2013; Jones 2020). With thoroughly developed candidature dossiers, 4–5 years of implementation, and 1 year of related celebrations, each ECoC event presents a significant opportunity for urban transformation at multiple levels. Other Capitals of Culture programmes have not yet necessarily arrived at such a degree of development and are thus more difficult to study to the same degree. Individual case studies have revealed the varying roles of industrial heritage in the programme. The 1990 ECoC in Glasgow has been noted for transforming the city from being an industrial city to a cultural city (García 2005), treating the city’s industrial past as a dissonant heritage. In contrast, the aforementioned Zollverein Coal Mine Industrial Complex was celebrated as a key element in the Essen for the 2010 Ruhr ECoC. In a review of ECoC programmes from 1985 to 2010, the term ‘industrial’ only appeared four times, with only one of these instances referring to the positive discovery of industrial heritage in Luxemburg (Kisiel 2020).

This article expands the current state of the art by surveying and categorising the inclusion of industrial heritage within the ECoC programme to provide a more complete understanding. This research allows us to better understand the relationship and interaction between the ECoC programme and industrial heritage. The findings of this survey represent 36 host cities and regions spread across Europe (see Fig. 1) and provide the most comprehensive understanding to date of the specific forms of interaction between industrial heritage and the ECoC programme. The categorisation process used herein aims to better describe the kinds of relationships that have taken place by, on the one hand, seeing how the event was used as a trigger to recognise and protect industrial sites as heritage, thereby expanding local conceptions of urban image and branding. On the other hand, this approach also aims to explore how the existing presence of recognised industrial heritage sites impacted and formed the narratives and policies used to legitimise the hosting of mega-events, as well as the new uses introduced. The following section presents the survey and categorisation of the 36 cases examined. From these, several examples will be explored in greater detail to better understand the varying role of industrial heritage. Finally, the main emerging issues will be discussed, and the conclusions will provide an overview of the importance of this expanded understanding of industrial heritage within cultural mega-events such as the ECoC programme, highlighting the issues for future host cities to consider in developing programmes as well as areas for future research to explore.

2 Investigation: Survey of industrial heritage in the ECoC programme

While some individual cases from the ECoC programme and other mega-events have already been studied for their integration of industrial heritage, there is no comprehensive overview to date. To fill this gap, this research covers the ECoC events held from 2006 through 2023. This period was selected specifically due to the availability of event candidature files and/or official evaluation reports. Prior to this period, there was no systematic record of the events or their accomplishments. This makes it quite difficult to readily access information from events held between 1985 and 2006 and guarantee consistent and reliable results. The survey was carried out using secondary sources, primarily relying on official evaluation reports and, where necessary, other sources, including research articles, newspaper articles and other documents. The first aim of this investigation was to identify the presence of industrial heritage within the activities carried out for the event; the second aim was to confirm the nature of their inclusion. This first stage of investigation provides us with a clear understanding of the important role of industrial heritage within the ECoC programme during the selected period, as shown in Figs. 1, 2 and 3.

Looking at all 36 ECoC events, it is evident that the restoration and transformation of industrial heritage represents an increasingly common and ongoing trend, with significant impacts on urban development, especially for the reuse of industrial areas. To gain a better and clearer understanding of their detailed usage, we carried out a qualitative policy and thematic analysis of the official candidature files, evaluation reports and other existing reports to identify any and all references to industrial heritage projects or events held during the ECoC period. Based on our findings from this data analysis, we divided the role of industrial heritage into the following three categories:

1. New conversion/restoration of industrial sites.
2. Programmatic elements addressing industrial heritage.
3. No industrial heritage focus.

As shown in Fig. 3, 24 of the host cities specifically restored and reused industrial sites for the occasion of the cultural mega-event, representing 66% of the total cases examined. Another 2 cities did not specifically carry out any new physical interventions for the mega-event but did make programmatic references to industrial heritage within their events or other activities. For instance, while the Albert Dock in Liverpool had already been restored and converted into a
complex involving cultural, commercial and residential functions, for the 2008 ECoC, the International Slavery Museum was opened, which addressed the challenging history of the industrial period of Liverpool. This means that a total of 72% of the host cities in the study period involved industrial heritage in their ECoC in some capacity. For the remaining 10 cities, we could find no evidence of an industrial heritage presence or any kind of focus during the related ECoC events. Figure 1 shows these three categories in terms of their geographic spread, and Fig. 3 presents a breakdown of the three types, with nearly three quarters of all the
### Fig. 2 Supplementary table for the map of the 36 ECOC host cities surveyed according to the three types identified (Source: the authors)

<table>
<thead>
<tr>
<th>New conversion/restoration of industrial heritage sites</th>
<th>Programmatic elements addressing industrial heritage</th>
<th>No industrial heritage focus</th>
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### Fig. 3 Graph showing the distribution of the ECOC host cities (2006–2023) that involved industrial heritage as part of their event programmes (Source: the authors)
events studied featuring or restoring industrial heritage during the event. This analysis clearly demonstrates the very high presence of industrial heritage in representing European heritage and culture through the ECoC programme.

To take the analysis further, we conducted a detailed investigation of the 24 cities falling into category 1, i.e., those that specifically renewed, restored and/or reused an industrial heritage site within the scope of the ECoC programme. Having confirmed the importance of industrial heritage within the ECoC programme, this deeper analysis allows us to better understand the specific nature and role of the transformations taking place. As illustrated in Fig. 4, we identified 12 total functions that were inserted into the transformed industrial sites: landmark/monument, theatre/concert hall, gallery/exhibition, visitor/civic centre, museum, creative centre, urban space, classroom, restaurant/bar, library, performance space, and office space. Figure 4 shows the breakdown based on the percentages of each type according to the presence of that function among the works carried out across the 24 host cities. The most common function that has been inserted into converted industrial spaces is the creative centre, which could include various studios or workshops related to the arts and design. This is followed by the insertion of theatres/concert halls and galleries/exhibitions which represent the second and third most common functions. Together, these three categories make up 50% of the newly inserted functions within the restored industrial heritage sites. These findings clearly show the prevalent role that cultural activities play in the adaptive reuse of industrial heritage through the ECoC programme.

Moreover, there were far fewer landmark/monument types and educational classrooms represented across the 24 host cities. From this investigation, it becomes clear that the majority of the 36 ECOCs embraced their industrial heritage and culture within their programmes, with very few being maintained as heritage monuments. While 10% of the ECOCs did insert museums into a renovated industrial heritage structure, from this figure alone, we cannot infer whether these corresponded in some way to presenting or educating individuals about the industrial heritage itself. The other categories identified include a range of mixed-use performance spaces, offices, restaurants, and visitor centres that suggest the new multifunctionality of the adapted industrial areas. This may in part result from the large-scale nature of many industrial sites that can support a multitude of functionalities. As industrial complexes were once mono-functional, their reuse not only alters their functions but also diversifies them and can make them more accessible to a wider audience.

Figure 4 shows the trend in the number of function types of industrial heritage across the 26 examined host cities of the ECoC programme from 2006 to 2023. These 26 cities belong to the first two categories mentioned above based on their involvement with industrial heritage during the study period. Overall, approximately 80% of those events either involved four or fewer functional types of industrial heritages being converted or contained references to the ECoC programme. Eight cities exhibited a singular functional transformation in the post-renovation period, e.g., the 2008 Liverpool museum and the 2010 Essen landmark, without implementing new physical interventions, i.e., involving only one type. Notably, in 2013, Kosice showed the most diverse range of functional transformations in the post-renovation period, with seven distinct types involved, followed by 2006 Patras, 2010 Pecs, 2020 Rijeka, and 2023 Elefsina, each of which illustrated a similar breadth of functional transformations by encompassing five new functions. Based on this analysis diagram, in addition to the apparent differences, we can also observe some similarities in the converted industrial spaces; the most common function is as a creative centre, which is included in nearly 60% of the hosting cities, as well as other significant information, as shown in Fig. 4.

The survey findings thus begin to provide a clearer picture of the extensive role that industrial heritage has come to play in the ECoC programme over the last twenty years; however, this picture is limited in the degree of detail that it can portray. Thus, to provide greater insight into how industrial heritage was approached, understood and addressed within the ECoC programme, we will now look at examples from across the 3 categories we identified in Fig. 3. These examples are not full case studies but rather more detailed reflections on industrial heritage in ECOCs where there was 1) new conversion/restoration, 2) programmatic elements, and 3) no focus on industrial heritage. In the following, we investigate each of these three types to explore instances where industrial heritage played a strong role, as well as where it was not part of the programme, to better understand how and why. In each example, we focus almost exclusively on the issue of industrial heritage, as this is the main purpose of our investigation. For these reasons, the examples are not necessarily equal, as more attention has been given to the example where industrial heritage played a pivotal role compared to where it is entirely absent.

The examples were selected according to the results of the survey and the authors’ personal knowledge and experience of the ECOCs. For this more precise investigation into the nature of industrial heritage, the first-hand experience of the authors in visiting the host cities and conducting interviews with event organisers was crucial.
Fig. 4 Graphs showing the overall percentage and distribution of new functions in converted industrial heritage sites within the ECoC programme (2006–2023)

(Source: the authors)
to providing the necessary insights. While these examples are not fully representative of the many experiences across Europe, they provide insight into the three categories we have identified within this research. The 2023 Elefsina ECoC represents an example where industrial heritage was heavily featured and used within the event despite the city's rich presence of ancient heritage. While the 2008 Liverpool ECoC referenced the city's industrial heritage through the opening of a new museum, otherwise, neither the city nor the event carried out any new transformation projects as part of the event program. Finally, 2017 Pafos is explored to better understand why industrial heritage was lacking from the event. These investigations were carried out using available secondary sources (ECoC bid books, evaluation reports, local media, scientific publications, etc.), as well as primary sources using semistructured interviews with 1–2 representatives of the ECoC organising/planning committees of the three events, along with site visits to Elefsina and Liverpool.

2.1 2023 Elefsina ECoC

The 2023 Elefsina ECOC, as a representative of the first category, was the fourth European Capital of Culture to be hosted in Greece (Prigkou 2022), following the first ever ECoC event in 1985 in Athens and the 1997 Thessaloniki and 2006 Patras ECoCs. Elefsina, which is a transportation hub (Fig. 5), is located only 21 km from the centre of Athens. It is one of the most significant sacred cities of antiquity, as it hosts the Eleusinian Mysteries and is the birthplace of Aeschylus. From the nineteenth century onwards, Elefsina has been transformed into an industrial centre, boasting the largest oil refinery in Greece (UCLG 2019). In this case, there is an abundance of both ancient archaeological sites and industrial sites such as factories and quarries in the area, making it a particularly unique site in the European context.

Making the most use of its vast historical and industrial resources became a key point in the planning and development of the city’s ECoC programme. The overall approach of the event led to the promotion and increased accessibility of the ancient areas and the transformation of industrial sites to allow for the insertion of new functions to serve this event and to continue to be used for future activities postevent. Notably, this event did not generate any new infrastructure or venues but instead focused exclusively on the restoration and reuse of existing ones, which aligned with the intention to focus on the city’s existing sites of antiquity and the industrial age.

Prior to the ECoC programme, Elefsina already had a tradition of reactivating former industrial sites through adaptive reuse. Dating back to 1875, the first industrial building in Elefsina was the Olive Press and Soap Works, which operated until its closure in 1960; it is commonly known as ‘the Old Olive Mill Factory of Eleusis’ (Agaliotou 2015). The abandoned complex hosted the temporary arts festival named the ‘Aeschylia Festival’ in 1975, which is the most renowned cultural event of Elefsina and is continuously gaining prominence among other cultural events in Greece. It is an annual artistic event that usually occurs at the end of summer and involves numerous theatrical performances, concerts, musical events and exhibitions. It attracts a high number of tourists from all over the world (Agaliotou 2015). This early example of activating industrial heritage through culture would subsequently continue and become one of the main strategies in the planning and implementation of the ECoC programme.

After originally being awarded the title of the European Capital of Culture 2021 (delayed until 2023 due to
the COVID-19 pandemic), Elefsina carried out a series of actions based on the culture-led strategy of ‘from participation to integration’, which embraces the fullness of an area’s profound history (Prigkou 2022). The Old Olive Mill Factory is one of the main areas that was converted with a diverse mix of uses in mind. While the administrative building and the 2000-seat open-air theatre (Fig. 6) were previously used for the Aeschylila Festival, the event led to the restoration of the three stone-built warehouses also located in the complex (Fig. 7). These spaces were used by local authorities to house various cultural events during the 2023 ECoC, for instance, the Stavros Xarchakos concert, performed by Iro Saia & Yiannis Kot siras, as well as the ‘Mystery 76 Don’t Look Back’ theatrical experience that transformed the three warehouses and reinterpreted the tragedy of Orpheus and Eurydice. Furthermore, some culture-related art installations and exhibitions were also set up in open spaces surrounding this industrial site, such as the ‘Mystery 202 Eleusinian Exhibits’, a multimedia audiovisual performance dealing with the important ancient past of Elefsina and its connection to the city’s present.

The transformation of the Old Olive Mill Factory represents a new important contribution to the heritage of the city as part of a long-standing tradition of cultural activities. Adding new artistic and educational functions to the complex further strengthens the industrial memories of visitors and residents alike by expanding the potential use of the space. The complex promotes awareness not only of the preservation of industrial sites but also of archaeological sites, as the factory is located close to the Archaeological Museum of Eleusis. The Attiko School of Ancient Greek Drama, which has been located in Elefsina since 2012 and organised events during the
ECoC period, provides one example of connecting the ancient and contemporary histories of the city, activating industrial spaces through the ancient traditions of drama and theatre. The sustainable approach of utilising both archaeological history and recent industrial history helps to shape a new image of contemporary Eleusis (Agaliotou 2015). In interviews, organisers repeatedly noted how they were very careful to balance the importance of the industrial heritage with the ancient city rather than attempting to focus attention on just one or the other.

Apart from the Old Olive Mill Factory, numerous other industrial sites were also converted specifically for the event. For instance, the reutilisation of the abandoned Old Railway Station provided this event with more creative and office spaces ¹, since some activities were held on railway tracks after essential restoration and conversion; an example is the ‘Mystery 37 Voices of Elefsina,’ an interdisciplinary art project that aimed to create a radio station by citizens, which was open to the public and offered radio-related lectures, screenings, etc. There was also a dedicated exhibition space with a visual arts and photography exhibition named ‘Elefsina Mon Amour,’ which highlighted the city’s complex history, including its industrial past, thus embracing this part of its history rather than shunning it. Additionally, the Eleourgiki industrial storage complex was converted to host dance performances, music events and academic/artistic workshops. Another structure of highly important historical significance for Elefsina is the chimney of and two of the oldest buildings within the Iris Factory, which previously housed a varnish and paint manufacturer. These representative cases of industrial architecture date to the interwar period; both of them were converted into venues to

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hold multipurpose events both during the ECoC period and beyond (Fig. 8).

The event focused not only on the restoration and conversion of industrial sites but also on archaeological relics and abandoned former facilities and infrastructure. For instance, former camping areas reopened for the 2023 ECoC, aimed at providing open spaces for both visitors and residents. Similarly, the Old Railway Station is a two-story building that was leased by the 2023 ECoC organizers in 2020 to be used for multipurpose cultural activities. These activities included a historic photographic exhibition showcasing the city’s important history of industrial and port activities. The event was not limited to a focus on industrial heritage but also included other restoration projects such as the City Clock, which is located above the archaeological site, and open spaces such as the main town square (Fig. 9) and the Archaeological Museum of Elefsina.

In addition to the focus on tangible heritage in Elefsina, intangible heritage also played a prominent role in this event. The city is well known for the ancient Eleusinian Mysteries, each of which has been named for an art project, thus representing a continuation in terms of culture and history and extending the ancient history of the city to today. There were also courses offered that focused on the city’s long history. For example, one project named the ‘Mystery 43 School of Waves and Weeds,’ which was related to education/training, the environment and cultural performance, was housed in the Iris Factory in September 2023. The video artwork produced by the workshops researching the poetic and political interrelations between production, development, parasitism and inertia was also presented at the Iris Factory. Thus, it is clear that the ECoC programme has played a critical role in both the restoration of sites and their activation regarding cultural uses that recognise both tangible and intangible aspects. Overall, industrial heritage represents a key element in the utilized approach, not only for the physical restoration and reuse of several structures but also for the development of a cultural programme that embraced its industrial past rather than attempting to ignore or cover it.

### 2.2 2008 Liverpool ECoC

Liverpool falls into the second category for containing programmatic elements that addressed the city’s industrial heritage even if no new renovations or restorations were carried out specifically for the 2008 ECoC. In many ways, Liverpool is a typical example of an important port city with a rich industrial past. After going through a series of dramatic changes in the postwar period and being faced with a prominent social problem regarding immigrants, the city gradually recognised the significance of the rehabilitation and restoration of industrial heritage sites (Trifa 2018).

The first efforts to rehabilitate the abandoned Albert Dock, an important harbour complex damaged during air raids during the Second World War, began in 1980. From an abandoned industrial port waterfront to a global infrastructure node (Silver and Wiig 2023), the Albert Dock was converted to host commercial, residential and cultural functions, including a branch of the Tate Gallery. While the complex was restored well before the ECoC event, the International Slavery museum was opened in 2008 and has played a critical role in addressing the negative and challenging aspects related to the city’s industrial past. In this way, the already converted industrial complex played a vital role in the 2008 ECoC in terms of attracting leisure infrastructure alongside the waterfront, as well as hosting a new museum. The museum shines a
light on the role that the international slave trade played in enriching and building up the Liverpool as an important industrial and port city, as well as recognising the ongoing forms of slavery in the world today.

While the city was listed as a UNESCO World Heritage Site in 2004 for the Maritime Mercantile City programme, with the included port areas representing a key part of the city’s industrial heritage, this did not come to feature as a key part of the 2008 celebrations. While there was a focus on the city’s history up to 2007, the overall trajectory of the ECoC period focused on presenting a new image of the city as a cultural and creative destination rather than on highlighting its past, with the city working to overcome long-standing negative associations (Jones 2020). However, even given with the focus on the city’s history in the year 2007, no specific restorations or conservation projects were carried out by the city municipality or the event organisers specifically for the event. Instead, external actors, such as the university and an arts organisation, carried out their own restoration work to align with the 2008 event (Jones 2017). However, these projects were not related to the city’s industrial heritage. Interviews with ECoC representatives confirmed the intentional strategy of broadly overlooking the city’s built heritage during the event, industrial or otherwise, to avoid raising awareness of dissonant heritage that might distract from the cultural reinvigoration of the city.

While the event has long been framed as being one of the most successful ECoCs, this strategic shift away from promoting the city’s heritage led to a decreased level of visibility with significant impacts (Jones 2020). Regarding the ECoC’s lack of interaction with industrial heritage, it was not the case that there was no further industrial heritage awaiting development. In fact, at that time, a large portion of the World Heritage Site was composed of abandoned and inaccessible docklands. While these areas were not developed as part of the 2008 ECoC, they were the central part of the subsequent Liverpool Waters development scheme. The proposed masterplans led to the World Heritage Site being added to the List of World Heritage sites in Danger in 2012 and later the loss of the city’s World Heritage Site status in 2021 (Jones 2023; West 2022). Although the loss of the city’s World Heritage Site status cannot be claimed as a direct legacy of the ECoC programme, it reveals the potential risk of overlooking heritage, specifically industrial heritage, within such events, as well as within the wider strategies and priorities of the city.

2.3 2017 Pafos ECoC

Regarding the third category, the case of Pafos presents an instance where there simply was not a significant presence of industrial heritage to valorise in comparison with other areas. Pafos is a coastal town located in the western region of the island of Cyprus. Unlike many of the other ECoC host cities, Pafos has never had an important industrial background, and its port is mainly devoted to tourist activities. Additionally, one of the few structures, namely, the Carob Mills, had already been converted into an entertainment hub. Despite this lack of important industrial structures, the first bid book proposed the restoration of the Silk Factory (later converted army barracks) (Pafos 2017 Working Group 2011). However, interviews with event representatives revealed that after the city was awarded the event, the budget was reduced, and this industrial component was considered expendable. Instead, the ECoC period focused on two other heritage aspects deemed more urgent, namely, the redevelopment of the historic city centre and the transformation of Turkish Cypriot properties (Dova et al. 2020).

More specifically, limited by the regional economy and lack of resources and infrastructure, approximately 70% of the activities were housed in open-air venues, based on the main principle of ‘open-air factories’, which allowed this small city to achieve mega-event-related urban regeneration (Dova, Sivitanidou, and Balasis 2019). Among all the transformation procedures, the 2017 Pafos ECoC prioritised the renovation of the city centre and the restoration of abandoned buildings belonging to the former Turkish-Cypriot community. These renovated venues hosted a series of activities and exhibitions in public squares, archaeological sites and streets. Specifically, Kennedy Square was previously used as a market and then paved into an urban square open to the public, surrounded by numerous important buildings. While industrial heritage was ultimately not featured, the ECoC period was critical to reshaping the spatial component of the Pafos, as well as serving as a tool for redefining the identity of the city from a provincial tourist resort to a multicultural hub of civic cohesion and creative innovation (Dova et al. 2022; Tommarchi and Cavalleri 2020). In this case, the lack of industrial heritage was essentially due to the limited presence of industrial heritage in the city and surrounding areas; however, it was also in part due to the need to address other pressing heritage concerns that were more central to the city’s identity and history.

3 Discussion: A strong legacy of culture and industrial heritage

Our research revealed that the majority of the 36 cities studied involved heritage in their ECoCs, with 24 carrying out physical restoration and transformation projects involving new uses and 2 others not carrying out restoration works but including dedicated industrial heritage events and activities within their programs.
While the earlier phases of the ECoC programme may not have embraced industrial heritage, it is clear that since 2006, there has been much greater inclusion of this topic, revealing the growing importance of industrial heritage for European cities. As highlighted in the case of Elefsina, not only was much of the city’s industrial heritage transformed for the event but the concept also became one of the main promotional elements for the entire year of the ECoC event. This approach represents a departure from earlier ECoCs, such as Glasgow in 1990, which famously used the ECoC programme as a way to overcome its industrial identity. Instead, this approach has now become embraced as a component in the cultural development of a city and even put into dialogue with other periods of history, as seen in Elefsina. Cultural events and exhibitions were also used to celebrate the city’s industrial heritage rather than trying to ignore it. While Liverpool did not transform any industrial structures, especially for the event, previously converted and reused port structures were changed to house a new museum that focused on the very challenging aspects of slavery connected to the city’s industrial history. Finally, although Pafos originally proposed the restoration of some peripheral industrial buildings, the organisers ultimately decided to focus their attention and efforts on more central areas that were a higher priority and of greater historic value.

While these three examples cannot fully represent experiences from across Europe, we can identify other shared instances from the other 23 host cities that also demonstrate the key role of the adaptive reuse of industrial heritage. The creation of new creative centres has led to the development of design hubs and art studios such as the Svetovar Brewery brownfield, which was transformed into a cultural centre during the 2015 Pilsen ECoC (TURŞIE Corina 2017), or the Old Slaughterhouse, which was transformed to host the international design cluster during the 2018 Valletta ECoC (Xuereb 2018). Similarly, for the 2019 Plovdiv ECoC, a former tobacco warehouse building was recycled and reused as a new space for art. The 2023 Timisoara ECoC also exploited several disused industrial buildings, such as a cigarette factory, a hat factory, a garment factory, the Garofit, the Azur Soap and Paint Factory and the Optica Factory, converting them into multipurpose creative spaces (Marian-Potra et al. 2020).

These instances highlight the focus on activating and reusing these sites as productive and living spaces rather than creating new monuments or memorials. In contrast, the landmark(monument function appeared far less frequently in our survey, with only two host cities producing this type, namely, the 2010 Essen ECoC and the 2023 Elefsina ECoC. The Gasometer Oberhausen in Essen, a former coal storage site, was converted into the tallest exhibition hall and a famous industrial landmark in Europe, while the Clock Tower, located in the highest position of the city, was also restored into a monument for the 2023 Elefsina ECoC. These limited instances show the tendency towards inserting new functions into industrial spaces rather than preserving them as individual monuments. While the heavy focus on cultural and creative centres may risk eroding the original values and meaning of industrial sites, the International Slavery Museum in Liverpool and the Bois-du-Luc Museum in Mons both represent examples where the newly inserted function of a museum responds to and educates others about the original function of the industrial space. However, this is not always the case; the art museums of the Zāķeta in Wroclaw or the Contemporary Art Museum of Estonia in Tallinn introduce purely art-based and cultural functions into their industrial containers that have little dialogue with the original uses or values of the spaces involved.

Through these examples, it is possible to see both sides of the discussion highlighted by the literature in Sect. 1. On the one hand, there is a strong adaptive reuse of industrial heritage, which contributes to the development of new sustainable local economies; on the other hand, there remains the risk of losing or even erasing the embedded tangible and intangible value associated with these industrial areas. From this research, it is impossible to necessarily summarise an overall conceptual approach, as this study spans the collective approaches and results of 36 individual cities spread across 30 countries over a span of more than 15 years. It responds to many different contexts, challenges, issues, goals, thinking and approaches to industrial heritage. However, it clearly confirms the increasing importance and recognition of industrial heritage across Europe and the strong linkage with culture and creativity as a driver of transformation and adaptive reuse. The pressure of hosting an ECoC event provides a clear stimulus to develop and implement these projects. As seen in Elefsina, this can mean the continuation and upscaling of an existing cultural adaptive reuse strategy for industrial heritage. Meanwhile, in Liverpool, where many works had already been completed, the event allowed further the exploration of the long-term meaning and impact of industrial heritage through a new museum.

Overall, these cases show that such events can provide a key opportunity for the adaptive reuse, transformation and conservation of industrial sites. These events and the additional funding they provide act as an impetus to complete projects that otherwise might not have been possible. Moreover, the refurbishment, restoration and reuse of these industrial spaces can be more economically
viable than designing and creating entirely new venues and facilities from scratch. However, these issues are by no means limited to the European context and can be increasingly relevant to other areas of the world that also address how to address their industrial heritage sites.

4 Conclusions

The survey and analysis conducted in this article clearly demonstrate the strong linkage between the European Capital of Culture Programme and industrial heritage. Past research has shown the key opportunities that cultural mega-events can provide for the use, promotion and reinterpretation of heritage more broadly, as seen in the Charter for Mega-events in Heritage-rich Cities. This work definitively shows the critical position of industrial heritage in Europe within the paradigm of large events. The cultural nature of these events clearly lends itself to the subsequent cultural and creative programming of industrial heritage sites; this continues to be a clear trend that has emerged over the last 30 years. This study also confirms the obvious importance of industrial heritage for Europe specifically, as cities across the continent have used these events as instruments through which to initiate the process of the restoration and adaptive reuse of their industrial heritage. As seen particularly in the case of Elefsina, the city did not shy away from its industrial past but rather used the event to highlight and promote this heritage as an asset just as important as a significant archaeological site. At the same time, questions remain about the widespread role of such an event in terms of going beyond the restoration and reuse of sites and actually recognising the wider tangible and intangible values present in industrial heritage. While some of the examples presented herein demonstrate active recognition and promotion through new museums, such as those seen in Liverpool, further research is necessary to better understand these dynamics and how they differ across the various socioeconomic regions of Europe.

The relevance of the findings also extends beyond the European context. As noted in the literature, there is an increasing amount of recognition of industrial heritage within the Asian context; this is particularly true in relation to mega-events. The recent 2022 Beijing Winter Olympic Games represent a relevant example given their inclusion of industrial sites within related events. In accordance with long-term urban planning, the Shougang District, which was once the bustling industrial heart of Beijing, underwent a transformation into the primary venue for the big air Olympic events. A series of abandoned former industrial heritages were also converted and used in the Games; for instance, a nearby old factory, situated near the big air venue, was revitalised into a service facility that catered to spectators during the Games, with the aim of using the building as a health-care centre in the postevent period. In addition, a visitor centre was transformed from an ex-factory building, which will be functionally integrated into a new park, with the aim of providing local citizens with dedicated space for physical exercise. Such examples highlight the relevance of this research for other areas of the world, as well as the need for continued research in areas beyond the European context.

The findings of this paper are potentially useful for a wide range of actors. First, they demonstrate to future decision-makers preparing bids for cultural events the potential roles for industrial heritage within the planning of their events. These events may represent the first moment of the beginning processes of restoration and reuse or the continuation of work already in progress. However, in line with the discussion in the literature, we also observed a significant trend of industrial heritage being converted to serve as locations for cultural or commercial activities. While in Elefsina, there were clear intentions to align the new uses of these structures with the city’s tangible and intangible heritage, this may not necessarily always be the case in other examples and should thus be studied further. Such an event can indeed provide opportunities to valorise and promote the intangible aspects of industrial heritage that are often overlooked and intentionally left out of events due to their challenging or negative connotations and memories. This work also provides a useful foundation for future research to explore in greater depth the cases identified and to study the motivations, challenges, goals, shortcomings and long-term effects of incorporating industrial heritage within not only the ECoC programme but also other mega-event programmes. As discussed, this discourse is by no means limited to the European or Western context and is relevant for any city seeking to develop and promote its industrial heritage through cultural channels.

Abbreviations

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<tr>
<th>Abbreviation</th>
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<tbody>
<tr>
<td>ECoC</td>
<td>European Capital of Culture</td>
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<td>HOME</td>
<td>Heritage Opportunities/threats within Mega-events in Europe</td>
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