The SMITour Project |
SMart Industrial Tourism in the Mediterranean

Work Package 1 –
State of the Art Analysis

D 1.1.1 Baseline study of tourism systems in the partner regions

SMITour | Interreg Euro-MED | Co-funded by the European Union

https://smitour.interreg-euro-med.eu/

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Executive Summary

This report presents a comprehensive overview of the industrial tourism landscape, drawing on data from both a survey of industrial tourism sites and an analysis of the state of industrial tourism in six European countries or regions. The study aimed to assess the current state of industrial tourism, identify best practices, and highlight key challenges and opportunities for future development.

The survey results revealed a diverse range of visitor experiences offered by industrial tourism sites, with a strong focus on engagement and education. Guided tours, interactive exhibits, and workshops were among the popular offerings, catering to a diverse audience including general tourists, families, school groups, and those with specialized interests.

Industrial tourism sites were generally well-equipped with amenities to enhance the visitor experience, including welcome centers, shops, and cafeterias. However, accessibility was identified as an area for improvement, with a significant proportion of sites acknowledging limitations in catering to visitors with diverse needs.

Technology played a varied role in enhancing visitor experiences, with interactive exhibits, audio guides, and virtual reality being utilized to varying degrees. Cost of implementation, integration with existing systems, and user experience were identified as key barriers to wider technology adoption.

The survey highlighted a strong commitment to sustainability, with sites demonstrating a range of environmental and social practices. These included the use of recycled materials, energy efficiency measures, water conservation, waste management, and initiatives to promote regional heritage, local employment, and community engagement.

The analysis of industrial tourism across the six countries or regions revealed similarities and differences in the level of development, industry focus, and government support. While some countries had dedicated programs and policies for industrial tourism development, others integrated it into broader tourism or cultural heritage initiatives.

The availability and nature of data and statistics on industrial tourism varied significantly across the cases, with some countries having comprehensive databases while others relied on estimates or lacked specific data altogether. This highlighted the need for improved data collection and reporting practices in the industrial tourism sector.

The integration of technology also varied across the countries, with some actively embracing new technologies like virtual and augmented reality, while others focused on more traditional approaches. The level of technology adoption reflected differences in funding, priorities, and the specific characteristics of industrial tourism sites.

Marketing and promotion strategies showed a mix of online platforms, collaboration with tourism entities, and traditional methods. Challenges included increasing awareness, establishing a clear identity for industrial tourism, and overcoming perceptions of industrial sites as unappealing tourist destinations.

The future outlook for industrial tourism was generally positive, with countries anticipating continued growth and diversification. However, challenges such as maintaining financial sustainability, adapting to evolving tourism trends, and ensuring accessibility needed to be addressed.

Introduction to the SMITour project

The SMITour Project | SMart Industrial Tourism in the Mediterranean

The SMITour project identifies the need to develop new SMart Industrial Tourism (SMIT) activities as a common challenge for Mediterranean regions wishing to leverage their industrial and manufacturing sites to diversify the economy, stimulate social and economic growth, minimize environmental impact and boost research and technological innovation. The high rate of industry participation in industrial tourism clusters makes this sector ideal for experimenting with advanced and immersive technologies that are already being adopted by manufacturing industries and that have been greatly enhanced by the covid-19 pandemic, and that allow combining physical and virtual visits through the use of AR, VR or MR (Augmented, Virtual and Mixed Reality). The virtuous combination of industrial tourism with advanced technologies gives rise to Smart Industrial Tourism (SMIT).

SMITour aims at studying the social and economic potential of SMart Industrial Tourism in six Mediterranean regions, assessing the state of the art by analyzing existing good practices in industrial tourism and in the use of advanced technologies in the tourism sector, exploring pathways for the development of SMIT activities in the regions and cities involved.

The project addresses the partners' common challenges by pooling their experience and know-how and by creating transnational Focus Groups involving the regional stakeholders to implement a series of thematic Innovation Camps that will co-design roadmaps and figure out a common Strategy and Action Plan to develop SMart Industrial Tourism. The Strategy and Action Plan will help MED regions to diversify tourism to stimulate social and economic growth while enhancing technological innovation. The partners will eventually be able to mobilize the necessary resources (human, technical, financial) and structures (management and governance) to achieve the project's goals.

The following is the partnership of the project:

1. Municipality of Prato (IT) - Lead Partner
2. University Institute of Lisbon (PT)
3. Industrial Tourism Network of Catalonia - Barcelona (ES)
4. Prato Textile Museum Foundation (IT)
5. Hellenic Clothing Industry Association - Athens (EL)
6. E-institute, Institute for Comprehensive Development Solutions (SI)
7. Faculty of Economics and Business Rijeka (HR)

SMITour is funded by the Interreg Euro-MED programme through the European Regional Development Fund and co-financed by the National Revolving Fund for the implementation of EU policies.

Work Package 1 – State of the Art Analysis

Activity 1.1: Baseline study of tourism systems in the partner regions
Deliverable: D 1.1.1 Baseline study of tourism systems in the partner regions

Partner in charge: Iscte - University Institute of Lisbon
Partners involved: Prato, Iscte, XATIC, MDT, HCIA, eZAVOD, EFRI
Date of production: 31 January 2025

As a basis for its activities, SMITOUR pools and exploits the experience and know-how of its partners and regional stakeholders to create a shared knowledge-base that will be used by the transnational Focus and Working Groups (FWGs) to implement a series of thematic Innovation Camps. The Innovation Camps will in turn develop a number of thematic roadmaps to meet the several sub-challenges posed by the overall objective of developing Smart Industrial Tourism.

To create the shared knowledge-base, Work Package 1 of the project performs a "State of the Art Analysis", collecting information from its partners about the following three areas of interest:

A1.1 - Tourism systems in the partner regions

A1.2 - Industrial tourism practices in the Mediterranean

A1.3 - Application of advanced technologies in the tourism sector

The present document constitutes deliverable**: "D1.1.1 Baseline study of tourism systems in the partner regions"** resulting from activity A1.1 above. D1.1.1 **a picture of the state of the art of tourism in the partner regions that maps the material and immaterial assets that can be exploited by the partners to develop Smart Industrial Tourism in their regions.**

Methodological approach

This study investigated the current landscape of industrial tourism by examining various aspects of industrial tourism sites, including visitor experiences, target audiences, operational practices, and sustainability initiatives. The research employed a quantitative approach, utilizing a survey instrument to gather data from site representatives.

Definition and Inclusion Criteria

The study adopted the definition of industrial tourism proposed by Otgaar (2012):

> "Industrial tourism considers visits to sites that enable residents and tourists to get acquainted with a region's operational firms. (...) Industrial tourism not only comprehends company visits/tours, but also visits to company museums and brand parks. (...) Industrial heritage sites are only included in the definition if they require the participation of operational firms" (Otgaar, 2012, p. 87).

To further refine the scope of the study and reflect the perspectives of industry stakeholders and current research trends, the following inclusion criteria were applied:

- **Active Industry Involvement:** Companies from diverse sectors actively engaged in providing tourism services, such as business tours and on-site experiences, showcasing their operations to visitors (Badia et al., 2024).
- **Company-Owned Museums:** Museums owned and operated by private firms or associated foundations, offering insights into the company's history, products, and processes (Riviezzo et al., 2021).

Data Collection

A survey instrument was developed and validated by a panel of experts, comprising project partners with expertise in industrial tourism and research methodology. Following a review process incorporating feedback from the partners, the survey was finalized and administered to representatives of industrial tourism sites. Data collection commenced on April 1st, 2024, and concluded on September 21st, 2024.

Sampling

Given the absence of a comprehensive database of industrial tourism sites across the six countries or regions included in the study, a convenience sampling approach was employed. This involved contacting and inviting participation from accessible and known industrial tourism sites within the respective regions. The number of surveyed industrial tourism sites is as follows:

Country	Nr
Italia	21

Greece	19
Slovenia	10
Spain	22
Portugal	18
Croatia	14
Total	**98**

Survey Instrument

The survey instrument (in the appendix) comprised a series of closed and open-ended questions designed to gather information on various aspects of industrial tourism sites, including:

- **Visitor experiences:** Types of tours, activities, and exhibits offered.
- **Target audience:** Demographics and visitor segments catered to.
- **Operational practices:** Tour capacity, pricing, accessibility, and marketing strategies.
- **Technology use:** Technologies employed to enhance visitor experience, manage visitor flow, and ensure safety.
- **Sustainability practices:** Environmental and social sustainability initiatives undertaken.
- **Performance indicators:** Visitor numbers, event frequency, and visitor satisfaction levels.

Data Analysis

Descriptive statistics were used to analyze the survey data, including frequencies, percentages, and measures of central tendency. Open-ended responses were analyzed qualitatively to identify key themes and patterns. The findings are presented in the following section, using tables and narrative descriptions to illustrate the key characteristics and trends within the industrial tourism sector.

Industrial tourism, a cross-national panorama

AN OVERVIEW

Across the six countries or regions surveyed, industrial tourism is generally seen as a growing and promising sector, offering opportunities to diversify tourism offerings, leverage industrial heritage, and promote regional development. However, the level of development and specific focuses vary across the cases.

Similarities include a focus on showcasing industrial heritage and active industries, providing educational and engaging experiences for visitors, and recognizing the potential for economic and social benefits for local communities. Challenges identified across multiple cases include the need for investments in infrastructure and technology, raising awareness among potential visitors, and balancing preservation with modernization.

Differences lie in the specific industries and types of sites emphasized, the level of government support and policies, and the integration of technology. For example, Italy (Prato) highlights the importance of textile industry and district-level initiatives, while Greece emphasizes the reuse of industrial spaces for cultural purposes and the need to overcome the misconception that Greece lacks significant industrial heritage. Spain (Catalonia) points to the challenge of establishing a clear identity for industrial tourism and the need for greater public awareness.

THE SCALE AND DISTRIBUTION OF INDUSTRIAL TOURISM

When asked about the number of operational industrial tourism sites in their respective countries, the responses revealed a mixed picture, with some countries having a clear inventory of sites while others lacked precise figures.

In Portugal, there were 217 identified industrial tourism sites, categorized as either "live industry" or "industrial heritage." Spain (Catalonia) reported 105 sites within its industrial tourism network, with an estimated 200 in Barcelona alone. Italy had 201 sites identified in a national survey, but the actual number is likely higher. In contrast, Croatia and Greece lacked precise figures, indicating that industrial tourism is intertwined with other forms of tourism and a comprehensive inventory is not yet available. Slovenia mentioned several operational sites but did not provide an exact count. These variations highlight differences in the level of development and recognition of industrial tourism across the six cases.

The availability and nature of data and statistics on industrial tourism varied significantly across the six countries or regions surveyed. Some countries had comprehensive databases and official statistics, while others relied on estimates or lacked specific data altogether.

Italy had the most detailed data, with ISTAT (National Institute of Statistics) conducting a survey of museums and similar institutions, including industrial tourism sites. This survey provided data on visitor numbers, revenue, opening hours, types of experiences offered, and technology integration. For example, the survey found that the Ferrari Museum in Maranello was the most visited industrial tourism site, with around 400,000 visitors annually.

Spain (Catalonia) also had some statistics available, particularly for the museums within the MNACTEC System (Catalan museums linked to industrial heritage). A study concluded that these museums generate 3 euros for every euro invested. However, comprehensive data for all industrial tourism sites in Catalonia was not available.

Portugal, Croatia, Greece, and Slovenia had limited or no official statistics on industrial tourism. Portugal's data primarily focused on the number of sites and their regional distribution, while Croatia and Slovenia mentioned that industrial tourism is a growing segment but lacked specific visitor figures. Greece estimated overnight visitors to industrial sites based on overall tourism growth trends.

The lack of comprehensive data in several countries highlights the need for improved data collection and reporting practices in the industrial tourism sector. This would enable a more accurate assessment of the sector's economic impact, visitor demographics, and trends, ultimately informing better decision-making for development and promotion strategies.

When asked about the regional concentration of industrial tourism sites, the responses highlighted some common trends while also revealing unique regional focuses.

Similarities:

- **Industrial Heritage:** Several countries identified regions with a strong industrial past, where former mining areas or manufacturing hubs have been transformed into industrial tourism destinations. This was evident in Slovenia's Zasavje and Savinjsko-Saleska region with its coal mining heritage, and in Greece's Lavrio Technological and Cultural Park, built on a former mining district.
- **Coastal Regions:** Coastal regions with historical maritime industries and shipbuilding activities were also mentioned as areas with a concentration of industrial tourism sites. This was the case in Croatia, with its focus on shipyards in Pula and Rijeka, and in Greece, where the Piraeus Port has been highlighted for its machine-making sector.

Differences:

- **Specific Industries:** Some countries identified regions known for specific industries, such as textile production in Prato, Italy, and the paper industry in the Istria region of Croatia.
- **Urban Concentration:** While some countries highlighted specific cities or towns with a concentration of industrial tourism sites, others focused on broader regional distributions. For example, Spain (Catalonia) mentioned the city of Barcelona as having a high concentration of industrial tourism resources, while Portugal identified regions like São João da Madeira and Marinha Grande.
- **Regional Development Strategies:** The responses also revealed different approaches to regional development through industrial tourism. In Slovenia, the focus was on showcasing industrial heritage in regions with a strong industrial past, while in Greece, the emphasis was on repurposing industrial spaces for cultural and tourism activities.

When asked about the industry's most commonly involved in industrial tourism, the responses highlighted both shared and unique trends across the six countries or regions.

Similarities:

- **Traditional Industries:** Several countries identified traditional industries like manufacturing, mining, and energy production as being commonly involved in industrial tourism. This reflects a shared interest in showcasing historical industrial processes and heritage.
- **Food and Beverage:** The food and beverage industry was also frequently mentioned, with winemaking, olive oil production, and breweries being popular attractions. This highlights the appeal of culinary experiences and the connection between industrial tourism and local products.

Differences:

- **Regional Variations:** Some countries highlighted industries specific to their regions, such as shipbuilding in Croatia, textiles in Prato (Italy), and salt production in Croatia.
- **Emerging Sectors:** While traditional industries dominated, some countries mentioned emerging sectors like technology and innovation, particularly in Slovenia and Spain (Catalonia), indicating a growing interest in showcasing modern industrial processes and advancements.
- **Integration with Other Forms of Tourism:** The responses also revealed different approaches to integrating industrial tourism with other forms of tourism. In Croatia, industrial tourism was linked to cultural and historical tourism, while in Greece, it was often combined with culinary and heritage tourism.

THE PERFORMANCE OF INDUSTRIAL TOURISM

Regarding the question "What is the average number of visitors per year to industrial tourism sites in your country?", the responses revealed a significant variation in the availability of visitor data and the scale of industrial tourism across the six countries or regions.

Some countries reported substantial visitor numbers, indicating a well-established industrial tourism sector. Spain (Catalonia) reported around 1,400,000 visitors to its industrial tourism sites, while Italy's industrial tourism sites attracted an estimated 2.5 million visitors in 2022. In contrast, other countries had limited or no specific data on visitor numbers. Portugal reported approximately 4,000 participants in its industrial tourism activities in 2023, but no specific data on individual site visits was available. Croatia and Slovenia mentioned that industrial tourism is a growing segment but lacked precise visitor figures. Greece estimated around 160,000 overnight visitors to industrial sites in 2023 based on overall tourism growth trends. These variations highlight the differing levels of maturity and data collection practices within the industrial tourism sectors of the surveyed countries or regions.

INDUSTRIAL TOURISM EXPERIENCES AND VISITORS

When asked about the most popular types of industrial tourism experiences offered, the responses revealed a diverse range of offerings with some common trends across the six countries or regions.

Similarities:

- **Guided Tours:** Guided tours were consistently mentioned as a popular option, providing visitors with expert commentary and insights into industrial processes and heritage.
- **Interactive Exhibits:** Interactive exhibits were also frequently cited, offering engaging and hands-on experiences that enhance visitor understanding and enjoyment.
- **Educational Programs:** Several countries highlighted the importance of educational programs, workshops, and demonstrations, catering to school groups and visitors interested in in-depth learning experiences.

Differences:

- **Unique Experiences:** Some countries emphasized unique experiences tailored to their specific industrial context. For example, Portugal mentioned activities with families and demonstrations with professionals, while Slovenia highlighted virtual reality experiences in coal mines and interactive exhibits in technical museums.
- **Accessibility and Technology:** The responses also revealed varying levels of technology integration and accessibility. While some countries emphasized the use of virtual reality, augmented reality, and interactive touchscreens, others focused on more traditional approaches like guided tours and audio guides.
- **Focus on Living Industry:** Some countries, like Portugal and Italy, highlighted the importance of "living industry" experiences, where visitors can witness active production processes, while others focused more on industrial heritage and historical sites.

When asked about the main target audiences for industrial tourism, the responses revealed a diverse range of audiences with some commonalities and differences across the six countries or regions.

Similarities:

- **General Tourists:** All countries recognized the importance of general tourists as a key target audience, indicating that industrial tourism has the potential to appeal to a broad range of visitors.
- **School Groups:** School groups were also frequently mentioned, highlighting the educational value of industrial tourism sites and their role in complementing school curricula.
- **Specialized Interest Groups:** Several countries identified specialized interest groups, such as history enthusiasts, industry professionals, and those seeking unique experiences, as important target audiences.

Differences:

- **Families:** While some countries, like Croatia and Slovenia, emphasized families as a key target audience, others did not explicitly mention them.
- **International Tourists:** Some countries, like Greece and Portugal, highlighted the importance of attracting international tourists, while others focused more on domestic tourism.
- **Specific Demographics:** Some countries identified specific demographics, such as university students in Croatia and the elderly in Italy, as potential target audiences.

POLICIES AND GOVERNAMENTAL SUPPORT OF INDUSTRIAL TOURISM

Regarding government policies and initiatives to support industrial tourism development, the six countries or regions presented a varied landscape, ranging from dedicated programs and funding to indirect support through broader tourism initiatives.

Direct Support:

- **Portugal:** To strengthen Portugal's industrial tourism offerings, Turismo de Portugal established a dedicated network in 2024, now comprising around 200 partners. This network, driven by a Dynamising Group and coordinated by Turismo de Portugal, fosters collaborative growth through training, technical meetings, and the annual "Discovering Industrial Tourism" program. A recent questionnaire gauging network effectiveness will inform future strategies, with results expected by year-end.
- **Italy:** While Italy does not have a specific national policy for industrial tourism, the government supports sustainable tourism development through funding and initiatives aimed at promoting ecological transition and enhancing cultural destinations.

Indirect Support:

- **Croatia:** Croatia indirectly supports industrial tourism through its sustainable tourism strategy, which includes investments in infrastructure and marketing to promote lesser-known attractions and extend the tourist season.
- **Greece:** Greece indirectly supports industrial tourism through its broader cultural heritage promotion and regional development initiatives. The Greek Ministry of Tourism's Annual Action Plan for 2022 includes a focus on industrial heritage tourism as part of its cultural tourism strategy.
- **Slovenia:** Slovenia indirectly supports industrial tourism through broader tourism development policies, including investment incentives, infrastructure development, and marketing campaigns. The country has also taken a leading role in digitally enriched tourism, which can benefit industrial tourism sites.
- **Spain (Catalonia):** In Catalonia, there is no specific government policy to support industrial tourism. However, some local and regional governments actively promote industrial tourism through specific policies and initiatives.

Effectiveness and Challenges

The effectiveness of these policies and initiatives varies across the cases. In Portugal, the dedicated program has resulted in tangible outcomes, such as the creation of a network of industrial tourism sites and the development of promotional materials. In other countries, the impact of indirect support is less clear, and further evaluation is needed to assess the effectiveness of these policies in promoting industrial tourism. Challenges include limited funding, the need for greater coordination among stakeholders, and the challenge of balancing preservation with modernization.

TECHNOLOGY & MARKETING

The integration of technology to enhance industrial tourism experiences varied across the six countries or regions, with some countries actively embracing new technologies while others focused on more traditional approaches.

Technology Leaders:

- **Slovenia:** Slovenia showcased a strong emphasis on technology integration, utilizing virtual reality (VR) and augmented reality (AR) to recreate historical environments and industrial processes. Examples include the Virtual Museum of Coal Mining in Trbovlje and the Idrija Mercury Mine. Interactive touchscreens, audio guides, and self-guided apps were also commonly used to enhance visitor experiences.
- **Italy:** Italy demonstrated a growing use of technology, particularly in larger industrial tourism sites. Interactive touchscreens, video displays, and proximity systems were commonly employed. However, the survey also revealed a potential for further integration of online experiences, such as virtual tours and digital archives.

Moderate Adoption:

- **Croatia:** Croatia reported active use of various technologies, including VR tours in museums like the Labin Mining Museum and AR experiences through apps like Explore Croatia.
- **Spain (Catalonia):** Catalonia invested in audiovisual technologies and language translation for its industrial heritage spaces. Additionally, a virtual game was developed to engage visitors across multiple destinations.

Limited Integration:

- **Greece:** Greece appeared to have limited integration of advanced technologies in its industrial tourism sites. The focus was primarily on online presence and digital guides rather than immersive technologies like VR or AR.

- **Portugal:** Portugal mentioned the use of technology for digital guides and websites but did not provide specific examples of advanced technology integration in industrial tourism sites.

The approaches to marketing and promoting industrial tourism sites showed similarities and differences across the six countries or regions.

Similarities:

- **Online Presence:** Most countries emphasized the importance of online platforms, including dedicated websites and social media, for showcasing sites and providing visitor information.
- **Collaboration:** Collaboration with tourism entities, local businesses, and educational institutions was also commonly mentioned as a way to enhance marketing efforts and reach wider audiences.
- **Traditional Methods:** Traditional marketing methods, such as brochures, visitor centers, and participation in tourism fairs, were still considered relevant in many cases.

Differences:

- **National or Regional Campaigns:** Some countries, like Portugal and Spain (Catalonia), had national or regional marketing campaigns specifically for industrial tourism, while others incorporated industrial tourism into broader cultural heritage promotion.
- **Challenges and Opportunities:** The main challenges and opportunities for promoting industrial tourism varied across the countries. In Croatia, the challenge was to increase awareness and incorporate industrial sites into popular tourist routes. In Greece, the challenge was the lack of awareness and the need to diversify the tourism offerings beyond traditional focuses. In Portugal, the challenge was to overcome the perception that industrial sites are not appealing tourist destinations. In Spain (Catalonia), the challenge was to establish a clear identity for industrial tourism and increase public awareness.
- **Specific Examples:** Some countries provided specific examples of marketing initiatives. In Italy, the TIPO project in Prato was highlighted for its comprehensive approach, including thematic itineraries, guided tours, and a dedicated app. In Portugal, the "Discovering Industrial Tourism" national agenda and the Industrial Tourism Webinars were mentioned as successful promotional initiatives.

LOOKING AHEAD: CHALLENGES AND OPPORTUNITIES FOR DEVELOPMENT OF INDUSTRIAL TOURISM

When asked about the biggest challenges and opportunities for industrial tourism development, the responses revealed a mix of shared concerns and unique prospects across the six countries or regions.

Challenges:

- **Common Challenges:** Several countries identified common challenges, such as the need for greater awareness and promotion of industrial tourism, the cost and complexity of preserving and restoring

industrial sites, and the importance of balancing modernization with maintaining the authenticity of industrial heritage.

- **Technology Integration:** The integration of technology was also mentioned as both a challenge and an opportunity. While some countries highlighted the potential for technology to enhance visitor experiences, others noted the need for skilled personnel and the risk of technology creating impersonal experiences.
- **Accessibility:** Accessibility was another shared concern, with some countries acknowledging limitations in infrastructure and the need for improvements to cater to diverse needs.

Opportunities:

- **Economic and Educational Benefits:** All countries recognized the potential for industrial tourism to generate economic benefits for local communities, create jobs, and provide educational opportunities for visitors.
- **Diversification of Tourism:** The opportunity to diversify tourism offerings and attract new visitor segments was also emphasized, particularly in countries where tourism has traditionally focused on other sectors, such as beach tourism or cultural heritage.
- **Sustainability:** The importance of sustainable practices and responsible tourism development was highlighted, with several countries mentioning initiatives to minimize environmental impact and promote social inclusion.
- **Unique Opportunities:** Some countries identified unique opportunities based on their specific industrial context. For example, Greece highlighted the potential for industrial tourism to overcome the misconception that the country lacks significant industrial heritage, while Italy emphasized the importance of showcasing industrial districts and networks.

When asked about the future of industrial tourism in their respective countries, the respondents expressed a generally optimistic outlook, while also recognizing the challenges and opportunities that lie ahead.

Positive Outlook:

- **Growth and Diversification:** Most respondents anticipated continued growth and diversification in the industrial tourism sector, driven by increasing interest in heritage tourism, unique experiences, and sustainable travel options.
- **Technology Integration:** The integration of technology was seen as a key driver for future development, with countries like Croatia and Slovenia emphasizing the potential of virtual and augmented reality to enhance visitor experiences.
- **Regional Development:** Industrial tourism was also viewed as a tool for regional development, particularly in areas with strong industrial heritage or those seeking to diversify their tourism offerings.

Challenges and Opportunities:

- **Sustainability:** Maintaining financial sustainability and adapting to evolving tourism trends were identified as key challenges. The need to balance preservation with modernization and ensure accessibility for diverse visitors were also emphasized.
- **Collaboration and Innovation:** Opportunities for future development included greater collaboration among stakeholders, the creation of innovative tourism products and experiences, and the integration of industrial tourism with other forms of tourism, such as cultural, culinary, or adventure tourism.
- **Specific Recommendations:** Some respondents provided specific recommendations for further development. Croatia highlighted the need for rebranding and targeted marketing campaigns, while Greece emphasized the importance of investing in infrastructure and promoting industrial tourism as a sustainable and authentic travel option.

Industrial tourism sites, an overview

TARGET AUDIENCE

The survey revealed that industrial tourism sites cater to a diverse audience, with a strong focus on general tourists and families, who constituted 94% and 82% of the target audience respectively. This suggests that these sites are successfully attracting a broad range of visitors seeking leisure and educational experiences. Individuals also represent a significant portion of the target audience at 80%, indicating the appeal of industrial tourism for independent exploration and learning. School groups form another key demographic at 83%, highlighting the educational value of these sites in showcasing industrial processes and heritage. While corporate groups and stakeholders constitute a smaller segment of the audience at 63% and 51% respectively, their presence underscores the potential for industrial tourism to foster business connections and community engagement.

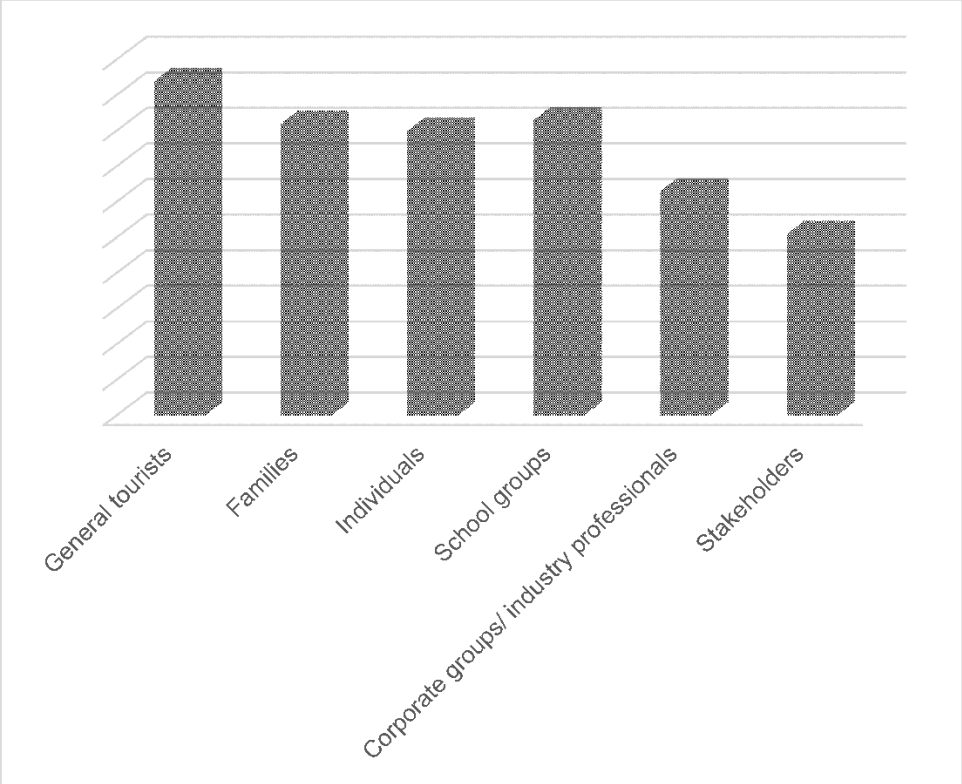

Figure 1. Target audience

Beyond the primary target groups, the survey responses indicate that industrial tourism sites are also attracting other niche audiences. The presence of "special interest tourists" suggests that these sites hold appeal for individuals with specific hobbies or areas of expertise related to industrial history, technology, or processes. Similarly, the attraction

of university students points to the potential of these sites as valuable resources for academic research and fieldwork, particularly in fields like engineering, architecture, and history. Interestingly, the mention of "wine tourists" hints at a possible connection between industrial tourism and local wine production, perhaps through sites related to the beverage industry or those located in regions known for viticulture.

TOUR LENGTH

The survey results clearly indicate that shorter tour lengths are preferred at industrial tourism sites. An overwhelming majority (74%) of the sites offer tours lasting 1-2 hours, catering to visitors who prefer a concise and focused experience. Medium-length tours (2-4 hours) are less common, with only 18% of sites offering this option. Interestingly, no sites reported offering extended tours lasting longer than 4 hours. This trend suggests that industrial tourism sites are prioritizing shorter, more manageable experiences, perhaps to accommodate a wider range of visitors and their time constraints. It may also reflect a conscious effort to maintain visitor engagement and avoid information overload.

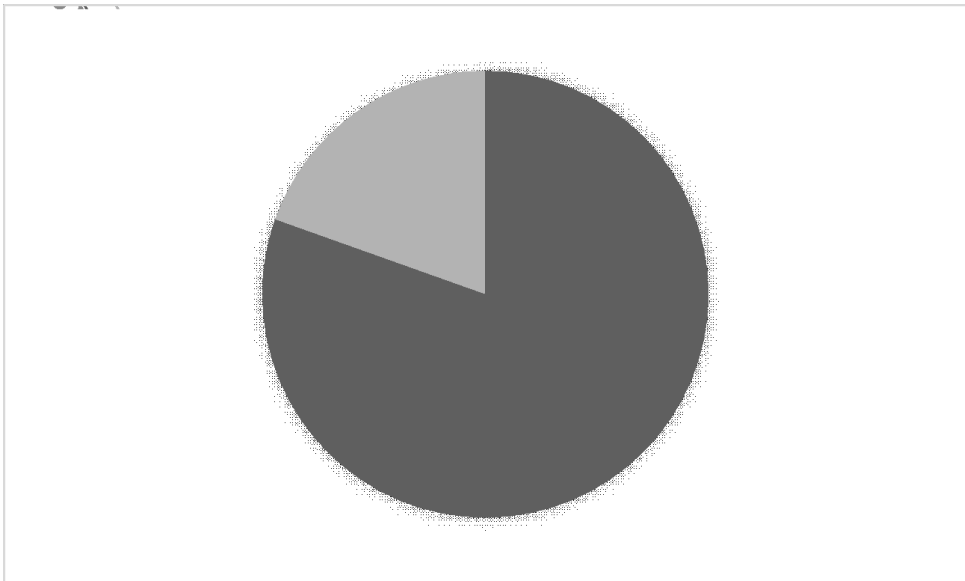

Figure 2. Tour Length

TOUR CAPACITY

The survey findings reveal a strong preference for small-group tour capacities at industrial tourism sites. The majority of sites (65%) cater to small groups of 1-5 people, suggesting an emphasis on personalized experiences and direct interaction with guides and exhibits. Medium-sized groups (6-10 people) and large groups (10+ people) are accommodated at a considerably smaller proportion of sites, with each representing 16% of the responses. This

preference for smaller tour groups may be attributed to several factors, including the nature of industrial environments, which often involve confined spaces or specialized equipment that necessitates closer supervision. Additionally, smaller groups allow for more tailored experiences and opportunities for visitors to engage in deeper learning and ask questions.

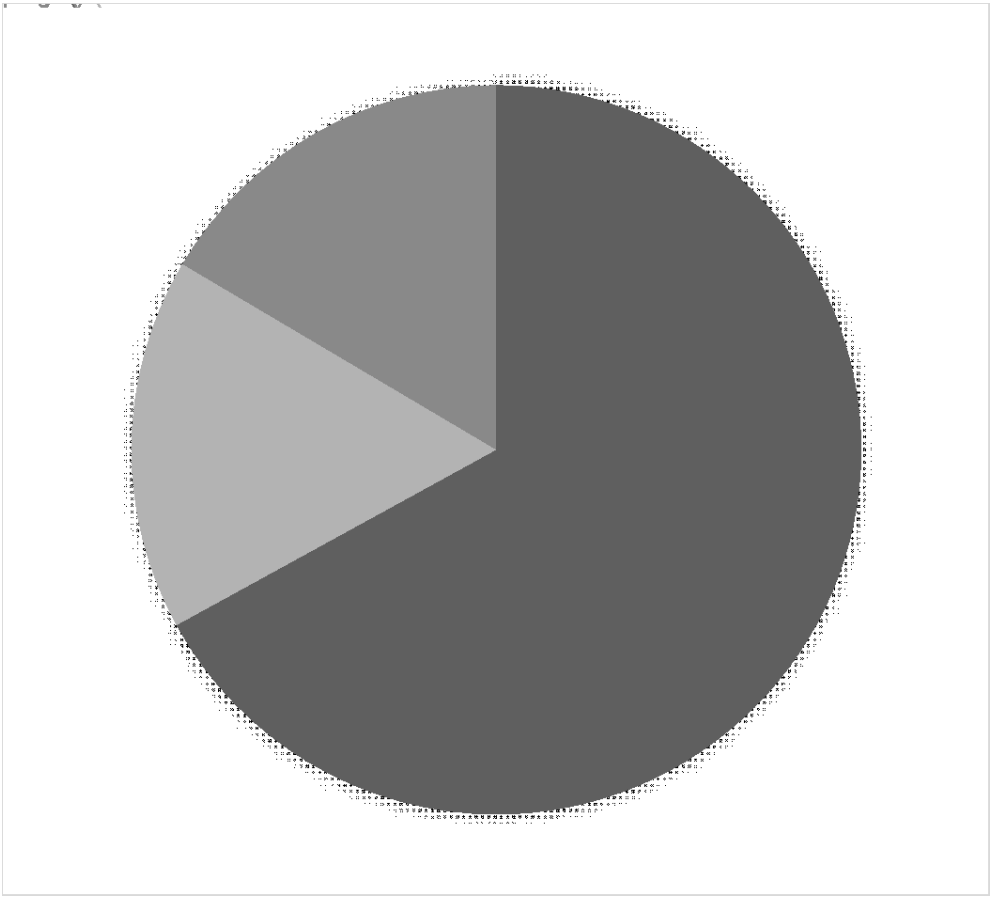

Figure 3. Tour Capacity

MAXIMUM CAPACITY OF VISITORS

The survey data indicates significant variation in the maximum visitor capacity across industrial tourism sites. While a moderate number of sites (18) accommodate small groups of 10-20 people, a larger proportion (39) are equipped to handle medium-sized groups of 20-50 visitors. Interestingly, the largest share of sites (41) reported a capacity for large groups of 50 or more people. This range in capacity likely reflects the diversity of industrial sites, with some featuring expansive spaces suitable for larger crowds, while others may involve more confined environments or specialized tours that necessitate smaller groups. The ability to accommodate larger groups may be particularly advantageous for sites aiming to attract school groups, corporate events, or large tour operators, contributing to their economic viability and educational outreach potential.

TYPE OF VISITOR EXPERIENCE

The survey results indicate a diverse range of visitor experiences offered by industrial tourism sites. Guided tours were the most popular option, with 90% of sites offering this experience. A significant majority (around 70% or more) also offered self-guided tours and interactive exhibits, highlighting a focus on engaging visitors directly with the industrial processes and history. Workshops were less common, present at 49% of the sites, suggesting a more specialized or hands-on approach to visitor engagement. Educational programs were offered by 57% of the sites, indicating a commitment to providing in-depth learning opportunities for those interested in industrial heritage and practices. Audio tours were the least supported option, available at only 29% of sites, perhaps reflecting a preference for more interactive and visually oriented experiences.

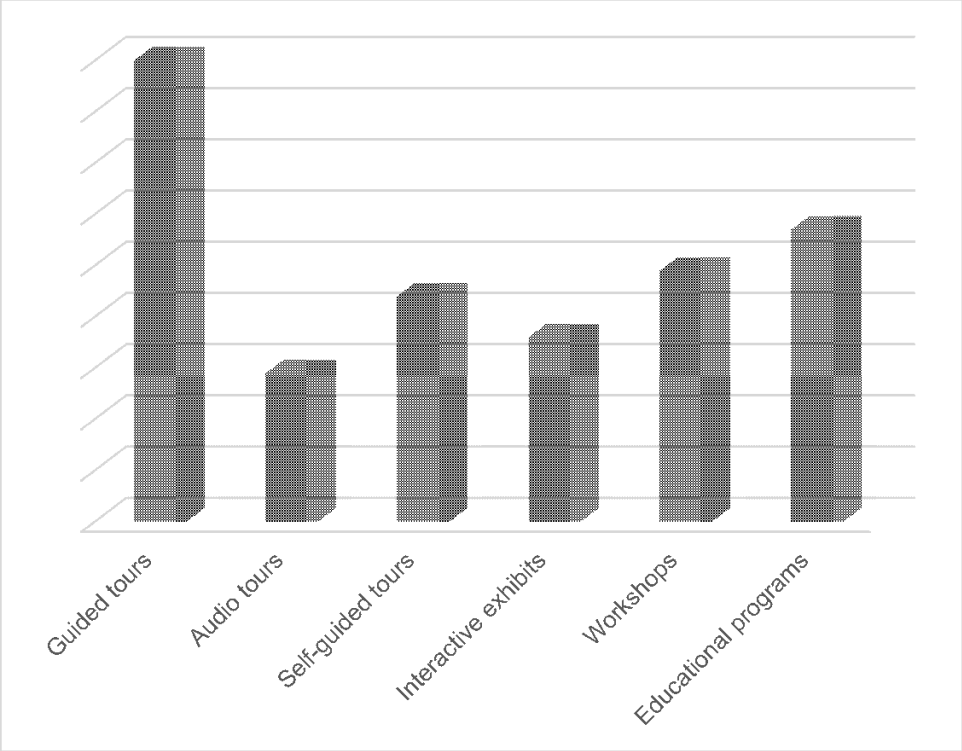

Figure 4. Type of visitor experience

In addition, the survey also revealed a range of other unique offerings at industrial tourism sites. Many sites have embraced their historical context by showcasing antiques and old equipment, providing visitors with a tangible connection to the past. Similarly, the preservation of original artisan residences offers a glimpse into the lives of those who lived and worked at these sites, adding a human element to the industrial narrative. Culinary experiences were also mentioned, suggesting that some sites have incorporated food and beverage offerings that may highlight local specialties or tie into the industrial theme. Art performances and exhibitions, though less common, point to a growing trend of integrating cultural and artistic elements into industrial tourism, potentially broadening the appeal to a wider

audience. Finally, the mention of trains in motion and visits for free suggests that some sites offer more dynamic experiences.

AMENITIES AND FACILITIES AVAILABLE TO VISITORS

The survey results highlight that industrial tourism sites are generally well-equipped with amenities to enhance the visitor experience. A large majority of sites (83) offer a welcome center and shop, providing a convenient point of entry and an opportunity for visitors to purchase souvenirs or learn more about the site. Cafeterias and cloakrooms are also relatively common, with 79 sites offering these facilities to ensure visitor comfort and convenience. However, auditoriums are less prevalent, available at only 32 sites, suggesting that large-scale presentations or gatherings may be less central to the visitor experience. Free Wi-Fi is a widely available amenity, present at 55 sites, enabling visitors to stay connected and share their experiences online. Dedicated education spaces are also relatively common, with 51 sites providing these areas for more focused learning and group activities.

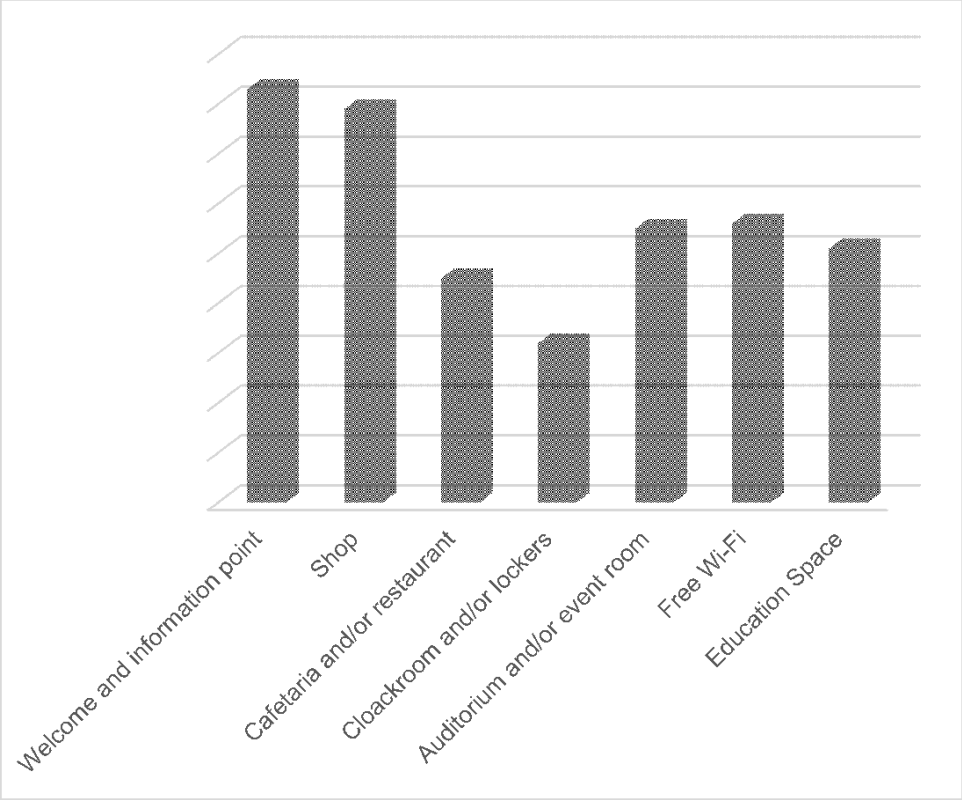

*Figure 5. **Amenities and facilities available to visitors***

Beyond the standard amenities, the survey revealed a diverse range of additional offerings that enhance the visitor experience at industrial tourism sites. Some sites capitalize on unique features like waterfront locations by offering

boating opportunities, while others provide immersive experiences with museums, virtual reality setups, and spaces for temporary exhibitions. Interpretation centers are also present at some sites, offering in-depth information and context for visitors. A few sites even host unique evening events, suggesting a focus on creating memorable and engaging experiences beyond typical daytime tours. The availability of picnic areas or cafeterias ensures that visitors can comfortably spend extended time at the site. Finally, the mention of wine tasting events and laboratories points to the potential for industrial tourism sites to diversify their offerings and cater to specific interests, such as enotourism or scientific exploration.

Marketing & Communication

MARKETING AND PROMOTION INFORMATION

The survey findings indicate that industrial tourism sites utilize a variety of marketing and promotion strategies, with a strong emphasis on digital and traditional channels. Websites are the most popular tool, employed by 84 sites, providing a comprehensive platform for showcasing attractions, tour information, and visitor resources. Social media is also widely utilized by 82 sites, enabling direct engagement with potential visitors and facilitating the sharing of visual content. Brochures and visitor centers remain important for disseminating information and providing on-site support, with 67 and 48 sites respectively utilizing these channels.

However, the relatively low numbers for partnerships with tourism entities (48) and media coverage (34) suggest potential areas for improvement. The limited engagement with tourism entities could indicate missed opportunities for collaborative marketing initiatives and broader regional tourism integration. Similarly, the low media coverage may reflect a lack of proactive media relations and communication strategies, potentially hindering wider public awareness and recognition of industrial tourism offerings. By strengthening partnerships and enhancing media outreach, industrial tourism sites could further expand their reach and attract a larger and more diverse audience.

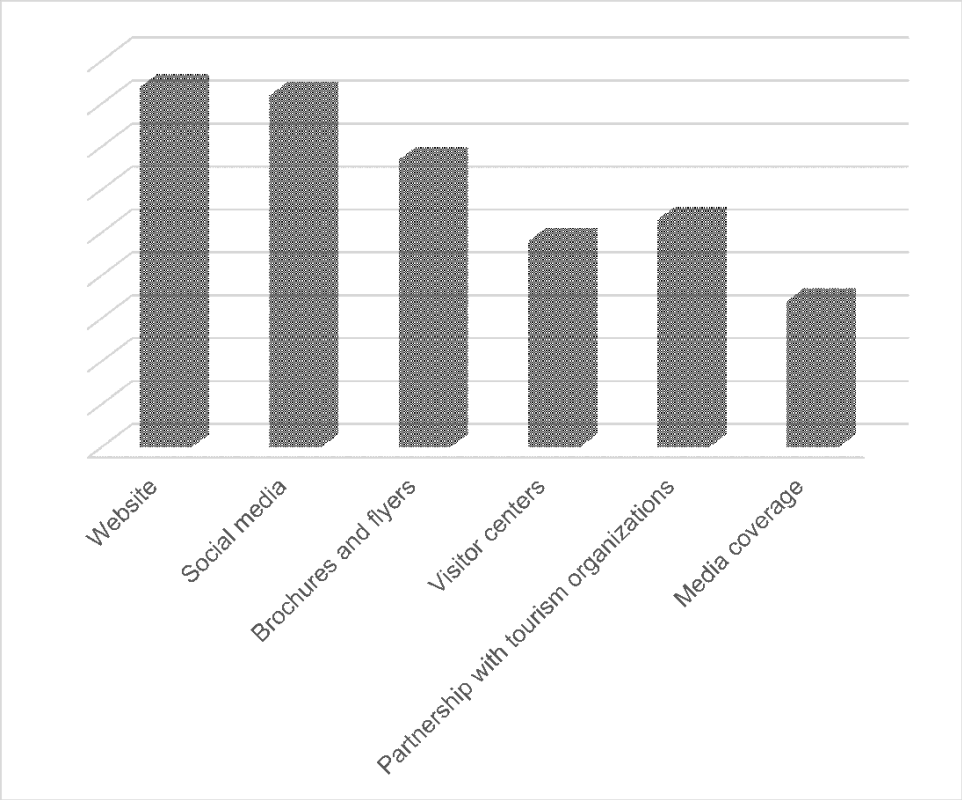

Figure 6. Marketing and Promotion Information

The survey responses also revealed other approaches to communication strategies employed by industrial tourism sites. International collaborations suggest a proactive effort to expand reach and attract visitors from diverse geographical locations. The utilization of mobile applications indicates a commitment to leveraging technology to enhance the visitor experience and provide accessible information. Furthermore, the presence of mail campaigns and tourist information points demonstrates a dedication to reaching potential visitors through traditional channels and local networks. Word-of-mouth marketing, highlighted in the responses, underscores the importance of positive visitor experiences in generating organic promotion and recommendations.

POSITIONING

The survey results demonstrate a strong understanding among industrial tourism sites of the importance of effective positioning and differentiation strategies. A vast majority (91) emphasize their unique historical significance, recognizing the value of their industrial heritage in attracting visitors seeking authentic and educational experiences. Many sites (62) also highlight innovative aspects, showcasing modern technologies or processes alongside historical exhibits to engage a wider audience. Location appears to be a key differentiator for 48 sites, suggesting that some capitalize on their proximity to other attractions or their integration within a specific regional context. Pricing strategies are also employed by 26 sites, potentially offering unique packages or value-added services to stand out

from competitors. Finally, 42 sites leverage special events to enhance their appeal, creating unique visitor experiences that generate excitement and attract new audiences.

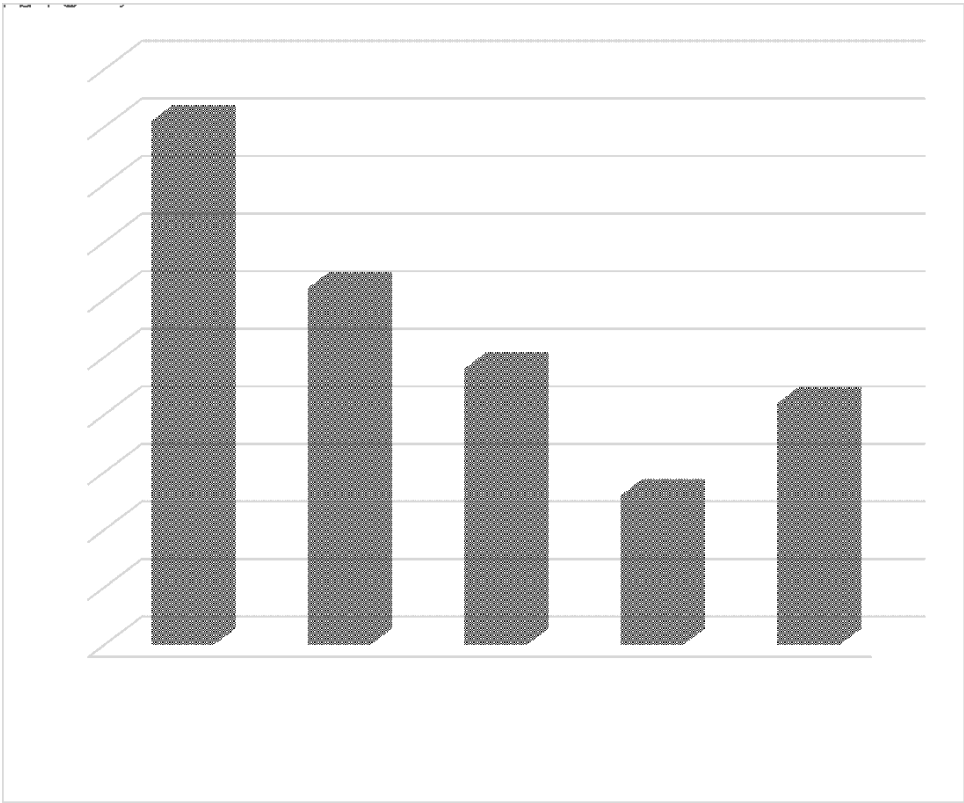

Figure 7. Positioning and differentiation arguments

Beyond the core positioning strategies, industrial tourism sites showcase a diverse array of unique selling points. Some emphasize the educational value of their offerings, providing insights into industrial processes, technological advancements, and the social impact of industry. Others focus on the authenticity of their sites, highlighting original machinery, preserved architecture, and the stories of the people who lived and worked in these industrial environments. Some sites leverage their connection to specific products or industries, such as those related to food production, textiles, or transportation, to attract niche audiences. The integration of interactive exhibits, special events, and social projects further enhances the visitor experience and creates a sense of community engagement. By diversifying their offerings and highlighting unique aspects, industrial tourism sites effectively cater to a wide range of interests and motivations, ensuring their continued relevance and appeal in a competitive tourism landscape.

PRICING

The survey revealed a wide range of admission prices at industrial tourism sites, indicating varying approaches to revenue generation and accessibility. While a significant number of sites (17) offer free admission, likely aiming to maximize public engagement and educational opportunities, the majority charge fees that vary considerably. These

fees range from modest amounts (e.g., €3, €5) to more substantial sums (e.g., €20, €28), possibly reflecting differences in the scale, scope, and exclusivity of the visitor experience. It's important to note that the reported prices represent regular admission fees and that many sites likely offer discounted rates for specific visitors such as children, students, seniors, and groups.

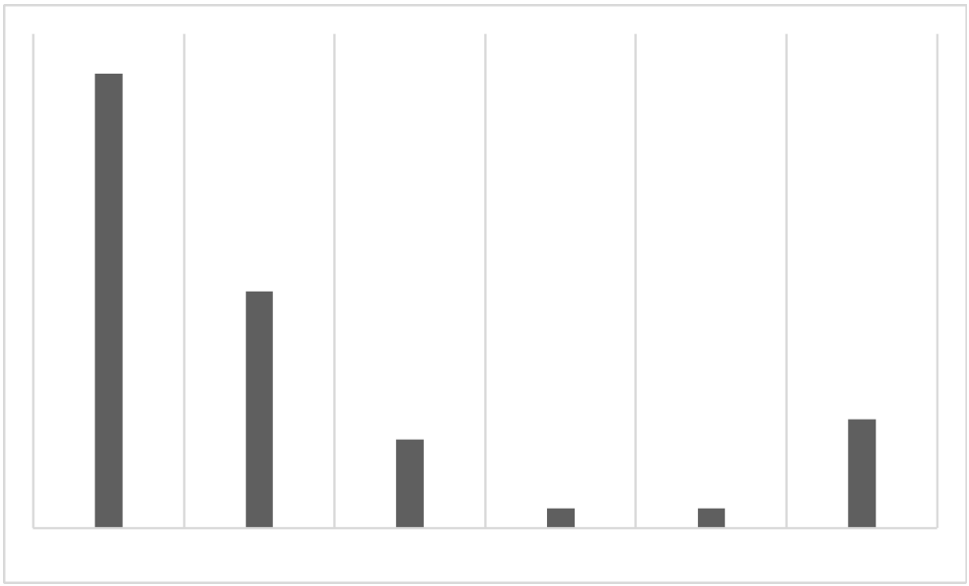

Figure 8. Price frequencies

Technologies usage

TECHNOLOGIES USED TO ENHANCE THE VISITOR EXPERIENCE

The survey reveals a varied landscape in the adoption of technology to enhance visitor experiences at industrial tourism sites. Interactive exhibits are the most prevalent, employed by 35 sites, suggesting a focus on engaging visitors with hands-on displays and multimedia content. Audio guides are also relatively common, offered at 25 sites, providing visitors with detailed explanations and historical context as they explore the site. Self-guided tours are utilized by 23 sites, allowing visitors to explore at their own pace and delve into areas of particular interest. However, more advanced technologies like virtual reality (24 sites) and augmented reality (10 sites) are less widely adopted, indicating that these immersive experiences may still be emerging in the industrial tourism sector. This variation in technology adoption likely reflects differences in resources, target audiences, and the specific characteristics of each site.

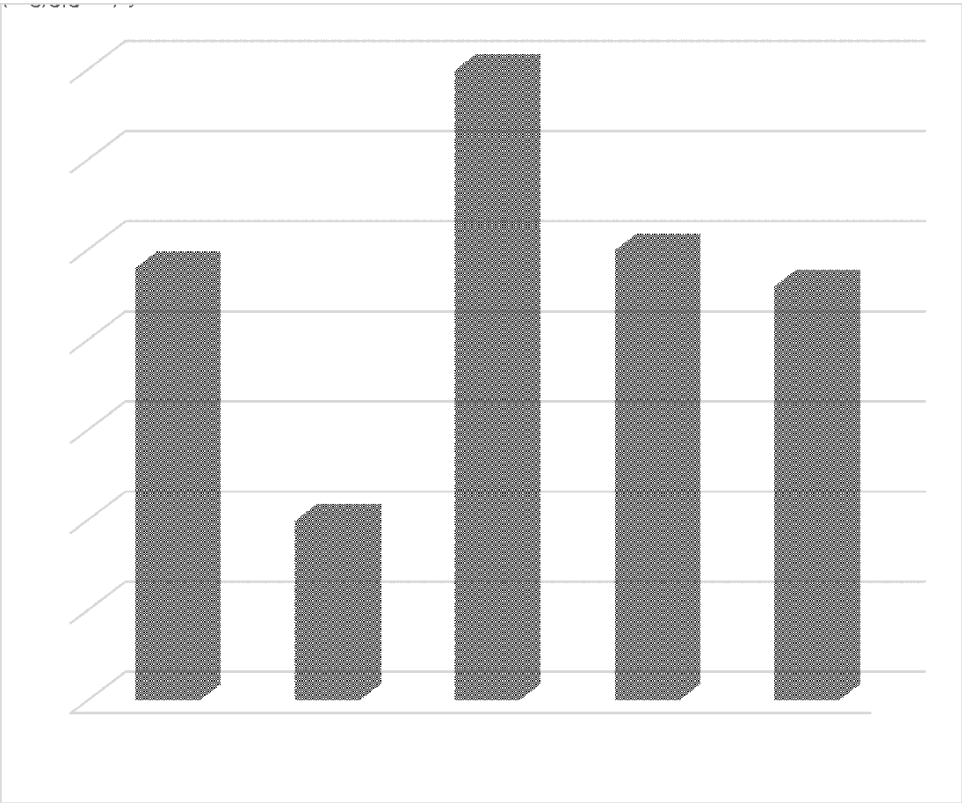

Figure 9. Technologies used to enhance the visitor experience

While the survey highlighted the core technologies used by industrial tourism sites, a range of other tools also contribute to enriching the visitor experience. Video presentations appear to be a popular choice, offering visual narratives and additional insights. Some sites utilize more advanced visual technologies like 3D visualizations and video walls to create impactful and engaging displays. Interactive maps and "Visionmap" technology, though less common, suggest an interest in providing visitors with interactive tools to explore the site and its history independently. The presence of online reservation systems further streamlines the visitor experience, offering convenience and flexibility in planning visits.

TECHNOLOGY APPLICATIONS

The survey findings illustrate a strong focus on visitor engagement and accessibility through the application of technology at industrial tourism sites. A significant number of sites (58) prioritize providing immersive experiences, likely through multimedia presentations, interactive displays, and virtual tours. An equal number (58) aim to make complex information more accessible, potentially through visualizations, simplified explanations, and interactive learning tools. Catering to diverse learning styles is also a priority for 35 sites, suggesting the use of varied media and

technology to accommodate different preferences and needs. Furthermore, 30 sites emphasize hands-on learning, incorporating interactive exhibits and simulations that allow visitors to actively engage with industrial processes and concepts.

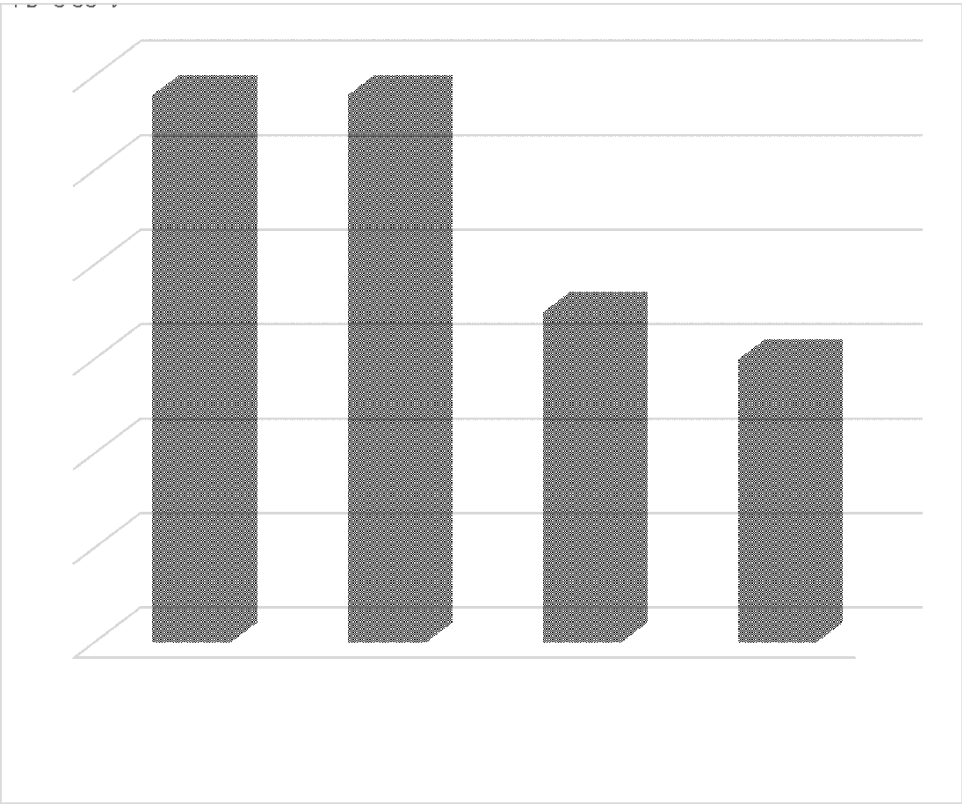

Figure 10. Technology application

Beyond the primary applications of technology, industrial tourism sites are exploring a range of other innovative approaches to enhance the visitor experience. Accessibility features, such as audio descriptions and tactile exhibits, ensure that individuals with diverse needs can fully engage with the site's offerings. Language support through translation services and multilingual guides caters to international visitors and promotes inclusivity. Interactive games and quizzes offer a fun and engaging way to learn about industrial processes and history, appealing particularly to younger audiences. Personalized experiences, potentially enabled through data analysis and visitor profiling, allow for customized tours and recommendations. The use of technology to gather visitor feedback provides valuable insights for continuous improvement and tailored experiences.

TECHNOLOGIES TO MANAGE VISITOR FLOW AND ENSURE SAFETY

The survey results indicate a varied approach to managing visitor flow and ensuring safety at industrial tourism sites. A significant number of sites (42) employ technologies to guide visitors throughout their experience, likely through interactive maps, audio guides, and clearly marked pathways. This approach enhances visitor engagement while facilitating a smooth and organized flow. A smaller proportion of sites (30) utilize technology to provide real-time information and updates to visitors, potentially through digital displays, mobile apps, or announcements, ensuring they are well-informed and prepared for any changes or safety procedures. Fewer sites (16) leverage technology to actively alert visitors to potential hazards or safety concerns, possibly through sensors, alarms, or automated notifications, prioritizing visitor safety in potentially hazardous industrial environments. Finally, 24 sites employ technology to offer interactive safety training or simulations, allowing visitors to engage with safety protocols in an engaging and informative manner.

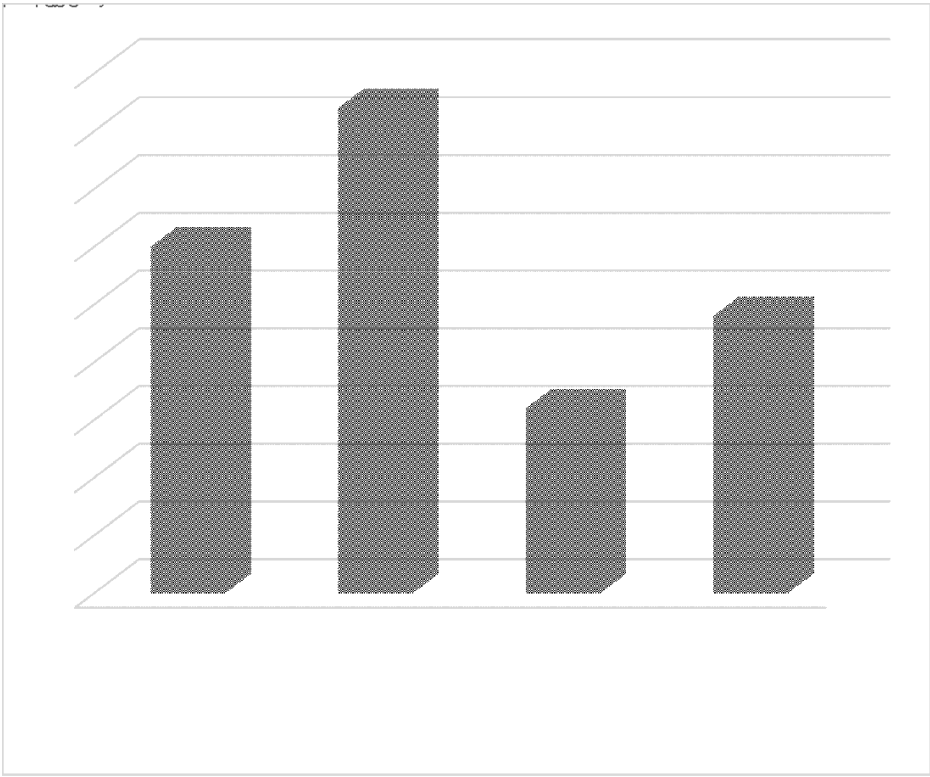

Figure 11. Technologies to manage visitor flow and ensure safety

While the survey captured the primary technological tools used to manage visitor flow and safety, a variety of other innovative applications also emerged. Some sites leverage technology to provide real-time updates on wait times and crowd levels, allowing visitors to plan their visit strategically and avoid potential congestion. Others utilize virtual queuing systems to minimize physical lines and optimize visitor flow, particularly during peak hours. Smart sensors and cameras play a crucial role in monitoring visitor density and movement, enabling proactive management of crowds and ensuring safety compliance. Automated alerts and notifications inform staff of potential safety issues or overcrowding, facilitating prompt responses and interventions.

BARRIERS TO TECHNOLOGY IMPLEMENTATION

The survey results highlight several key barriers hindering wider technology implementation at industrial tourism sites. Cost of implementation emerges as the most significant challenge, with 77 sites identifying it as a major obstacle. This suggests that financial constraints may limit the adoption of advanced technologies like virtual or augmented reality, which often require significant investment. Integration with existing systems is another concern for 55 sites, indicating potential difficulties in seamlessly incorporating new technologies with current infrastructure and processes. User experience is also a consideration for 49 sites, highlighting the importance of ensuring that technology enhances rather than hinders visitor engagement and enjoyment. Data privacy concerns are raised by 15 sites, reflecting a growing awareness of the importance of responsible data management and visitor information security.

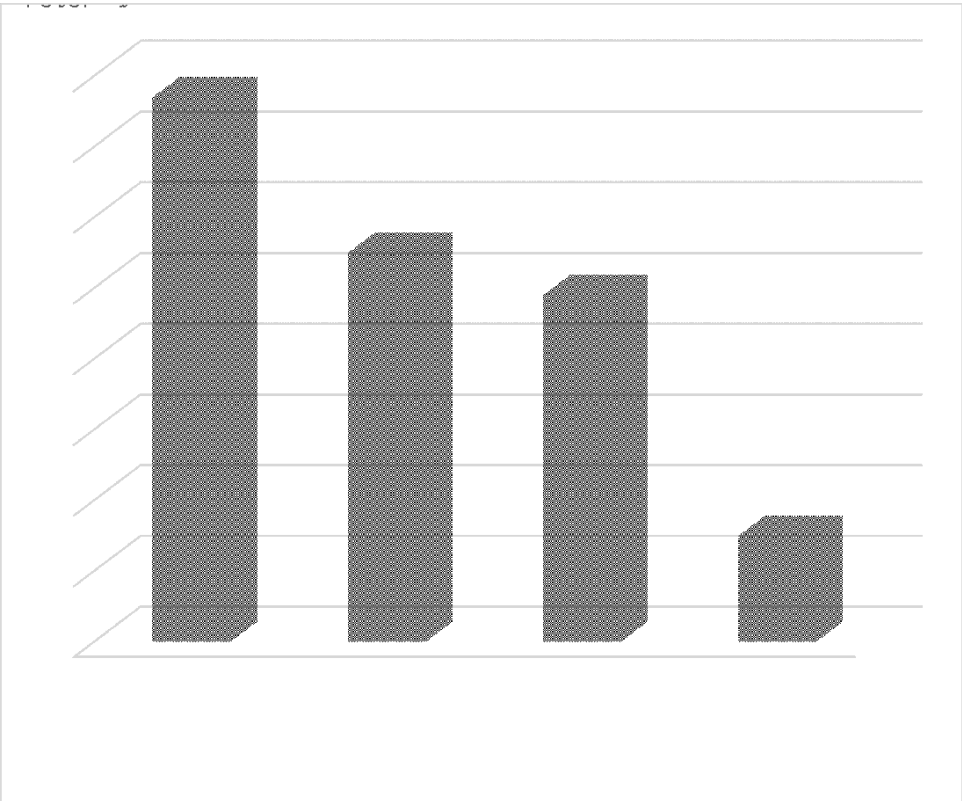

Figure 12. Barriers to technology implementation

In addition to the main barriers identified, the survey revealed further challenges to technology implementation at industrial tourism sites. Several respondents cited the risk of losing the direct connection with visitors, a concern that technology might create an impersonal or overly structured experience. This highlights the importance of balancing technological enhancements with opportunities for authentic human interaction and personalized guidance. Limited internet connectivity was mentioned as an obstacle for some sites, particularly those in remote locations, hindering

the implementation of online resources and interactive tools that rely on stable internet access. The lack of skilled personnel to operate and maintain new technologies was also identified as a barrier, emphasizing the need for training and support to ensure effective technology integration. These findings underscore the complexity of technology adoption in the industrial tourism sector, requiring careful consideration of not only financial and logistical factors but also the potential impact on the visitor experience and the need for adequate resources and staff training.

Sustainability

ENVIRONMENTAL SUSTAINABILITY PRACTICES

The survey results indicate a strong commitment to environmental sustainability among industrial tourism sites. A significant majority of the sites (46) prioritize the use of recycled and reused materials, demonstrating a commitment to resource conservation and waste reduction. Energy efficiency is also a key focus for 43 sites, likely through the adoption of energy-saving technologies and practices, contributing to reduced environmental impact and operational costs. Water conservation measures are employed by 25 sites, reflecting a responsible approach to water resource management, particularly crucial in water-stressed regions. Waste management strategies are implemented by 29 sites, suggesting efforts to minimize waste generation, promote recycling, and responsibly dispose of waste materials. These findings highlight the growing awareness and adoption of sustainable practices within the industrial tourism sector, contributing to environmental protection and responsible tourism development.

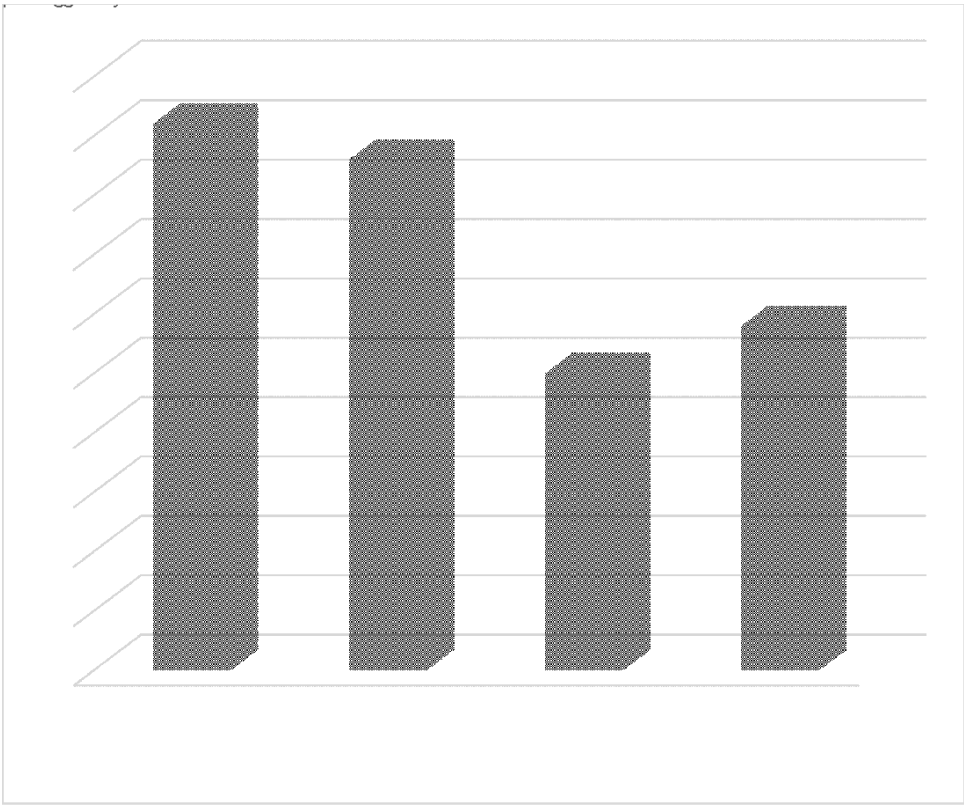

Figure 13. Environmental sustainability practices

Beyond the core sustainability practices, the survey uncovered a range of other environmentally conscious initiatives undertaken by industrial tourism sites. Several sites highlighted their efforts to minimize their carbon footprint, likely through initiatives such as utilizing renewable energy sources, promoting sustainable transportation options, and offsetting carbon emissions. Others emphasized their commitment to preserving biodiversity and protecting local ecosystems, potentially through habitat restoration projects, responsible landscaping practices, and educational programs focused on environmental awareness. Some sites mentioned active involvement in community initiatives and partnerships with local organizations to promote sustainability and environmental responsibility.

ECONOMIC SUSTAINABILITY PRACTICES

The survey findings reveal a strong awareness of economic sustainability within the industrial tourism sector, with sites actively contributing to the well-being of their communities and regions. A significant number of sites (81) emphasize their role in promoting regional heritage, recognizing the importance of preserving and showcasing local history and culture. Many sites (56) also highlight their contribution to local employment, providing job opportunities and economic benefits to the surrounding community. Investment in infrastructure is a priority for 51 sites, indicating a commitment to improving local facilities and contributing to regional development. Furthermore, 55 sites recognize the indirect economic benefits they generate, such as supporting local businesses and stimulating tourism in the region.

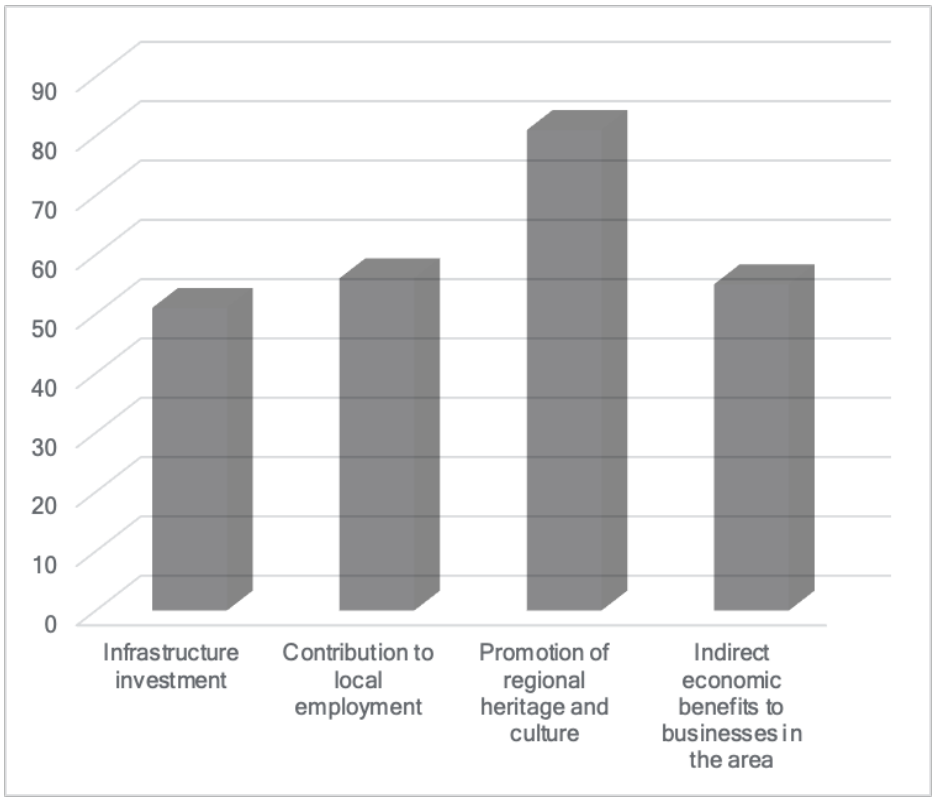

Figure 14. Economic sustainability practices

In addition to the key economic sustainability practices already mentioned, the survey responses revealed a range of other commendable initiatives. Several sites highlighted their commitment to inclusivity and accessibility, ensuring that their facilities and programs cater to diverse needs and abilities. Some emphasized their efforts to engage with local communities through educational programs, volunteer opportunities, and partnerships with local organizations. Others mentioned specific initiatives such as supporting local artisans, promoting cultural events, and contributing to historical preservation efforts. These diverse actions demonstrate a broader understanding of economic responsibility within the industrial tourism sector, recognizing the importance of contributing to the well-being of local communities and preserving cultural heritage for future generations.

SOCIAL SUSTAINABILITY PRACTICES

The survey results demonstrate a commendable commitment to social sustainability within the industrial tourism sector, with sites actively engaged in a variety of practices that benefit their local communities and regions. Education and awareness initiatives are a key focus for 81 sites, suggesting a dedication to educating visitors and the public about industrial heritage, processes, and their social and environmental impact. Preservation of industrial history is prioritized by 57 sites, recognizing the importance of safeguarding tangible and intangible cultural heritage for future generations. Enhancement of local pride is fostered by 73 sites, likely through showcasing local achievements, celebrating industrial heritage, and involving the community in tourism activities. Furthermore, 54 sites actively work towards fostering a sense of community, potentially through collaborations with local organizations, supporting community events, and providing spaces for social interaction. These diverse social sustainability practices demonstrate a commitment to responsible tourism that extends beyond the immediate visitor experience to encompass broader community development and cultural preservation goals.

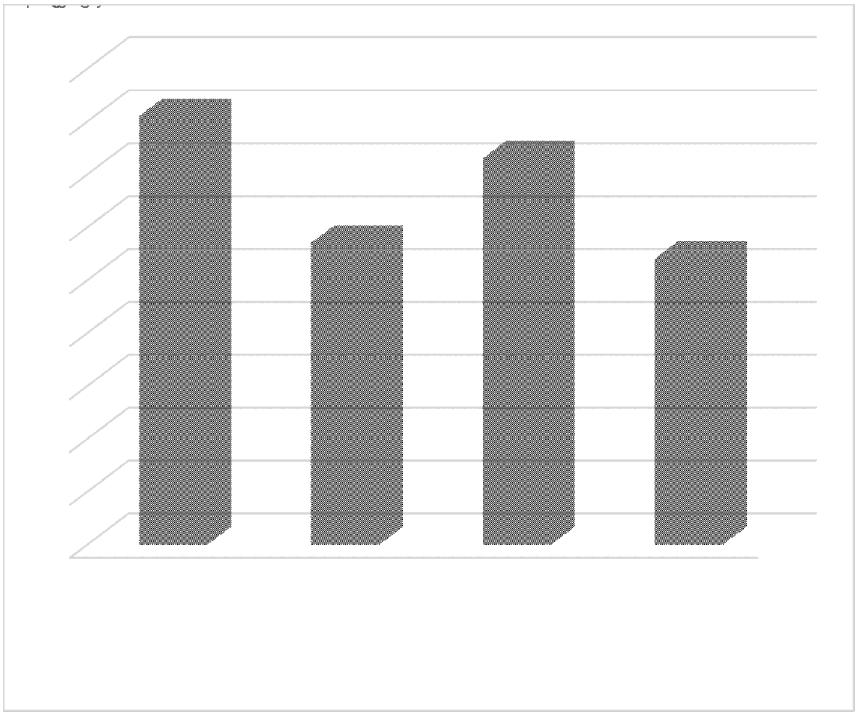

Figure 15. Social sustainability practices

Beyond the core social sustainability practices, the survey responses highlighted a range of other valuable initiatives. Several sites emphasized their commitment to social inclusion, ensuring accessibility for people with disabilities and offering programs designed to engage diverse social groups. Support for local foundations and charities was also mentioned, demonstrating a commitment to contributing to the broader well-being of the community. Some sites highlighted their efforts to integrate refugees and immigrants, providing opportunities for cultural exchange and social

cohesion. Others mentioned initiatives aimed at empowering vulnerable groups, such as offering workshops and training programs to enhance skills and promote social participation.

ACCESSIBILITY

The survey results reveal a mixed picture regarding accessibility at industrial tourism sites. While a majority of sites (62) report being wheelchair accessible, a significant number (39) indicate accessibility for individuals with specific needs, suggesting that accommodations are made for various disabilities beyond wheelchair users. However, a concerning proportion (30) of sites acknowledge limited accessibility, highlighting an area where improvement is needed to ensure inclusivity for all visitors. This limitation may be due to the historical nature of industrial sites, which might present challenges in retrofitting for full accessibility. Nevertheless, it underscores the importance of continued efforts to improve accessibility features and provide detailed information about access limitations to allow visitors to plan their visits effectively.

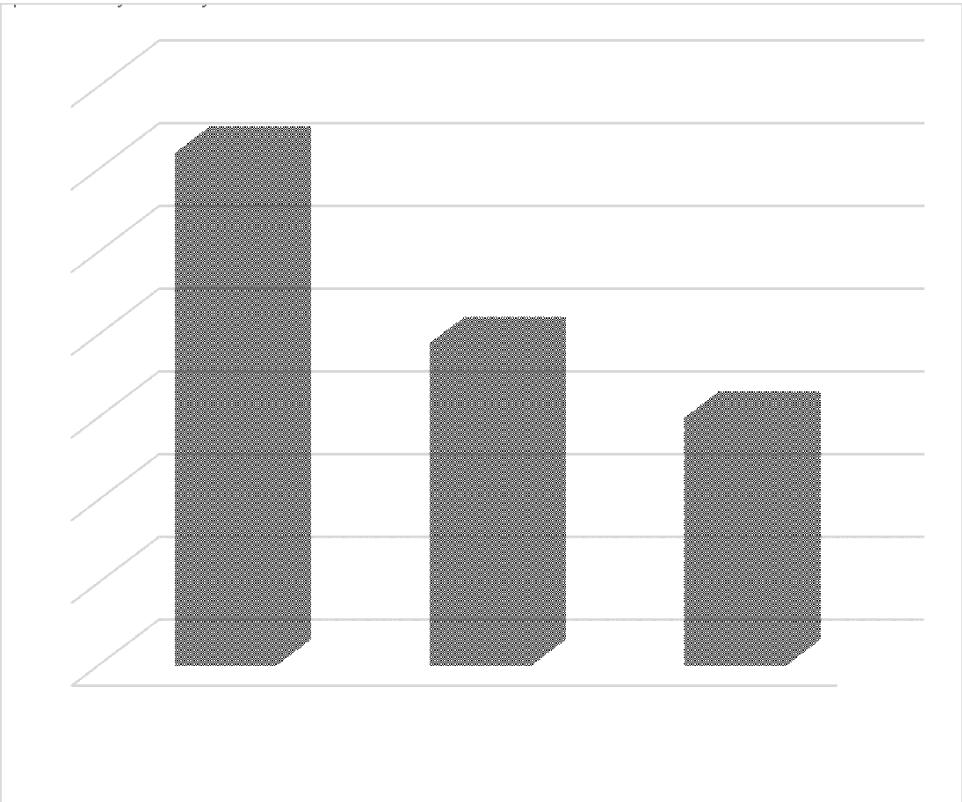

Figure 16. Accessibility of the site

Performance indicators

NUMBER OF VISITORS

The industrial tourism sites surveyed attracted a diverse range of visitor numbers, reflecting variations in site capacity, attractions, and target audiences. The total number of visitors reported across all sites was 1,776,264, indicating a significant interest in industrial heritage and experiences. The average number of visitors per site was approximately 18,896, though this figure is influenced by a wide range, with some sites attracting smaller, specialized audiences while others accommodate large crowds. The most visited site reported an impressive 500,000 visitors, highlighting the potential for industrial tourism to attract substantial audiences and generate significant economic and cultural impact.

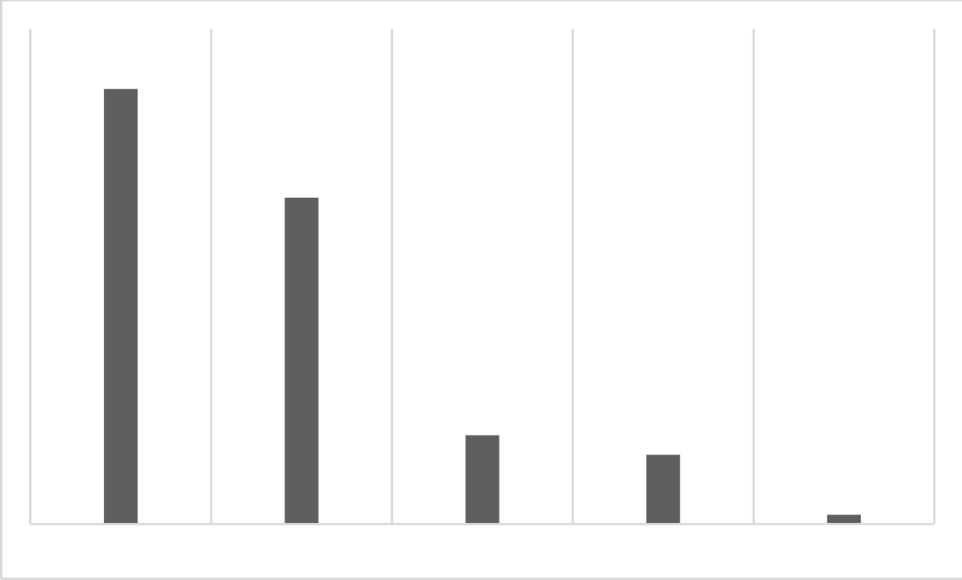

Figure 17. Histogram of the number of visitors

A significant portion of the sites attract a modest number of visitors annually, with 42 reporting less than 5000 visitors. This suggests that a considerable segment of industrial tourism caters to niche audiences or operates on a smaller scale, focusing on specialized experiences or serving as educational resources for local communities. Another 35 sites reported visitor numbers between 5000 and 20000, indicating a moderate level of visitation that balances broader appeal with a more personalized or intimate visitor experience.

NUMBER OF EVENTS

The survey also explored the number of events hosted by industrial tourism sites as a measure of their engagement and outreach efforts. The responses revealed a wide range, with some sites hosting a modest number of events, likely focused on specific themes or occasions, while others organized a more extensive program of activities. A significant number of sites reported hosting between 10 and 50 events annually, suggesting a consistent effort to provide diverse and engaging experiences for visitors and local communities.

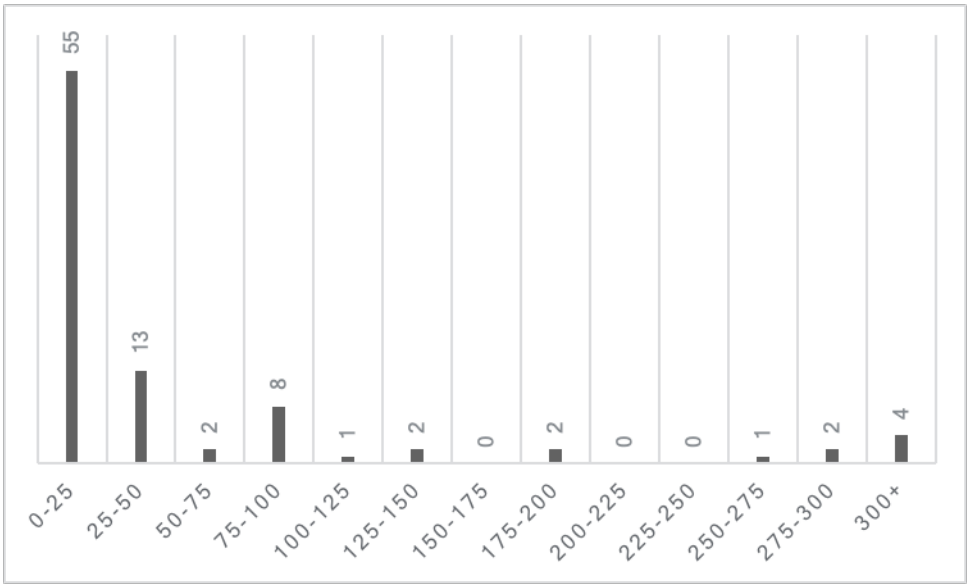

Figure 18. Histogram of the number of events

A significant portion of these sites (59) reported organizing less than 25 events per year, suggesting a focus on smaller-scale activities, specialized tours, or educational programs that cater to specific audiences. Another 20 sites indicated hosting between 25 and 50 events annually, demonstrating a more active approach to event programming and visitor engagement.

VISITOR'S SATISFACTION

The survey data reveals a generally high level of visitor satisfaction among industrial tourism sites. Across the 95 responses, satisfaction levels ranged from a minimum of 3 to a maximum of 5, with no sites reporting average satisfaction scores below 3. This suggests that visitors generally find their experiences at these sites to be positive and rewarding. The most frequent satisfaction score was 5, indicating that a considerable number of sites consistently deliver highly satisfactory experiences. While the data doesn't reveal the specific factors driving satisfaction, it suggests that industrial tourism sites are successfully engaging visitors and providing valuable experiences.

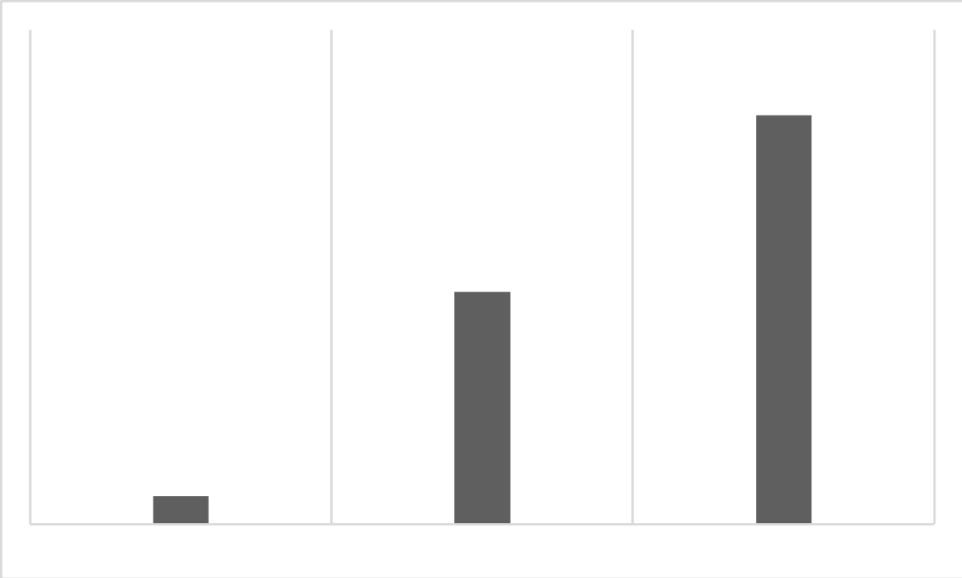

Figure 19. Histogram of the visitor's satisfaction

SWOT Analysis

To gain a deeper understanding of the internal and external factors influencing the success of industrial tourism sites, a SWOT analysis was conducted, examining both short-term and long-term perspectives. This involved identifying internal strengths and weaknesses, as well as external opportunities and threats. The decision to create two separate SWOT tables stems from the recognition that certain factors exert their influence over shorter timeframes, while others have a more enduring impact. This distinction allows for a more nuanced understanding of the challenges and prospects within the industrial tourism sector.

In the short term, industrial tourism sites can leverage their diverse visitor experiences, amenities, and online presence to attract visitors and enhance satisfaction. However, they must also address accessibility issues, cost barriers to technology adoption, and potential competition from other tourism sectors. Collaborative marketing initiatives and targeted events can further enhance their appeal and reach.

Short-Term SWOT Analysis for Industrial Tourism Sites

Strengths	Weaknesses	Opportunities	Threats
Diverse visitor experiences offered, including guided tours, interactive exhibits, and workshops.	Limited accessibility at some sites, hindering inclusivity for all visitors.	Potential for increased media coverage and public relations efforts to raise awareness.	Competition from other tourism sectors and changing visitor preferences.
Well-equipped with amenities such as welcome centers, shops, and cafeterias.	Cost of implementing advanced technologies can be a barrier.	Collaboration with tourism entities and local businesses for joint marketing initiatives.	Economic downturns and seasonal variations impacting visitor numbers.
Strong online presence with websites and social media platforms.	Integration of new technologies with existing systems can be challenging.	Organizing special events and themed tours to attract diverse visitor segments.	Negative perceptions or safety concerns related to industrial environments.
Focus on visitor engagement and education through interactive exhibits and guided tours.	Ensuring user experience is not compromised by technology integration.	Leveraging online platforms for visitor feedback and continuous improvement.	
Commitment to environmental sustainability through recycling, energy efficiency, and water conservation.			
Active promotion of regional heritage and contribution to local employment.			

From a long-term perspective, the preservation of industrial history, community engagement, and commitment to sustainability serve as key strengths. However, sites must also address the challenge of balancing technology integration with authentic human interaction, ensuring internet connectivity, and developing a skilled workforce to manage technological advancements. Long-term financial sustainability and adapting to evolving tourism trends are also crucial for continued success.

Long-Term SWOT Analysis for Industrial Tourism Sites

Strengths	Weaknesses	Opportunities	Threats
Preservation of industrial history and showcasing of unique historical significance.	Balancing technology integration with authentic human interaction.	Developing immersive experiences with virtual and augmented reality technologies.	Long-term financial sustainability and securing funding for ongoing operations and development.
Strong community engagement through education programs, partnerships, and social initiatives.	Limited internet connectivity in some locations hindering online initiatives.	Expanding accessibility features to cater to diverse needs and abilities.	Maintaining relevance and adapting to evolving tourism trends and technological advancements.
Commitment to social sustainability through inclusivity, local partnerships, and cultural preservation.	Lack of skilled personnel to operate and maintain advanced technologies.	Creating partnerships with educational institutions for research and training opportunities.	Climate change impacts and potential environmental risks associated with industrial sites.
Focus on providing accessible and engaging experiences for diverse learning styles.	Data privacy concerns requiring robust data management protocols.	Developing sustainable transportation options and promoting responsible tourism practices.	
High level of visitor satisfaction indicating positive experiences and potential for repeat visits.			
Contribution to regional development through investment in infrastructure and support for local businesses.			

In summary, industrial tourism sites exhibit considerable strengths in visitor engagement, sustainability practices, and community involvement. However, they must address key challenges related to accessibility, technology adoption, and long-term financial sustainability. As such, the development strategy must effectively leverage existing strengths

and mitigating weaknesses, where industrial tourism sites should capitalize on emerging opportunities and navigate potential threats to ensure their continued growth and contribution to local communities and regional development.

Appendix - Questionnaires used in the survey

COUNTRY LEVEL FORM

General Information:

Country Name:

Respondent Name:

Respondent Title/Organization:

Date of Completion:

Current State of Industrial Tourism:

Please provide a brief overview of the current state of industrial tourism in your country.

How many operational industrial tourism sites are there in your country?

Are there any specific regions in your country with a concentration of industrial tourism sites?

What is the average number of visitors per year to industrial tourism sites in your country?

Which industries are most commonly involved in industrial tourism?

What are the most popular types of industrial tourism experiences offered? (e.g., guided tours, workshops, interactive exhibits)

What are the main target audiences for industrial tourism in your country? (e.g., families, school groups, tourists)

What are the biggest challenges and opportunities for the development of industrial tourism in your country?

Government Policies and Support:

Does your government have any specific policies or initiatives to support industrial tourism development?

If yes, please describe these policies and initiatives.

How effective have these policies been in promoting industrial tourism?

Data and Statistics:

Are there any official statistics available on the number of industrial tourism visitors and revenues generated?

If yes, please share the most recent data you have access to.

Are there any trends or patterns you can identify in these data?

Technology Integration:

To what extent are technologies being used to enhance industrial tourism experiences in your country? (e.g., VR, AR, interactive touchscreens, audio guides, self-guided apps)

What are the most common technologies used, and in which industries are they being implemented?

Are there any specific examples of successful technology integration in industrial tourism initiatives in your country?

Marketing & Promotion:

How are industrial tourism sites in your country typically marketed and promoted?

Are there any national or regional marketing campaigns for industrial tourism?

What are the main challenges and opportunities for promoting industrial tourism in your country?

Examples and Best Practices:

Can you share some examples of successful industrial tourism initiatives in your country?

What are the key factors that contribute to their success?

Are there any best practices for industrial tourism development that you would like to share?

Future Outlook:

What do you see as the future of industrial tourism in your country?

What are the main challenges and opportunities that lie ahead?

What are your recommendations for further development of this sector?

Additional Comments:

Please feel free to share any additional information or comments you have about industrial tourism in your country.

INDUSTRIAL SITE LEVEL FORM

Part I – Characterization

Case Study Title (Industrial Site):

Location:

Country:

Industry:

Year Established:

Dimension (Km^2)

Visitor Experience:

- Type of visitor experience (guided tours, self-guided tours, workshops, etc.)
  - Guided tours
  - Audio tours
  - Self-guided tours
  - Interactive exhibits
  - Workshops
  - Educational programs
- Target audience:
  - General tourists
  - Families
  - Individuals
  - School groups
  - Corporate groups/ industry professionals
  - Special interest groups
- Tour Length:
  - Short (1-2 hours)
  - Medium (2-4 hours)
  - Long (4+ hours)
- Tour Capacity:
  - Small (10-20 people)
  - Medium (20-50 people)
  - Large (50+ people)
- Amenities and facilities available to visitors
- Pricing information

- Accessibility
  - Wheelchair accessible
  - Accessible for individuals with disabilities
  - Limited accessibility
- Marketing and Promotion Information
  - How is the site marketed?
    - Website
    - Social media
    - Brochures and flyers
    - Visitor centers
    - Partnership with tourism organizations
  - Media coverage
    - How does the site attract visitors?
    - Unique historical or cultural significance
    - Innovative visitor experiences
    - Location and accessibility
    - Pricing and packages
    - Special events and promotions

Part II - Technologies implemented

What technologies are used to enhance the visitor experience?

- Virtual reality (VR)
- Augmented reality (AR)
- Interactive touchscreens
- Audio guides
- Self-guided tour apps
- Other:

How do these technologies help to educate visitors about the site's history, industry, and processes?

- Provide immersive and engaging experiences
- Make complex information more accessible
- Cater to different learning styles
- Offer hands-on learning opportunities
- Other

How do these technologies help to manage visitor flow and ensure safety?

- Provide real-time information about tour availability and wait times
- Guide visitors through the site in an efficient and organized manner
- Alert visitors to potential hazards or safety concerns
- Offer interactive maps and navigation tools
- Other

How do these technologies contribute to sustainability and environmental responsibility?

- Reduce the use of paper and other printed materials
- Provide digital alternatives to physical exhibits and displays
- Encourage visitors to book tours and purchase tickets online
- Track visitor data to improve efficiency and reduce waste

What are the challenges and opportunities associated with using technology in industrial tourism?

- Cost of implementation and maintenance
- Integration with existing infrastructure and systems
- User experience and usability considerations
- Data privacy and security concerns

Part III – Sustainability

Sustainability Practices:

- Efforts to minimize environmental impact
- Use of recycled or sustainable materials
- Energy-efficient practices
- Water conservation measures
- Waste management strategies

Economic Impact:

- Direct revenue generated from tourism
- Contribution to local employment
- Promotion of regional heritage and culture
- Indirect economic benefits to businesses in the area

Social Impact:

- Education and awareness about industrial heritage
- Preservation of industrial landmarks
- Enhancement of local pride and identity
- Fostering a sense of community through shared experiences

Part IV SWOT analysis

- External or contextual dimension
  - Opportunities
  - Threats
- Internal or site-specific dimension
  - Strengths
  - Weaknesses

Part V Performance

- Number of visitants (annual)
- Visitant satisfaction 1 = Very Bad; 5 = Very Good

Part VI Good practices

- Identify at least one good practice

Additional Notes:

- Any relevant historical information or interesting anecdotes
- Photos or videos of the industrial site and visitor experience
- Contact information for the site manager or tourism authority

References

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