

INDUSTRIAL TOURISM AS A FACTOR OF COMPETITIVENESS FOR INDUSTRIAL COMPANIES

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Doutoramento

**INDUSTRIAL TOURISM AS A FACTOR OF
COMPETITIVENESS FOR INDUSTRIAL COMPANIES**

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Outubro, 2024



UNIVERSIDADE PORTUGALENSE

Do conhecimento à prática.

IMP.GE.191.0



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COMPANIES**

Dissertação de Doutoramento na área das Ciências Empresariais orientada pelo Senhor Professor Doutor Jorge Humberto Soares Marques e coorientada pela Senhora Professora Doutora Cristina Paixão de Sousa e apresentada ao Departamento de Economia e Gestão da Universidade Portucalense.

Outubro 2024

DEDICATORY

À minha mãe, pioneira na indústria da Borracha em Portugal,

Rosa Moreira Barbosa

ACKNOWLEDGEMENTS

I would like to express my deepest gratitude to all those who, in one way or another, contributed to the completion of this doctoral thesis.

First and foremost, I thank Professor Jorge Marques for his tireless guidance, availability, patience, and valuable intellectual contributions that enriched this work. I extend my gratitude to Professor Cristina Sousa, who has accompanied me since the beginning of my academic journey in Management and who, despite the physical distance, will always remain in my heart. To Professor Filomena Lopes and Professor Isabel Freitas, who, seven years ago, introduced me to Industrial Tourism for the first time, my sincere gratitude.

A special thank you is dedicated to my family. To my parents, António and Rosa, for the personal and emotional foundation they have provided me throughout my life. To Vitor, in gratitude for his understanding, patience, and unwavering support as my pillar throughout this entire process. To my children, Santiago, Margarida and Francisco, from whom I took some time off to devote myself to this thesis but who will undoubtedly be proud of their mother who, through her effort and dedication, wants to pass onto them some of her passion for continuing education.

I extend my sincere thanks to my colleagues and friends from the Doctoral Program in Business Sciences, whose camaraderie and knowledge sharing have enriched this journey, with special mention to Elisabete Nogueira and Manuel Névoa.

I am also grateful to the institution that welcomed me, the Universidade Portucalense Infante D. Henrique, which provided me with all the tangible and intangible resources needed to overcome the challenges along this path. I would like to express my gratitude to the REMIT - Research on Economics, Management, and Information Technologies, for enabling the publication of articles in scientific journals and participation in various conferences, particularly Professor Luís Pacheco for his availability and support.

Lastly, I acknowledge the financial support provided by the Fundação para a Ciência e a Tecnologia through a Doctoral Scholarship (UIDP/05105/2020) funded by national funds.

Finally, I extend my gratitude to all those who, in some way, contributed to making this dream a reality. To all of you, my sincere thank you.



ABSTRACT

Tourism is experiencing significant growth in Portugal and various parts of the world, emerging as a significant economic activity in many countries. Industrial tourism, as a specialized segment of this broader activity, is closely linked with industrial enterprises and the living heritage of industrial sites. This makes analysing the relationship between tourism and the industry highly relevant for the successful interaction between these sectors. Industrial tourism encompasses visits to sites of contemporary, historical, or future significance, including both operational and abandoned facilities, as well as prospective industrial locations.

The primary objective of this thesis is to explore how industrial tourism can enhance the competitiveness of industrial companies. This entails evaluating the benefits, challenges, barriers, and opportunities associated with industrial tourism, as well as identifying key strategies that can positively impact this relationship. Addressing this objective from the perspective of industrial companies is essential to fill a gap identified in the literature on industrial tourism.

The research presented in this thesis was conducted using a diversified methodology, as detailed in Chapters 2 through 5. The research includes four studies employing the following methodologies: 1) Systematic Literature Review and bibliometric study, 2) Questionnaire survey, and 3) Delphi Methodology.

The findings highlight the main strengths of industrial tourism for industrial companies, framed within a business-oriented approach. While company strategy and culture can present barriers to the implementation of industrial tourism, integrating industrial tourism into a company's strategy and culture can lead to diversification, foster the introduction of new knowledge, and stimulate business innovation and competitiveness.

Given that industrial tourism represents a service distinct from the primary activities of industrial companies, its integration presents numerous challenges that must be carefully analysed. This analysis is crucial for ensuring that industrial tourism is effectively integrated, accepted, and promoted within the company.

In the final phase of this thesis, practical contributions are presented, focusing on various areas within industrial companies and the role of different stakeholders. The results have been systematically organized according to different functional areas of business.

Finally, the limitations encountered during the research are discussed, along with suggested avenues for future research, aiming for continuous growth and improvement in the field of industrial tourism.

Keywords: Industrial Tourism; Industrial Companies; Competitiveness; Business strategy; Systematic Literature Review; Questionnaire survey; Delphi method

O TURISMO INDUSTRIAL COMO FACTOR DE COMPETITIVIDADE DAS EMPRESAS INDUSTRIAIS

RESUMO

O Turismo encontra-se em forte desenvolvimento em Portugal e em diferentes zonas do mundo, sendo considerado uma importante atividade económica nos diferentes países.

Sendo o Turismo Industrial uma vertente específica desta atividade e, estando este intimamente associado às empresas industriais, na vertente viva do património industrial, a análise desta relação mostra-se extremamente relevante para o sucesso da relação turismo – indústria. O Turismo Industrial inclui visitas a locais com importância contemporânea, histórica ou prospetiva, incluindo instalações fechadas e abandonadas, empresas em funcionamento e futuras instalações industriais.

O objetivo geral desta tese é perceber de que forma o Turismo Industrial pode contribuir para a sustentabilidade e competitividade das empresas industriais, fornecendo outputs sobre as vantagens, desvantagens, barreiras e oportunidades desta relação, e salientando as principais estratégias que poderão fomentar positivamente esta relação. Uma análise na ótica das empresas industriais é essencial, indo ao encontro de uma das lacunas detetadas na literatura sobre do Turismo Industrial.

O trabalho apresentado foi realizado através da aplicação de uma metodologia diversificada, conforme descrito nos Capítulos 2 a 5. A pesquisa incorpora 4 estudos que utilizam as seguintes metodologias: 1) e 2) Revisão Sistemática da literatura e estudo bibliométrico; 4) Inquérito por questionário e 5) Metodologia Delphi.

São referidos os vários outputs, numa abordagem direcionada ao mundo empresarial, onde os principais pontos fortes do Turismo Industrial para as empresas industriais situam-se nas áreas de Marketing, Social e Recursos Humanos. A estratégia e a cultura empresarial podem ser uma barreira à implementação do Turismo Industrial. No entanto, estado o Turismo Industrial integrado na estratégia e cultura empresarial, sendo vivido dentro da empresa, permitirá a diversificação da empresa, promovendo a entrada de novos conhecimentos e estimulando a inovação empresarial.

Sendo o Turismo Industrial um serviço muito diferente da atividade principal da empresa industrial, a sua integração acarreta muitos desafios que devem ser analisados e ponderados, para que o Turismo Industrial seja genuinamente integrado, aceite e promovido dentro da própria empresa.

Na fase final desta tese são apresentados contributos práticos relacionados com diferentes áreas das empresas industriais, reforçando também o papel dos vários stakeholders. Os resultados obtidos foram sistematizados de acordo com diferentes áreas funcionais empresariais.

Por último e numa perspetiva de crescimento e melhoria contínua, são apresentadas as limitações encontradas na realização deste trabalho bem como sugeridas linhas de pesquisa para futuras investigações.

Palavra-chave: Turismo Industrial; Empresas Industriais; Competitividade; Estratégia Empresarial; Revisão Sistemática da Literatura; Inquérito por questionário; Método Delphi

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PART I

CHAPTER 1 – INTRODUCTION

1.1. Justification for the topic

Tourism is one of the most dynamic sectors globally, playing a significant role in developing and developed countries (UNWTO, 2013). The sector has contributed to accelerated economic growth in various nations and has played a role in reducing poverty levels in several regions (UNWTO, 2013).

By the end of 2019, Portugal was experiencing a highly favourable period in tourism, concluding the year with over 27 million tourists (Turismo de Portugal, 2021). However, the COVID-19 pandemic introduced significant challenges, revealing the sector's vulnerability (Turismo de Portugal, 2021). Despite the setbacks, the tourism sector demonstrated a remarkable recovery in the subsequent years, surpassing pre-pandemic levels. In 2023, international tourism receipts in Portugal reached €25.1 billion, representing a 36.6% increase compared to 2019 and marking the highest figure ever recorded. This achievement confirms the complete recovery of the sector on an international scale (Turismo de Portugal, 2024).

This context underscores the significance of studying tourism development. This research aims to focus specifically on Industrial Tourism, with particular emphasis on how this tourism product can enhance the competitiveness of industrial companies. It is important to note that Industrial Tourism aligns with the Strategic Vision for Tourism 2027. This alignment is evident as Industrial Tourism contributes to territorial value, stimulates the economy, enhances educational opportunities (particularly for young people in the industry), fosters networks and connectivity, and promotes Portugal on a global scale (Tourism Strategy 2027).

From an economic perspective, tourism serves as a significant source of income for many countries, regions, and companies. This study seeks to understand the impact of Industrial Tourism on the operations and dynamics of industrial companies and explores how it can act as a catalyst for enhancing their competitiveness. The introduction of a new service within industrial companies is closely linked to their capacity for diversification and innovation. As competitiveness is largely driven by innovation (Porter, 1990), this principle is equally relevant to the tourism sector (Kozak, 2017).

Industrial Tourism has the potential to be a source of innovation for both the industrial company and the tourism product itself by fostering wisdom sharing. In addition to the numerous benefits highlighted in the literature, Industrial Tourism

allows companies to develop diversification strategies (Endo & Kurata, 2015), contributing to increased business competitiveness.

Industrial Tourism encompasses a range of tourist activities primarily focused on industrial knowledge, whether material or immaterial. Edwards and Llurdés (1996) provided one of the most widely recognized definitions of Industrial Tourism, emphasizing its connection to historical contexts. According to them, Industrial Tourism involves presenting tourist experiences at sites, buildings, and landscapes shaped by historical industrial processes.

More recent studies offer a broader definition of Industrial Tourism. Rodriguez-Zulaica (2017) describes it as any tourist activity conducted at industrial sites and buildings, whether active or historical, as long as their primary function is not or has not been tourism. This inclusive definition links Industrial Tourism to various other forms of tourism (Ionica et al., 2020), such as farm tourism (Veeck et al., 2010), farm stays (Shinners, Lewis, & Parker, 2019), working exhibitions, workplace tourism, factory tourism, sideline tourism (Ionica et al., 2020), and wine tourism (Salvado, 2016).

It is important to note that, while these other tourism types may relate to and fall under the broader concept of Industrial Tourism, they refer to more specialized products. For instance, wine tourism can be considered a form of Industrial Tourism if it involves showcasing the production processes, whether current or historical, to visitors.

Industrial tourism has emerged as a niche market, providing an alternative to traditional mass tourism. Perfetto and Presenza (2017) note that the literature on Industrial Tourism predominantly focuses on heritage management, often appearing fragmented and lacking a comprehensive understanding of its key aspects and issues. They identify three principal themes within this literature: tourism demand, local development, and destination governance.

Zhang et al. (2020) conducted a meta-analysis revealing that the primary research topics on Industrial Tourism in Europe include industrial heritage and community formation around this heritage, tourist exploitation, the protection of industrial legacy, and the adoption of new technologies. This overview underscores the critical need for additional studies from the perspective of industrial companies.

Given this research gap, this study aims to explore how industrial companies can develop strategies to capitalize on the influx of tourists to their production spaces.

Additionally, it seeks to examine how Industrial Tourism can be positioned as a strategic factor to enhance the competitiveness of industrial companies.

A review of the existing literature reveals that Industrial Tourism is closely linked to regional development. This relationship highlights its significance across various dimensions, including rehabilitation, regional dynamism, and economic and social development. Given that companies play an active role in the development of their surrounding regions, an initial examination of the regional context within the scope of Industrial Tourism was crucial, followed by a more focused analysis of industrial companies.

Throughout this thesis, various terms have been employed to describe the same entities, including "industrial companies", "operating industrial companies", "active industrial companies" and more specifically, "SME industrial companies," referring to the size of the firm. All these terms denote companies engaged in industrial activities.

1.2. Research objective

Industrial Tourism, as a strategic tourism product, has the potential to enhance regional competitiveness and attractiveness (Richards & Raymond, 2000; Hermantoro, 2011; Richards & Marques, 2012; Abad, 2017; Moral-Moral & Fernandez-Alles, 2019). An initial review of the literature reveals notable gaps in research concerning the perspective of industrial companies, particularly regarding the factors influencing their decision to adopt or reject this tourism concept, which diverges significantly from their core activities.

Industrial Tourism integrates two distinct economic sectors: services and industry. To advance the understanding of Industrial Tourism, this study concentrates on the perspectives of industrial companies. It aims to investigate how these companies can formulate strategies to capitalize on the influx of tourists to their production facilities, thereby enriching knowledge in this area.

While numerous benefits of Industrial Tourism have been highlighted in the literature, particularly regarding regional enrichment, the perspective of active industrial companies remains underexplored. This research aims to provide insights that will enhance the development of Industrial Tourism in Portugal and promote the adoption of this tourism product by industrial companies, presenting its main advantages and disadvantages and proposing strategies for its implementation.

Various studies have identified a range of potential objectives associated with Industrial Tourism, including: showcasing product quality (McBoyle, 1996); promotional opportunities (Otgaar, 2012, 2008; Chow et al., 2017); building customer

relationships (Endo & Kurata, 2015; Chow et al., 2017;); increasing brand loyalty (Chow et al., 2017); recruitment strategies (Nielsen, 2012); demonstrating environmental integrity and a green attitude (McBoyle, 1996; Rudd & Davis, 1998); developing differentiation strategies (Endo & Kurata, 2015); increasing profits (Rudd & Davis, 1998); and gaining a larger market share (Rudd & Davis, 1998), among others.

This research seeks to bridge the gap between two disparate economic sectors—industry (primary sector) and services (tertiary sector)—by highlighting both the advantages and disadvantages of Industrial Tourism and proposing strategies to positively reinforce this relationship.

The findings of this study are intended to benefit the academic and scientific communities, as well as local government representatives, business managers, and professionals involved in tourism, including tour guides, travel agencies, and other stakeholders.

1.3. Methodology adopted

When addressing the topic of Industrial Tourism, it was deemed essential to conduct a thorough preliminary literature review. This comprehensive analysis culminated in the development of two chapters, each focusing on these key themes: Industrial Tourism in relation to regional development and Industrial Tourism in connection with companies, specifically concerning innovation, diversification, and marketing.

The literature reviews serve multiple purposes: they aim to map the existing body of knowledge on Industrial Tourism, outline its evolution, and identify the types of studies that have been conducted. Additionally, these reviews explore the significance and challenges of Industrial Tourism within the strategic frameworks of both regions and companies, emphasizing its role as a critical factor in enhancing competitiveness.

The Systematic Literature Review (SLR) is a methodological approach designed to systematically locate, evaluate, and synthesize existing studies within a particular field of knowledge. It involves several key steps: identifying relevant research, selecting and assessing contributions, analysing and integrating data, and producing a comprehensive report that offers clear conclusions about what is known and what remains unexplored in the chosen topic (Denyer & Tranfield, 2009).

Conducting an SLR on Industrial Tourism presents challenges due to the fragmented nature of the existing literature in this field. The dispersed nature of

research contributions makes it challenging to form a cohesive understanding of Industrial Tourism.

Chapters 2 and 3 reflect the theoretical analysis based on Systematic Literature Review (SLR), which followed a two-steps process. Firstly, an analysis was carried out, allowing us to present data on the evolution of publications and the relationship between bibliographic elements, in which we used the VOSviewer software to analyse citations, co-citations, and bibliographic coupling. Secondly, a qualitative analysis was made, based on a content analysis, which followed the model proposed by Denyer and Tranfield (2009), whose SLR includes five essential steps for its preparation in the business sciences: 1st formulation of the research question, 2nd location of the studies to be included, 3rd selection and evaluation of the selected studies, 4th analysis and synthesis of the selected information, 5th description and use of the results obtained in the previous steps.

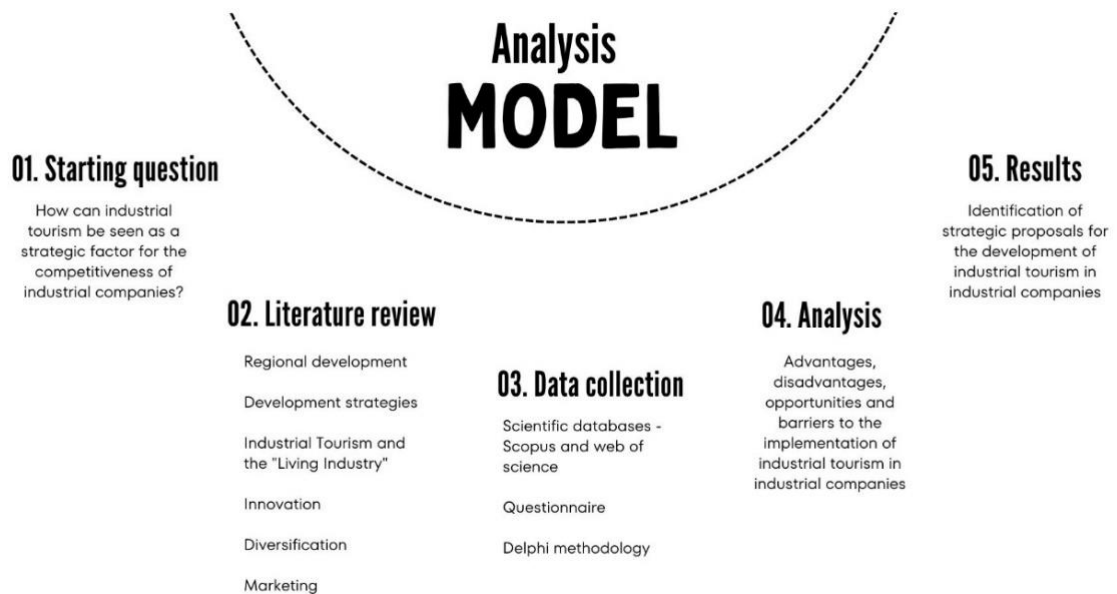
The articles for the SLR were collected from the Scopus scientific database. To ensure the relevance of the articles to the research questions, searches were conducted in December 2021 and June 2022. These searches involved grouping keywords and applying specific search conventions. Boolean operators were used in complex searches to construct precise search strings, which were tailored for each chapter of the review. The details of these search strings are provided within the respective chapters. In addition to the Scopus database, the "snowball" approach (Noy, 2008) was used to enhance the thoroughness of the review. This method involved identifying and incorporating additional relevant articles from the Web of Science database that were not initially discovered in the Scopus searches.

Chapter 4 presents an empirical analysis through a descriptive statistical approach, using data collected from a questionnaire distributed to small and medium-sized Portuguese industrial companies. This methodology enabled an examination of how Industrial Tourism is being implemented across these companies and provided insights into the reasons behind its limited adoption. The data collected and analysed shed light on the perspectives of industrial companies that have embraced Industrial Tourism as well as those that have yet to adopt it.

Finally, Chapter 5 utilized the Delphi Methodology, involving expert stakeholders to gather in-depth perspectives on the main advantages, disadvantages, barriers, and strategies associated with Industrial Tourism. The Delphi Method is a well-established scientific research technique for collecting qualitative data from experts in a specific field, known for its validity and effectiveness in generating comprehensive insights (Hsu & Sandford, 2007).

This thesis adhered to a study model designed to contribute to the advancing of this research field, as illustrated in Figure 1. This model integrates various methodologies and perspectives to provide a holistic view of Industrial Tourism and its implications for industrial companies.

Figure 1- Analysis model

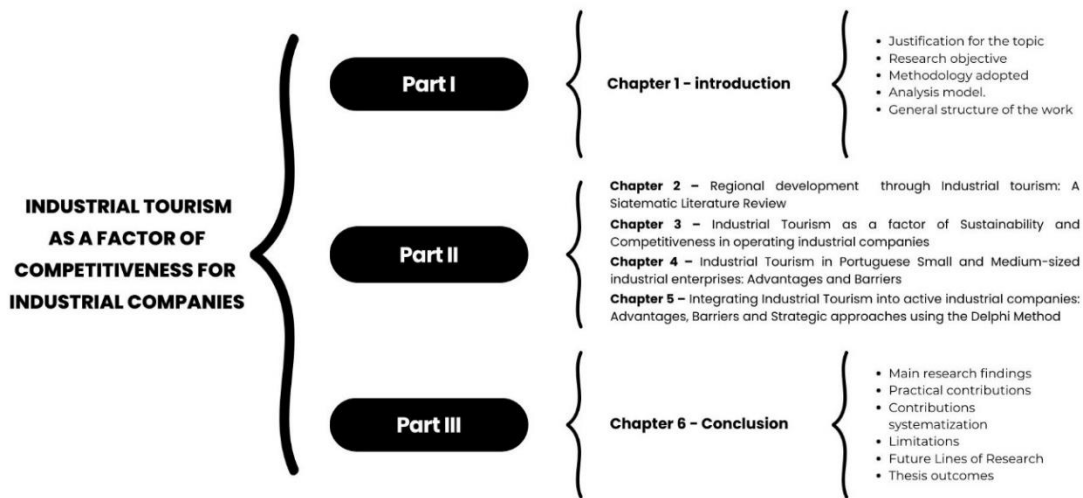


Source: Own elaboration

1.4. General structure of the work

This thesis adopts a formal organization by articles, with the structure divided into three distinct parts, as illustrated in the figure below.

Figure 2- General structure of the work



Source: Own elaboration

The first part, corresponding to chapter 1, includes the introduction, justification of the topic, study objectives, methodology and analysis model.

Part II corresponds to the development of the study and consists of the following chapters: Chapter 2 – Regional development through Industrial Tourism: A Systematic Literature Review; Chapter 3 – Industrial Tourism as a factor of Sustainability and Competitiveness in operating industrial companies; Chapter 4 – Industrial Tourism in Portuguese Small and Medium-sized industrial enterprises: Advantages and Barriers; Chapter 5 – Integrating Industrial Tourism into active industrial companies: Advantages, Barriers and Strategic approaches using the Delphi Method.

At the end, corresponding to Part III, chapter 6 – conclusion is presented, where the main results of the study are referenced. A systematization of the results found is also included, as well as the main contributions, limitations of the study, suggestions for future investigations, and a brief reference to external exposure at conferences and scientific journals.

Part II

CHAPTER 2 – REGIONAL DEVELOPMENT THROUGH INDUSTRIAL TOURISM: A SYSTEMATIC LITERATURE REVIEW

Abstract

This article contributes to a conceptual clarification and an understanding of how Industrial Tourism research has evolved. It is based on a literature review of scientific research produced over the past 25 years, focusing on its relation to regional development. The analysis was based on 51 scientific articles retrieved from the Scopus database. The growing interest in this theme, which is transversal to several research areas, is evident, adopting, in most cases, a qualitative methodology of case studies. As a promoter of regional development, Industrial Tourism has positive aspects, such as economic, social, and ecological benefits, among others, but also some constraints, such as excessive commercialization and loss of authenticity of the places. Thus, this work also contributes to identifying this product's impacts and development strategies in the territories.

Keywords

Industrial Tourism; Systematic Literature Review (SLR); Impacts; Development strategies; Regional development.

2.1. Introduction

One of the most widespread definitions of Industrial Tourism was given by Edwards and Llurdés, who stated “that Industrial Tourism is the development of tourism activities and industries in man-made sites, buildings and landscapes that have their origins in industrial processes of past periods” (Edwards & Llurdés, 1996:342). More recently, Rodríguez-Zulaica (2017) defined Industrial Tourism as any tourism activity developed in industrial sites and buildings, active or not, provided that its main activity is not or has not been tourism. Frequently, this broad definition of Industrial Tourism is associated with other types of tourism (Ionica et al., 2020), such as farm tourism (Veeck et al., 2010), farm stays (Shinners et al., 2019), working exhibitions, workplace tourism, factory tourism, sideline tourism (Ionica et al., 2020), and wine tourism (Salvado, 2016). However, these types of tourism have different characteristics and scopes, and as such, should be treated independently. As an example, in the case of wine tourism, if the tourism proposal of a wine farm is to present the industrial process of wine production, it will fit into the scope of Industrial Tourism. If it is about promoting wine tasting and selling, then it does not.

Moreover, according to Rodríguez-Zulaica (2017), Industrial Tourism in the English literature is associated with the recovery and enhancement of the industrial past of a city or region, using the term "industrial heritage tourism". Accordingly, the frequent translation of Industrial Tourism to Spanish and French appears in many documents as "industrial heritage tourism", a concept that is considered a subcategory of "heritage tourism", defined as including tourism activities linked to heritage, essentially cultural heritage. Rudd and Davis (1998: 85) stressed that "Industrial Tourism is a popular subsection of Industrial Heritage Tourism". Givental et al. (2019) consider that Industrial Tourism has become an essential part of cultural tourism, arguing that industrial heritage is a part of the culture and, as such, reflects the national character and national history. Therefore, Industrial Tourism can be defined as a type of tourism that includes visits to present, past or future industrial sites. Includes places that are no longer active in their industrial function, industrial companies currently in operation and locations of future industrial facilities. Also, it is related to visits to other sites whose theme is associated with the industry (industrial technology centres, museums, industrial tourist routes, schools and industrial laboratories and other similar) (Montenegro & Sousa, 2022). Thus, Industrial Tourism encompasses all kinds of tourist activities whose primary reason for visiting is related to industrial knowledge. According to Perfetto & Presenza (2017), the literature on Industrial Tourism heritage management still needs a deeper understanding.

Nevertheless, these authors highlight the existence of three main strands in this field of research: tourism demand, local development and destination governance. Although this points to acknowledging a relationship between Industrial Tourism and regional development, there is a need to better understand the configurations that relationship can assume.

This paper aims to contribute to the scarce literature on Industrial Tourism and specifically address the relationship between Industrial Tourism and regional development. This work has two main goals: i) to map and analyse the literature on Industrial Tourism; and ii) to explore its relevance and challenges in the context of regional strategies, that is, to understand the contributions of Industrial Tourism to regional development. The methodology was based on a Systematic Literature Review, and we collected the bibliographic data in the Scopus database. We identified and characterized fifty-one articles covering 25 years of published research. Furthermore, based on content analysis, we grouped the articles according to their objectives and main conclusions regarding the relationship between Industrial Tourism and regional development.

2.2. Research methodology

2.2.1. Research model

The Systematic Literature Review (SLR) is frequently used to locate scientific studies in a given area of knowledge. It helps select and assess contributions and analyse and synthesise data. Additionally, it provides an evidence report that allows for reasonably clear conclusions about what is known on a given topic or area of knowledge (Denyer & Tranfield, 2009). Performing an SLR in Industrial Tourism is particularly challenging, however necessary, given the fragmented nature of the topic.

To conduct this research, we followed Denyer and Tranfield's model, whose SLR includes five essential steps (Denyer & Tranfield, 2009):

- (1) Formulation of the research question,
- (2) Location of the studies to be included,
- (3) Selection and evaluation of the selected studies
- (4) Analysis and synthesis of the selected information
- (5) Describe and use the results collected in the previous steps.

The questions we intend to answer in this study are the following:

What is state-of-the-art research on Industrial Tourism?

How can Industrial Tourism contribute to regional development?

Afterwards, it was necessary to locate, select, and evaluate scientific articles that would answer the research objectives of the SLR. For the bibliometric analysis, we used the VOSviewer software for citation, co-citation and bibliographic coupling analysis, and the Nvivo11 software for the word cloud of Industrial Tourism research. We performed the content analysis manually, using an inductive approach.

2.2.2. Selection and evaluation of articles

In December 2021, we searched the Scopus database to find articles that could answer the research questions, applying keywords and search conventions and adopting and combining Boolean operators with complex searches, as shown in table 1.

Table 1- Structure of the search criteria

Selection criteria	Results
Database	Scopus
Search field	Article title, Abstract, Keywords
Keywords	"Industrial Tourism"; "Industrial heritage tourism"; "factory tourism"
Search date	06/12/2021
Years	1996-2021
Total number of documents	196
Selection of document type	Scientific article
Number of scientific articles	136
Selection of research areas	Social Sciences / Business, Management and Accounting, Economics, Econometrics and Finance
Total number according to research areas	106
Selection of language	English; Portuguese, Spanish
Total number according to language selection	100
Duplicate articles	0
Unavailable articles	8
Abstract analysis	92
Out of scope	41
Final number of scientific articles for analysis	51

Source: Own elaboration

For this, we used the following keywords: "Industrial Tourism"; "Industrial Heritage Tourism"; "Factory Tourism". We obtained a comprehensive listing of 196 articles (primary contributions), which helped us address the research questions formulated earlier. After filtering according to the type of document, research area and

language, 100 remained, of which only 92 had a full text available online. Then, we identified and ordered those 92 articles using the EndNote citation software tool. Following this, we read and analysed the abstracts to ensure their relevance to the study. At this stage, we identified some articles that did not fit the specific theme or contributed to answering the research objective. Thus, our final list for the SLR had 51 articles published between 1996 and 2021(appendix 1).

The goal of the analysis and synthesis phase is directly related to how we break down individual articles into compatible parts and the extent to which each part relates to the other, and thus to be able to gauge associations between data (Denyer and Tranfield, 2009). To identify key contributions, we carefully reviewed the articles in our database before summarizing each one. Additionally, based on the "nine-ball" technique approach (Noy, 2008), we considered enriching this analysis by integrating two articles not identified during the search process. These two articles, presented in table 2, were published in journals indexed in the Web of Science database and meet our study on the evolution of the literature on regions and Industrial Tourism.

Table 2- Articles to be included in the analysis

Authors	Title	Year
Botella, MDP	The heritage of the industry: a tourist referent to explore in the Region of Murcia	2018
Rodrigues, JCM	The route of the industrial heritage in the Vale do Ave (north of Portugal) in a new trend of the tourism	2019

Source: Own elaboration

2.3. Bibliometric analysis

Industrial Tourism has been growing in the last 25 years. Its approach maintains an empirical, qualitative, and somewhat fragmented nature, possible to verify in the predominance of case studies and by the diversity of studies presented in different scientific areas, such as geography, archaeology, social and political sciences, and architecture, among others. Using Nvivo software, it was possible to elaborate the word cloud based on the content of the analysed articles, represented in figure 3.

Figure 3- Word cloud of Industrial Tourism research



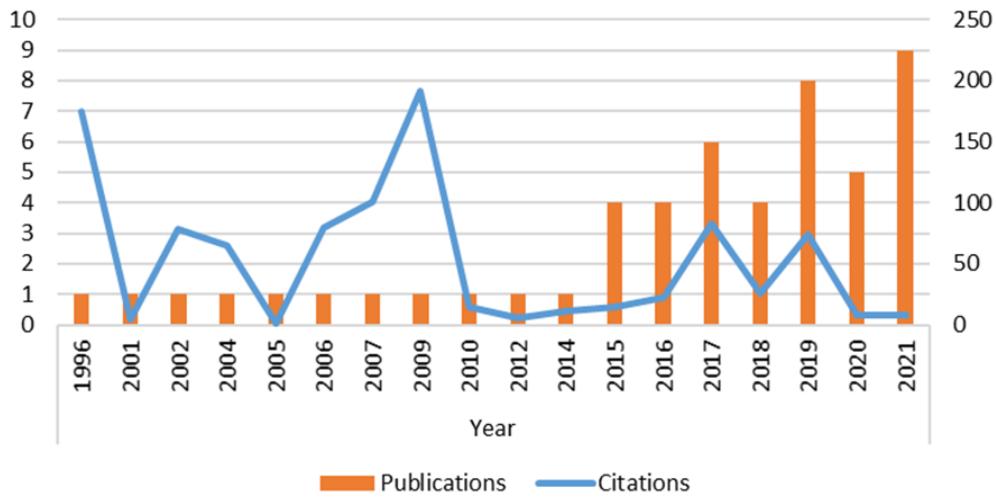
Source: Own elaboration

Through the word cloud, we can see the wide variety of terms surrounding Industrial Tourism research. From sustainability to management, government, innovation, heritage, stakeholders, and authenticity, among many others, we can stratify the various themes studied over the years. The emphasis on territorial development and community approach is particularly relevant to this research.

2.3.1. Evolution of publications and citations

Figure 4 shows the number of articles published per year, which reflects the increasing trend over the years, with its most significant focus in the years 2017, 2019 and 2021.

Figure 4- Publications and citations per year



Source: Own elaboration

Although the first publication dates from 1996, the following two decades had limited publications, which only began to grow sustainably in 2015. Regarding citations, 2009 stands out with the highest number, even though only one article was published this year. Table 3 shows the most cited articles, where we can see that the article with the most citations was published 12 years ago. Two relatively recent articles from 2019 already appear in the top cited articles list.

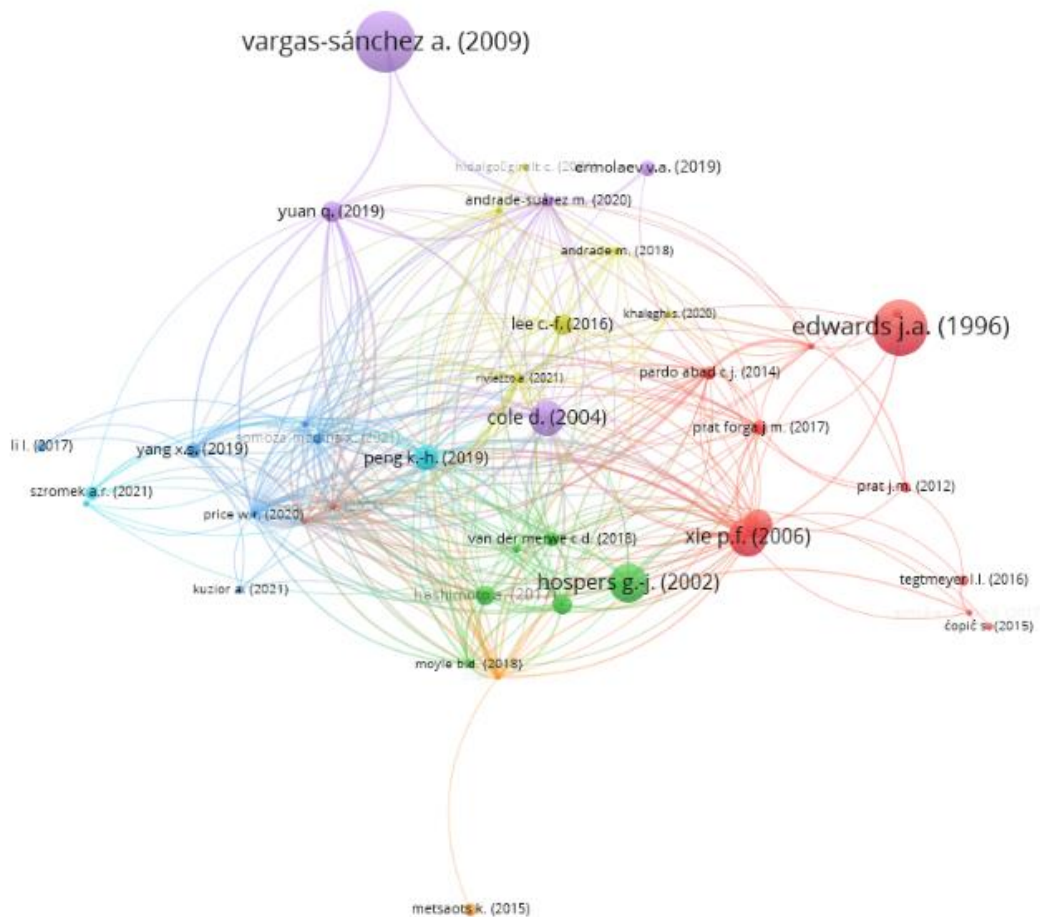
Table 3- Articles with most citations

Authors	Title	Year	Source title	Cited by	Average Quotes / Year
Vargas-Sanchez, A; Plaza-Mejia, MD; Porras-Bueno, N	Understanding Residents' Attitudes toward the Development of Industrial Tourism in a Former Mining Community	2009	Journal of Travel Research	191	16
Edwards, J.A., Llordés I Coit, J.C.	Mines and quarries: Industrial Heritage Tourism	1996	Annals of Tourism Research	175	7
Ballesteros, E.R., Ramírez, M.H.	Identity and community - Reflections on the development of mining heritage tourism in Southern Spain	2007	Tourism Management	101	7
Xie, P.F.	Developing industrial heritage tourism: A case study of the proposed jeep museum in Toledo, Ohio	2006	Tourism Management	80	5
Hospers, G.-J.	Industrial heritage tourism and regional restructuring in the European union	2002	European Planning Studies	79	4
Cole, D.	Exploring the sustainability of mining heritage tourism	2004	Journal of Sustainable Tourism	65	4
Frantál, B., Urbánková, R.	Energy tourism: An emerging field of study	2017	Current Issues in Tourism	39	10
Peng, K.-H., Tzeng, G.-H.	Exploring heritage tourism performance improvement for making sustainable development strategies using the hybrid-modified MADM model	2019	Current Issues in Tourism	28	14
Yuan, Q., Song, H., Chen, N., Shang, W.	Roles of tourism involvement and place attachment in determining residents' attitudes toward industrial heritage tourism in a resource-exhausted city in China	2019	Sustainability (Switzerland)	19	10
Hashimoto A., Telfer D.J.	Transformation of Gunkanjima (Battleship Island): from a coalmine island to a modern industrial heritage tourism site in Japan	2017	Journal of Heritage Tourism	16	4

Source: Own elaboration

Figure 5 represents the relationship between citations, co-citations, and bibliographic coupling between authors.

Figure 5- Relationship of citations, co-citations and bibliographic coupling



Source: Own elaboration

As for the relationship between the various authors through citations, the influence of Edwards and Llundud's I Coit (1996) is noteworthy as the authors who gave the kick-off to this theme. Other authors, such as Hospers G.J. (2002), Cole D. (2004), Xie P.F. (2006) and Vargas-Sánchez (2009), also appear with higher relevance and influence over the remaining authors.

2.3.2. Countries

As for the authors/institution's countries, firstly, we identified the country to which the study refers. In cases it was impossible to determine the country, we identified the authors' nationality. There are four articles where it was identified more than one country. Table 4 shows that the country with the most publications is Spain

(10), followed by the United States of America (4) and China (4). Overall, Europe has the most publications, accounting for 63%, followed by Asia with 21%.

Table 4- Distribution studies per country (with 2 or more published articles)

Country	Articles	%
Spain	10	19,61%
China	4	7,84%
EUA	4	7,84%
Japan	3	5,88%
Poland	3	5,88%
Italy	2	3,92%
Wales	2	3,92%
Czech Republic	2	3,92%
Russia	2	3,92%
Taiwan	2	3,92%
Portugal	2	3,92%
Countries with 1 published article	11	21,57%
articles involving several countries	4	7,84%

Source: Own elaboration

2.3.3. Types of studies and methodology

Most articles present a qualitative case study methodology (table 3), following the approach adopted by the first article published in 1996. In total, about 84% refer to case studies. Thus, this theme has been primarily explored empirically, lacking studies addressing a more general and conceptual approach.

Table 5- Types of study

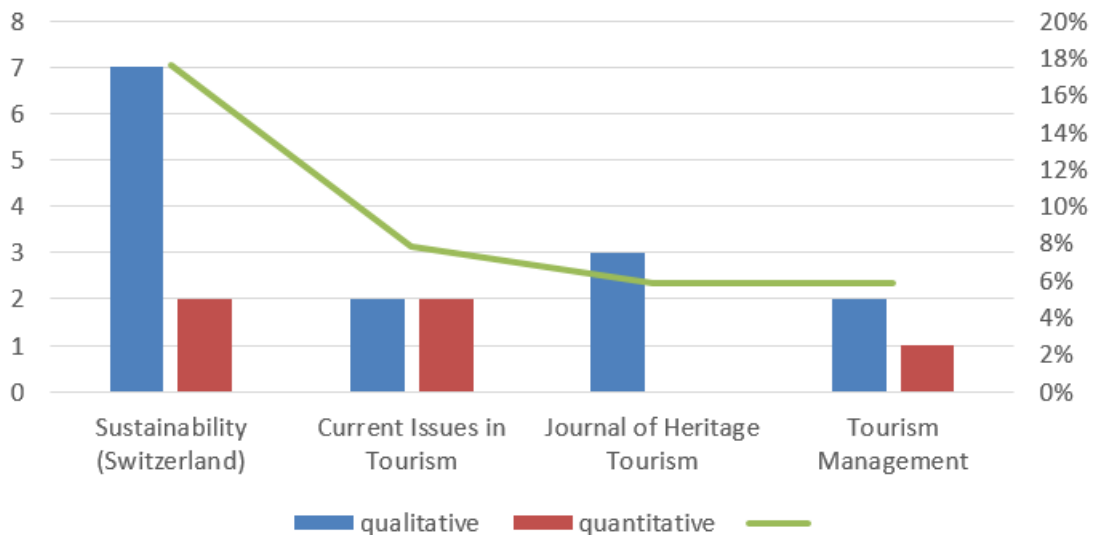
Type of study	Articles	%
Mixed	7	13,73%
Quantitative	7	13,73%
Qualitative	37	72,55%
	51	100,00%

Source: Own elaboration

2.3.4. Journals

The articles are published in 36 journals. In Figure 6 we can see the list of journals with more than one publication.

Figure 6- Journals with more than 1 publication and types of studies



Source: Own elaboration

Sustainability (Quartile 1) has nine publications, followed by *Current Issues in Tourism* (Quartile 1) with four and *Journal of Heritage Tourism* (Quartile 2) with three, totalling 37.25% of total publications. The remaining 62.75% of the published articles are scattered, with each article corresponding to a different journal.

The selected articles are generally spread over numerous journals from different areas, including Tourism and Hospitality, Culture, Regional Studies, Economics and Management, Law, Geography, Archaeology, Marketing and Social Sciences.

2.4. Content analysis: Industrial Tourism and regional development

The regions, their development and their relationship with Industrial Tourism are the main aspects addressed in the content analysis. Accordingly, it is possible to identify two main topics of research: i) the impacts (both positive related to opportunities and negative related to challenges) of Industrial Tourism on the development of regions, and ii) the strategies used to overcome the region's Industrial Tourism challenges.

2.4.1. Impacts of Industrial Tourism on regional development

Tourism, in which priority is given to the responsible use of industrial heritage, can provide new development opportunities for territories, avoiding the degradation and deterioration of resources (Moral-Moral & Fernandez-Alles, 2019). It is considered a way to recover the investment attractiveness of a region and can provide economic and ecological development, preservation of historical heritage, development and enhancement of local culture, and improvement of quality of life (Andrade-Suárez & Caamaño-Franco, 2020; Kuzior et al., 2021). Therefore, Industrial Tourism brings opportunities for the sustainable development of regions, affecting the three dimensions of the triple bottom line: economic, social and environmental (Elkington, 1994).

This touristic product is often linked to regional economic development, offering the opportunity to generate income and create jobs for the local population (; Hashimoto & Telfer, 2017; Ronck & Price, 2019; Khaleghi et al., 2020; Kuzior et al., 2021). It is particularly felt in regions where the industry has declined or disappeared, considered as a source of revitalisation (Pretes, 2002; Del Pozo & Gonzalez, 2012). This deindustrialisation process is regarded by Kandžija et al. (2017) as a natural process (a result of economic growth) in developed countries, marked by the decline of industry and industrial employment, with a simultaneous increase in the importance of the service sector. Deindustrialisation provides empty spaces that, due to non-use, begin to deteriorate, which promotes the loss of meaning, recognition and importance, generating an economic loss in the region (Custódio & dos Santos, 2020). In these contexts, the role of industry in shaping urban space has diminished (Gieranczyk, 2005), and Industrial Tourism is considered an element of positive diversification: the discovery of a new economic function, based on leisure activities, applied in former manufacturing areas is advantageous for the region (Ruíz et al., 2019; Custódio & dos Santos, 2020). Industrial heritage as a tourism resource is often considered a last resort when these traditional manufacturing sectors have reached a stage of irreversible decay - or even disappeared - and alternative revitalisation measures have already proven impractical or failed (Coit, 2001). Several authors report that Industrial Tourism activities stimulate other local support services and generate employment (Hospers, 2002; Vargas-Sanchez et al., 2009; Kuzior et al., 2021), acting as an overall dynamic factor for the area (Vargas-Sanchez et al., 2009; Alonso et al., 2010). However, there is debate in the literature about the actual economic impacts of Industrial Tourism. Some authors point out that income and employment levels are much lower than those of former industrial activities (Edwards & Llurdes, 1996; Xie,

2015). In this context, Andrade & Caamaño-Franco (2018) report that the improvement in job creation will be moderate since it is a type of tourism that does not generate large flows of visitors with a specific demand. Other authors have noted that post-industrial communities may have few economic options that are more viable than tourism; even a moderate economic impact is arguably better than the alternatives (Ronck & Price, 2019).

The literature also stresses the social impacts of Industrial Tourism, namely by revitalising community development (Hashimoto & Telfer, 2017; Harfst et al., 2021) and promoting social cohesion (Ruíz et al., 2019). Čopić & Tumarić (2015) report that cities affected by deindustrialisation use this type of tourism both for economic and social revitalisation. Reopening brownfield sites to tourists encompasses a variety of purposes and perspectives. The site can provide an opportunity to learn about the past by respecting and preserving memories (Hashimoto & Telfer, 2017; Ruíz et al., 2019) and building a collective memory (Ronck & Price, 2019). Industrial Tourism has an important educational function and helps to reinforce the local population's sense of belonging to an industrial community (Prat & Valiente, 2012; Khaleghi et al., 2020) and territorial identity (Ruíz et al., 2019). It also preserves the native culture of the region (Khaleghi et al., 2020). Moreover, it implies the dissemination and knowledge of industrial values and traditions, allowing the enjoyment of this heritage by the whole society (Moral-Moral & Fernandez-Alles, 2019). According to Custodio & dos Santos (2020), revitalising de-industrialised areas promotes social reconnection, recognition, identity, and attachment to the environment.

Additionally, Industrial Tourism can provide the impetus for environmental improvement in denuded post-industrial areas (Conesa et al., 2008) and land use (Ronck & Price, 2019). The European Parliament emphasises that developing Europe's industrial heritage could contribute to achieving a more sustainable tourism sector through the preservation, transformation and rehabilitation of industrial sites (Custodio & dos Santos, 2020). This development is essential because it promotes sustainability by reusing the space, constructing a historical narrative and social representativeness and converting abandoned buildings into visitor centres (Hashimoto & Telfer, 2017). On the other hand, investment in these revitalised regions is mainly supported by the European Union's public policies, and the industrial heritage is a crucial tool for tourism promotion and integration of the European Union (Custodio & dos Santos, 2020).

However, scholars warn that Industrial Tourism does not have the same impact in all territories (Ruíz, del Pozo, & Ruiz-Valdepeñas, 2019). The positive impacts should be assessed from a long-term perspective or even on an intangible basis. It

includes replacing the traditional industrialised image with a more attractive one for potential foreign investors (Coit, 2001, 2004) as well as on a regional and local level, allowing for an improved destination image (Tegtmeyer, 2016; González Durán, 2017; Prat, Forga & Cànoves Valiente, 2017; Andrade & Caamaño-Franco, 2018;) and a strengthening of the local community's identity (Tegtmeyer, 2016; Prat & Valiente, 2012, 2017; Andrade & Caamaño-Franco, 2018; Ruíz, del Pozo, & Ruiz-Valdepeñas, 2019; Custódio & dos Santos, 2020). Moreover, some scholars have a more nuanced vision of the positive impacts of Industrial Tourism on regional developments, arguing that it is not a panacea for regions facing industrial decline. According to Coit (2001), industrial heritage tourism initiatives should not be seen as the only solution to the problems of industrial areas facing decline since other forms of tourism can be much more profitable in terms of income and employment. In a more critical perspective, Hospers (2002) considers that it is unlikely that the effects of heritage tourism will be large enough to rejuvenate an entire declining industrial region. This author argues that, in theory, industrial heritage tourism could be an interesting new combination for industrial areas in the European service economy.

However, in practice, its effects on regional restructuring may be limited. Hospers (2002) suggests reusing industrial heritage for other economic activities besides tourism, stating that the contribution of industrial heritage tourism to regional renewal in the EU may be somewhat disappointing for several reasons. Some of these reasons are the relatively low impact on regional employment (Hospers, 2002) and the fact that it does not directly contribute to improving workers' skills in the tourism sector (Andrade & Caamaño-Franco, 2018). Therefore, industrial heritage tourism is only part of the solution to many problems faced by (former) industrial regions (Harfst et al., 2021). Harfst et al. (2021) agree that the economic impacts of industrial heritage tourism on the transition to more sustainable regional development are pretty low. Also, according to Somoza-Medina & Monteserín-Abella (2021), Industrial Tourism may have sustainability problems when implemented outside the significant economic development centres. Especially in the cases of places that depend on this specific product's success for their economic development. From a more critical perspective, there is evidence that Industrial Tourism may bring some adverse effects and be related to some challenges for regional development. Tegtmeyer (2016) states that transforming the post-industrial city into a tourist attraction has not solved socio-economic problems but commodified them. It is necessary to reflect on how tourism shifts from a leisure activity to a marketing strategy and the importance of tourism in urban development. Another issue to analyse is how destinations will react to increased tourist flows. According to Ermolaev et al. (2019), opening businesses to

visitors and creating tourist attractions will stimulate the modification of regions and loss of authenticity, especially if the tourist flow is excessive. Likewise, Ruíz, del Pozo, & Ruiz-Valdepeñas (2019) report that experiences of enhancing industrial heritage tourism are not always successful and that the boundaries of Industrial Tourism are blurred. These authors warn about the convenience of evaluating the economic impact and other intangible aspects of social interest or territorial potential. According to Somoza-Medina & Monteserín-Abella (2021), industrial heritage tourism has not generated that much progress or innovation in some cases. It is mainly based on exhibition centres that are visited chiefly through school groups on educational visits or by older people for recreation. They are not seen as engines of innovation or benchmarks for the regeneration of the productive fabric of these places, nor produce structural changes in a territory unless accompanied by many other public and private initiatives (Somoza-Medina & Monteserín-Abella, 2021).

Lastly, Li & Soyez (2017) Industrial Tourism products rarely use the “negative” side of industrialisation phases or patterns, that is, its disturbing histories of war, occupation, other forms of imposition of foreign influence, disasters, social unrest, and the suffering of individuals or groups triggered by crises, failures, relocations, and destruction.

Table 6 and 7 summarise the main perspectives on the possible benefits and main difficulties of implementing Industrial Tourism at the regional level.

Table 6 - Benefits of Industrial Tourism for regional development

Benefits	Authors
Educational function	Prat & Valiente, 2012; Klempa, Bujok, Jelínek, Porzer, & Pavluš, 2015
Experiencing industrial environments of different types	Klempa, Bujok, Jelínek, Porzer, & Pavluš, 2015
Revitalizing the economy	Čopić & Tumarić, 2015
Generating income	Kuzior et al., 2021; Khaleghi et al, 2020; Hashimoto & Telfer, 2017
To create employment	Kuzior et al., 2021; Khaleghi et al, 2020; Hospers, 2002; Vargas-Sanchez, Plaza-Mejia, & Porras-Bueno, 2009; Kuzior, Lyulyov, Pimonenko, Kwilinski, & Krawczyk, 2021; Hashimoto & Telfer, 2017
Recovering the investment attractiveness of a region	Kuzior, Lyulyov, Pimonenko, Kwilinski, & Krawczyk, 2021
Stimulate the formation of local service activities	Hospers, 2002; Vargas-Sanchez, Plaza-Mejia, & Porras-Bueno, 2009; Kuzior, Lyulyov, Pimonenko, Kwilinski, & Krawczyk, 2021; Rodrigues, 2019
New development opportunities for the territories	Moral-Moral & Fernandez-Alles, 2019
Revitalize community development	Hashimoto & Telfer, 2017
Social benefits	Harfst, Sandriester, & Fischer, 2021; Čopić & Tumarić, 2015 ; Custódio & dos Santos, 2020
Improve quality of life	Kuzior, Lyulyov, Pimonenko, Kwilinski, & Krawczyk, 2021
Sense of belonging for the local population	Prat & Valiente, 2012
Preserving the native culture of the region	Khaleghi, Hosseinzadeh, & Moridsadat, 2020; Hashimoto & Telfer, 2017; Ruíz, del Pozo, & Ruiz-Valdepeñas, 2019
Preserving memories	Hashimoto & Telfer, 2017; Ruíz, del Pozo, & Ruiz-Valdepeñas, 2019
Increasing community awareness	Khaleghi, Hosseinzadeh, & Moridsadat, 2020
Recognition, identity, and bonding with the environment	Custódio & dos Santos, 2020
Offer options for increased participatory activity of the population	Metsaots, Printsman, & Sepp, 2015
Considering non-locals, help improve integration issues	Metsaots, Printsman, & Sepp, 2015
Enable the enjoyment of this heritage by the whole society.	Moral-Moral & Fernandez-Alles, 2019
Dissemination and knowledge of industrial values and traditions	Moral-Moral & Fernandez-Alles, 2019
Preventing degradation and deterioration of resources, preserving historical heritage	Hashimoto & Telfer, 2017; Moral-Moral & Fernandez-Alles, 2019; Kuzior, Lyulyov, Pimonenko, Kwilinski, & Krawczyk, 2021
Providing impetus for environmental improvement in denigrated post-industrial areas	Conesa et al. 2008.
Preserving cultural heritage and saving it from degradation for future generations	Szromek, Herman, & Naramski, 2021; Józwiak & Sieg, 2021
Promote sustainability through reuse of space	Custódio & dos Santos, 2020
Investment in these revitalized regions is financed by European Union public policies	Custódio & dos Santos, 2020

Source: Own elaboration

Table 7- Difficulties of Industrial Tourism at regional level

Negative points	Authors
Other forms of tourism can be much more profitable in terms of income and employment provision.	CoIT (2001)
Its effects on regional restructuring may be limited.	Hospers (2002)
The contribution of industrial heritage tourism to regional renewal in the EU may be rather disappointing, for several reasons, one of which is doubts about the appeal of industrial heritage to the public	Hospers (2002)
Relatively low impact on regional employment	Hospers (2002)
Does not contribute directly to improving the skills of workers in the tourism sector	Andrade & Caamaño-Franco (2018)
Little effect on the local economy	Mans eld, 1992 citado por Hospers, (2002)
Economic impact on the transition to more sustainable regional development are quite low.	Harfst, Sandriester & Fischer(2021)
Even a moderate economic impact is arguably better than the alternatives	Ronck & Price (2019)
Industrial Tourism is not sustainable in locations distant from centers of economic development	Somoza-Medina & Monteserín-Abella (2021)
It is unlikely that in practice the effects of heritage tourism will be large enough to rejuvenate an entire declining industrial region	Hospers (2002)
that industrial heritage tourism experiences various obstacles, such as lack of funding and resources.	Giventalet al.(2019); Alonso et al. (2010)
IT has not solved socio-economic problems but instead commodified them	Tegtmeyer (2016)
Current valuations of industrial heritage only rarely reflect the other side of the phases or patterns of industrialization, i.e., its disturbing histories of war, occupation, other forms of imposition of foreign influence, disasters, social unrest, and the suffering of individuals or groups triggered by crises, failures, relocations, and destruction.	Li & Soyez (2017)
Experiences of enhancing industrial heritage in the service of tourism are not always successful and that the boundaries of Industrial Tourism are blurred	Ruíz, del Pozo, & Ruiz-Valdepeñas (2019)

Source: Own elaboration

2.4.2. Identifying strategies to overcome the region's Industrial Tourism challenges

From the results discussed in the previous section, regional stakeholders need to form a realistic frame of the potentials and limitations of industrial heritage tourism to create an overall sustainable development strategy (Harfst et al., 2021). The content analysis reveals many ways to develop and promote Industrial Tourism. According to Xie (2006), the information presented by Kotler, Haider, and Rein in 1993 captures the essence of the complexity of industrial heritage tourism, where two places will never implement development strategies in the same way, as each place has its own culture, resources and products. Places differ in histories, cultures, policies, leadership, and particular ways of managing public-private relationships (Xie, 2006). Therefore, leadership and strategic tourism planning are needed in developing a regional strategy (Van der Merwe & Rogerson, 2018). Other authors mention that the lack of financial resources is a critical issue in developing industrial heritage tourism experiences (Alonso et al., 2010; Givental et al., 2019). Van der Merwe & Rogerson (2018) reinforce that the capacity constraints at the local government level must be correctly addressed to maximize the potential of industrial heritage tourism. Price (2021) notes that developing Industrial Tourism requires a long-term financial commitment and effective coordination at multiple scales of governance. Moreover, reliance on industrial - and other forms of cultural heritage - as a central aspect of tourism identity and branding can lead to challenges for areas trying to move in new directions or seeking distance from the past. Therefore, regional stakeholders need to form a realistic picture of the potentials and limitations of industrial heritage tourism to create an overall sustainable development strategy (Harfst et al., 2021).

According to Ballesteros & Ramírez (2007), there is a tendency to think that the main explanatory factors to understand the development of heritage tourism (as for any tourism) are the market, its demand generation, and government intervention. However, these authors argue that endogenous factors of the host societies should also be considered to explain better why heritage tourism has developed in some areas and not in others. Tourism affects and builds identities, but identities can also build or obstruct tourism (Ballesteros & Ramírez, 2007).

For Cole (2004), economically speaking, tourism should always be fully integrated with a broader holistic regeneration plan, ideally including providing training and monitoring to the local community. Besides, it should also address considerations of equity in the distribution of benefits, development of marketing programs linked to the industry, and possibly forming alliances that include the promotion of

complementary attractions nearby or even between regions that share a similar history. One of the most preeminent challenges is balancing economic impacts with heritage preservation and sustainability concerns. In the long run, Industrial Tourism can provide sustainable and increasing economic growth (Sjaifuddin, 2018). The industry's history and decline can be valuable discursive tools in some tourism attractions (Price & Rhodes, 2020). In cases where industrial heritage benefits from the classification of cultural heritage after its closure, there is even more potential for Industrial Tourism development (Somoza-Medina & Monteserín-Abella, 2021). For tourism purposes, the existing heritage must be converted into a tourism resource, and tourism, on the other hand, as an economic activity, is subject to market convergence with relevant public legislation and involvement of local communities (Ballesteros & Ramírez, 2007). According to Peng & Tzeng (2019), decision-makers should prioritize the improvement of criteria such as "social utility," "resource integration," "destination policy and development," "economic development," "cultural linkages," "cultural learning," and "natural landscape resources" to achieve the aspired performance levels. Active management based on implementing sustainable programs and plans for the regions aims to ensure continued economic and social development without depleting existing resources while promoting respect for the environment (Moral-Moral & Fernandez-Alles, 2019). Local authorities should place more importance on strengthening residents' native emotional ties and focus on how to encourage residents to participate in tourism activities to help them form perceptions of positive impacts, deepen attachment to the place, and build a sustainable tourism industry (Yuan et al., 2019)

Therefore, tourism can be seen as a way to preserve cultural heritage and save it from degradation for future generations. Tourism must be based on facilities incorporating this heritage, which requires a specific business model transformation approach (Jóźwiak & Sieg, 2021; Szromek et al., 2021;). The design of tourism activities for industrial heritage is a model that has emerged since the early days of its recognition and that takes as a reference point what has been done for cultural heritage, which can provide a new path for the conservation of this heritage (Botella, 2018). Additionally, the progressive reduction of the life cycle of tourism products has revolutionized territorial planning models, with more flexible offers that can reconcile the identity of tourism with the capacity for constant renewal of territories (Prat & Valiente, 2012).

Some authors explore some examples of promising strategies being used in several regions. Andrade-Suárez & Caamaño-Franco (2020) address winemaking as a means of enhancing the heritage and memory of the wine industry. Specifically,

they consider visits to wineries as a form of Industrial Tourism capable of boosting the sustainable development of wine-growing territories, considered an element with the capacity to revitalize the economy and improve the city's image. Wine tourism, as a form of Industrial Tourism, can be seen as a tool for regional development that favours the integration of various sectors, agriculture (primary), wine industry (secondary), and tourism (tertiary) (Andrade-Suárez & Caamaño-Franco, 2020). Other studies address diverse realities, such as:

- (1) Ecomuseums and collective memory (Prat & Valiente, 2012).
- (2) The marble industry in Sardinia and the strategic advantage of having all companies concentrated in a limited and homogeneous area of quarrying and processing activities (Careddu et al., 2017).
- (3) The coal's contributions to Wales and the overall legacy of the resources (Price & Rhodes, 2020).

Most studies stress the need to involve several stakeholders in the process. Opinions of local inhabitants and tourists can benefit regional planning, revealing their needs and expectations. Xie (2006) argues that not only do industry and residents' interests need to be coordinated, but also that all stakeholders must be involved and collaborate for the well-being of industrial heritage. One positive side effect is the provision of options for increased participatory activity and considering non-locals could help improve integration issues (Metsaots et al., 2015). Cooperation among stakeholders is highly significant for the development of industrial heritage tourism. However, at the same time, it is somewhat difficult to achieve, and local governments have capacity limitations in tourism development, planning and management (Van der Merwe & Rogerson, 2018). According to Yang et al. (2019), the governments have different roles and interventions during this development process, being possible to identify three distinct phases. In the first phase, the government's part is essential in defining the path to take and allocating financial support. In the second phase, the private sector assumes a more important role, becoming the leading investor, increasing commoditization, and shifting the emphasis from heritage preservation to economic development in search of higher returns for capital investment. Later, the government gets involved again to control the excesses of commodification, creating plans to achieve a better balance between preservation and development.

The need to involve the local population and social authorities would show the value that industrial heritage can acquire (Botella, 2018) to achieve the tourism sustainability of a destination, involving the local population in managing their resources (Moral-Moral & Fernandez-Alles, 2019). Alonso et al. (2010) point out that the participation of academia in projects at industrial plants presents a wide range of

benefits for both the educational institutions and the plant. Building relationships with government agencies is also essential to secure future funding for projects. Zhao & Liu (2021) studied the importance of initial conditions and stakeholder collaboration in promoting the development of industrial heritage tourism. They concluded that the participation of local communities, the application of new technologies, and strong support from national and local governments are vital to creating a new path for Industrial Tourism, believing that industrial heritage sites have the potential to become modern tourism destinations. From the analysis of the specific case of the mining industry, Givental et al. (2019) point out that the recognition and classification of industrial heritage by UNESCO is a critical valuation factor. However, before reaching this stage, it is necessary to improve the quality of domestic tourism sites and amenities before appealing to the international tourism community, seeking cross-sectoral cooperation of various stakeholders, including regional and local government, private companies, investors, and residents.

Pardo Abad (2014) addresses the importance of sustainability in achieving local development, with coordination between the various government administrations (Price, 2021), promotion of private initiative, and sustainable use of heritage wealth being fundamental objectives. It also reinforces the importance of integrating management projects in urban, regional, tourism and cultural policies, as well as in the economy and society of the receiving areas (Pardo Abad, 2014). Frequently, sustainable tourism has been understood only as a long-lasting form of tourism rather than referring to the viability of the activity without causing damage to the environment (Pardo Abad, 2014).

Zhao & Liu (2021) report that in the early stage of Industrial Tourism development, local business participation, pilot development, and government support play an essential role. Promoting industrial heritage can be a meaningful way to enhance places highly dependent on the original industrial enterprises (Yan et al., 2021). The conversion of industrial heritage into a cultural resource and a tourism product requires, in most cases, the intervention of public initiatives to finance enterprises' costs. City councils have been the architects of the shift to tourism, applying local or regional government initiatives and using the technical capacity to boost tourism (Pardo Abad, 2014).

The uniqueness of Industrial Tourism is strongly related to a given region's culture and industrial heritage, depending, among others, on local social and cultural values and the relationships between the local population and the environment. To improve the sustainability of both architectural and cultural space, we should classify industrial heritage sites and implement different measures to preserve the

manufacturing process equipment (Han et al., 2020), advising the creation of a database of industrial heritage resources for future reference and better management.

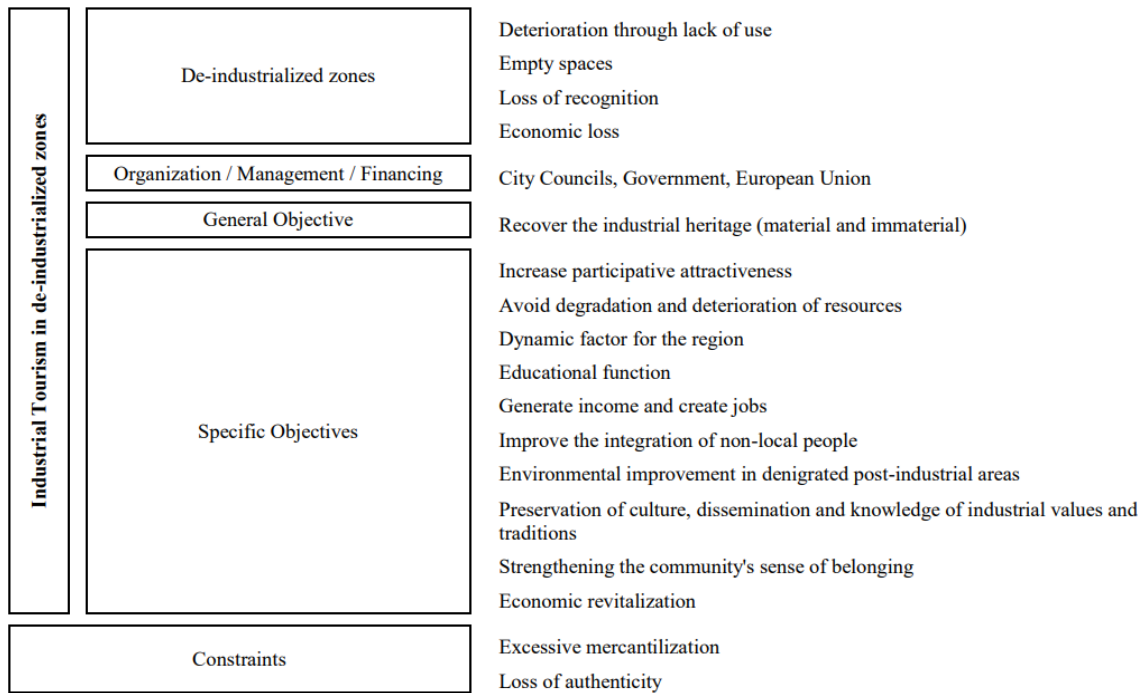
Another important aspect has to do with the ability of this product to attract visitors. Industrial heritage tourism can be a dynamizing phenomenon of the territory by offering differentiated goods and services to tourists with increasingly higher purchasing power and availability of free time. Consequently, regions should consider the preparation and successful implementation of special programs and initiatives to promote tourism (as a regional brand), minimizing its adverse effects (Ermolaev et al., 2019). Specific initiatives are suggested to boost Industrial Tourism, including marketing Industrial Tourism, encouraging industrial organizations to become a member of the regional tourism organization, and developing their tourism capacity and products (Moyle et al., 2018). Some case studies highlight that a lack of publicity and visibility can hamper Industrial Tourism development and its impact on regional development (Van der Merwe & Rogerson, 2018; Givental et al., 2019). For Alonso, O'Neill, & Kim (2010), physical proximity to highways or largely populated cities provides a decisive advantage in attracting visitors, as does the importance of access to an international airport (Nohara, Okamura, & Kawahara, 2016). Location is considered a critical success factor for industrial heritage tourism (Hollick, 2011). Another important aspect is related to the UNESCO World Heritage Site classification, which will obviously impact the industrial heritage sites that obtain such recognition (Hashimoto & Telfer, 2017). In this regard, the conservation of industrial monuments should be an important societal goal (Klempa et al. 2015). Large-scale campaigns may be needed to preserve active industrial heritage, with a rigorous management plan to maximize its cultural value and visitor appeal (Merciu et al., 2015). Nohara et al. (2016) consider it essential to promote cities through Industrial Tourism by working on regenerating attractive urban spaces in industrial cities. Therefore, urban renewal involves the enhancement of this heritage to develop Industrial Tourism (Laloyaux, 2016). For the conservation and reuse of industrial heritage sites, relevant policies, regulations, incentives, and plans are needed to clarify the use of industrial heritage to generate economic benefits from tourism (Peng & Tzeng, 2019). The level of reuse and access to industrial heritage sites should assume that no harm will be done to the cultural or natural landscape and that such landscape is incorporated to attract tourists (Peng & Tzeng, 2019). Moreover, there is a need for greater awareness, on the part of the population, of the importance of all the resources that make up the industrial heritage, as well as collaborative work and a long-term strategy that allows its conservation, improvement, promotion and tourism marketing (Andrade & Caamaño-Franco, 2018).

A lack of tourism infrastructure can hamper the region's potential to profit from Industrial Tourism (Givental et al., 2019). The economic potential of industrial heritage is a strong incentive for implementing several activities, such as information and education centres, visitor centres, museums, shopping centres, tourist accommodations, and sports facilities (Rodrigues, 2019). According to Hollick (2011), developing complementary facilities such as tourist accommodations is essential to increase the income associated with Industrial Tourism. Regarding tourism infrastructures, Industrial Tourism influences its improvement, although it is closely linked to the degree of tourism development. That is, as the degree of tourism development increases, the public and the private sector will also invest more in infrastructure (Andrade & Caamaño-Franco, 2018).

Another example of Industrial Tourism-related infrastructures and facilities are corporate museums, which can assume a central role in developing an agenda between industry, business and territory. Thus, corporate museums and other local institutions responsible for promoting local cultural heritage should cooperate to strengthen local identity while promoting synergies with tourism (Riviezzo et al., 2021). According to Lee (2016), on-site attractions, security and safety systems, and external access are the main dimensions in determining the attractiveness of Industrial Tourism.

From the analysis of the different perspectives, it was possible to identify the main challenges associated with Industrial Tourism development in "de-industrialized" areas, presented in figure 7.

Figure 7- The main challenges associated with Industrial Tourism development in "de-industrialized" areas



Source: Own elaboration

Therefore, designing a strategy that captures the benefits of Industrial Tourism requires actions at several levels. According to Xie (2006), these levels can be summarized as follows:

- (1) Potential: Conduct an industrial screening to assess industrial areas' characteristics and decide which tourism programs to invest in.
- (2) Stakeholders: Industrial heritage tourism depends on a diversity of people who may operate in many fields (may include business leaders, planners, and coalition builders; active members in grassroots organizations, supporters, and multiple audiences, or users of facilities, among others).
- (3) Adaptive Reuse: Related to the space where industrial cities recycle degraded buildings and constructive but unglamorous histories into new uses and tourist attractions.
- (4) Economy: Tourism has become an essential means of minimizing the losses associated with economic changes from deindustrialization.
- (5) Authenticity: This attribute is an essential factor in determining the vitality of industrial heritage tourism (Cohen, 1988; Leary & Sholes, 2000; Xie, 2006).

- (6) Perceptions: Successful tourism development needs a common community perception.

2.5. Conclusions

The literature review on Industrial Tourism enabled us to conclude that this topic was primarily explored empirically, lacking studies that analyse the theme in a more general and conceptual way. The selected articles are distributed among journals from different areas, including Tourism and Hospitality, Culture, Regional Studies, Economics and Management, Law, Geography, Archaeology, Marketing and Social Sciences.

Industrial Tourism is frequently referred to as having social, economic and environmental benefits, thus contributing to regional sustainable development (Prat & Valiente, 2012). However, some disruptive perspectives also argue that there are better solutions to improving the regions than Industrial Tourism. Nevertheless, its tourism potential is primarily recognized, and the participation of public entities in the management, promotion and financing of Industrial Tourism is seen as essential for its success. Managing industrial heritage involves creativity, flexibility, networking, dynamism, advertising and information and communication technologies (ICT) that are difficult to reconcile with a traditional approach made by a high bureaucratization, static conservation and unilateral management (Perfetto & Vargas-Sánchez, 2018). Therefore, an adequate strategic plan is essential for the success of this tourism product, allowing strategic and collaborative action and identification of possibilities and challenges. By combining heritage with industry and fostering synergies, it will be possible to create more awareness of this tourism activity. Namely through specific actions, such as more effective signage, better accessibility and more planned activities throughout the year, to reduce seasonality (Botella, 2018).

This study's limitations are related mainly to the scope of the analysed articles, as it was based exclusively on scientific journals written in English, Spanish or Portuguese, not contemplating articles in other languages, as well as documents in other formats (e.g., books, brochures). As a suggestion for future work, we recommend a broader approach that relates the concept to different themes, such as the impact of Industrial Tourism in active companies (on the motivation and productivity of factory workers and as a source of innovation) and its role in the protection of living industrial heritage.

It is also essential to conduct more theoretical studies on topics such as managing and implementing Industrial Tourism in companies and regions, promoting a deeper conceptual and theoretical discussion. Nevertheless, empirical studies and case studies are critical, reinforcing the practical application of Industrial Tourism in different parts of the world.

Also, maintaining a dialogue with companies and listening to their needs may provide helpful insights for future research.

CHAPTER 3 – INDUSTRIAL TOURISM AS A FACTOR OF SUSTAINABILITY AND COMPETITIVENESS IN OPERATING INDUSTRIAL COMPANIES

Abstract

This paper presents a systematic literature review (SLR) about Industrial Tourism and intends to show how this product can increase sustainability and competitiveness in operating industrial companies. It uses bibliometric analysis with data from 32 journal articles that address this topic. Through this sample of articles, we do not intend to generalize conclusions but rather to concretely identify factors of sustainability and competitiveness based on a set of scientific studies that met a very specific set of criteria. Industrial Tourism is categorized as a form of tourism encompassing excursions to industrial locations spanning the spectrum of contemporary, historical, or prospective significance. This encompasses venues that have ceased their industrial operations, presently functioning industrial enterprises, and forthcoming industrial establishments. Additionally, it involves visits to other destinations with an industrial theme, such as industrial technology hubs, museums, industrial tourist routes, educational institutions with industrial programs, laboratories, and analogous venues. The focus of this article is to analyse the literature on Industrial Tourism from the point of view of active industrial companies, the so-called “living industry”, to identify how this type of tourism can contribute to enhancing these companies. Industrial Tourism allows industrial companies to achieve environmental, social, and economic benefits and can be seen as a marketing tool and a promoter of innovation within companies.

Keywords

Industrial Tourism; systematic literature review; innovation; diversification; marketing

3.1. Introduction

Industrial Tourism has been garnering growing attention as an alternative form of tourism. It is based on the touristic exploration of industrial heritage (Pardo Abad, 2017; Montenegro et al., 2024) and can occur in deactivated production facilities (e.g., company museums), in operational production units, or even in those projected for the future (Montenegro et al., 2022) that, due to their specificity, arouse interest because of their educational and touristic attractions (Moral-Moral & Fernandez-Alles, 2019). Thus, Industrial Tourism can encompass all types of tourist activities whose primary motive for visiting is related to both material and immaterial industrial knowledge.

Although recognizing that Industrial Tourism encompasses both visits to industrial sites of the past and operational production units, scholars need to pay more attention to the latter type of Industrial Tourism. Moreover, the existing studies usually need to consider the perspective of the industrial enterprise offering this tourist product. The studies that deal with the topic suggest that the impact of opening industrial enterprises to tourism depends on the strategies adopted by the companies, namely in terms of innovation and marketing (Montenegro, 2020; Montenegro & Sousa, 2021).

According to Zhang et al. (Zhang et al., 2020), through a meta-analysis of studies on Industrial Tourism, the main research contents addressed in Europe are related to heritage and community-building of industrial heritage, the exploitation of tourism, the protection of industrial heritage, and the use of new technologies. This study reinforces the importance of carrying out an analysis from the point of view of industrial companies.

This article aims to address this gap and contribute to understanding how Industrial Tourism can contribute to strengthening the sustainability and competitiveness of industrial companies. The paper has two main objectives:

1. Map the literature on Industrial Tourism in active industrial companies, analysing its evolution;
2. Explore the relevance and challenges of developing Industrial Tourism activities in the context of business strategies in these companies.

Analysing the extant literature enables us to identify different strategies companies adopt and potential effects on their sustainability and competitiveness. Therefore, the article contributes to increasing the knowledge of the processes and

outcomes of introducing Industrial Tourism in the portfolio of activities of operating industrial companies.

This article is organized into seven sections. The following section presents the re-search framework, outlining the research approach employed, including the procedures adopted in the systematic literature review. The results are presented in four different sections. Section 3 presents the findings of the bibliometric analysis conducted on the scientific production related to Industrial Tourism in active companies. It examines the evolution of publications and citations over time, identifies the countries contributing to the literature, explores the types of studies and methodologies employed, and highlights the journals in which the articles were published. Sections 4, 5, and 6 present the results of the content analysis, organized into three categories: Sustainability and Innovation through Industrial Tourism (Section 4), Marketing and Industrial Tourism (Section 5), and Critical Success Factors of Industrial Tourism (Section 6). The final chapter presents the main conclusions of the study.

3.2. Research Framework

3.2.1. Systematic Literature Review Model

Systematic literature review (SLR) is used to locate scientific studies in each area of knowledge, select and assess contributions, analyse and synthesize data, and end with an evidence report that allows for reasonably clear conclusions about what is known and what is not known about a given topic or area of knowledge (Denyer & Tranfield, 2009). Performing an SLR in the field of Industrial Tourism is particularly challenging given the fragmented nature of the topic. In this paper, Denyer and Tranfield's model was followed. The model includes five essential steps (Denyer & Tranfield, 2009):

1. Formulation of the research question;
2. Location of the studies to be included;
3. Selection and evaluation of the selected studies;
4. Analysis and synthesis of the selected information;
5. Description and use of the results achieved in the previous steps.

The first stage is of utmost importance. By clearly elaborating the research question, the criteria for inclusion of primary studies in the review become clear. The research question addressed in the study is: How can Industrial Tourism contribute to the sustainability and competitiveness of industrial companies?

Considering this research question, locating, selecting, and assessing scientific articles was necessary. The procedures adopted are explained in the following sections.

3.2.2. Location, Selection, and Evaluation of Articles

For this study, we searched the Scopus database for articles that could answer the proposed research question. The search was made in June 2022, applying subsequent keywords and search conventions, and adopting and combining Boolean operators with complex investigations, as shown in Table 1.

Given the focus of the research, we searched for different words that could be related to the central concept of the research: “Industrial Tourism”, “Industrial Heritage Tour-ism”, “Factory Tourism”, and “Factory Visit”. As a result of the search string, we obtained a comprehensive listing of articles (primary contributions). A total of 266 articles were located, making it possible to analyse 122 published or available in the Scopus database between 1996 and 2022. According to the defined search criteria, the list of articles analysed represents the catalogue of studies considered most relevant to the theme.

We collected and stored the articles located using the EndNote Online citation soft-ware tool, which allowed the identification and ordering of the articles. Then, we proceeded to read and analyse the abstracts of all articles to ensure their relevance to the objectives of our study. At this stage, we identified some articles that needed to fit the in-tended theme, considering exclusion criteria regarding the explanation provided by the article and whether it contributed to answering the research objective. Thus, 32 articles published between 1996 and 2022 were selected and considered for the following stages of the SLR. Appendix 2 lists all the articles analysed, indicating the authors, year of publication, and journal.

Table 8- Structure of search criteria

Selection Criteria	Research
Database	Scopus
Search field	Article title, Abstract, Keywords
Search words	Industrial Tourism; Industrial Heritage Tourism; Factory Tourism; Factory Visit
Search date	8 June 2022
Years	all
Initial number of articles	266
Document Type	Article and conference paper
Number of articles	239
Search Fields	Social Sciences/Business, Management and Accounting, Economics, Econometrics and Finance
Number of articles	146
Language	English, Portuguese, and Spanish
Number of articles	138
Unavailable articles	16
Number of articles	122
Abstract did not reflect the topic	90
Final number of articles	32

Source: Own elaboration

The goal of the analysis and synthesis phase is directly related to how we break down individual articles into compatible parts and the extent to which each part relates to the other, and thus to be able to gauge associations between data (Denyer & Tranfield, 2009). We carefully reviewed the articles in our database to identify critical contributions before summarizing each one. Additionally, based on the nine-ball technique approach (Noy, 2008), we considered enriching this analysis by integrating two articles not identified during the search process. These two articles, presented in Table 9, were published in journals indexed in the Web of Science database and meet our study on the evolution of the literature.

Table 9- Extra articles integrated in the analysis

Title	Authors	Source Title	Year
Botella, M.D.P.	The heritage of the industry: a tourist referent to explore in the Region of Murcia.	Cuadernos De Turismo	2018
Hospers,G	Industrial Heritage Tourism and Regional Restructuring in the European Union.	European Planning Studies	2002

Source: Own elaboration

The methodology employed in this study involves a systematic delineation of the criteria governing our sample selection and provides a comprehensive explanation of the procedures followed. Although the sample of articles is small, the aim is not to generalize conclusions but rather to concretely identify factors of sustainability and competitiveness in operating industrial companies based on a set of scientific studies that met a particular set of criteria.

3.2.3. Analysis and Synthesis of Articles

The goal of the analysis and synthesis phase is directly related to how we broke down individual articles into consistent parts and the extent to which each part relates to the other, and thus, to be able to gauge associations between the data (Denyer & Tranfield, 2009). Two types of analysis were performed: bibliometrics and content analysis.

We used the VOSviewer 1.6.18 software for the bibliometric analysis for citation, co-citation, and bibliographic coupling analysis.

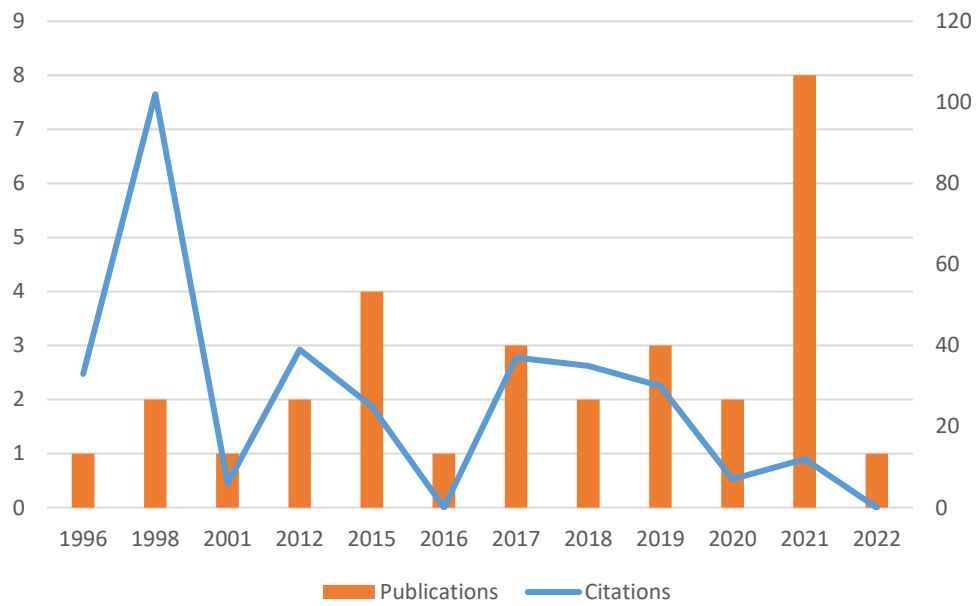
Content analysis was performed manually. We carefully analysed the articles in our database to gauge key contributions before summarizing each one. An inductive approach was used, and the following categories of analysis emerged:

- Sustainability and Innovation through Industrial Tourism;
- Marketing and Industrial Tourism;
- Critical Success Factors of Industrial Tourism.
-

3.3. Scientific Production on Industrial Tourism as a Source of Sustainability and Competitiveness

This theme has been addressed over the past 26 years, maintaining an empirical and somewhat fragmented trend. Publications related to tourism and

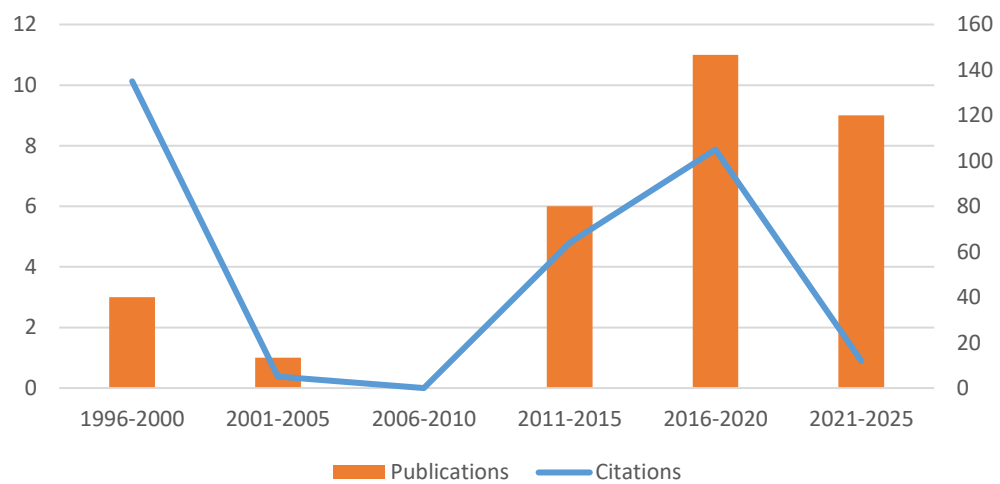
Figure 9- Distribution of publications and citations per year



Source: Own elaboration

The growing interest of researchers in the topic is also demonstrated by the constant evolution of the number of publications over the last decade (Figure 10). The year 2021 has eight publications, showing that more attention has been paid in more recent years.

Figure 10 - Publications by 5-year periods



Source: Own elaboration

Table 10 presents the most cited articles, and we can see that the two articles with the most citations were published 24 years ago.

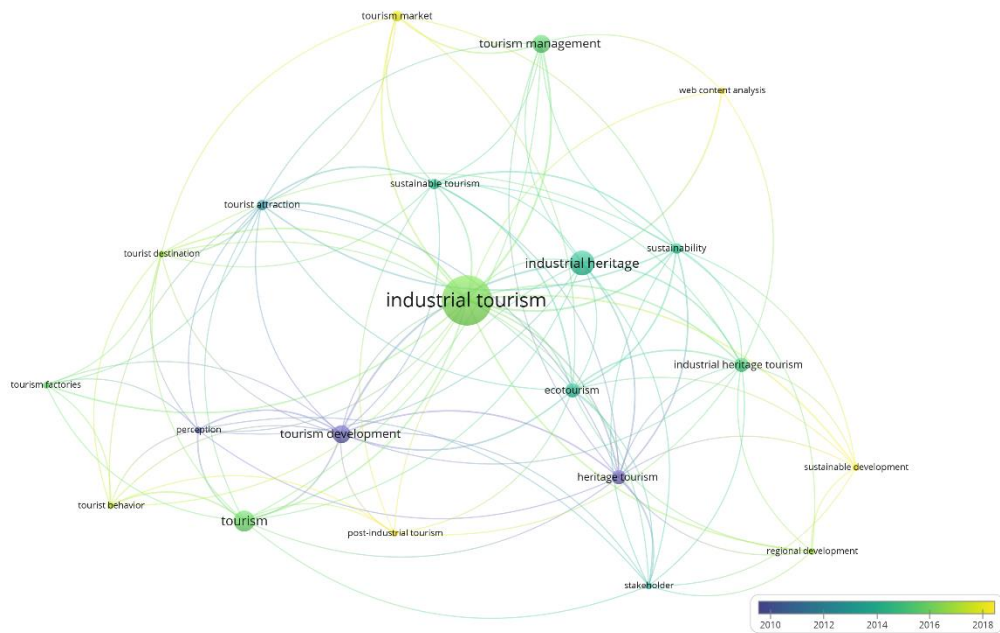
Table 10- Most cited articles

Authors	Title	Year	Source Title	Cited by	Average Quotes/Year
Kerstetter D., Confer J., Bricker K.	Industrial heritage attractions: Types and tourists	1998	<i>Journal of Travel and Tourism Marketing</i>	60	2, 50
Rudd M.A., Davis J.A.	Industrial heritage tourism at the Bingham Canyon copper mine	1998	<i>Journal of Travel Research</i>	42	1, 75
Otgaar A.	Towards a common agenda for the development of Industrial Tourism	2012	<i>Tourism Management Perspectives</i>	39	3, 90
McBoyle G.	Green tourism and Scottish distilleries	1996	<i>Tourism Management</i>	33	1, 27
Chow H.-W., Ling G.-J., Yen I.-Y., Hwang K.-P.	Building brand equity through Industrial Tourism	2017	<i>Asia Pacific Management Review</i>	21	4, 20
Beer M., Rybár R., Kaľavský M.	Renewable energy sources as an attractive element of Industrial Tourism	2018	<i>Current Issues in Tourism</i>	16	4, 00
Perfetto M.C., Vargas-Sánchez A.	Towards a Smart Tourism Business Ecosystem based on Industrial Heritage: research perspectives from the mining region of Rio Tinto, Spain	2018	<i>Journal of Heritage Tourism</i>	14	3, 50
Lee C.-F.	Tourist satisfaction with factory tour experience	2015	<i>International Journal of Culture, Tourism, and Hospitality Research</i>	14	2, 00
Szromek A.R., Herman K.	A business creation in post-industrial tourism objects: Case of the industrial monuments route	2019	<i>Sustainability</i>	13	4, 33
Yang X.	Industrial heritage tourism development and city image reconstruction in Chinese traditional industrial cities: a web content analysis	2017	<i>Journal of Heritage Tourism</i>	12	2, 40

Source: Own elaboration

By analyzing figure 131 we can see that, more recently, the themes addressed are the tourism market, web content analysis, post-industrial tourism, and sustainable development, which demonstrates the evolution of the themes of the published articles towards greater specificity in areas such as marketing and sustainability.

Figure 11 - Evolution and relation of the main words addressed over time



Source: Own elaboration, using software VOSViewer 1.6.19

3.3.2. Countries

Regarding the countries that are researching more about tourism in industrial companies, indicated in Table 11, the country with the most publications is China (5), followed by Spain (4) and the United States of America (4).

Table 11 - Distribution per country (with 2 or more published)

Country	Articles	%
China	5	16.67%
Spain	4	13.33%
USA	4	13.33%
Germany	3	10.00%
Japan	3	10.00%
Poland	3	10.00%
France	2	6.67%
Italy	2	6.67%
The Netherlands	2	6.67%

Source: Own elaboration

Considering regions, Europe has the most publications, representing 53% of the existing publications, followed by Asia with 32%. Oceania and Africa are not represented.

3.3.3. Types of Studies and Methodology

The first published articles date from 1996 and 1998, both being case studies, two qualitative and one quantitative. Different authors wrote all three articles. About 77% of the articles are case studies. Thus, the topic has been mainly explored qualitatively (table 12). There need to be more studies that analyse the topic in a more general and conceptual manner. To date, there is no literature review on the theme addressed.

Table 12- Types of study

Type of Study	Articles	%
Literature review	0	0.00%
Mixed approach	2	6.67%
Quantitative approach	9	30.00%
Qualitative approach	19	63.33%
	30	100%

Source: Own elaboration

3.3.4. Journals

The analysed articles are published in 24 different journals. Table 13 presents the journals with two or more publications, identifying the number of articles published in journals in the different quartiles.

Table 13- Journals with more publications, types of studies, and quartile

Source Title	Qualitative	Quantitative	Mixed	Case Study	Research Paper	Number of Articles	%	Q
<i>Sustainability</i> (Switzerland)	3	2		5		5	16.67%	2
<i>International Journal of Culture, Tourism, and Hospitality Research</i>		2		2		2	6.67%	2
<i>Journal of Heritage Tourism</i>	2			1	1	2	6.67%	2
Journals with 1 published article	5	2	1	6	2	8	26.67%	1
	1			1		1	3.33%	2
	8	3	1	8	3	12	40.00%	Other Q and unclassified
Total	19	9	2	23	6	30	100.00%	
	63.33%	30.00%	6.67%	76.67%	20.00%	100.00%		

Source: Own elaboration

Sustainability (Switzerland) has five publications, followed by the *International Journal of Culture, Tourism, and Hospitality Research* and the *Journal of Heritage Tourism*, with two publications each, totalling 30% of the analysed publications. In turn, 70% of the published articles are dispersed, with each article corresponding to a different journal, and 26.67% of the analysed articles were published in journals in the 1st quartile. The selected articles are dispersed among numerous journals from different areas.

3.4. Sustainability and Innovation through Industrial Tourism

The first category of analysis that emerged from the content analysis of selected papers was the benefits for operating companies that extend their activity to Industrial Tourism. These benefits are related to increased sustainability and competitiveness of the businesses.

Contrasting with the trend of studies related to all types of Industrial Tourism, where the main articles reflect the concern of regions with industrial heritage, innovation is a salient topic in the studies that consider active companies.

Competitiveness depends mainly on innovation (Porter, 1990); this is also true of tourism (Kozak, 2017). However, these themes, associated with Industrial Tourism, have had little attention from researchers until 2015. Accordingly, innovation and sustainability are present in some articles, primarily through case studies. Several examples are presented as ways to innovate in companies, and the proposals are presented to the public.

The so-called “living industry tourism” is considered an innovative modality that “leads to diversification from its basic activities to enter new markets and generate synergies” (Periáñez et al., 2012, cited by Ruíz et al(2019). For example, Lin (Lin, 2019) presents the economic development of Taiwan, which gradually shifted from manufacturing to the service sector. According to Lin (2019), tourism has been adopted as a form of industrial transformation in Taiwan. In recent years, many conventional industrialists in Taiwan have begun transforming production-oriented manufacturing and their production facilities into tourism facilities (Lin, 2019). This trend promotes industrial transformation and helps industrial operators rethink how to create business value through service innovation and determine future development directions for manufacturing (Rudd & Davis, 1998).

According to Perfetto and Vargas-Sánchez (2018), the management of industrial heritage requires a new approach that involves factors such as creativity, flexibility, networking, dynamism, promotion and information and knowledge technologies that are difficult to reconcile with a traditional system made by a high bureaucratization, static conservation, and unilateral management. It should be integrated with broader tourism that would include, for example, providing training and mentoring to the local community, designing industry-linked marketing programs, forming alliances that promote complementary attractions nearby or even between regions that share a similar history (Cole, 2004).

Zhao and Liu (2021) agree that Industrial Tourism is inseparable from industrial and technological innovation, giving an example of Kitakyushu (Japan), where Industrial Tourism combines local industrial heritage with emerging and new technologies.

According to Lopez de Avila (2015), a smart tourism destination (smart destination) is considered an innovative destination built on a state-of-the-art technology infrastructure that ensures the sustainable development of tourism areas, accessible to all, which facilitates the interaction and integration of visitors in the surroundings, increases the quality of the experience in the destination, and improves the quality of life of residents (Perfetto & Vargas-Sánchez, 2018). On the other hand, sustainability in this context refers to addressing the needs of tourists and local

communities today without compromising the needs of future generations. For the World Tourism Organization, sustainable tourism fully considers its economic impacts, current and future social and environmental issues, meeting the needs of visitors, industry, environment, and host communities (UNWTO, 2005). Pardo Abad (2014) reinforces the importance of sustainability in achieving local development, with coordination between the various government administrations, the promotion of private initiative, and the promotion of the sustainable use of heritage wealth being absolute objectives. Integrating “smart tourism” and sustainability concepts is crucial to ensure that the growth of the tourism sector does not harm destinations and that the economic benefits are distributed equitably.

Kozak (2017) notes that public policy in practice more often employs “substitution objectives” rather than complex and demanding objectives (e.g., modernization or renewal rather than urban regeneration or culture or tourism). In contrast, the tourism sector is more product-oriented, in line with the new post-industrial paradigm. Introducing innovations is more complex and largely depends on their ability to adopt the new tourism paradigm suitable for the knowledge-based economy and information society (Kozak, 2017).

The analysed papers also mention the target public of the Industrial Tourism product. Some authors consider it as being directed to a niche market (Kao et al., 2015; Morales et al., 2015). However, others believe it can attract the attention of a wide variety of publics. According to Rudd and Davis (1998) and Mitchell and Mitchell (2001), younger generations view manufacturing with curiosity because they have never experienced factory work. On the other hand, older generations view the industrial era with nostalgia because they remember the “good old days”, creating a desire to know more about the different industrial processes. Visitors perceive a significant connection between the factory visit and remembrance, transferring the affections and beliefs of the in-factory experience to memory (Gregan-Paxton, 2001).

Also related to the customers and their experiences, Lin (2019) suggests that Industrial Tourism operators should increase customers’ technical knowledge (Dębczyńska & Piasecki, 2021; Pavlakovič et al., 2021) and improve customers’ cultural communication and identity of sustainable Industrial Tourism. Moreover, visits to production facilities can allow customers to become familiar with the origins of a corporate brand, which can be an effective way for a company to strengthen its brand and develop a differentiation strategy (Endo & Kurata, 2015).

In Japan, proposals are presented for night tours in coastal areas to observe old, illuminated factories (Amano, 2016; Orange, 2017), with digital effects changing and enriching the viewer’s experience of industrial factories. With the assistance of a

guide, these tours also offer a brief overview of the local industry, geography, and function of the facilities (Amano, 2016).

Renewable energy sources can also be attractive to industrial tourists, mainly due to their modern design, proportions, eco-image, and—in certain regions—their uniqueness (Beer et al., 2018).

The content analysis also revealed that Industrial Tourism allows industrial companies to achieve various benefits at the environmental, social, and economic levels, but mainly as a marketing tool and as a promoter of innovation within companies.

According to McBoyle (1996), industrial attractions allow visitors to be confronted with the quality of the products but also with the environmental integrity (Ruban et al., 2019), and Industrial Tourism is an effective means of return on environmental investments made by companies.

Companies use tourism as part of their business operations to supplement profits, gain more significant market share, relieve the economic stress associated with the shift to a post-industrial society, affirm the environmental integrity of an industry, and renegotiate the company's relationship with the physical environment (Edwards & Llundés I Coit, 1996; McBoyle, 1996; (Edwards & Llundés I Coit, 1996; McBoyle, 1996; Rudd & Davis, 1998; Ruban et al., 2019). Overriding the financial aspect, some companies choose to donate all tourism revenues to social causes (Rudd & Davis, 1998), as is the example of the company "Corticeira Amorim" (Montenegro, 2020).

While visits to active industrial companies may not generate direct profit, they can help maintain or improve the company's image (Nielsen, 2012). According to (Otgaar, 2012), these visits can be used to enhance the image of industries and, consequently, the regions in which they are located, allowing the reconstruction of unique images of cities and increasing their competitiveness (Hospers, 2002; Yang, 2017; Harfst et al., 2021).

Otgaar (2012) notes that Industrial Tourism can be an effective tool for co-branding the region if the participating companies fit the image the region wants to communicate. Company visits can help demonstrate the excellence or innovation of the region's economic activities (Otgaar, 2012). A marketing event at a production facility could meet consumers' demand for authenticity and satisfy demand for the origin of a consumer product brand (Lin, 2019). For example, the pencil production company "Viarco" is part of the industrial companies network promoted by the tourism of São João da Madeira (Montenegro, 2020).

However, Industrial Tourism implies that companies subject themselves to public scrutiny (McBoyle, 1996), using tourism as a public relations tool (Rudd & Davis, 1998), promoting not only products and brands but also countering fears about pollution and degradation (Rudd & Davis, 1998).

Otgaar (2012) considers that the development of Industrial Tourism presents opportunities for industries as a source of income and employment but, more importantly, as a marketing and public relations tool. This facet holds the potential to generate additional revenue, such as entrance tickets and on-site product sales.

Factory visits can also be seen as a recruitment strategy for younger visitors, especially groups of college students (Nielsen, 2012) who will soon enter the labour market.

Table 14 systematizes the tangible objectives of Industrial Tourism referred to by different authors:

Table 14- Intangible benefits of Industrial Tourism

	Intangible Benefits	Authors
Economic	Alleviate the economic stress associated with the shift to a post-industrial society	Rudd and Davis
	Promoting local economic regeneration	Rudd and Davis ; McBoyle
Social and Environmental	Educate and motivate the public on an issue	Pavlakovič, Demir, Pozvek, & Turnšek
	Show environmental integrity, green attitude	Ruban; McBoyle; Rudd and Davis
Innovation	Develop a differentiation strategy.	Endo and Kurata
	Increase competitiveness	Hospers; X. Yang
	Build a sustainable relationship with society	Otgaar; Chow, Ling, Yen, & Hwang
Marketing	Present the quality of your products	McBoyle
	Promotional opportunity of brands, products, or regions	Chow, Ling, Yen, and Hwang; Otgaar
	Building relationships with customers.	Endo & Kurata; Chow, Ling, Yen, and Hwang
	Increase brand loyalty	Chow, Ling, Yen, and Hwang
	Public relation tool to generate a positive image of the industry/company/region	McBoyle; Rudd & Davis; Nielsen; Otgaar; Endo and Kurata; Chow, Ling, Yen, and Hwang
	Company recruitment strategies	Nielsen, 2012
	Strengthen reputation	Otgaar; 15-Chow, Ling, Yen, and Hwang
Strengthen reputation	Otgaar	

Opportunity to become familiar with the origins of a corporate brand	Endo and Kurata
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Source: Own elaboration

The tangible benefits mentioned by the authors are fundamentally economic, as can be seen in table 15.

Table 15- Tangible benefits of Industrial Tourism

Tangible Benefits	Authors
Increase profits	Rudd and Davis
Gain greater market share	Rudd and Davis
Support social causes -proceeds from IT donated to charity	Rudd and Davis; Chow, Ling, Yen, and Hwang
Generate additional income	Otgaar

Source: Own elaboration

However, some fewer positive factors are also presented in the literature on the relationship between Industrial Tourism and companies. Liability and security concerns have led some companies to re-evaluate visits to their operating factories, moving more towards “museum company” type models (Gregan-Paxton). Other reasons companies do not invest in Industrial Tourism are development costs and the threat of industrial theft and espionage (Kao et al., 2015; Pavlakovič et al., 2021). Mitchell and Mitchell (Mitchell & Mitchell, 2001) presented the example of the Kellogg’s Company, which closed its cereal factories to visitors after it became aware of rivals taking photographs during a public tour.

Chow et al. report that in Taiwan, many factories have become involved in Industrial Tourism by turning their manufacturing factories into tourism factories, which include visits to production plants, company museums, company visitor centres, and branded parks. However, not all Industrial Tourism sites have thrived. Some need help with problems such as a lack of attractiveness to visitors or insufficient visitors to support their operating costs (Chow et al., 2017).

Another reason that may cause companies not to organize company visits is the attractiveness of the production process (Otgaar, 2012), and it can sometimes cause damage to a company’s reputation. On the other hand, companies may also decide to keep their doors closed because they feel they cannot attract visitors (Kao et al., 2015).

According to Montenegro and Sousa (2021) the company's strategy and culture should be aligned with Industrial Tourism so that mechanisms (such as specialized human resources, adequate marketing strategies, adjusted production area, factory store, etc.) can be created in its internal dynamics to collect and take advantage of all the added value that this relationship can bring. Since tourism is not the core business of industrial companies, if it is not aligned with their strategy, this activity can be seen as a source of "noise" and "disturbance" to industrial daily life (Montenegro & Sousa, 2021).

In summary, the negative points of Industrial Tourism for industrial companies are public scrutiny, development costs, security and security risks, threat of theft and industrial espionage, and source of "noise" and "disruption" to industrial daily life.

3.5. Marketing of Industrial Tourism

As a tourism product, Industrial Tourism competes with all the other existing products within national and international markets. Therefore, its promotion is a central aspect of the success of Industrial Tourism. Several initiatives are suggested to boost Industrial Tourism, which includes marketing industry travel, encouraging the resource sector to become a member of the regional tourism organization, marketing and beautifying their factories, and developing their tourism capacity and products (Moyle et al., 2018).

In an attempt to define markets for Industrial Tourism, Kerstetter et al. (Kerstetter et al., 1998) state that the use of thematic "identifiers" (for example, floods, railroads, battlefields) is a way for visitors to recognize and identify themes and storylines quickly.

On the other hand, Botella (2018) mentions another form of organization, grouping tourist actions by zones or areas rather than by types of tourism (thermal, natural, rural, sports, etc.), which would allow them to unify from their diversification and generate new proposals.

Kerstetter et al. (1998) state that promotional schemes could be developed that promote the visit of all the sites linked to the various themes, also promoting cooperation agreements with agencies that offer a similar service or product, resulting in discounts for visitors and ultimately higher revenues for each attraction.

Industrial Tourism is referred to by several authors who relate it to Experience Tourism. Mitchell and Mitchell (2001) state that a consumer who witnesses the production of his favourite products may become a more loyal consumer to the brand

and a credible spokesperson for the company as he shares the excitement of his experience. These authors consider consumer experience tourism as a strategic tool used to strengthen the connection between consumers and the brands they consume, and there is a growing number of companies maintaining factory visits to satisfy the intellectual curiosity of consumers as well as to create personal ties with the various stakeholders. According to Chow et al. (2017), companies should offer tourists experiences that help increase brand loyalty.

According to Tynan and McKechnie (Tynan & McKechnie, 2009), consumers are increasingly seeking holistic, authentic, multisensory, and memorable experiences that are associated with the product or service in question, leading to a rapid increase in the number of marketing efforts known as experience marketing, which attempts to establish a personal and meaningful interaction with the consumer.

Seeing active industry can be a means of dissemination by making it possible to transmit the experiences and processes that go from the production phase to the consumption of the product in person (Botella, 2018). This interactive engagement is a significant determinant of the perceived value of mementoes, wherein the encounter within the manufacturing premises becomes seamlessly intertwined with the assessment of the keepsake (Lin, 2020). This perceived value of mementoes possesses the capacity to transition into habitual purchasing behaviour (Lin, 2020). Consequently, the priority lies in creating hedonically appealing settings and, more crucially, in transforming initial tourists into dedicated, loyal customers through adept relationship management strategies.

In general, factories that host tourists compete in the tourism industry and the specific manufacturing industry where they manufacture and sell their products, and it is imperative and significant to link in-factory experiences to perceptions or attitudes towards tangible products (Lin, 2020). According to Lee (2015) the higher the satisfaction of visitors, the more likely they are to recommend and participate in in-factory tourism activities again.

Consumer goods companies often have communication platforms to attract visitors and advertise their products and business philosophies. Such platforms include corporate showrooms, museums, and factory tours (Endo & Kurata, 2015).

Cristobal-Fransi et al. (2020) report that although in some cases there is a lack of data on the websites about some of the services offered by companies linked to Industrial Tourism or the destination, the results confirm that this type of establishment, in general, meets the basic information needs of users in choosing their Industrial Tourism destination, which helps to reduce the uncertainty generated before a trip. On the other hand, the same authors mention that the sites analysed

use mainly traditional means of communication with their users, such as e-mail or telephone. Some sites also have more interactive features, such as social networks, blogs, or image and video exchange platforms, although to a lesser extent (Cristobal-Fransi et al., 2020). For the e-commerce dimension, Cristobal-Fransi et al. (2020) concluded that the analysed establishments still have a long way to go. With the implementation of online booking and payment mechanisms, they should also provide a greater connection with the users who access them and seek to generate feedback between themselves and their visitors, which will help improve the organization's management. It is also advisable to incorporate more informative content regarding the services offered and the tourism resources of the area (Cristobal-Fransi et al., 2020).

Another study conducted by Bugarin et al. (2021) states that the media in Serbia needs to sufficiently inform potential tourists about industrial tourist attractions and the potential of the tourism offer. The investment of specific resources in the marketing and development of Industrial Tourism would create additional demand, which would improve the tourism offer (Bugarin et al., 2021).

Amirkhani et al. (Amirkhani et al., 2021), who studied oil Industrial Tourism and appropriate strategies for its promotion, make some recommendations—namely, local involvement; cooperation of tour guides from schools/educational institutions to train tour guides in Industrial Tourism; working with other regions to establish a network of oil and gas museums in the Middle East; cooperation of the various ministries and the private sector to organize tours; fairs and exhibitions on Industrial Tourism; cooperation of Petroleum Public Relations to attract and guide visitors and tourists; and the establishment of a network to promote Industrial Tourism. These authors also suggest a diversification strategy by integrating ecotourism with industrial tours; integrating archaeological tours with industrial tours; organizing industrial tours for people from the oil sector and schools; creating an oil and natural gas eco-museum; creating augmented reality for the introduction of natural gas and oil industry activities in existing museums; and creation of a petroleum industrial heritage route involving various regions.

Through a web content analysis, Yang (Yang, 2017) studied how old Chinese industrial cities promote industrial heritage tourism and post-industrial image reconstruction and found that heritage and Industrial Tourism are rarely promoted or mentioned on these websites. Traditional Chinese industrial cities tend to seek opportunities to participate in global competition rather than reflect and preserve their past through the process of urban development, suggesting to Yang (2017) that more

attention should be paid to the integration of culture into Chinese urban development in the future both in academic research and practice.

Bugarin et al. (2021) report the statistically significant impact of digital marketing on post-industrial tourism development, noting that digital marketing catalyses post-Industrial Tourism development and that implementing digital marketing tools in promoting post-industrial tourism services is necessary. Thus, cloud technologies and artificial intelligence would be the main drivers of individualization of post-industrial tourism services, eco-consciousness, computerization, and modernization of tourism business (Kuzior et al., 2021).

In summary, the literature identifies the following critical points for the promotion and dissemination of Industrial Tourism:

- “Thematic identifiers”: floods, railroads, etc.;
- Group tourism actions by air zones;
- Promotional programs involving several locations;
- Cooperation agreements with travel agencies. Include IT in the tour operators’ offer;
- Experience tourism as a strategic tool in the consumer/brand connection;
- Interactive experiences;
- Attach a “story” or “theme” to reflect the authenticity of the factory work;
- Consulting with specialized companies that make the connection between companies/tourists;
- Inventory and preliminary studies to identify the most attractive tourist spots;
- Elaboration of a strategic plan;
- Participation in trade fairs;
- Digital marketing (websites, mobile applications, etc.);
- Production of guides about the places/themes;
- Program of fiscal and economic incentives by the government.

3.6. Critical Success Factors of Industrial Tourism

The final category of analysis that emerged is related to the critical success factors of Industrial Tourism.

Swarbrooke (Swarbrooke, 2002) states that modern and traditional production processes can attract visitors. Different authors also mention other factors as being necessary for success, such as the attractiveness and accessibility of the site,

accommodation and catering facilities, nearby attractions, provision of safety and emergency systems, and provision of information services (Lee, 2015).

Xie (Xie, 2006) states that it is necessary to analyse the feasibility of Industrial Tourism by identifying essential points where potential analysis (industrial screening), stakeholders and site authenticity are included.

According to Lee (2016), accessibility is a critical issue that determines tourism potential, stating that no matter how attractive an Industrial Tourism destination is, if it is not accessible, both externally and internally, demand will drop to zero. Considers accessibility as the accessibility by public and private transport, connections to nearby attractions, opening days and hours, carrying capacity parking and capacity, entry fee, and internal transport facilities (Lee, 2016).

Satisfaction with providing safety and emergency systems should be recognized as the “basic sector-specific infrastructure” that ensures the overall factory visit experience is more enjoyable and rewarding (Lee, 2015). Factory visits often require booking to enable visitors to minimize production interference and overcome potential safety and security issues. This issue is significant for those touring manufacturing facilities with heavy machinery and where the production of goods and services remains in operation (Lee, 2015).

Some companies certify their company according to a quality system related to Industrial Tourism. According to Martínez Carballo et al. (Martínez Carballo et al., 2015), the reasons that lead companies to adopt these quality systems are internal or proactive causes (search for organizational and control benefits, search for improvements in competitive position, search for improvements in productivity and costs), and external or reactive causes (normative and legal aspects, market demands, incentives from public administrations).

Otgaar (2012) suggests using the term “potential Industrial Tourism” to analyse the ability of an individual company and a region to attract industrial tourists. The potential power of Industrial Tourism depends on at least four factors: (1) the attractiveness of the company; (2) the supply of company visits; (3) the quality of the location and facilities for visitors; and (4) good promotion (Kao et al., 2015). It is essential to conduct inventories and preliminary studies to identify the most attractive tourist spots and make their implications known completely and comprehensively (Botella, 2018).

As stated by Otgaar (2012), good promotion is essential for an excellent ability to attract tourists; they state that the ability to attract industrial tourists depends on promotional activities, such as distributing brochures, posting posters, advertising, cooperation with local tourism services and word-of-mouth communication. Lee

(2015) reports that the main priority for Industrial Tourism factories is to focus on enriching and diversifying on-site attractions, both tangible (e.g., showroom) and intangible (e.g., observation of the production process, do-it-yourself experience).

Visited factories should differentiate themselves from the competition by creating a personalized experience on a physical level, demonstrating how complicated it is to produce the product and how the product can be used, physically engaging visitors in a series of production and personal activities by interacting with guides/employees, and most importantly, attaching a “story” and “theme” to reflect any authentic factory work experience (Lee, 2015). Chow et al. (2017) suggest that companies involved in Industrial Tourism should focus on offering tourists’ interactive experiences that enhance brand associations and on ensuring that operations (e.g., assembly line operations) are visible to visitors during visits to emphasize the high quality of whatever is being produced, thus eventually contributing to greater brand loyalty.

Botella (2018) suggests partnering with stakeholders specializing in promotion and dynamism, promoting interaction between different venues. He presents as an example the emergence of a company, “Turinde-Visita a Industrias y Empresas,” that intends to respond to this gap: it works as an intermediary to bring together companies and visitors, but it is not limited only to this aspect, making specialized consulting in this area in compliance with the UNE 302001 standard for Industrial Tourism; it can carry out the study, analysis, planning, and realization of visits to companies as well as explanatory videos and adds to this a guide service, management of the dissemination, promotion of the activity, and the transfer of visitors.

The preparation of a strategic plan is essential for the success of Industrial Tourism to allow the decomposition of actions in a coordinated and complete way, framing the possibilities and difficulties of the proposals to be made, combining the heritage with the active industry to strengthen the information, generating correct signage to facilitate its location, taking care of accesses, and working on non-seasonal proposals that allow attracting different visitor profiles (Botella, 2018). The same author mentions the importance of dissemination. For this, it is necessary to make the visit understandable, training both the guides and the workers who take on this task, producing handbooks and adding the aspect of Industrial Tourism to mobile applications, showing what has been done in this area in trade fairs and managing to include it among the offers of tour operators (Botella, 2018). In the case of active companies, along with these points, it would be feasible to create a tax incentive program for those who join this initiative (Botella, 2018). All this would be more easily

channelled through creating a specific centre or entity that would coordinate the actions and a program for rescuing industrial elements at risk (Botella, 2018).

All in all, according to the literature, we were able to identify the following critical success factors for Industrial Tourism:

- Attractive production process;
- Site accessibility;
- Accommodation and catering facilities;
- Nearby attractions;
- Security and emergency systems;
- Provision of information services;
- Visitor offers;
- Good promotion;
- Quality of location of facilities for visitors;
- Industrial Tourism aligned with the strategy and culture of the companies.

3.7. Conclusions

This paper addressed a still-under-researched topic and intended to contribute to understanding how Industrial Tourism can contribute to strengthening the sustainability and competitiveness of companies. It therefore focused on Industrial Tourism in active industrial companies and how diversifying into this type of tourism could benefit them.

The concept of “Industrial Tourism,” often called “living industry tourism,” constitutes an innovative paradigm that fosters diversification among enterprises employing tourism to augment profitability and expand market influence. This approach encompasses multifaceted objectives such as recruitment endeavours, enhancement of corporate image, and bolstering public relations initiatives. However, considerations surrounding liability, security implications, and the spectre of industrial espionage have prompted certain corporations to contemplate the feasibility of accommodating such visits.

The allure of this production process is a pivotal factor in determining the viability of granting access to tourist excursions. Interlinked with consumer experience tourism as a strategic instrument, Industrial Tourism fortifies the nexus between consumers and brands. This facet facilitates the cultivation of personal affinities with consumers and personnel, investors, residents, and other stakeholders.

Industrial Tourism bestows various advantages upon industrial enterprises, encompassing environmental, social, and economic dimensions. Of paramount significance is its role as a powerful marketing tool and a catalyst for innovation within corporate entities. Instances of guided tours through production facilities proffer patrons the occasion to acquaint themselves with the genesis of a corporate marque. This mechanism substantiates itself as a productive means through which a company can fortify its brand equity and craft a distinctive strategic position. As a tourism product, Industrial Tourism competes with all other existing products in different national and international markets.

Marketing is presented in the literature on Industrial Tourism through two perspectives—marketing as a tool at the disposal of Industrial Tourism linked to the promotion and dissemination of this tourism product and another perspective, Industrial Tourism as a marketing tool for industrial companies. Digital marketing and experience marketing appear in the literature as two essential tools for Industrial Tourism.

According to the literature, several factors need to be present for the Industrial Tourism proposals to be successful, namely factors related to the production process, accessibility, and safety. Apart from these factors, establishing partnerships and promotion are fundamental for Industrial Tourism's success. All these factors involve different areas within the companies and stakeholders, making Industrial Tourism in companies challenging.

The analysis showed that the literature has explored the theme qualitatively, mostly resorting to single-case studies. Researchers have focused more on regions, territories, heritage, and tourism demand, and active industrial companies need more case studies. Future studies should also analyse the topic in question more broadly and theoretically. Within the scope of the categories presented, more theoretical studies should be carried out, particularly on topics such as the management and implementation of Industrial Tourism in companies. Empirical studies and case studies are always critical, reinforcing the practical application of Industrial Tourism in different parts of the world, and it is interesting to maintain dialogue with companies and listen to their needs, which may provide helpful information for future research. We also suggest supporting and encouraging an analysis in which there is sharing between different disciplines and perspectives.

This study's limitations are related mainly to the scope of the analysed articles, as it was based exclusively on scientific journals written in English, Spanish, or Portuguese - not contemplating articles in other languages - as well as documents in other formats (e.g., books, brochures). It would be important to carry out a study that

covered a larger sample that met the specific criteria we defined for our study. However, the limitation of the sample further highlights the need for further research in this area.

CHAPTER 4 – INDUSTRIAL TOURISM IN PORTUGUESE SMALL AND MEDIUM-SIZED INDUSTRIAL ENTERPRISES: ADVANTAGES AND BARRIERS

Abstract

This paper explores Industrial Tourism within Portuguese small and medium-sized enterprises (SMEs). It aims to identify the main challenges and opportunities of this tourism product and offers suggestions to enhance the sustainability and competitiveness of these organizations. Industrial Tourism involves visits to sites with contemporary, historical, or prospective significance, including closed and abandoned facilities, operational companies, and future industrial facilities. This research seeks to understand the perspective of active industrial enterprises, or the "living industry," and how this type of tourism can enhance their sustainability and competitiveness. Primary data was collected through a questionnaire administered to 186 SMEs in Portugal. The findings show that most Portuguese SMEs do not engage in Industrial Tourism, mainly due to logistical, security, and strategic concerns. However, the study concludes that Industrial Tourism offers opportunities for SMEs to improve their marketing approaches, societal relationships, business strategies, and human resources.

Keywords

Industrial Tourism, small and medium-sized enterprises (SME), challenges, opportunities.

4.1. Introduction

Industrial Tourism is considered a niche market alternative to mass tourism. It is based on industrial heritage (Pardo Abad, 2017), whether in deactivated production facilities (e.g., company museums), in operational production units, or even ongoing projects of industrial facilities (Montenegro et al., 2022) which, due to their specificity, arouse interest due to their educational and tourist attraction (Moral-Moral & Fernandez-Alles, 2019). It includes all types of tourist activities whose primary purpose is related to material and immaterial industrial knowledge. However, the existing literature on this topic still needs to be explored, especially regarding the approach from the perspective of industrial small and medium enterprises (SMEs) (Montenegro, 2020; Montenegro & Sousa, 2021). According to Zhang et al. (2020), the research on Industrial Tourism addresses mainly topics related to heritage and the construction of industrial heritage communities, the exploitation of tourism, the protection of industrial heritage, and the use of new technologies (Zhang et al., 2020), which reinforces the importance of developing more studies in this field. Therefore, this research focuses precisely on Industrial Tourism from the perspective of industrial enterprises and seeks to understand the main challenges and opportunities SMEs face when implementing this product. The aim is to present empirical results in the context of industrial enterprises when facing the potential of Industrial Tourism and how the two areas of such different economic sectors - the secondary sector (industry) and the tertiary sector (services) - can be bridged. Thus, this work has two main objectives: 1) to identify the main challenges of developing Industrial Tourism and integrate this product into industrial SME business strategies, and 2) to point out the main strategic opportunities this tourism product takes to SMEs.

This research makes three main contributions. First, it contributes to a better conceptual delimitation and contextualization of the scarce research that has been carried out on this topic from the perspective of industrial SMEs, reinforcing a new, broad, and necessary field of research (Zhang et al., 2020). Secondly, it allows us to understand better the reality of industrial SMEs and the main challenges associated with implementing Industrial Tourism in their organizations. Thirdly, it will enable us to identify the primary potentialities and contributions that Industrial Tourism can bring to enterprises and point out strategic guidelines for implementing this product.

This article is structured with a research framework, followed by a presentation of the methodology and the characterization of the sample, a presentation and discussion of results, and, finally, the main conclusions, limitations, and guidelines for the future of research.

4.2. Exploring Industrial Tourism as a Business Strategy for SMEs

The literature on strategic management has generated different theories over the last 40 years. The industrial organization strategy model, developed by Porter (1985), was pursued in the 1990s with the resource-based view theory (Grant, 1991), which later evolved into competence-based competition and into the dynamic capabilities view (Teece et al., 1997). The strategic perspectives following Porter emphasize the role of internal resources and distinctive competencies as the main drivers of companies' long-term evolution (Crema et al., 2014). Corporate strategy is the set of decision rules determining which businesses a company will or will not operate and how it will allocate resources (Crema et al., 2014). A company's strategy is a conscious plan to align the company with the opportunities and threats of its environment (Ansoff, 1988). According to Porter (1985), winning business strategies allow companies to gain a competitive advantage in the market. Therefore, a company has a competitive advantage whenever it has an edge over its rivals in obtaining customers and defending itself against competitive forces (Crema et al., 2014). Accordingly, Crema et al. (2014) identify three main strategies to gain a competitive advantage: i) diversification, ii) cost leadership, and iii) innovation (differentiation).

In the 1960s and early 1970s, diversification was popular among industry and academia (Lichtenthaler, 2005). After many companies failed to diversify in the following years, diversification was considered a destroying value (Lichtenthaler, 2005). Henceforth, academia developed new approaches to diversification, where the success of diversification depends, among other factors, on a clearly defined business strategy (Lichtenthaler, 2005). Nowadays, business diversification is a strategy that allows companies to expand their core business into other activities (Chan et al., 2019). Since Industrial Tourism is not the main focus of industrial companies, it is essential to understand how this tourism product can be framed into business diversification and innovation, thus creating added value for SMEs.

Looking for diversification opportunities is a knowledge-generation process where information about current trends and the company's strategy and competencies is critical (Lichtenthaler, 2005).

Diversification strategies can be critical for companies, allowing them to readjust to a constantly changing world as a safety device, reducing risk, and promoting the search for profitable opportunities (Couto et al., 2021). It allows for strategic slack as a reserve of knowledge (Orlando et al., 2018), enabling them to expand into new market segments or to invest in a different business area (Crema et al., 2014),

allowing the creation of new product development strategies (Danjou & Koehler, 2007). In the context of globalization, market consolidation, and economic instability, companies must look for new ways to strengthen their market position, reduce business risks, and increase profits (Lee & Nguyen, 2021). Forming and implementing the business diversification strategy partially solves these problems (Li et al., 2021). According to Shen et al. (2018), diversified companies performed better than focused companies during the global financial crisis, being the level of diversification being positively and linearly related to performance. For Bhatia & Thakur (2018), diversification provides opportunities to increase company performance, and the reverse is holds true as well, where higher profitability motivates management to diversify.

There is an academic debate on the impact of diversification on innovation. Depending on several factors, diversification can impact organizations differently and positively or negatively affect innovation. According to Dang et al. (2016), diversification is positive for companies' products and innovation. There is also evidence indicating that a company's diversification strategy can adversely affect research and development (R&D) intensity, yet still maintain a positive relationship with innovation (Dang et al., 2016). According to Orlando et al. (2018), the diversification strategy is both a factor of sunk costs and strategic slack, with strategic slack being a valuable reserve of knowledge that can promote innovation.

The company's most challenging task is choosing a diversification strategy that produces the maximum long-term economic effect (Li et al., 2021). This effect may differ between companies, even those from the same sector (Wang & Xu, 2009). For example, a diversification strategy might improve the financial performance of tourism animation companies; however, that might not be the case for restaurants and hotels, where diversification may represent a significant challenge (Wang & Xu, 2009). Diversification can be an enabler of competitive advantages; however, concentrating on core capabilities rather than diversifying can also be necessary, suggesting a careful analysis of the benefits and risks of the diversification decision (Valtonen et al., 2015).

The interaction between formal and informal institutional environments also influences the choice of a diversification strategy, with the formal environment inhibiting it (Zuo et al., 2023). According to Crema et al. (2014), companies that choose a diversification strategy will most likely use open innovation management practices. The scarcity of resources and skills that often characterizes SMEs frequently serves as a barrier to initiating innovative pathways. So, by opening their doors to the outside, for example, through collaborations and partnerships with

suppliers, customers, and others, companies of limited size can find adequate ways to survive and grow in the global market (Crema et al., 2014). Particularly in the case of Industrial Tourism, over the years, several possible objectives have been identified to be achieved through Industrial Tourism, namely the presentation of the quality of its products (McBoyle, 1996); promotional opportunity (Otgaar, 2012; Chow et al., 2017); building relationships with customers (Endo & Kurata, 2015; Chow et al., 2017); increasing brand loyalty (Chow et al., 2017); companies' recruitment strategies (Nielsen, 2012); showing environmental integrity, green attitude (McBoyle, 1996; Rudd & Davis, 1998); developing a differentiation strategy (Endo & Kurata, 2015); increasing profits (Rudd & Davis, 1998); gaining a larger market share (Rudd & Davis, 1998), among others.

One factor that may influence the impact of diversification is the company's size. According to Duijm & Van Beveren (2022), the relationship between diversification and performance is not direct. It is influenced by the size of the company, concluding that the performance of smaller companies is significantly affected by diversification. However, in larger companies, this is no longer the case. According to Nurdiono et al. (2019), family businesses' diversification strategy usually positively impacts the company's value.

Another critical point is top management's involvement in corporate diversification dynamics. Silalahi & Bimo (2021), when analysing the relationship between diversification and the influence of CEOs, noted that although diversification tends to lower company performance, a higher commitment of the Chief Executive Officer (CEO) tends to eliminate that negative influence (Silalahi & Bimo, 2021). Accordingly, Montenegro & Sousa (2021) stated that implementing a diversification strategy in industrial companies through Industrial Tourism depends on the organizational strategy and culture, reinforcing the importance of the involvement of top management.

In this context, Industrial Tourism emerges as an innovative product for SMEs that could contribute to the strategic differentiation of industrial companies. This is mainly because it does not imply a profound change in the resources that companies already use, nor a substantial adjustment in the processes in place. It does mean the need to think strategically and integrate this product into the company's structure to determine how it can be implemented. This analysis and discussion will be explored in the following sections.

4.3. Method

4.3.1. Sample and data collection

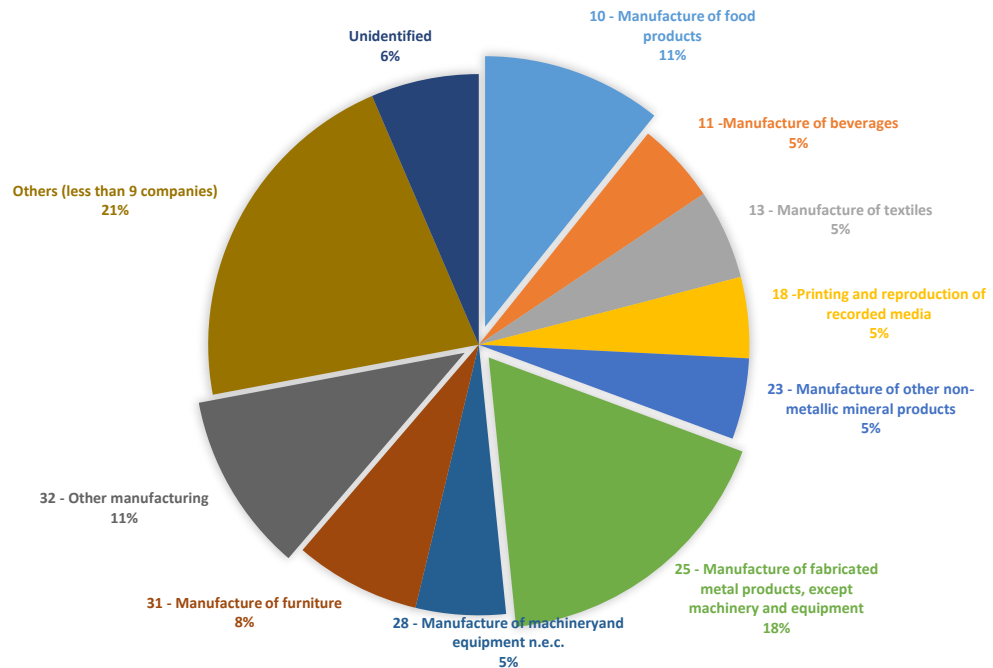
The data was gathered using an online questionnaire distributed via email to all industrial companies in Portugal between May 24 and June 30, 2023, according to the list presented in the SABI (System of Analysis of Iberian Balance Sheets) database, version 134. The sample included all companies with:

1. NACE (Statistical Classification of Economic Activities in the European Community) (Rev.2) division from 10 to 32 (Section 3 – Manufacturing);
2. E-mail address;
3. State: Active;
4. Number of employees between 1 and 249 (last year available);
5. Net annual profit not superior to €43,000,000 (last year available)

Although there are industrial companies in other NACE sections, section 3 reflects a huge industrial diversity, which is considered fundamental to enriching our study.

Participants were duly informed about the study's objectives and provided informed consent for the utilization of their data. Their participation was voluntary and anonymous. One hundred eighty-six (186) valid responses were obtained. The breakdown of the participants by industry (NACE division) and location in the Portuguese territory (district) are presented in figures 12 and 13.

Figure 12- Industries of the companies in the sample



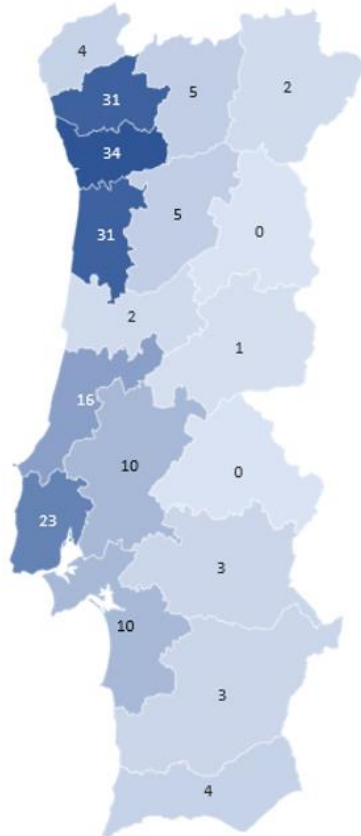
Source: Own elaboration

The industries most prominently represented in the sample (as illustrated in Figure 14) include the manufacturing of metal products, excluding machinery and equipment (NACE 25), food industries (NACE 10), and other manufacturing sectors (NACE 32).

Most of the participating companies are situated in the northern and central coastal districts of the country (figure 13), particularly in Aveiro, Braga, Leiria, Lisbon, and Porto. This is in line with the distribution of the manufacturing industry in Portugal (INE, 2021).

It was possible to have the participation of a company from the Azores, from the district of Ponta Delgada, and one company did not identify its location.

Figure 13- Location of the companies in the sample



Source: Own elaboration

The questionnaire contained five sections, each made up of questions that measured the variables used in this study, namely:

Section 1: questions on the general characteristics of the company, in particular the municipality of the headquarters and the main NACE division in which the company operates.

Section 2: a question on whether the company offers activities related to Industrial Tourism. (Yes or No).

Section 3 (for companies not offering activities in the field of Industrial Tourism): questions about the main reasons for not implementing tourism in their industrial facilities.

Section 4 (for companies offering activities in the field of Industrial Tourism): questions about the way Industrial Tourism is implemented, namely on the following topics: the date Industrial Tourism began and the characteristics of the visits: type of visitors, timetable, type of experiences offered, price and the visitors' country.

Section 5 (for companies offering activities in the field of Industrial Tourism): questions on the advantages and disadvantages of Industrial Tourism for the company, whether they have a factory store, whether they have seen a return on this investment, and what support and partnerships they have established in the field of Industrial Tourism.

4.3.2. Measures

This study adopts a quantitative approach, complemented by a descriptive statistical analysis of the data collected (SPSSv.25).

4.4. Results

A total of 186 industrial enterprises participated voluntarily, 169 (90.86%) without Industrial Tourism and 17 (9.14%) with industrial tourism. To better analyze the data collected, the results are presented in two sub-sections: companies with Industrial Tourism and companies without Industrial Tourism.

Throughout the text, the results found are also categorized to present the research findings in a more enriching and systematized way. This categorization considers organizational behavior, respecting the general organizational structure of companies (Robbins et al., 2010). Functional categorization is one of the most popular ways of grouping business activities, but there are other ways, such as by product, by customer, by region, among others. As a matter of organization and the authors' choice, the article adopts functional categorization, specifying different areas such as Strategy, Logistics, Accessibility and Security, among others.

4.4.1. Portuguese SMEs with Industrial Tourism

In this section, we present how Portuguese industrial SMEs are integrating Industrial Tourism into their business strategy.

The primary spheres of activity among companies that have diversified into Industrial Tourism are notably varied, encompassing domains such as cutlery, metalwork, bicycle manufacturing, wine, quarries, wood flooring, ceramics, and cheese making. Most of them (53%) have factory outlets. Of the Industrial Tourism companies that promote Industrial Tourism, ten chose to reveal their identity, which led us to consult some information on official websites, where we found that only one company advertises Industrial Tourism through this medium.

On average, these companies have received tourists for 15 years, ranging from 1 to 54 years. Demand for Industrial Tourism varies throughout the year, with the months of March, May, June, and July seeing the most significant demand. The months with the lowest demand are January and February. It is interesting to observe that while December represents a period of diminished demand for some companies, it emerges as a peak month for visitor influx in the operations of others.

The activities proposed by the companies are different. Around 76% of the companies offer guided tours of their facilities, which is the most common way companies use to boost Industrial Tourism. This is followed by training sessions and workshops (18% and 11% of companies, respectively). Other types of activities, mentioned less frequently, include free visits, visits to local institutions, wine tastings and access to museums, and points of sale. In most of companies (76.5%), visits are free to visitors.

Around 65% of the companies say that most visitors are Portuguese, while the remaining 35% come from other countries, such as France, Germany, USA, Brazil, UK and Spain, among others.

The analysis of the answers of companies involved in Industrial Tourism enables us to understand what they value most about this tourism product, which differs so much from its main area, the industry. Table 16 shows the advantages that are more often mentioned by Industrial Tourism companies.

Table 16 - Main advantages of Industrial Tourism

Advantages	No. of companies	%
Building relationships with customers	15	88,24%
Presenting the quality of your products	14	82,35%
Strengthen reputation	11	64,71%
Establish trust and understanding in the supply chain	9	52,94%
Promotional opportunity for brands, products, or regions	9	52,94%
Educate and motivate the public on an issue	9	52,94%
Building a sustainable relationship with society	9	52,94%
Increase brand loyalty	8	47,06%
Show environmental integrity, green attitude	7	41,18%
Develop a differentiation strategy	7	41,18%
Increase competitiveness	5	29,41%
Gain a larger market share	4	23,53%
Motivating the company's employees	4	23,53%
Recruitment strategy	3	17,65%

Source: Own elaboration

It is worth noting that almost all companies cite building relationships with customers and presenting the quality of their products as the main advantages of

Industrial Tourism. This is followed by other advantages, also in marketing, reputation, trust and promotional opportunities, which are also added benefits in terms of relations with society (52.94%).

The additional benefits highlighted by the companies pertain to the potential for differentiation and heightened competitiveness, advantages that we perceive to be intertwined with the business strategy itself. Moreover, within the realm of human resources, they serve as a strategic approach for both recruitment and employee motivation.

The next table (table 17) shows the disadvantages that are more often mentioned by Industrial Tourism companies.

Table 17- Main disadvantages of Industrial Tourism

Disadvantages	No. of companies	%
Threat of industrial espionage	6	35,29%
Source of "noise" and "disruption" to industrial daily life	5	29,41%
Development costs	3	17,65%
Security risks	2	11,76%
Threat of theft	1	5,88%
Public scrutiny	1	5,88%

Source: Own elaboration

The primary drawback of Industrial Tourism lies in the risk of industrial espionage, as cited by 35% of the companies. Other reasons cited by companies as disadvantages of implementing Industrial Tourism in their facilities include being a source of "noise" and "disruption" to everyday industrial operations (29%), incurred development costs, security risks, and the potential threat of theft.

When asked about partnerships with external entities, the companies differed, with around 53% saying they had no partnerships in the field of Industrial Tourism. The companies that say they do have partnerships are with town halls, tourism associations, universities, parish councils, government bodies, schools, travel agencies, hotels, and companies in their supply chain.

Around 41% of the companies said that they had obtained a financial return on their investment in diversification through Industrial Tourism. Around 53% of the companies have a factory store where visitors can buy products at the end of their visit. There is a more significant number of companies with factory outlets that have obtained a financial return on their investment compared to companies without factory outlets, which may indicate that the opportunity for visitors to purchase a company

product at the end could be beneficial to the success of Industrial Tourism in industrial companies.

Some suggestions were made, to be specific: improving promotion; creating partnerships; Industrial Tourism is an investment with a return; it strengthens relationships with clients and suppliers; national pride - through Industrial Tourism is possible to show the world that products produced in Portugal have quality, design and innovation; creating hybrid spaces (in the event that it is difficult to access the production space): museum, store, exhibition space.

4.4.2. Portuguese SMEs without Industrial Tourism

As previously stated, approximately 90% of the surveyed companies lack tailored initiatives for Industrial Tourism. The reasons for this lack of engagement are varied and are outlined in table 18. The reasons provided by various companies to justify the absence of Industrial Tourism on their premises are primarily related to internal factors within the company's operations (87 %), including corporate strategy and culture, costs, production processes, security, and logistics. External factors (13%) include issues such as the risk of theft and industrial espionage, difficulties in accessing the facilities, and the potential for reduced and sporadic demand were also mentioned. The findings align with reasons presented by various authors, including security (Lukas, 1999); costs and industrial espionage (Mitchell & Mitchell, 2001; Otgaar, 2012; Botella, 2018); attractiveness of the production process (Otgaar, 2012); and corporate strategy and culture not aligned with Industrial Tourism (Montenegro & Sousa, 2021).

Table 18- Reasons why SMEs don't promote Industrial Tourism

Reasons why SMEs don't have Industrial Tourism	% companies
Industrial Tourism is not aligned with the company's strategy and culture	62,13%
Unattractive production process	20,12%
Security risks	18,93%
Threat of industrial espionage	8,88%
Source of "noise" and "disturbance" to daily industrial activity	7,69%
Difficulties in accessing facilities	3,55%
Threat of theft	2,37%
Public scrutiny	1,78%
Development costs	1,78%
Not considered/equalized so far	1,78%
Scheduled and sporadic visits	0,59%

Source: Own elaboration

Moving on to a more sectoral analysis of the data collected, considering the NACE division, it was possible to see that, depending on their area of activity, the reasons for not joining Industrial Tourism are also diverse, not only for the type of reason but also for the number of reasons given.

Based on functional categorization, Logistics, Strategy and Accessibility, and Safety are some of the reasons mentioned by companies, however, depending on which NACE division the company operates in, the company's concern falls more on one reason or another.

The sectors of leather and leather products, as well as machinery and equipment manufacturing, frequently cite reasons related to company logistics to justify the absence of Industrial Tourism initiatives. On the other hand, there are sectors that did not report any concerns about logistics, namely the Food industry; Clothing industry; Wood and cork industry (except furniture); Manufacture of basketry and wickerwork; Manufacture of metal products and Manufacture of furniture and mattresses.

Within logistics, the fact that the production process is unattractive was the most frequently mentioned reason, identified by around 20% of companies.

As for accessibility and safety, 76% of the companies reported no concerns about these issues.

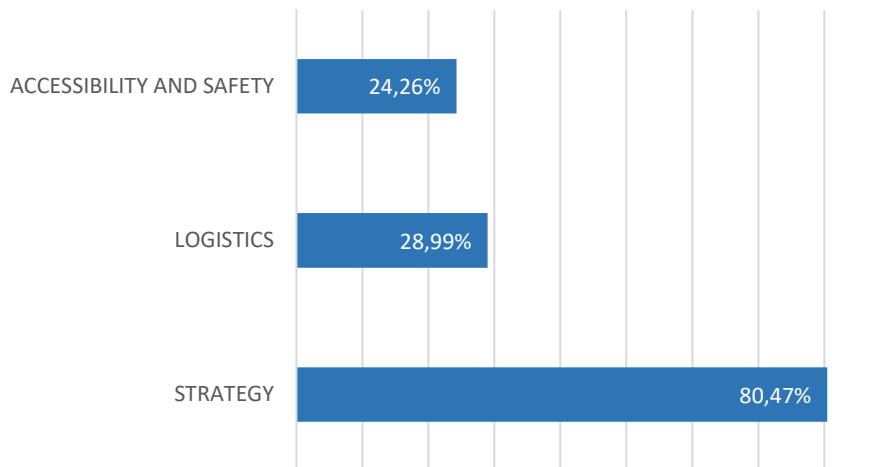
The companies within the Wood and Cork industry (excluding furniture), Manufacture of basketry and wickerwork, and Manufacture of machinery and equipment express the highest levels of concern regarding accessibility and safety issues.

Only 24% of companies say that reasons linked to accessibility and safety prevent them from promoting Industrial Tourism on their premises, with safety concerns being the main one.

Around 80% of companies cited reasons associated with the company's strategy. Companies in the clothing industry and the leather and leather products industry are those that most frequently cite reasons related to business strategy. Around 63% of companies say that Industrial Tourism does not fit in with the company's strategy and culture. The issue of opportunity and knowledge regarding Industrial Tourism is also cited as one of the reasons for not participating in Industrial Tourism by approximately 17% of the companies.

In general, the reasons why companies don't promote Industrial Tourism on their premises fall into three categories, the most representative of which is associated with the company's own strategy, as shown in the figure below.

Figure 14 - General challenges for implementing Industrial Tourism



Source: Own elaboration

The companies that identify the most reasons for not implementing Industrial Tourism are those in the Leather industry, Manufacture of metal products and Manufacture of machinery and equipment.

On the other hand, the companies with the fewest reasons for not implementing Industrial Tourism are Food industries, Textile manufacturing and Furniture and mattress manufacturing.

Looking at the results from another perspective, we can see that the main reasons for not joining Industrial Tourism are related to factors internal to the company itself, where 93% of companies mentioned at least one reason. As for external factors, most companies (81%) do not point to any reason outside the company for not adopting this tourism product.

4.5. Discussion

The Industrial Tourism offering in industrial enterprises can take various forms (visits, workshops, museums, among others). Industrial Tourism is a service that can and should be adjusted to the company's characteristics, in line with Montenegro and Sousa (2021), who state that the success of Industrial Tourism depends on the company's strategy and culture.

Industrial Tourism allows companies to engage with diverse audiences, including prospective employees, existing customers, and the wider community, both domestically and internationally, in Portugal and beyond. As Crema et al. (2014) point

out, this dynamic of outward-looking relationships can help SMEs, where a lack of resources and skills can be a barrier to innovation, by promoting open innovation management practices.

The process of diversification through Industrial Tourism makes it possible to achieve a wide range of benefits, namely in terms of Marketing, allowing companies to present the quality of their products and strengthen their reputation, establishing trust and understanding of their supply chain, it is also a promotional opportunity for the brand, meeting the benefits identified by several authors such as McBoyle (1996), Chow et al.(2017) and Otgaar (2012). The results found suggest that Industrial Tourism in industrial enterprises can also increase brand loyalty and show the company's environmental integrity, in line with the conclusions presented by McBoyle (1996), Rudd & Davis (1998) and Chow et al. (2017). Through the new service, companies promote a sustainable relationship with society, opening, making themselves known, and promoting industrial knowledge among the population.

In terms of business strategy, Industrial Tourism is considered by the companies surveyed to be interested in boosting a diversification strategy, in line with Duijm & Van Beveren (2022), who state that the performance of smaller companies is significantly affected by diversification, making it possible to increase the company's competitiveness and gain a greater market share.

The benefits of this diversification process also cover the area of human resources, enabling and promoting motivation in the company's employees, who will go from being factory workers to “artists/craftsmen” who have the opportunity to show their knowledge to the outside world, as well as being able to act as a recruitment strategy, in line with the idea mentioned by Nielsen (2012).

The option to diversify through Industrial Tourism may also bring some less positive points that should be analysed by companies to minimize them. Valtonen et al (2015) and Li et al (2021) state that the benefits and risks should be weighed up by industrial companies.

Security risks and the threat of industrial espionage are cited by companies as reasons for not promoting Industrial Tourism. According to Mitchell & Mitchell (2001), using the example of the Kellogg's Company, which closed its cereal factories to visitors after noticing rivals taking photographs during a public visit, the companies surveyed that promote Industrial Tourism also stress their concern about the problem of industrial espionage.

The attractiveness of the production process is also essential when considering the implementation of Industrial Tourism and can be a limiting factor when it comes to joining Industrial Tourism. When identifying companies with the most significant

potential for Industrial Tourism, promoters should survey existing companies in various fields, not forgetting the sector to which they belong. Depending on the sector of activity, the obstacles to Industrial Tourism also vary, as highlighted in this study.

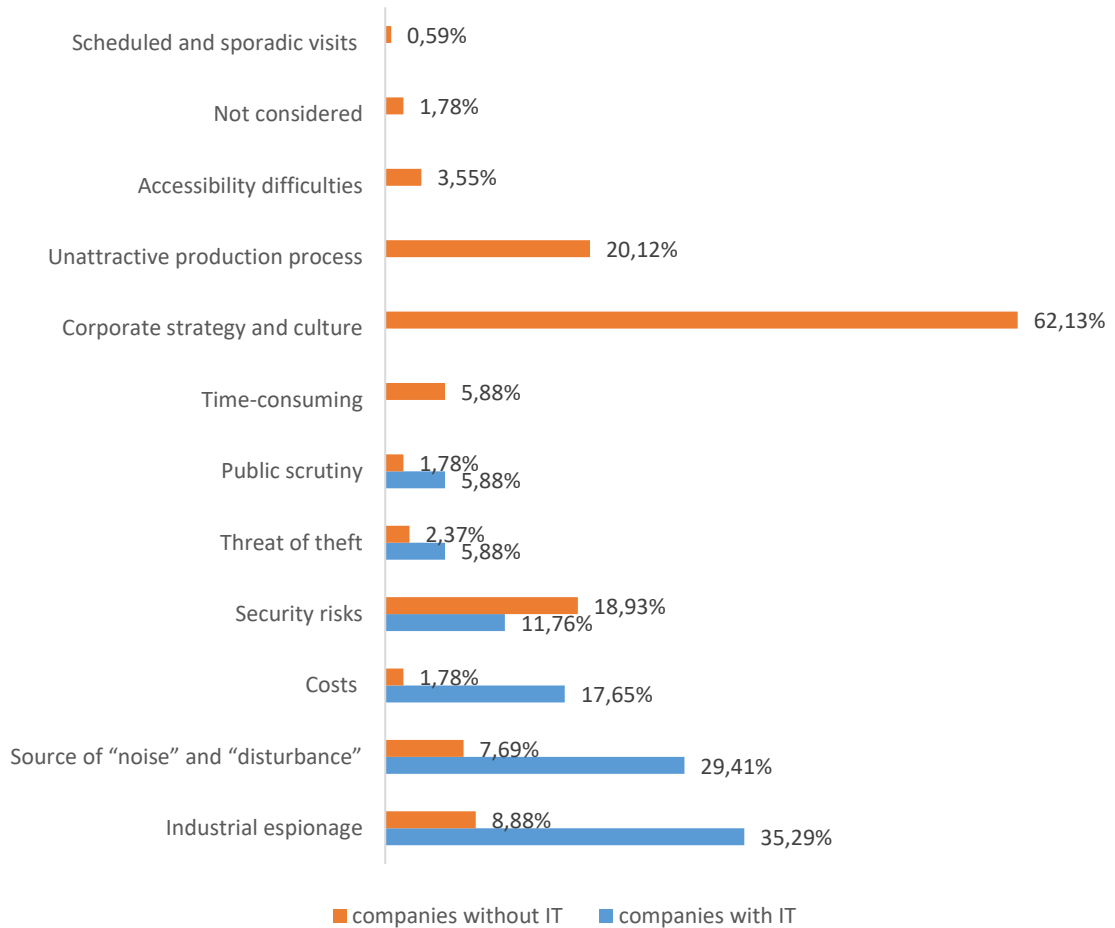
There are common concerns to also companies with and without Industrial Tourism, the main ones being associated with industrial espionage, security, and sources of noise, but, on the other hand, there are concerns in companies without Industrial Tourism that do not exist in companies with Industrial Tourism, and vice versa.

The companies that promote Industrial Tourism left encouraging comments, stressing the importance of publicizing and establishing partnerships and making suggestions to minimize some of the inconveniences that may arise when people from outside the companies enter.

The existence of a factory store in some companies could be positive and could promote a financial return on the investment made in Industrial Tourism. Nevertheless, based on our study and considering the limited number of companies with factory stores, definitive conclusions regarding the success or failure of this strategy cannot be drawn. However, the presence of a factory store can be viewed as an additional point of contact with visitors, fostering a connection to the brand and its products. Moreover, it represents an opportunity to sell the company's manufactured goods.

By analysing the entire sample and the reasons provided by each company, we can see that there are reasons that, after implementing Industrial Tourism, no longer make sense and other limitations that are more significant, depending on whether they have already implemented Industrial Tourism, as shown in the image below.

Figure 15- Challenges identified by companies with and without Industrial Tourism



Source: Own elaboration

The threat of industrial espionage, the source of "noise" and "disruption" to daily factory life, development costs, the threat of theft, and public scrutiny are the reasons most highlighted by companies with Industrial Tourism. We can consider that these concerns are reinforced with the implementation of Industrial Tourism and are not so much emphasized by companies that do not yet promote Industrial Tourism.

On the other hand, some reasons were only listed by companies without Industrial Tourism and were not identified by companies with Industrial Tourism, particularly the need to spend time, Industrial Tourism not being aligned with the business strategy, the production process not being very attractive, accessibility difficulties, not having been considered so far and the possibility of visits being sporadic, as can be seen in the graph below. These concerns could have been

considered in the initial pre-implementation phase of Industrial Tourism, since the companies are already promoting Industrial Tourism, these concerns may have been overcome.

The company's sector of activity may be relevant to whether it is more or less open to Industrial Tourism. There are companies that could pose a greater number of barriers to the integration of Industrial Tourism, such as companies in the leather industry, metal products, and machinery and equipment.

From this study, we can see that the number of companies without Industrial Tourism is relatively high, representing around 90% of the companies surveyed. This demonstrates the high potential for developing this tourism product in Portuguese industrial companies.

As mentioned by Montenegro & Sousa (2021), corporate culture and strategy are essential and must be aligned with Industrial Tourism and vice versa. If Industrial Tourism is not “lived” internally it will be challenging to effectively convey it to the public, and the results may fall short of expectations. This is one of the key reasons identified in the study for the non-implementation of Industrial Tourism by the industrial companies surveyed.

The main barrier identified by companies relates to business strategy and culture, a challenge that, once overcome, ceases to be an issue in companies that have implemented Industrial Tourism. The bodies that promote Industrial Tourism, namely government and municipal associations and organizations, should focus their efforts on the phase of attracting active industrial companies to integrate Industrial Tourism proposals, on the top managers of the companies, understanding the company's culture, its business dynamics and how Industrial Tourism can be presented as a differentiating proposal that meets the company's objectives. After overcoming this first barrier, identified by the companies as the main barrier to implementing Industrial Tourism, it will be possible to analyse, together with the company, the best way to present Industrial Tourism to the internal public (human resources) and the external public (visitors and partners). This way, the first and foremost task of entities that promote Industrial Tourism is to change the culture and strategy of business managers.

Given that the industrial focus is primarily on product production, changing mindsets and establishing a new culture and strategy that incorporates Industrial Tourism is a challenging and complex task. No matter how many potential benefits Industrial Tourism can bring, if it is not integrated into the company's strategy, the benefits can be reduced. For example, if the company doesn't have ways of

interacting and absorbing the possible benefits (whether in terms of marketing, human resources, economics, etc.), the results may not be as expected.

The commitment of top managers to this new form of diversification is fundamental to the approach of Industrial Tourism into companies and to overcoming all the limitations associated with accessibility, safety, and logistics. Industrial Tourism as a form of diversification shows a lot of potential, but as Lichtenthaler (2005) points out, it must be the subject of a clearly defined strategy.

This work conducted highlights of several important insights regarding the relationship between Industrial Tourism and industrial enterprises. However, as mentioned by Valtonen et al. (2015), there are many advantages associated with diversification, but are also associated with concentrating on core capabilities, reinforcing the need for a careful analysis of the benefits and risks of implementing Industrial Tourism in active industrial enterprises.

4.6. Conclusions

Seeking to shed light on Industrial Tourism from the perspective of industrial companies, a facet that has received limited attention in research, we believe that the findings of this study are quite enlightening regarding the reality of Industrial Tourism in active industrial companies.

There is enormous growth potential for Industrial Tourism within industrial companies, where currently only a small percentage of them actively promote this tourism product. Industrial Tourism can serve as an opportunity for diversification and innovation within these companies.

By understanding the realities of companies that implement Industrial Tourism and the reasons why some industrial companies do not embrace this proposition, we can bridge the gap between the industrial and tourism sectors.

Beyond presenting conclusions, we aim to provoke reflection among industrial company managers so they can analyse the potential of this combined tourism and industrial proposition and its viability within their own companies. These conclusions are also intended for a variety of stakeholders, including policymakers, regional entities, researchers, students, tour operators, and others.

Industrial companies that promote Industrial Tourism identify several positive aspects of Industrial Tourism in the realms of Marketing, Social Impact, Business Strategy, and Human Resources. However, these same companies also recognize some negative aspects of Industrial Tourism, including the threat of industrial

espionage, which poses a risk of disruption to daily industrial operations, development costs, security risks, and the threat of theft.

On the other hand, industrial companies that do not implement Industrial Tourism identify the main reasons for not doing so as being related to Security, Logistics, and Business Strategy.

As potential stakeholders who could contribute to the success of Industrial Tourism, companies identify the Municipal Council, Tourism Associations, Universities, Parish Councils, government entities, schools, travel agencies, hotels, and companies within their supply chain.

The daily operations of industrial companies dictate the dynamics of visits to the companies. Most companies adjust visits to their operating hours and production dynamics, without having specific spaces and schedules for this type of activity. This leads us to consider whether this dynamic of instability in schedules and types of visits may be an inhibiting factor for demand. Additionally, there is no significant investment from companies with Industrial Tourism in marketing this tourism product.

The intervention of the government and entities promoting Industrial Tourism in industrial companies should focus on internal company-level initiatives. This could include promoting awareness of Industrial Tourism within companies and with their decision-makers, proposing financial incentives and cost-sharing schemes to support companies in implementing Industrial Tourism, providing a team to assist companies in creating routes, tours, and offerings for tourists without disrupting industrial operations, establishing partnerships with travel agencies to facilitate factory visits, analysing what their target customers prefer and suggesting experiences to be organized and marketed to tourists effectively.

Regarding the company itself, it should review its production process to ensure that trade secrets are not exposed to unintended external observers. Additionally, the company should seek to establish partnerships with specialized travel agencies to create joint experiences. Delegating this responsibility to the company's marketing department can aid in effectively managing customer relations, attracting prospective clients, cultivating brand ambassadors, and harnessing the power of influencers.

Before implementing Industrial Tourism, the company should analyse the potential positive and negative impacts of Industrial Tourism on its operations, including motivational, financial, logistical, and other aspects. This thorough assessment will help the company make informed decisions and mitigate any potential risks associated with Industrial Tourism implementation.

There are many advantages associated with diversification, yet also with concentrating on core capabilities. This work highlights the need for a careful analysis

of the benefits and risks of implementing Industrial Tourism in industrial enterprises, and it is essential to define a business strategy that includes this tourism product.

4.7. Limitations and Future Research

As the primary difficulty encountered, we have the number of participating companies in our study. Despite taking great care in selecting the timing for sending out questionnaires and the questionnaire's scope, we consider that the response from companies fell short of our expectations. This may have been due to the shortage of time on the part of company managers or their lack of motivation to take part in this type of study.

As suggestions for future studies, we recommend conducting more empirical research to analyse the partnerships established and their significance for the success of Industrial Tourism. In addition, it would be interesting to understand the direct economic impact of implementing Industrial Tourism on industrial companies.

CHAPTER 5 – DEVELOPMENT PROPOSALS TO INTEGRATE INDUSTRIAL TOURISM IN ACTIVE INDUSTRIAL COMPANIES: A DELPHI STUDY

Abstract

This article explores how to incorporate Industrial Tourism into active industrial companies, whose main focus is industrial production rather than tourism. Industrial Tourism encompasses visits to industrial sites that have ceased their operations, industrial companies currently in operation and future industrial establishments, as well as visits to other destinations with an industrial theme, such as industrial technology hubs, museums, industrial tourist routes, educational institutions with industrial programs, laboratories, and similar sites. In contrast to most of the research on Industrial Tourism, this article focuses on the point of view of active industrial companies, the so-called "living industry", to identify the impact of this product on industrial companies, as well as strategies, and barriers to its implementation.

The Delphi methodology was employed, involving 27 experts, both academics and practitioners, with different backgrounds, such as Anthropology, Tourism, Business Sciences, Marketing, Economics, International Public Relations, History, Museology, Cultural Heritage, Art, and History.

The results provide new knowledge on the advantages, weaknesses, strategies, and barriers to the implementation of Industrial Tourism in active industrial companies and can inform business strategies and future studies.

Keywords

Industrial tourism, industrial companies, Delphi method, strategies, barriers.

5.1. Introduction

Industrial Tourism has been recognized as a niche market, offering an alternative to traditional mass tourism. This form of tourism is based on the exploitation of industrial heritage, as highlighted by Pardo Abad (2017), ranging from decommissioned production facilities, such as company museums, to fully operational production units, and even projects in development for the future, as noted by Montenegro et al. (2022).

In this way, Industrial Tourism enclose a wide range of tourist activities in which industrial knowledge, both tangible and intangible, plays a central role. Due to their uniqueness, such activities are arousing interest both for their educational and tourist value, as indicated by Moral-Moral & Fernandez-Alles (2019). Regional enhancement, as well as the enhancement of other tourism products can be considered as driving forces to its growth. Particularly business tourism could benefit from the existence of differentiating tourist attractions (Marques & Santos, 2016), which include industrial attractions.

Although it is recognized that Industrial Tourism includes visits to production units that are still in operation, this specific branch of Industrial Tourism remains under-examined in the academic sphere, revealing a significant gap in the approach from the perspective of the industrial company. Previous literature suggests that the impact of opening industrial companies to tourism is strongly influenced by the strategies adopted by these companies (Montenegro, 2020; Montenegro & Sousa, 2021). According to Zhang et al. (2020), whose research included a meta-analysis, the main research topics on Industrial Tourism in Europe are related to industrial heritage, and the formation of communities around this heritage, tourist exploitation, the protection of industrial heritage and the adoption of new technologies. This panorama highlights the urgent need to develop more studies from the perspective of industrial companies.

This paper focuses on Industrial Tourism of the production or factory type and seeks to understand the advantages, disadvantages, strategies, and barriers to implement this tourism product in industrial companies. The main aim is to present proposals for the implementation of Industrial Tourism in active industrial companies, and to address how these two different economic sectors - the secondary sector (industry) and the tertiary sector (services) – can complement each other in this context.

Therefore, this research has two main objectives:

1. To explore the main development strategies and proposals related to the implementation of Industrial Tourism in active companies;

2. To develop a SWOT analysis related to the implementation of Industrial Tourism in active companies.

The paper is structured as follows: the next section presents the framework of the research, followed by a presentation of the methodology adopted and the respective characterization of the panel of experts. The results section discusses the advantages, disadvantages, barriers and strategies for implementing Industrial Tourism in industrial companies, and the main partnerships needed. The presentation and analysis of the results ends with an integrative analysis of the previous approaches. Finally, the main conclusions, limitations, and future lines of research are presented.

5.2. Literature review

Over the years, several articles have been published which, in a scattered way, identify various possible objectives to be achieved with Industrial Tourism, namely presenting the quality of its products (McBoyle, 1996); promotional opportunity (Otgaar, 2012, 2008; Chow et al., 2017); building relationships with customers (Endo & Kurata, 2015; Chow et al., 2017); increasing brand loyalty (Chow et al., 2017); company recruitment strategies (Nielsen, 2012); showing environmental integrity and green attitude (McBoyle, 1996; Rudd & Davis, 1998); developing a differentiation strategy (Endo & Kurata, 2015), increasing profits (Rudd & Davis, 1998); and gaining a greater market share (Rudd & Davis, 1998). The different articles adopt various perspectives, whether in terms of the development of countries, regions, and/or companies.

From the point of view of companies, it is acknowledged that they use tourism as part of their business operations to boost profits, increase their market share, relieve economic stress, affirm environmental integrity (Edwards & Llurdés I Coit, 1996; McBoyle, 1996). Some case studies showcase examples where companies have chosen to donate all tourism revenues to social causes (Rudd & Davis, 1998). Visits to industrial attractions allow visitors to meet the quality of products and their environmental integrity, making Industrial Tourism a way of obtaining a return on environmental investments made (McBoyle, 1996).

According to Otgaar (2012) and Nielsen (2012), company visits can be useful for maintaining or improving the image of companies and industries. A marketing event in an industrial company can meet consumers' demand for authenticity and satisfy their curiosity about the origin of a brand (Endo & Kurata, 2015). In fact, visits to production facilities can provide customers with an opportunity to familiarize

themselves with the origins of a brand, making this an effective way for companies to reinforce their brand and develop differentiation strategies (Endo & Kurata, 2015).

However, responsibility and security concerns have led some companies to consider their form of exposure, changing factory visits to visits to "museum companies" (Lukas, 1999; Botella, 2018). Other factors that lead companies to view Industrial Tourism more negatively include development costs, as well as the threat of theft and industrial espionage (Botella, 2018).

The success of Industrial Tourism in active industrial companies is not always guaranteed and, as an example, a study carried out by Chow et al. (2017) reports that not all Industrial Tourism sites are thriving, with some facing problems such as lack of attractiveness for visitors, not receiving enough visitors to support their operating costs. This highlights the idea of the uncertainty of how the brand can be promoted (Chow et al., 2017).

In general, factories that receive tourists not only compete in the tourism industry, but also compete in the specific manufacturing industry where they make and sell their products, and it is imperative and significant to link in-factory experiences to perceptions or attitudes towards tangible products (Lin, 2020).

Given this duality of tourism and industry, the literature offers several suggestions on how Industrial Tourism proposals can be presented to the public. These include the using thematic "identifiers" (Kerstetter et al., 1998) where different proposals are grouped by themes, thus creating promotional schemes that encourage visits to all locations under the same theme; promoting cooperation agreements with agencies that offer similar services or products (Kerstetter et al., 1998); encouraging the development of experiential tourism proposals (Mitchell & Mitchell, 2001); and creating interactive experiences (Chow et al., 2017) to foster a stronger connection with visitors. Botella (2018) states that "living" the active industry can disseminate it by allowing the first-hand transmission of experiences and processes.

According to Otgaar (2012) the success of Industrial Tourism depends on the attractiveness of the company(ies), the offer of company visits, the quality of the facilities for visitors, and good promotion. The attractiveness of the production process was also found to be a relevant factor (Swarbrooke, 2002)

In addition to the company characteristics, there are other important factors for success related to its location, such as attractiveness and accessibility of the site (Lee, 2015; Otgaar, 2008); accommodation and catering facilities (Lee, 2015); nearby attractions (Lee, 2015); security and emergency systems (Lee, 2015); information services (Lee, 2015).

The design and implementation of a strategic plan is of paramount importance for the success of Industrial Tourism, as it allows for the meticulous and comprehensive articulation of actions, considering the variables and challenges inherent in the proposals in question (Botella, 2018). This approach seeks to harmonize heritage resources with the dynamics of active industry, aiming to enhance the dissemination of relevant information, promote clear signage to facilitate navigation, ensure accessibility, and develop continuous initiatives capable of attracting a diverse range of visitors (Botella, 2018).

The same author emphasizes the importance of effective dissemination, highlighting the need to make the visit comprehensible to both guides and employees. This implies the production of informative guides and the integration of the Industrial Tourism aspect into the mobile applications in use, demonstrating the progress made in this sphere at trade fairs and seeking its inclusion in the offers of tour operators (Botella, 2018). In the context of active companies, it is also suggested that it would be feasible to set up a tax incentive program for those who join this initiative (Botella, 2018).

Digital promotion emerges as a key element for the success of Industrial Tourism, as highlighted by Cristobal-Fransi et al. (2020). These authors noted that the establishments analysed still lack a robust digital presence and need to implement online booking and payment systems. Additionally, it is recommended to establish a closer connection with users, aiming to generate reciprocal feedback between them and visitors. Cristobal-Fransi et al. (2020) also suggest the inclusion of more informative content, both about the services offered and the tourist resources available in the region.

In turn, a study conducted by Bugarin et al. (2021) in Serbia points out that the media has not adequately informed potential tourists about the attractions of Industrial Tourism and the potential of the associated tourist offer. Targeted investments in the marketing and development of Industrial Tourism could stimulate additional demand, resulting in the expansion and improvement of the tourism offer (Bugarin et al., 2021).

All in all, the literature review offers relevant insights on the advantages and drawbacks of integrating tourism activities in active industrial companies, as well as on the factors and strategies relevant to its success. The empirical analysis will assess their relevance by gathering insights from experts in the field.

5.3. Methodology

5.3.1. Context of the Delphi method

The study adopts a qualitative approach and employs the Delphi Methodology, which has enabled the gathering of insights from interviewees regarding their perspectives on Industrial Tourism in active industrial companies.

The Delphi method is widely recognized and adopted as a scientific research approach, whose validity and effectiveness have been extensively proven for collecting qualitative data from experts in a particular field of study (Hsu & Sandford, 2007). This method is particularly relevant in initial theory building, providing a framework for identifying critical variables and generating pertinent hypotheses (Okoli & Pawlowski, 2004). The Delphi technical methodology has been used in different areas, specifically in the areas of tourism (Lin & Song, 2015) and management (Hsu & Sandford, 2007).

According to Landeta (2006) the main characteristics of this methodology are: it is a repetitive process; maintains the anonymity of the participants; allows controlled feedback and statistical response from the group; and all opinions are part of the final response.

The Delphi method stands out as a robust and effective approach for building consensus and making informed decisions. The method is based on the principle that the decisions of a structured group of individuals are more accurate than those of unstructured groups (Rowe and Wright, 2001). Participants respond to questions without direct interaction. Panel members remain anonymous to each other through the study, and their comments are consistently anonymized at each stage of the investigation. This process effectively eliminates interpersonal dynamics inherent in face-to-face decision-making scenarios.

As for the size of the panel, there is no consensus among the scholars; it ranges from seven to more than a thousand participants (Linstone & Turof, 1975; Walker & Selfe, 1996; Hasson et al., 2000). The decision on the number of participants may be influenced by the complexity of the issue under analysis and the resources available (Delbecq & Gustafson, 1975; Hasson et al., 2000).

It is important to note that the Delphi method does not require the panel of experts to be representative of a sample, unlike statistical studies, since the validity of the results depends on the quality, not the quantity, of the panel members (Powell, 2003).

5.3.2. Selection of participants

In this study, the choice of participants was guided by two eligibility criteria that they should cumulatively satisfy: (i) possess professional or academic experience in the industrial and/or tourism sector; (ii) have extensive knowledge of the topic under discussion. After a thorough analysis of potential stakeholders who met the eligibility criteria, invitations to participate were made via telephone or email. In composing the panel, an effort was made to include various stakeholders who could influence the industry-tourism relationship.

Twenty-seven individuals agreed to participate, thus constituting the initial panel. These experts were strategically selected due to their extensive knowledge of the subject and/or area of research, forming what is referred to as the Delphi panel (Landeta & Barrutia, 2011; Landeta et al., 2011; Paré et al., 2013). This panel comprises specialists from six distinct areas: five academics; five representatives from industrial companies; five individuals from industrial museums; four individuals from Regional Tourism Associations/Entities; four travel agents and four members from public entities. Most of the specialists (99.97%) had completed higher education, with around 22% having a PhD. Table 19 shows the different scientific backgrounds of the panel of experts, reflecting a broad and diverse approach to the subject. The average age of the experts is 51, with ages ranging from 27 to 71. There were 9 men and 18 women.

Table 19 - Delphi panel background areas

General area	Specific area
History and Heritage	Museology
	History
	Anthropology
	Archaeology
Business sciences	Cultural Heritage
	Business sciences
	Economics
	Project Management
	Management
Engineering	Marketing
	International Relations
	Mining Engineering
	Electrical and Computer Engineering / Informatics
	Electromechanical Engineering
Tourism and Hospitality	Hotel Management
	Tourism Management
Other	Geography
	Sociology
	Translation
	Sport

Source: Own elaboration

The composition of the panel meets the recommendations of the literature, maintaining a high level of expertise while also ensuring diversity in its composition. Delbecq & Gustafson (1975) argued that the diversity of personalities and perspectives among panel members would result in a higher quality consensus than in homogeneous groups. Rowe & Wright (1999) support this approach, recommending the selection of experts from different fields to ensure a broad knowledge base.

5.3.3. Procedures and Delphi rounds

Data collection was conducted through questionnaires sent to the panel, to be answered anonymously in successive rounds and as independently as possible to obtain a final consensus (Rowe & Wright, 1999; Hsu & Sandford, 2007).

The study involved two rounds of web-based questionnaires, all conducted via email between February and June 2023. The individual responses of each expert were collected using Google Forms, thus allowing for better response rates and anonymity of the members' responses.

In the first round, participants were asked four open-ended questions related to tourism in industrial companies, specifically addressing the advantages, disadvantages, barriers, and strategies. In the second round, the lists of opinions and suggestions obtained in the first round were compiled and organized based on their frequency. In the second round, participants were asked to indicate, from the provided list, the five options they considered most important or relevant for each question.

It should be noted that the sample size decreased between rounds. From the first to the second round, there were four dropouts, resulting in 23 participants.

5.4. Results

5.4.1. Strategic Management of Industrial Tourism

According to the panel's answers, it is possible to identify several advantages and disadvantages regarding the implementation of Industrial Tourism in active industrial companies.

Regarding the advantages, table 20 shows that the experts valued different areas, however, it is visible that the main advantages of Industrial Tourism for industrial companies are centered on marketing (including product and brand promotion) and social aspects. The analysis of the experts' comments reveals that the associated benefits can vary depending on the size and type of company. For example, the GALP refinery's advantages are primarily related to social responsibility and the demystification of prejudices concerning the activity and its impacts, particularly environmental ones. In contrast, for Viarco, a family business SME, these benefits are related to revenue's source and a means of promotion.

Table 20 - The main advantages of Industrial Tourism for companies

The main advantages of Industrial Tourism for companies	Frequency	Percentage of experts
Enhancement and promotion of the brand and its products	22	95,65%
Participation in the tourist and economic dynamics of the area in which they operate	15	65,22%
Promoting an emotional connection with customers,	9	39,13%
Contact with new customers and stakeholders	9	39,13%
Practicing social responsibility	8	34,78%
Sharing knowledge with the public outside the company,	8	34,78%
Openness and connection to society	8	34,78%
Business diversification (tourism),	8	34,78%
Motivating and valuing employees - internal marketing,	7	30,43%
Source of creative and innovative inputs	5	21,74%
Decrease in seasonality	5	21,74%
Extra source of revenue,	4	17,39%
Visibility among professionals in the sector	2	8,70%
Access to funding to improve infrastructure and equipment	2	8,70%
Job creation	1	4,35%

Source: Own elaboration

Table 21 shows the disadvantages for industrial companies resulting from the implementation of Industrial Tourism as identified by the experts. The experts pointed out disadvantages in different areas, with the main disadvantages being associated with the disruption to the production process, as well as the need to allocate resources to this new service. The associated costs are also identified by the experts, as initial investments may be needed to adapt the facilities to welcome visitors.

It was also pointed out by one expert that companies do not face any disadvantages with the introduction of Industrial Tourism activities, as long as best practices are followed and implemented.

Table 21- The main disadvantages of Industrial Tourism for companies

The main disadvantages of Industrial Tourism for companies	Frequency	Percentage of experts
Disruptions to the production chain and the operation of the company	13	56,52%
Need for more human resources to allocate to Industrial Tourism	13	56,52%
Initial investment and implementation costs	12	52,17%
Increased cost of maintaining and adapting facilities	12	52,17%
Seasonality and visiting times	8	34,78%
Extra care with safety and hygiene	8	34,78%
Difficulty in implementation	7	30,43%
Industrial espionage	7	30,43%
Increased bureaucracy	5	21,74%
Human resources exposed to outside eyes	5	21,74%
Risk of companies becoming artificialized and staged spaces	5	21,74%
Little buy-in	4	17,39%
Loss of focus on core business	4	17,39%
Trivialization of processes through constant presentation	2	8,70%
Risk of negative perception of the production process	2	8,70%
Environmental damage	1	4,35%

Source: Own elaboration

There are areas shared by the advantages and disadvantages pointed out by the experts. This is the case of Marketing and Social Benefits, where the advantages seem to outweigh the disadvantages, and of Logistics, Finance, Human Resources and Health and Safety, where the disadvantages seem to outweigh the advantages.

In terms of Human Resources, companies will need to consider whether opening doors to people outside the company will be beneficial, depending on the type of people working there. While this external exposure could be viewed negatively by employees, it could also serve as a source of motivation and appreciation for them.

The same is true of business strategy, where Industrial Tourism may help diversify a company's offerings or, conversely, may work against it by drawing attention away from the core business. Companies should consider and evaluate all these factors.

5.4.2. Threats and opportunities for implementing Industrial Tourism

A variety of strategies and actions were suggested by the experts for the promoting Industrial Tourism within companies. The most widely agreed upon (table 22) were those that dealt with promoting Industrial Tourism in different markets and through different media, establishing or joining an Industrial Tourism network, and having a single platform for the promotion of this tourism product.

Table 22- Main actions to boost Industrial Tourism in companies

Main strategies or specific actions to boost Industrial Tourism in companies	Frequency	Percentage of experts
Promotion of Industrial Tourism on the national and European market and in different communication channels	14	60,87%
Existence of a single platform for promotion/branding with the various tour operators	12	52,17%
Creation/association with a national and international Industrial Tourism network	12	52,17%
Creation of incentives, tax benefits, and financing programs	11	47,83%
Promotion of training activities in companies on Industrial Tourism	10	43,48%
Support for defining itineraries and guided tours	7	30,43%
Establishing partnerships with tourist agents and hotels	6	26,09%
Drawing up a manual of good practices with examples of success (national and international)	5	21,74%
Public-private partnerships	5	21,74%
Creating a storytelling about the company	5	21,74%
Industrial Tourism offer based on experience tourism	5	21,74%
Creation of a factory store	4	17,39%
Simplicity and proximity in relations with municipalities and government bodies	4	17,39%
Use of technology to create immersive and interactive experiences	4	17,39%
Creation of a regional team to coordinate investment and practical implementation of Industrial Tourism in companies	3	13,04%
Benchmarking actions in mature Industrial Tourism destinations	2	8,70%
Implementation of Industrial Tourism proposals following the Portuguese Quality Standard 4556:2017	2	8,70%
Visits in more than one language	2	8,70%
Internal investment by companies to publicize their proposals	1	4,35%

Source: Own elaboration

If we look at the areas of action, we can see that the opportunities and actions proposed by the experts are essentially in the areas of Marketing (33%) and training

and support for companies in the practical implementation of Industrial Tourism (33%). Partnerships are also highly valued by experts (26%).

In terms of who should act and implement the proposals to promote Industrial Tourism in companies, 70% of the responses refer to actions that are the government's responsibility, local authorities, and associations. The remaining 30% is the responsibility of companies.

As for the threats to the development of Industrial Tourism in companies, the experts identified a wide range, with the greatest consensus on the main barriers being the cost of implementation (52%), limited visiting hours (43%), the scarcity and need for specific training of human resources (43%) and the lack of knowledge about what Industrial Tourism is (43%), as can be seen in the Table 21.

Table 23- Main threats to the development of Industrial Tourism in companies

Main threats to the development of Industrial Tourism in companies	Frequency	Percentage of experts
Implementation costs	12	52,17%
Limitations on company timetable	10	43,48%
Shortage of human resources and need for training	10	43,48%
Lack of knowledge about Industrial Tourism	10	43,48%
Industrial Tourism is not part of the company's strategy and culture	9	39,13%
Need for confidentiality of internal processes and risk of industrial espionage	9	39,13%
Difficulty in creating and implementing visit routes and guides	7	30,43%
Little marketing of Industrial Tourism through private agents	7	30,43%
Nature of industrial activity makes visits impossible (dust, noise, danger)	6	26,09%
Extra security procedures	5	21,74%
Lack of incentives and difficulty in obtaining bank financing	4	17,39%
Size of the company	4	17,39%
Excessive bureaucracy	4	17,39%
Lack of receptiveness to partnerships	4	17,39%
Employee resistance and discomfort (exposure vs. privacy)	2	8,70%
Visits conducted in only one language	2	8,70%
Failure by the company to comply with some legal requirements (e.g., environmental sustainability)	2	8,70%
Poor promotion of Industrial Tourism activities	2	8,70%
Location and accessibility of the company	2	8,70%
Lack of attractiveness of the company's industrial assets	2	8,70%
Non-involvement of employees in the process	1	4,35%

Source: Own elaboration

Looking at areas of activity, the most significant threats relate to the areas of the company's business strategy (21%), logistics (20%), finance (14%) and human resources (13%). It is interesting to note that almost half of the experts (43%) consider that a lack of knowledge about what Industrial Tourism is can be a significant barrier to its implementation.

The experts identified both opportunities and threats to the adoption of Industrial Tourism in industrial companies in the areas of partnerships, marketing, and finance. Regarding marketing, it is evident that the strategies outweigh the barriers that have been identified; however, in finance, a balance exists between the two. As a result, there is a duality in the analysis of the financial component, as it can be seen as both an opportunity and a threat.

5.4.3. Key Partnerships for the Success of Industrial Tourism

An analysis of the most important partnerships mentioned by the experts shows that they value the role of the government and associated bodies in boosting Industrial Tourism, which was mentioned by more than 73% of the experts. Experts also value partnerships between companies, travel agencies, and tour operators, with 17 experts indicating them as fundamental to the success of Industrial Tourism.

Table 24- Key stakeholders for the success of Industrial Tourism in companies

Key stakeholders for the success of Industrial Tourism	Frequency	Percentage of experts
National public administration (e.g., Turismo de Portugal, Ministry of Economy, Directorate General for Cultural Heritage, IAPMEI)	19	82,61%
Portuguese Industrial Tourism Network	19	82,61%
Regional public administration (e.g., town halls, parish councils, regional tourism bodies, regional tourism boards)	17	73,91%
Travel agencies and tour operators	17	73,91%
Companies	7	30,43%
Schools, Universities, and Research Centres	7	30,43%
Company employees	6	26,09%
Museums, technology, and industrial sites	6	26,09%
Industrial Heritage Protection Associations	5	21,74%
Tourism associations	4	17,39%
Local hotels and restaurants	4	17,39%
Funding bodies	3	13,04%
Business associations	2	8,70%
Local community	2	8,70%

Source: Own elaboration

This analysis shows that there is a strong expectation of government action for the implementation and success of Industrial Tourism in industrial companies, although other entities are also relevant.

5.4.4. SWOT analysis

Table 25 shows a SWOT analysis derived from the answers given by more than 30% of the experts in relation to the various categories of analysis. The aim is to summarize the results found above, enabling a more global analysis of the study.

Table 25- Strengths, weaknesses, opportunities and threats of Industrial Tourism to companies

STRENGTHS	WEAKNESSES
<ul style="list-style-type: none"> • Enhancement and promotion of the brand and its products • Participation in the tourist and economic dynamics of the area in which they operate • Promoting an emotional connection with customers • Contact with new customers and stakeholders • Business diversification (tourism) • Practicing social responsibility • Sharing knowledge with the public outside the company • Openness and connection to society • Motivating and valuing employees - internal marketing 	<ul style="list-style-type: none"> • Disruptions to the production chain and the operation of the company • Need for more human resources to allocate to Industrial Tourism • Initial investment and implementation costs • Increased cost of maintaining and adapting facilities • Seasonality and visiting times • Extra care with safety and hygiene • Industrial espionage • Difficulty in implementation
OPPORTUNITIES	THREATS
<ul style="list-style-type: none"> • Promotion of Industrial Tourism on the national and European markets and in different communication channels • Creation/association with a national and international Industrial Tourism network • Existence of a single platform for promotion/branding with the various tour operators • Creation of incentives, tax benefits, and financing programs • Promotion of training activities in companies on Industrial Tourism • Support for defining itineraries and guided tours 	<ul style="list-style-type: none"> • Implementation costs • Limitations on company timetables • Shortage of human resources and need for training • Lack of knowledge about Industrial Tourism • Industrial Tourism is not part of the company's strategy and culture • Need for confidentiality of internal processes and risk of industrial espionage • Difficulty in creating and implementing visit routes and guides • Little marketing of Industrial Tourism through private agents

Source: Own elaboration

The experts identified various positive (strengths) and less positive points (weaknesses) and proposed various strategies. In this table, we can see the most relevant points in the relationship between industry and tourism, where the main strengths of Industrial Tourism are in the areas of Marketing, Social and Human Resources. Strategy, corporate culture, and company logistics can be considered barriers or weaknesses to the implementation of Industrial Tourism in industrial companies. The same area can appear in more than one quadrant, with both positive and negative aspects simultaneously, such as human resources (strength, weakness and threat) and marketing (strength, opportunity and threat).

The advantages of marketing for an industrial company are numerous. In this area, it was possible to identify some less positive points, which are accompanied by a wide range of opportunities aimed at minimizing or even eliminating them, such as the establishment of partnerships, the creation of a factory store, the creation of attractive proposals for visitors and the analysis of other existing proposals, as well as the company's own investment in publicizing its proposals. These results are in line with the literature already presented, where, for example, Kerstetter et al (1998) suggested partnership agreements to boost Industrial Tourism; Mitchell & Mitchell (2001) proposed experience tourism and Chow et al (2017) interactive experiences. On the other hand, there are proposals not identified in the literature on Industrial Tourism, such as the need for the company itself to invest in promoting its tourism offer.

On a social level, the experts presented many advantages to boosting Industrial Tourism within industrial companies, where it is possible to stimulate a close relationship with society, benefits that have also been identified in the literature, namely by Prat & Valiente (2012), Moral-Moral & Fernandez-Alles (2019) and Pavlakovič et al. (2021). The disadvantage identified was the possibility of environmental damage from Industrial Tourism. We believe that, despite this possibility, Industrial Tourism is currently considered a niche tourism, not promoting the mass influx of tourists in the regions that promote this tourism product and is even considered a way of presenting the environmental integrity and green attitude of companies to the outside world (Pavlakovič et al., 2021).

In the Human Resources area, it is important that employees are involved in the dynamics of Industrial Tourism and feel comfortable. They will be the main actors, and they will be able to pass on all their industrial knowledge and experience in the first person. It is through this contact that the company will be able to differentiate its offer, creating a close relationship with visitors, potential consumers, and brand ambassadors. Industrial Tourism can be considered a motivating factor for some

employees, but at the same time, for other employees it can be an inhibiting and uncomfortable factor, as they feel exposed to unwanted external gazes (Montenegro, 2020). Managers of the company should handle this relationship with consideration for the individuality of their employees. The lack or absence of human resources specialized in tourism within the company could be a strong barrier to the implementation of Industrial Tourism.

On a financial level, Industrial Tourism allows companies to have an extra source of income, either through the sale of entrance tickets or through the sale of their products. Although experts have identified the need to make initial investments in adapting the company to receive visitors, whether in terms of marketing, logistics, security and accessibility, companies can analyse the possibility of obtaining incentives, financial support and tax benefits from the state. The companies must examine the scales and determine how they weigh and how they can minimize the cost of implementation. The need for state support is mentioned by several authors, mainly in the context of regional development through Industrial Tourism (Alonso et al., 2010; Givental et al., 2019; Price, 2021).

The logistics and adaptation of an industrial company to receive visitors require the company to analyse its reality and try to understand how it can receive people from outside its day-to-day operations without jeopardizing the company's functioning. In the search for the perfect relationship, Portuguese Standard 4556 - Industrial Tourism Services, published in 2017, aims to guide and set quality service standards for Industrial Tourism, in all its aspects, namely also in the Living Industry aspect, which is the case of industrial companies. Industrial Tourism could be a way of reducing the seasonality of the industrial process, making it possible to receive visitors all year round, while at the same time facing the challenge of organizing visits, adjusting them to everyday factory life without them being considered a nuisance.

Strategy and corporate culture can be a barrier to the implementation of Industrial Tourism (Montenegro, 2020; Montenegro & Sousa, 2021), but when implemented, it allows the company to diversify through Industrial Tourism, also allowing new knowledge to enter, stimulating business innovation. Although no particular strategy linked to corporate strategy and culture is suggested, we believe it is important for managers to think about ways of capturing the new ideas that visitors may bring, stimulating sharing and defining strategies for capturing knowledge (such as workshops, completing a questionnaire at the end where visitors present their ideas, activities throughout the visit that stimulate visitors' creativity, among others).

Companies should look at themselves, their characteristics, and their capabilities, where, through the resource-based view (RBV), the company's resources

and capabilities are sources of competitive advantage (Helfat & Peteraf, 2003). According to their characteristics (which include corporate culture and strategy), their capabilities and resources, companies should look at Industrial Tourism and analyse how it can be an asset for the company, trying to find a healthy cross between its strengths and weaknesses.

To stay focused on their core business, the industry, managers will need to think carefully about how to best incorporate this tourism offer into the organization. Another major business concern is espionage and the need to protect industrial secrets, which may or may not be a top priority for a given company. Hence, managers will need to figure out how to safeguard the most private data while only revealing to the public what is necessary.

It is essential that the government and other organizations support efforts to increase Industrial Tourism in industrial companies. They can engage with businesses at the outset by serving as a source of information about Industrial Tourism and how businesses can promote it within their own industries. They can also assist with the planning stage by providing financial support, assistance in creating specific routes and tours, assistance with recruiting employees or providing training, and assistance with logistics, promotion, and distribution. The social benefits are extremely important, not only for the companies but also for the regions that host them, allowing the preservation of the culture and history of the region (Khaleghi et al. (2020), promoting the participation of the population (Metsaots et al. (2015), disseminating knowledge, values and industrial traditions (Moral-Moral & Fernandez-Alles (2019); revitalizing the local economy (Copic & Tumaric,2015), among others.

Through Industrial Tourism, the company presents itself to the community as an open company that wants to make itself known, participating in its dynamics, sharing knowledge and connecting with society.

Like any diversification strategy, Industrial Tourism has its advantages and disadvantages. It is now up to the various stakeholders to figure out how they can minimize the less positive points and what the best strategies are, in order to reap the greatest number of benefits from this partnership between industry and tourism.

5.5. Conclusions

In attempting to provide some clarity on the Industrial Tourism product from the perspective of industrial companies, the findings of this research are highly beneficial to them, offering pertinent details on this potential for a new venture, or established

companies, to diversify their sphere of influence, or as a means of obtaining human resources, connections to the community, or as marketing tools.

Rather than presenting conclusions, our aim is to provide food for thought that will enable managers of industrial companies to analyse the potential of this tourism and industrial proposal and its viability within their company. The conclusions are also aimed at the various stakeholders, such as policymakers and regional bodies, researchers and students, and tour operators, among others.

Since Industrial Tourism is different from the main activity of the industrial company, it can be very interesting for industrial companies, leading to diversification of the company, greater proximity to society, and greater connection to old, new and potential customers, as a form of recruitment and as a motivating factor for human resources in the manufacturing area, who may feel valued and recognized when presenting their work, going from factory workers to artists/craftsmen who present the art of their work through their hands.

Industrial Tourism also has some disadvantages for companies, namely the possibility of logistical difficulties, increased costs, serving as an inhibiting factor and discomfort for human resources, and the need for extra attention to hygiene and safety to welcome tourists to industrial facilities.

The main threats to implementing Industrial Tourism are associated with the areas of business strategy and culture, logistics, finance, human resources, marketing, and the companies' own lack of knowledge about Industrial Tourism.

Finally, after presenting the advantages, disadvantages, and main threats of Industrial Tourism in industrial companies, it was possible to identify a range of strategies for boosting this tourism product in industrial companies. The main strategies are focused on Marketing, Training and support, Partnerships, and Financial.

The prominent partnerships for the success of Industrial Tourism in industrial companies are the public administration, tourism bodies and associations; travel agencies; industrial companies, and schools and universities.

As Industrial Tourism is a service distinct from the core activities of an industrial company, its integration must be carefully analysed, weighing both the advantages and disadvantages for the company. This ensures that Industrial Tourism is genuinely integrated, accepted, and promoted within the organization itself.

5.6. Limitations and Future Research

Although we consider the composition of the panel to be very interesting, its larger size would certainly add even more value to the results found. Although more rounds are possible, due to the time factor and the lack of need to delve deeper into the topic, no more rounds were held beyond the 2nd round.

As a suggestion for future research, it would be interesting to analyse the relationship between the human resources of industrial companies and Industrial Tourism. In what way are they open to or would even like to receive tourists in their workplace, and how could they contribute their knowledge and experience to enhancing the company in the context of Industrial Tourism. On the other hand, carrying out a study in this area with the top managers of industrial companies could provide very interesting information on how Industrial Tourism is being implemented within industrial companies and how it is perceived by managers.

PART III

CHAPTER 6 - CONCLUSION

The work presented in this research aims to respond to the general objective of this thesis: to understand how Industrial Tourism can contribute to the competitiveness of industrial companies.

The conclusions of the various studies are referenced in their respective chapters, and this section aims to compile the various conclusions found throughout the work. By bringing the main conclusions to light, it has been possible to create a systematic presentation of the subject. The theoretical and practical contributions will be shared. The limitations of the studies and future lines of research are also identified. Finally, the results of this doctoral thesis are presented.

6.1. Main research findings

Rather than presenting definitive conclusions, the aim of this chapter is to provide insights that will enable managers of industrial companies to analyse the potential of this tourism and industrial proposal and its viability in their company. The conclusions drawn are also relevant to various stakeholders, including political and regional leaders, researchers and students, tourism operators, and others. The central focus of this study is the relationship between industry and Industrial Tourism.

This thesis comprises four studies, all of which focus on Industrial Tourism. The first two studies involve a literature review from both territorial and business perspectives, aimed at offering comprehensive insights into academic work on this subject. The third and fourth studies present empirical research concerning Industrial Tourism within active industrial companies. The initial phase, discussed in Chapter 4, explores the extent to which industrial companies have adopted and promoted Industrial Tourism within their manufacturing facilities. Finally, Chapter 5 incorporates the knowledge and expertise of a group of specialists, providing a detailed examination of the relationship between tourism and industry.

The first literature review (Chapter 2) on Industrial Tourism, which connects this topic to regional development, reveals that this field has been predominantly explored from an empirical standpoint, with a notable lack of broader conceptual analysis. The selected articles span various research domains, often highlighting the social, economic, and environmental benefits of Industrial Tourism, which contributes to regional sustainability. The tourism potential of Industrial Tourism is widely recognized, and public entities play a crucial role in managing, promoting, and financing this type of tourism. The development of a strategic plan is essential for the

successful implementation of Industrial Tourism, which has a significant impact, not only on companies, but also on the regions in which they operate.

Chapter 3, still within the scope of the literature review, focuses on Industrial Tourism within active industrial companies and examines how this type of tourism can benefit them. Often referred to as "live industry tourism," this innovative paradigm facilitates business diversification by using tourism to enhance profitability and extend market influence. Industrial Tourism offers numerous advantages to industrial companies, encompassing environmental, social, and economic dimensions, similar to those observed in regional contexts. Its role as a powerful marketing tool and a catalyst for innovation within business entities is of primary importance. According to the literature, several factors must be in place for Industrial Tourism initiatives to succeed, including aspects related to the production process, accessibility, and safety. Additionally, the establishment of partnerships and effective promotion are fundamental to the success of Industrial Tourism, requiring coordination across various areas within companies and among stakeholders, which presents a significant challenge.

To address the limitations identified in the systematic literature review (RSL), a questionnaire survey was conducted among Portuguese SMEs, with the findings presented in Chapter 4.

In Chapter 4, the focus shifts to understanding Industrial Tourism from the perspective of industrial companies, a facet that has received limited attention in existing research (as shown in Chapters 2 and 3). By examining the experiences of companies that have implemented Industrial Tourism and understanding the reasons why some industrial companies have not embraced this concept, this chapter seeks to clarify the practical relationship between the industrial sector and the tourism sector. The industrial companies analyzed in this study that promote Industrial Tourism identify several positive aspects, particularly in the areas of marketing, social impact, business strategy, and human resources. However, these companies also acknowledge certain challenges, including the threat of industrial espionage, disruption to daily operations, development costs, security risks, and the potential for theft. Companies that have not adopted Industrial Tourism cite concerns related to safety, logistics, and business strategy. Various stakeholders, such as municipal governments, parish councils, government bodies, tourism associations, universities, schools, travel agencies, hotels, and supply chain companies, are identified as important in this relationship. Time constraints, the dynamics of daily industrial life, and the lack of investment by companies in publicizing and marketing Industrial Tourism are factors that could inhibit demand.

Following the exploration of the reality faced by some Portuguese industrial companies, the subsequent chapter aims to further knowledge about the integration of Industrial Tourism within industrial companies, highlighting the expertise of several professionals in the field and reinforcing the connection between industry and tourism.

Chapter 5 presents research conducted using the Delphi methodology, involving 27 experts in the field. It offers insights into Industrial Tourism, including its advantages, disadvantages, opportunities, and threats for industrial companies. The primary strengths of Industrial Tourism for these companies are observed in the areas of marketing, social impact, and human resources. Conversely, company strategy, corporate culture, and logistics may pose barriers to the implementation of Industrial Tourism.

On a social level, Industrial Tourism fosters a close relationship with society, a benefit that has been identified in the literature and reaffirmed by the expert panel. Through Industrial Tourism, companies present themselves to the community as open entities, eager to engage with societal dynamics, share knowledge, and establish connections.

In terms of corporate marketing, Industrial Tourism offers numerous advantages, such as strengthening brand identity, enhancing relationships with clients and stakeholders, and increasing visibility within the sector. Some challenges were also identified in this area, but these are accompanied by opportunities to minimize or eliminate them, such as forming partnerships, creating factory stores, developing attractive visitor experiences, analysing existing proposals, and investing in marketing efforts.

In the realm of human resources, it is crucial that employees are actively involved in Industrial Tourism activities and feel comfortable in their roles. Employees play a central role in conveying industrial knowledge and experience directly to visitors. This interaction allows companies to differentiate their offerings and foster a close relationship with visitors, potential consumers, and brand ambassadors. Industrial Tourism can also serve as a tool for employee recognition and value, transforming factory workers into artisans who showcase their craftsmanship. However, the lack of specialized tourism human resources within a company can present a significant barrier to implementing Industrial Tourism.

Financially, Industrial Tourism provides companies with an additional revenue stream, whether through ticket sales or product sales. It can also help mitigate the seasonality of the industrial process by allowing companies to receive visitors year-round, although this necessitates careful planning to avoid disruptions to daily operations.

Corporate strategy and culture can present challenges to the implementation of Industrial Tourism. However, if Industrial Tourism is integrated into a company's strategy and culture, it can foster diversification, facilitate the influx of new knowledge, and stimulate business innovation.

Despite these advantages, Industrial Tourism also presents disadvantages for companies, including potential logistical difficulties, increased costs, the risk of discomfort among human resources, and the need for heightened attention to hygiene and safety when welcoming tourists into industrial facilities.

The main threats to the implementation of Industrial Tourism are associated with areas such as business strategy and culture, logistics, finance, human resources, marketing, and a general lack of awareness about Industrial Tourism among companies themselves.

Strategies to promote Industrial Tourism in industrial companies should focus on marketing, training and support, partnerships, and financial considerations. The most critical partnerships for the success of Industrial Tourism in industrial companies include public administration, tourism bodies and associations, travel agencies, other industrial companies, and educational institutions. Notably, although not mentioned by experts in Chapter 3, companies within the same supply chain also play an important role in the industry-tourism relationship.

Since Industrial Tourism represents a distinct service from a company's primary industrial activities, its integration must be carefully evaluated, weighing all potential advantages and disadvantages to ensure that it is genuinely embraced and promoted within the company itself.

6.2. Practical contributions

This thesis presents several practical contributions, each offering distinct implications for practice. The studies detailed in Chapters 2 and 3 aim to deepen the understanding of Industrial Tourism, a theme that is widely dispersed across various areas of study within the literature. Notably, the connection between Industrial Tourism and regional development is among the most frequently addressed topics in the existing literature. Chapter 3 specifically explores the relationship between Industrial Tourism and industrial companies, identifying potential benefits and challenges as discussed in the literature, which are further examined through the empirical work presented in the subsequent chapters. The scarcity of literature on Industrial Tourism within the field of business management was confirmed through this analysis.

Chapters 4 and 5 provide practical insights that are beneficial not only to industrial companies considering the implementation of Industrial Tourism but also to various stakeholders involved in this relationship. Before proceeding with the implementation of Industrial Tourism, companies should conduct a thorough analysis of the potential positive and negative impacts on their operations. This comprehensive assessment will enable companies to make informed decisions and mitigate any potential risks associated with the integration of Industrial Tourism. While diversification offers numerous advantages, there are also significant benefits to maintaining a focus on core capabilities. This thesis underscores the importance of a careful evaluation of the benefits and risks associated with Industrial Tourism and highlights the necessity of defining a business strategy that effectively incorporates this tourism product.

The role of the government and entities promoting Industrial Tourism should be centered on fostering internal initiatives within companies. These initiatives could include raising awareness of Industrial Tourism among companies and their decision-makers, as the company's strategy and corporate culture may pose challenges to the adoption of Industrial Tourism. Additionally, the provision of financial incentives and cost-sharing schemes could support companies in the implementation of Industrial Tourism. Furthermore, the government could offer specialized teams to assist companies in designing routes, tours, and offerings for tourists that do not disrupt industrial operations.

The formation of partnerships, particularly with specialized travel agencies, can be highly beneficial. Such agencies can promote visits to companies, assist in analyzing customer preferences, and suggest experiences that can be organized and effectively marketed to tourists. Assigning this responsibility to the company's marketing department can help manage relationships with current and potential customers more efficiently, foster brand ambassadors, and harness the influence of social media and other influencers.

The logistics and adaptation required for an industrial company to host visitors require a thorough analysis of how to accommodate external guests without compromising daily operations. Companies should carefully review their production processes to ensure that trade secrets are not exposed to unintended external observers. Managers must develop strategies to protect sensitive information, revealing to the public only what is necessary and advantageous for the company. In pursuit of the optimal relationship between industrial operations and tourism, the Portuguese Standard 4556—Industrial Tourism Services, published in 2017—offers guidelines and establishes quality standards for Industrial Tourism, particularly within

industrial companies. This standard can serve as a valuable reference point for companies preparing to venture into this new area of activity.

In the realm of human resources, Industrial Tourism may serve as a motivating factor for some employees while for others, it might be a source of discomfort or inhibition. Company managers must navigate this dynamic by recognizing the individuality of their employees. To ensure that Industrial Tourism is not perceived as a destabilizing force, and to maintain focus on the company's primary industrial activities, managers should carefully consider how best to integrate this tourism offering into the organization.

To fully capitalize on the potential benefits of hosting external visitors—particularly in terms of capturing new ideas that visitors may contribute—managers should encourage knowledge sharing by implementing strategies to capture visitor insights. This could include activities such as workshops, post-visit questionnaires where visitors can share their ideas, or creative activities during the visit that stimulate innovative thinking. Companies should view Industrial Tourism as an opportunity to enhance their value proposition, striving to find a healthy balance between leveraging their strengths and addressing any potential weaknesses.

6.3. Contributions systematization

In the development of this thesis, a concerted effort was made to adopt a differentiated approach to Industrial Tourism, particularly in examining the challenges and benefits it presents to industrial companies and their stakeholders. This approach facilitated the systematization of the findings from the perspective of the company's functional organization, specifically in the areas of Marketing, Human Resources, Finance, Logistics, Social Impact, and the company's overarching Business Strategy. The systematization of these results is illustrated in figure 16.

Figure 16- Systematization of results

Industrial Tourism	Integrating industrial tourism into industrial companies		
Marketing	STRENGTHS	STRATEGIES	ATTENTION
	<ul style="list-style-type: none"> Enhancement and promotion of the brand and its products Promoting an emotional connection with customers Contact with new customers and stakeholders Visibility among professionals in the sector 	<ul style="list-style-type: none"> Creation of a factory store Benchmarking actions in mature industrial tourism destinations Internal investment by companies to publicize their proposals Establishing partnerships with tourist agents and hotels Public-private partnerships Creating a storytelling about the company Industrial tourism offer based on experience tourism Use of technology to create immersive and interactive experiences Association with a national and international industrial tourism network 	<ul style="list-style-type: none"> Little marketing of Industrial Tourism through private agents Poor promotion of industrial tourism activities Lack of attractiveness of the company's industrial assets Risk of companies becoming artificialized and staged spaces Little buy-in Trivialization of processes through constant presentation Risk of negative perception of the production process
	STRENGTHS	STRATEGIES	ATTENTION
Financial	<ul style="list-style-type: none"> Extra source of revenue Access to funding to improve infrastructure and equipment 	<ul style="list-style-type: none"> Creation of incentives, tax benefits and financing programs Creation of a factory store 	<ul style="list-style-type: none"> Initial investment and implementation costs Increased cost of maintaining and adapting facilities Lack of incentives and difficulty in obtaining bank financing
	STRENGTHS	STRATEGIES	ATTENTION
	<ul style="list-style-type: none"> Motivating and valuing employees - internal marketing Job creation and recruitment Contact with potential future employees 	<ul style="list-style-type: none"> Promotion of training activities in companies on Industrial Tourism Involving employees in the dynamics of industrial tourism 	<ul style="list-style-type: none"> Need for more human resources to allocate to industrial tourism Shortage of human resources and need for training Employee resistance and discomfort (exposure vs. privacy) Non-involvement of employees in the process Visits conducted in only one language
Human Resources	STRENGTHS	STRATEGIES	ATTENTION
	<ul style="list-style-type: none"> Motivating and valuing employees - internal marketing Job creation and recruitment Contact with potential future employees 	<ul style="list-style-type: none"> Promotion of training activities in companies on Industrial Tourism Involving employees in the dynamics of industrial tourism 	<ul style="list-style-type: none"> Need for more human resources to allocate to industrial tourism Shortage of human resources and need for training Employee resistance and discomfort (exposure vs. privacy) Non-involvement of employees in the process Visits conducted in only one language
	STRENGTHS	STRATEGIES	ATTENTION

Logistics	STRENGTHS	STRATEGIES	ATTENTION
	<ul style="list-style-type: none"> Decrease in seasonality Contact with possible new suppliers Valuing the production process 	<ul style="list-style-type: none"> Support for defining itineraries and guided tours Implementation of Industrial Tourism proposals following the Portuguese Quality Standard 4556:2017 Visits in more than one language 	<ul style="list-style-type: none"> Disruptions to the production chain and the operation of the company Seasonality and visiting times Difficulty in implementation Extra care with safety and hygiene Increased bureaucracy Limitations on company timetables Difficulty in creating and implementing visit routes and guides Nature of industrial activity makes visits impossible (dust, noise, danger) Extra security procedures Excessive bureaucracy Location and accessibility of the company
Business strategy	STRENGTHS	STRATEGIES	ATTENTION
	<ul style="list-style-type: none"> Business diversification (tourism) Open innovation - Source of creative and innovative inputs 	<ul style="list-style-type: none"> Absorbing information about industrial tourism from other stakeholders - associations, government, universities, other companies, etc. Draw up itineraries to prevent the risk of industrial espionage Define points of contact for assimilating visitors' ideas 	<ul style="list-style-type: none"> Loss of focus on core business Industrial espionage Industrial tourism is not part of the company's strategy and culture Need for confidentiality of internal processes and risk of industrial espionage Size of the company Failure by the company to comply with some legal requirements (e.g. environmental sustainability) Lack of knowledge about industrial tourism Lack of receptiveness to partnerships
Social	STRENGTHS	STRATEGIES	ATTENTION
	<ul style="list-style-type: none"> Participation in the tourist and economic dynamics of the area in which they operate Practicing social responsibility Sharing knowledge with the public outside the company Openness and connection to society 	<ul style="list-style-type: none"> Donations to charitable institutions, using funds raised through industrial tourism Propose activities that promote the company's connection with society 	<ul style="list-style-type: none"> Risc of environmental damage

Source: Own elaboration

6.4. Limitations

The limitations of the studies corresponding to the Systematic Literature Reviews in Chapters 2 and 3 primarily stem from the scope of the articles analyzed. The reviews were limited to scientific journals written in English, Spanish, or Portuguese, and did not include articles in other languages or documents in alternative formats (e.g., books, brochures). However, this limitation of the sample underscores the need for further research in this area, particularly from the perspective of industrial companies.

In Chapter 4, the primary difficulty encountered was the limited number of participating companies, despite the significant number of companies initially contacted. Although the timing and scope of the questionnaire were carefully considered, the responses from the companies did not meet our expectations. For future studies involving industrial companies through email questionnaires, it is crucial to refine the distribution method to minimize the likelihood of emails not being received.

In Chapter 5, the main limitation was the extended time required to conduct successive rounds, which often resulted in participant dropouts either at the initial contact stage or during the subsequent rounds.

6.5. Future Lines of Research

For future work, it is recommended that more theoretical studies be conducted on topics such as the management and implementation of Industrial Tourism in both companies and regions, fostering a deeper conceptual and theoretical discussion. Empirical studies and case studies are also essential, as they reinforce the practical application of Industrial Tourism across different regions of the world. Existing research tends to focus more on themes related to regions, territories, heritage, and tourism demand, highlighting the need for additional case studies involving active industrial companies.

It is crucial to support and encourage analyses that involve cross-disciplinary sharing and perspectives. Various approaches are suggested, including exploring the relationship between Industrial Tourism and business innovation, the management of employee motivation and productivity, and the role of Industrial Tourism in safeguarding living industrial heritage, particularly in preserving industrial history and culture. More empirical studies are recommended to examine established partnerships and their significance for the success of Industrial Tourism.

From a business management perspective, maintaining a dialogue with companies and understanding their needs is essential for generating valuable insights for future research. Conducting a Delphi study with employees and senior managers of industrial companies would provide an internal perspective on the implementation of Industrial Tourism. Additionally, analyzing the perceptions of visitors and tourists regarding Industrial Tourism could yield valuable data for its effective promotion.

6.6 Thesis outcomes

This thesis contributes to the enrichment of literature by exploring the relationship between Industrial Tourism and the business world, with a particular focus on its industrial aspects.

Part II of this doctoral thesis comprises four chapters, each of which represents the outcome of a distinct investigation. The findings from this research have led to scientific publications in journals indexed in the Web of Science and/or Scopus, as well as participation in conferences, with proceedings also indexed in the Web of Science and/or Scopus (refer to table 26).

Table 26 - Published and submitted articles

Published and submitted articles			
Chapters	Articles	Journals	Situation
2	Regional development through Industrial Tourism: A Systematic Literature Review DOI: https://doi.org/10.59072/rper.vi68.594	RPER - Revista Portuguesa de Estudos Regionais	published
3	Industrial Tourism as a factor of Sustainability and Competitiveness in Operating Industrial Companies DOI: https://doi.org/10.3390/su151914243	Sustainability	published
4	Industrial Tourism in Portuguese small and medium-sized industrial enterprises: advantages and barriers		submitted
5	Development proposals to integrate Industrial Tourism in active industrial companies: a Delphi Study		submitted

Conference Presentations				
Paper	Conference	Host entity	Date	Location
How can industrial tourism contribute to innovation and sustainability?	DSOTT 23	Faculty of Arts & Humanities of the University of Coimbra	31 May - 2 june 2023	Coimbra, Portugal
Integrating Industrial Tourism in Active Industrial Companies: Advantages, Strategies, and Barriers - A Delphi Methodology	IWTHM2023	ISAG-European Business School	23 june 2023	Porto, Portugal

Exploring Industrial Tourism's Potential: How Can It Contribute to Business Innovation?	ECIE 2023	UPT - University Portucalense Infante D. Henrique	21-22 September 2023	Porto, Portugal
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Source: Own elaboration

In addition to publications and conference participation, this research was also disseminated through various other events. Notably, the work was presented at the 1st and 2nd PhD Research Seminars of REMIT and shared with master's students in Tourism and Hospitality.

REFERENCES

- Alonso, A. D., O'Neill, M. A., & Kim, K. (2010). In search of authenticity: A case examination of the transformation of Alabama's Langdale Cotton Mill into an industrial heritage tourism attraction. *Journal of Heritage Tourism*, 5(1), 33-48. <https://doi.org/10.1080/17438730903469821>
- Amano, I. (2016). In praise of iron grandeur: the sensibility of *kōjō moe* and the reinvention of urban technoscape. *Contemporary Japan*, 28(2), 145-164. <https://doi.org/10.1515/cj-2016-0008>
- Amirkhani, S., Torabi Farsani, N., & Moazzen Jamshidi, H. (2021). Future strategies for promoting tourism and petroleum heritage in Khuzestan Province, Iran. *Journal of Tourism Futures*. <https://doi.org/10.1108/JTF-12-2020-0226>
- Andrade, M., & Caamaño-Franco, I. (2018). Theoretical and methodological model for the study of social perception of the impact of industrial tourism on local development. *Social Sciences*, 7(11). <https://doi.org/10.3390/socsci7110217>
- Andrade-Suárez, M., & Caamaño-Franco, I. (2020). The relationship between industrial heritage, wine tourism, and sustainability: A case of local community perspective. *Sustainability* (Switzerland), 12(18). <https://doi.org/10.3390/SU12187453>
- Ansoff, H. I. (1988). The concept of strategy. In (pp. 75-89): John Wiley & Sons.
- Crema, M., Verbano, C., & Venturini, K. (2014). Linking strategy with open innovation and performance in SMEs. *Measuring Business Excellence*, 18(2), 14-27. <https://doi.org/10.1108/MBE-07-2013-0042>
- Ballesteros, E. R., & Ramírez, M. H. (2007). Identity and community - Reflections on the development of mining heritage tourism in Southern Spain. *Tourism Management*, 28(3), 677-687. <https://doi.org/10.1016/j.tourman.2006.03.001>
- Beer, M., Rybar, R., & Kal'avsky, M. (2018). Renewable energy sources as an attractive element of industrial tourism [Article]. *Current Issues in Tourism*, 21(18), 2147-2159. <https://doi.org/10.1080/13683500.2017.1316971>
- Bhatia, A., & Thakur, A. (2018). Corporate diversification and firm performance: an empirical investigation of causality. *International Journal of Organizational Analysis*, 26(2), 202-225. <https://doi.org/10.1108/IJOA-04-2017-1149>
- Botella, M. D. P. (2018). The heritage of the industry: a tourist referent to explore in the Region of Murcia. *Cuadernos De Turismo* (41), 491-512. <https://doi.org/10.6018/turismo.41.327121>

- Bugarin, D., Veličković, S. K., & Tucović, M. (2021). Potentials of Cultural - Historical and Tourism Heritage for the Development of Tourism in the Timok Region. *Serbian Journal of Management*, 16(1), 201-212. <https://doi.org/10.5937/SJM16-32147>
- Careddu, N., Siotto, G., & Marras, G. (2017). The crisis of granite and the success of marble: errors and market strategies. The Sardinian case. *Resources Policy*, 52, 273-276. <https://doi.org/10.1016/j.resourpol.2017.03.010>
- Chan, L. F., An, B. A., & Nasir, A. B. M. (2019). Does the method of corporate diversification matter to firm's performance? In *International Symposia in Economic Theory and Econometrics* (Vol. 26, pp. 208-233). <https://doi.org/10.1108/S1571-038620190000026011>
- Chow, H. W., Ling, G. J., Yen, I. Y., & Hwang, K. P. (2017). Building brand equity through industrial tourism. *Asia Pacific Management Review*, 22(2), 70-79. <https://doi.org/10.1016/j.apmr.2016.09.001>
- Çipi A, L. S., Ferreira FA. (2014). Current situation of corporate governance practices in Albanian joint stock companies: a Delphi-based approach. In (Vol. 110:841–851): *Procedia Social and Behavioral Sciences*.
- Cole, D. (2004). Exploring the sustainability of mining heritage tourism. *Journal of Sustainable Tourism*, 12(6), 480-494. <https://doi.org/10.1080/09669580408667250>
- Coit, J. C. L. I. (2001). Heritage tourism and textile “model villages”: The case of River Park, Barcelona, Spain. *Tourism Recreation Research*, 26(1), 65-71. <https://doi.org/10.1080/02508281.2001.11081178>
- Conesa, H. M., Schulin, R., & Nowack, B. (2008). Mining landscape: A cultural tourist opportunity or an environmental problem?: The study case of the Cartagena–La Unión Mining District (SE Spain). In (Vol. 64, pp. 690-700). *Ecological Economics: Elsevier*.
- Ćopić, S., & Tumarić, A. (2015). Possibilities of industrial heritage reuse as tourist attractions - A case study of City of Zrenjanin (Vojvodina, Serbia). *Geographica Pannonica*, 19(2), 44-49. <https://doi.org/10.5937/GeoPan1502044C>
- Couto, G., Cabral, J., Pimentel, P., & Castanho, R. A. (2021). The level of diversification on the firms of the iberian market. *WSEAS Transactions on Business and Economics*, 18 C7 - 93, 978-985. <https://doi.org/10.37394/23207.2021.18.93>

- Cristobal-Fransi, E., Daries, N., Martin-Fuentes, E., & Montegut-Salla, Y. (2020). Industrial Heritage 2.0: Internet presence and development of the electronic commerce of industrial tourism. *Sustainability (Switzerland)*, 12(15). <https://doi.org/10.3390/SU12155965>
- Custódio, M. M., & dos Santos, F. B. (2020). The european union's policy in tourism: Cultural tourism and the sustainability of industrial heritage in integration. *Brazilian Journal of International Law*, 17(3), 202-221. <https://doi.org/10.5102/rdi.v17i3.7068>
- Dang, R., Houanti, L., & Bonnard, A. (2016). Exploring the effect of diversification strategy on R&D intensity using quantile regression: evidence from France. *Applied Economics Letters*, 23(18), 1317-1320. <https://doi.org/10.1080/13504851.2016.1153784>
- Danjou, S., & Koehler, P. (2007). Challenges for Design Management. *Computer-Aided Design and Applications*, 4(1-4), 109-116. <https://doi.org/10.1080/16864360.2007.10738531>
- Dębczyńska, K., & Piasecki, A. (2021). The underground city: The tourism potential of water and sewage infrastructure: The example of Poland. *Bulletin of Geography. Socio-economic Series*, 54(54), 89-95. <https://doi.org/10.2478/bog-2021-0035>
- Del Pozo, & Pablo Alonso González, P. B. (2012). Industrial Heritage and Place Identity in Spain: From Monuments to Landscapes. In (Vol. 102:4, pp. 446-464): *Geographical Review*.
- Delbecq, A. V. d. V., AH, & Gustafson, D. (1975). Group techniques for program planning: a guide to nominal group and Delphi processes. In. Scott Foresman, Glenview, IL.
- Denyer, D., & Tranfield, D. (2009). In *Producing a systematic review*. The SAGE handbook of organizational research methods.
- Direção de Gestão de conhecimento (2024). *Turismo em Portugal 2023*. Turismo de Portugal, I.P.
- Duijm, P., & Van Beveren, I. (2022). Product diversification as a performance boosting strategy? Drivers and impact of diversification strategies in the property-liability insurance industry. *Risk Management and Insurance Review*, 25(3), 303-328. <https://doi.org/10.1111/rmir.12219>

- Edwards, J. A., & Llurdés I Coit, J. C. (1996). Mines and quarries: Industrial Heritage Tourism. *Annals of Tourism Research*, 23(2), 341-363. [https://doi.org/10.1016/0160-7383\(95\)00067-4](https://doi.org/10.1016/0160-7383(95)00067-4)
- Elkington, J. (1994). Towards the sustainable corporation: Win-win-win business strategies for sustainable development. *California management review*, 36(2), 90-100.
- Endo, Y., & Kurata, Y. (2015). Customer communication facilities with tourism: A comparison between German and Japanese automobile companies. In *Advances in Culture, Tourism and Hospitality Research* (Vol. 10, pp. 221-233): Emerald Group Publishing Ltd.
- Ermolaev, V. A., Yashalova, N. N., & Ruban, D. A. (2019). Cheese as a tourism resource in Russia: The first report and relevance to sustainability. *Sustainability (Switzerland)*, 11(19). <https://doi.org/10.3390/su11195520>
- Fallah, M., & Ocampo, L. (2021). The use of the Delphi method with non-parametric analysis for identifying sustainability criteria and indicators in evaluating ecotourism management: the case of Penang National Park (Malaysia). *Environment Systems and Decisions*, 41(1), 45-62. <https://doi.org/10.1007/s10669-020-09790-z>
- García-Melón, M., Gómez-Navarro, T., & Acuña-Dutra, S. (2012). A combined ANP-delphi approach to evaluate sustainable tourism. *Environmental Impact Assessment Review*, 34, 41-50. <https://doi.org/10.1016/j.eiar.2011.12.001>
- Grant, R. M. (1991). THE RESOURCE-BASED THEORY OF COMPETITIVE ADVANTAGE - IMPLICATIONS FOR STRATEGY FORMULATION. *California Management Review*, 33(3), 114-135.
- Gieranczyk, W. (2005). The role of industry in formation of functional structure of torun. *Bulletin of Geography*, 4(1), 57-66.
- Givental, E., Stepanov, A. V., Ilyushkina, M. Y., & Burnasov, A. S. (2019). The Post-Industrial Landscapes of Central Urals, Russia: Heritage Value, Tourist Potential, and Unrealized Opportunities. *Regional Research of Russia*, 9(2), 193-203. <https://doi.org/10.1134/S2079970519020035>
- González Durán, S. (2017). Urban and industrial tourism in the “post-industrial” periphery: Imaginaries and narratives of the inhabitants of the Left Bank of the river Nervión in metropolitan Bilbao. *Scripta Nova*, 21, 1-27.
- Gregan-Paxton, J. The Role of Abstract and Specific knowledge in the Formation of Product Judgments: An Analogical Learning Perspective. In (Vol. 11, pp. 141-158). *Journal of Consumer Psychology*.

- Han, R., Liu, D., & Cornaglia, P. (2020). A study on the origin of china's modern industrial architecture and its development strategies of industrial tourism. *Sustainability (Switzerland)*, 12(9). <https://doi.org/10.3390/su12093609>
- Harfst, J., Sandriester, J., & Fischer, W. (2021). Industrial heritage tourism as a driver of sustainable development? A case study of steirische eisenstrasse (Austria). *Sustainability (Switzerland)*, 13(7). <https://doi.org/10.3390/su13073857>
- Hashimoto, A., & Telfer, D. J. (2017). Transformation of Gunkanjima (Battleship Island): from a coalmine island to a modern industrial heritage tourism site in Japan. *Journal of Heritage Tourism*, 12(2), 107-124. <https://doi.org/10.1080/1743873X.2016.1151884>
- Hasson, F., Keeney, S., & McKenna, H. (2000). Research guidelines for the Delphi survey technique. *Journal of Advanced Nursing*, 32(4), 1008-1015. <https://doi.org/10.1046/j.1365-2648.2000.t01-1-01567.x>
- Helfat, C. E., & Peteraf, M. A. (2003). The dynamic resource-based view: capability lifecycles. In (Vol. 24 pp. pp. 997-1010). *Strategic Management Journal*.
- Hollick, M. (2011). Sustaining the benefits of heritage mining for the site, city and region: Exploring the success of Sovereign Hill outdoor museum. In M. Conlin & L. Jolliffe (Eds.), *Mining heritage and tourism: A global synthesis* (pp. 108–128). London: Routledge
- Hospers, G. J. (2002). Industrial heritage tourism and regional restructuring in the European union. *European Planning Studies*, 10(3), 397-404. <https://doi.org/10.1080/09654310220121112>
- Hsu, C. C., & Sandford, B. A. (2007). The Delphi technique: Making sense of consensus. *Practical Assessment, Research and Evaluation*, 12(10), 1-8.
- INE. (2021). *Estatísticas da Produção Industrial 2020*. In (Vol. Edição 2021): Instituto Nacional de Estatística.
- Ionica, A., Samuil, I., Leba, M., & Toderas, M. (2020). The path of petrila mining area towards future industrial heritage tourism seen through the lenses of past and present. *Sustainability (Switzerland)*, 12(23), 1-32. <https://doi.org/10.3390/su12239922>
- Jones, J., & Hunter, D. (1995). Qualitative Research: Consensus methods for medical and health services research. *Bmj*, 311(7001), 376. <https://doi.org/10.1136/bmj.311.7001.376>
- Jóźwiak, M., & Sieg, P. (2021). Tourism development in post-industrial facilities as a regional business model. *Sustainability (Switzerland)*, 13(4), 1-16. <https://doi.org/10.3390/su13042028>

- Kalaian, S. A., & Kasim, R. M. (2012). Terminating sequential delphi survey data collection. *Practical Assessment, Research and Evaluation*, 17(5), 1-10.
- Kandžija, V., Tomljanović, M., & Huđek, I. (2017). DEINDUSTRIALIZATION AS A PROCESS IN THE EU. In (pp. 399 - 414): *Ekonomski vjesnik : Review of Contemporary Entrepreneurship, Business, and Economic Issues*.
- Kao, Y. F., Chen, H. C., & Wu, P. L. (2015). An innovative regional tourism study by microfilms. In *Intelligent Systems Reference Library* (Vol. 90, pp. 59-76).
- Kerstetter, D., Confer, J., & Bricker, K. (1998). Industrial heritage attractions: Types and tourists. *Journal of Travel and Tourism Marketing*, 7(2), 91-104. https://doi.org/10.1300/J073v07n02_05
- Khaleghi, S., Hosseinzadeh, M. M., & Moridsadat, P. (2020). Assessment of Geotourism and Industrial Tourism Development: A Case Study of Pars Special Economic Energy Zone, Iran. *e-Review of Tourism Research*, 18(1), 45-67.
- Klempa, M., Bujok, P., Jelinek, J., Porzer, M., & Pavlus, J. (2015). Reconstruction of former industrial complexes and their utilisation in tourism - case study. *Tourism*, 63(2), 247-258.
- Kozak, M. W. (2017). Innovations in Tourism Policy: the Case of Poland [Article]. *Almatourism-Journal of Tourism Culture and Territorial Development*, 8(7), 160-177. <https://doi.org/10.6092/issn.2036-5195/6761>
- Kuzior, A., Lyulyov, O., Pimonenko, T., Kwilinski, A., & Krawczyk, D. (2021). Post-industrial tourism as a driver of sustainable development. *Sustainability (Switzerland)*, 13(15). <https://doi.org/10.3390/su13158145>
- Laloyaux, S. (2016). Which industrial tourism in touring? (area of Lille). *International Journal of Sustainable Development and Planning*, 11(3), 436-446. <https://doi.org/10.2495/SDP-V11-N3-436-446>
- Landeta, J. (2006). Current validity of the Delphi method in social sciences. *Technological Forecasting and Social Change*, 73(5), 467-482. <https://doi.org/10.1016/j.techfore.2005.09.002>
- Landeta, J., & Barrutia, J. (2011). People consultation to construct the future: A Delphi application. *International Journal of Forecasting*, 27(1), 134-151. <https://doi.org/10.1016/j.ijforecast.2010.04.001>
- Landeta, J., Barrutia, J., & Lertxundi, A. (2011). Hybrid Delphi: A methodology to facilitate contribution from experts in professional contexts. *Technological Forecasting and Social Change*, 78(9), 1629-1641. <https://doi.org/10.1016/j.techfore.2011.03.009>

- Lee, C. F. (2015). Tourist satisfaction with factory tour experience. *International Journal of Culture, Tourism, and Hospitality Research*, 9(3), 261-277. <https://doi.org/10.1108/IJCTHR-02-2015-0005>
- Lee, C. F. (2016). An investigation of factors determining industrial tourism attractiveness. *Tourism and Hospitality Research*, 16(2), 184-197. <https://doi.org/10.1177/1467358415600217>
- Lee, H. H., & Nguyen, M. T. N. (2021). Applying Fuzzy Delphi Method and ANP to Analyze Instrumental Attributes in Purchasing Sustainable Apparel Products. *International Journal of Information and Management Sciences*, 32(3), 209-221. [https://doi.org/10.6186/IJIMS.202109_32\(3\).0002](https://doi.org/10.6186/IJIMS.202109_32(3).0002)
- Li, Y., Biloshchytskyi, A., Bronin, S., & Liashchenko, T. (2021). A Conceptual Model for Diversification Strategies Choice. *SIST 2021 - 2021 IEEE International Conference on Smart Information Systems and Technologies C7 - 9465934*,
- Lichtenthaler, E. (2005). Corporate diversification: Identifying new businesses systematically in the diversified firm. *Technovation*, 25(7), 697-709. <https://doi.org/10.1016/j.technovation.2003.12.005>
- Lin, C. L. (2019). The analysis of sustainable development strategies for industrial tourism based on IOA-NRM approach. *Journal of Cleaner Production*, 241. <https://doi.org/10.1016/j.jclepro.2019.118281>
- Lin, C. H. (2020). Industrial tourism: moderating effects of commitment and readiness on the relationship between tourist experiences and perceived souvenir value. *International Journal of Culture, Tourism, and Hospitality Research*, 14(4), 545-564. <https://doi.org/10.1108/IJCTHR-02-2019-0027>
- Linstone, H., & Turof, M. (1975). The Delphi method: techniques and applications. In (Vol. vol 29). Addison-Wesley, Reading, MA
- Lukas, B. A. (1999). Strategic type, market orientation, and the balance between adaptability and adaptation. In (Vol. 45(2), pp. 147–156): *Journal of Business Research*
- Marques, J., & Santos, N. (2016). Developing business tourism beyond major urban centres: The perspectives of local stakeholders. *Tourism and Hospitality Management*, 22(1), 1-15. <https://doi.org/10.20867/thm.22.1.3>
- Martínez Carballo, M., Guillén Solórzano, E., & Portela Maquieira, S. (2015). Key success factors on the implementation of the une 302001 standard on industrial tourism in the autonomus region of galicia. *Revista Galega de Economía*, 24(1), 51-63.

- McBoyle, G. (1996). Green tourism and Scottish distilleries. *Tourism Management*, 17(4), 255-263. [https://doi.org/10.1016/0261-5177\(96\)00017-9](https://doi.org/10.1016/0261-5177(96)00017-9)
- Merciu, F. C., Cercleux, A. L., & Peptenatu, D. (2015). Roșia montană , Romania: Industrial heritage in situ, between preservation, controversy and cultural recognition. *Industrial Archaeology Review*, 37(1), 5-19. <https://doi.org/10.1179/0309072815Z.00000000039>
- Metsaots, K., Printsman, A., & Sepp, K. (2015). Public Opinions on Oil Shale Mining Heritage and its Tourism Potential. *Scandinavian Journal of Hospitality and Tourism*, 15(4), 380-399. <https://doi.org/10.1080/15022250.2015.1024817>
- Mitchell, M., & Mitchell, S. (2001). Showing off what you do (and how you do it). *Journal of Hospitality and Leisure Marketing*, 7(4), 61-77. https://doi.org/10.1300/J150v07n04_06
- Montenegro, Z. (2020). Percepção dos gestores sobre os efeitos do turismo em empresas industriais - estudos de caso. In: Universidade Portucalense.
- Montenegro, Z., & Sousa, C. (2021). Managers' perception of the effects of creative and industrial tourism on industrial companies C3 - Proceedings of the International Conference on Tourism Research. 4th International Conference on Tourism Research, ICTR 2021.
- Montenegro, Z., Marques, J., & Sousa, C. (2022). Understanding the Concept of Industrial Tourism: A Systematic Review of the Literature. In J. Marques & C. Sousa (Eds.), (pp. 271-280). Proceedings of the 5th International Conference on Tourism Research, 2022: Academic Conferences International Limited.
- Montenegro, Z., Marques, J., & Sousa, C. (2024). Regional development through industrial tourism: a literature review. *RPER - Portuguese Review of Regional Studies*.
- Moral-Moral, M., & Fernández-Alles, M. T. (2019). Perceptions of the local resident to industrial tourism as a sustainable development model. *Revista de Estudios Regionales*(114), 45-69.
- Morales, P. M. C., Guzmán, T. J. L. G., Cuadra, S. M., & Agüera, F. O. (2015). Analysis of demand of olive tourism in Andalusia. *Revista de Estudios Regionales*(104), 133-149.
- Moyle, B. D., Moyle, C. L. J., & Bec, A. (2018). The coexistence of tourism and mining: a strategic framework for cross-sectoral interaction. *Current Issues in Tourism*, 21(17), 1966-1987. <https://doi.org/10.1080/13683500.2016.1238884>

- Nielsen, N. C. (2012). Industrial Tourism: Opportunities for City and Enterprise. *Tourism Geographies*, 14(3), 532-534. <https://doi.org/10.1080/14616688.2011.609902>
- Nohara, T., Okamura, Y., & Kawahara, S. (2016). Research for a comprehensive and active planning method in an industrial-residential mixed area focused on Ota creative town vision in Ota Ward, Tokyo. *Planning Malaysia*, 4(Special Issue 4), 369-382. <https://doi.org/10.21837/pmjournal.v14.i4.171>
- Noy, C. (2008). Sampling knowledge: The hermeneutics of snowball sampling in qualitative research. *International Journal of Social Research Methodology*, 11(4), 327-344. <https://doi.org/10.1080/13645570701401305>
- Nurdiono, N., Farichah, F., Wibowo, B., Kusumaningrum, N. D., Mirfazli, E., & Ali, M. M. (2019). The effect of good corporate governance implementation in diversification strategy of family company and its effect on firm value. *Humanities and Social Sciences Reviews*, 7(6), 691-699. <https://doi.org/10.18510/hssr.2019.76103>
- Okoli, C., & Pawlowski, S. D. (2004). The Delphi method as a research tool: An example, design considerations and applications. *Information and Management*, 42(1), 15-29. <https://doi.org/10.1016/j.im.2003.11.002>
- Orlando, B., Renzi, A., Sancetta, G., & Cucari, N. (2018). How does firm diversification impact innovation? *Technology Analysis and Strategic Management*, 30(4), 391-404. <https://doi.org/10.1080/09537325.2017.1313405>
- Orange, H. (2017). Flaming smokestacks: Kojo Moe and night-time factory tourism in Japan. *Journal of Contemporary Archaeology*, 4(1), 59-72. <https://doi.org/10.1558/jca.31290>
- Otgaar, A. (2012). Towards a common agenda for the development of industrial tourism. *Tourism Management Perspectives*, 4, 86-91. <https://doi.org/10.1016/j.tmp.2012.05.004>
- Otgaar, A., Bergm L. V. D., Berger, C. e Ferg, R. X. (2008). Industrial Tourism: opportunities for city and enterprise. In. *Roterdão: Erasmus University Rotterdam*.
- Pardo Abad, C. J. (2004). La reutilización del patrimonio industrial como recurso turístico. Aproximación geográfica al turismo industrial". In (pp. 7-32): *Treballs de la Societat Catalana de Geografia*.
- Pardo Abad, C. J. (2014). Indicators of touristic sustainability applied to the industrial and mining heritage: Evaluation of results in some case studies. *Boletín de la*

- Asociacion de Geografos Espanoles(65), 11-36+411-415.
<https://doi.org/10.21138/bage.1741>
- Pardo Abad, C. J. (2017). Sostenibilidad Y turismo en los paisajes custurales de la industrialización. In (Vol. julio-septiembre, pp. 103-785). Arbor, Ciencia, Pensamento Y cultura.
- Paré, G., Cameron, A. F., Poba-Nzaou, P., & Templier, M. (2013). A systematic assessment of rigor in information systems ranking-type Delphi studies. *Information and Management*, 50(5), 207-217.
<https://doi.org/10.1016/j.im.2013.03.003>
- Pavlakovič, B., Demir, M. R., Pozvek, N., & Turnšek, M. (2021). Role of tourism in promoting geothermal energy: Public interest and motivation for geothermal energy tourism in slovenia. *Sustainability (Switzerland)*, 13(18).
<https://doi.org/10.3390/su131810353>
- Peng, K. H., & Tzeng, G. H. (2019). Exploring heritage tourism performance improvement for making sustainable development strategies using the hybrid-modified MADM model. *Current Issues in Tourism*, 22(8), 921-947.
<https://doi.org/10.1080/13683500.2017.1306030>
- Perfetto, M. C., & Presenza, A. (2017). Conceptualising industrial heritage tourism management. *International Journal of Tourism Policy*, 7(2), 110-128.
<https://doi.org/10.1504/IJTP.2017.085304>
- Perfetto, M. C., & Vargas-Sanchez, A. (2018). Towards a Smart Tourism Business Ecosystem based on Industrial Heritage: research perspectives from the mining region of Rio Tinto, Spain. *Journal of Heritage Tourism*, 13(6), 528-549. <https://doi.org/10.1080/1743873x.2018.1445258>
- Porter, M. E. (1985). *Competitive Advantage. Creating and Sustaining Superior Performance*. In. Free Press, New York.
- Porter, M. E. (1990). The competitive advantage of nations. In (Vol. 68, pp. 73-93). Harvard Business Review.
- Powell, C. (2003). The Delphi technique: Myths and realities. *Journal of Advanced Nursing*, 41(4), 376-382. <https://doi.org/10.1046/j.1365-2648.2003.02537.x>
- Prat Forga, J. M., & Cànoves Valiente, G. (2017). Cultural change and industrial heritage tourism: material heritage of the industries of food and beverage in Catalonia (Spain). *Journal of Tourism and Cultural Change*, 15(3), 265-286.
<https://doi.org/10.1080/14766825.2015.1108327>
- Prat, J. M., & Valiente, G. C. (2012). Industrial heritage as a boost for the country: The case of eco-museum the Farinera, in Castelló d'Empúries (Catalunya).

- Documents d'Analisi Geografica, 58(1), 79-100.
<https://doi.org/10.5565/rev/dag.192>
- Price, W. R. (2021). Mining for Tourists: An Analysis of Industrial Tourism and Government Policy in Wales. *Tourism Planning and Development*, 18(4), 435-456. <https://doi.org/10.1080/21568316.2020.1829695>
- Price, W. R., & Rhodes, M. A. (2020). Coal dust in the wind: Interpreting the industrial past of South Wales. *Tourism Geographies*.
<https://doi.org/10.1080/14616688.2020.1801825>
- Riviezzo, A., Garofano, A., Mason, M. C., & Napolitano, M. R. (2021). Italian corporate museums as industrial tourism destinations: A segmentation study based on strategic orientation. *European Journal of Tourism Research*, 29.
- Robbins, S., Judge, T., & Sobral, S. (2010). *Comportamento organizacional*. Pearson, 470-473.
- Rodrigues, J. C. M. (2019). The route of the industrial heritage in the vale do ave (north of portugal) in a new trend of the tourism. *Pasos-Revista De Turismo Y Patrimonio Cultural*, 17(5), 989-1003.
<https://doi.org/10.25145/j.pasos.2019.17.070>
- Rodriguez-Zulaica, A. (2017). Redefining Industrial Tourism. Comparison of the term in spanish, french and english literature. *Pasos-Revista De Turismo Y Patrimonio Cultural*, 15(2), 311-318.
<https://doi.org/10.25145/j.pasos.2017.15.019>
- Ronck, C. L., & Price, W. R. (2019). Revealing "salt city's" geological and mining heritage at strataca. *Great Plains Research*, 29(2), 137-151.
<https://doi.org/10.1353/gpr.2019.0018>
- Rowe, G., & Wright, G. (1999). The Delphi technique as a forecasting tool: Issues and analysis. *International Journal of Forecasting*, 15(4), 353-375.
[https://doi.org/10.1016/S0169-2070\(99\)00018-7](https://doi.org/10.1016/S0169-2070(99)00018-7)
- Ruban, D. A., Molchanova, T. K., & Yashalova, N. N. (2019). Three rising tourism directions and climate change: Conceptualizing new opportunities. *e-Review of Tourism Research*, 16(4), 352-370.
- Rudd, M. A., & Davis, J. A. (1998). Industrial heritage tourism at the Bingham Canyon copper mine. *Journal of Travel Research*, 36(3), 85-89.
<https://doi.org/10.1177/004728759803600310>

- Ruíz, M. C. C., del Pozo, P. B., & Ruiz-Valdepeñas, H. P. (2019). The limits of industrial tourism in disadvantaged areas. Singular experiences in Spain. In *Cuadernos Geograficos* (Vol. 58, pp. 180-204).
- Salvado, J. (2016). Wine Culture, Territory/ Landscape and Tourism, the enotourism Key Pillars. How to get Business Success and territorial sustainability inside wine tourism ecosystem? In. A pathway for the new generation of tourism research proceedings of the ESTSA conference.
- Shen, N., Au, K., & Yi, L. (2018). Diversification Strategy, Ownership Structure, and Financial Crisis: Performance of Chinese Private Firms. *Asia-Pacific Journal of Financial Studies*, 47(1), 54-80. <https://doi.org/10.1111/ajfs.12203>
- Shinners, D., Lewis, R., & Parker, B. (2019). Cultivating hospitality agritourism: Exploring Farm - Stays in Rural Oregon. In. University of Oregon School of Planning, Public Policy, and Management.
- Silalahi, E. E., & Bimo, I. D. (2021). DIVERSIFICATION, CEO COMMITMENT, AND FIRM PERFORMANCE. *Dynamic Relationships Management Journal*, 10(2), 19-29. <https://doi.org/10.17708/DRMJ.2021.v10n02a02>
- Sjaifuddin, S. (2018). Environmental management prospects of industrial area: A case study on mcie, Indonesia. *Business: Theory and Practice*, 19, 208-216. <https://doi.org/10.3846/btp.2018.21>
- Somoza-Medina, X., & Monteserín-Abella, O. (2021). The sustainability of industrial heritage tourism far from the axes of economic development in Europe: Two case studies. *Sustainability (Switzerland)*, 13(3), 1-27. <https://doi.org/10.3390/su13031077>
- Swarbrooke, J. (2002). The development and management of visitor attractions In: Burlington: Butterworth-Heinemann.
- Szromek, A. R., Herman, K., & Naramski, M. (2021). Sustainable development of industrial heritage tourism – A case study of the Industrial Monuments Route in Poland. *Tourism Management*, 83. <https://doi.org/10.1016/j.tourman.2020.104252>
- Teece, D. J., Pisano, G., & Shuen, A. (1997). Dynamic capabilities and strategic management. *Strategic Management Journal*, 18(7), 509-533. [https://doi.org/10.1002/\(sici\)1097-0266\(199708\)18:7<509::aid-smj882>3.0.co;2-z](https://doi.org/10.1002/(sici)1097-0266(199708)18:7<509::aid-smj882>3.0.co;2-z)
- Tegtmeyer, L. L. (2016). Tourism aesthetics in ruinscapes: Bargaining cultural and monetary values of Detroit's negative image. *Tourist Studies*, 16(4), 462-477. <https://doi.org/10.1177/1468797615618100>

- Tynan, C.; McKechnie, S. *Experience marketing: A review and reassessment*. *J. Mark. Manag.* 2009, 25, 501–517. <https://doi.org/10.1362/026725709X461821>. (Vol. 25, pp. 501-517).
- Valtonen, M., Pätäri, S., Jantunen, A., Kyläheiko, K., & Sandström, J. (2015). Diversification strategies in the global pulp and paper industry - empirical analysis from years 1996 and 2006. *International Journal of Business Innovation and Research*, 9(1), 15-33. <https://doi.org/10.1504/IJBIR.2015.065951>
- Van der Merwe, C. D., & Rogerson, C. M. (2018). The local development challenges of industrial heritage in the developing world: Evidence from Cullinan, South Africa. *Geojournal of Tourism and Geosites*, 21(1), 186-199.
- Vargas-Sanchez, A., Plaza-Mejia, M. D., & Porrás-Bueno, N. (2009). Understanding Residents' Attitudes toward the Development of Industrial Tourism in a Former Mining Community. *Journal of Travel Research*, 47(3), 373-387. <https://doi.org/10.1177/0047287508322783>
- Veeck, G., Deborah Che, D., & Veeck, A. (2010). America's Changing Farmscape: A Study of Agricultural Tourism in Michigan. *The Professional Geographer*.
- Walker, A. M., & Selfe, J. (1996). The delphi method: A useful tool for the allied health researcher. *International Journal of Therapy and Rehabilitation*, 3(12), 677-681. <https://doi.org/10.12968/bjtr.1996.3.12.14731>
- Wang, C., & Xu, H. (2009). Is diversification a good strategy for chinese tourism companies. *Journal of China Tourism Research*, 5(2), 188-209. <https://doi.org/10.1080/19388160902910698>
- Xie, P. F. (2006). Developing industrial heritage tourism: A case study of the proposed jeep museum in Toledo, Ohio. *Tourism Management*, 27(6), 1321-1330. <https://doi.org/10.1016/j.tourman.2005.06.010>
- Xie, P. F. (2015). *Industrial Heritage Tourism*: Channel View Publications.
- Yan, Y. Q., Shen, H. J., Ye, B. H., & Zhou, L. (2021). From awe to awe: assessing the co-effects of awe and authenticity on industrial heritage tourism. *Current Issues in Tourism*. <https://doi.org/10.1080/13683500.2021.1996543>
- Yang, X. (2017). Industrial heritage tourism development and city image reconstruction in Chinese traditional industrial cities: a web content analysis. *Journal of Heritage Tourism*, 12(3), 267-280. <https://doi.org/10.1080/1743873X.2016.1236800>

- Yuan, Q., Song, H., Chen, N., & Shang, W. (2019). Roles of tourism involvement and place attachment in determining residents' attitudes toward industrial heritage tourism in a resource-exhausted city in China. *Sustainability (Switzerland)*, 11(19). <https://doi.org/10.3390/su11195151>
- Zhang, J., Cenci, J., Becue, V., Koutra, S., & Ioakimidis, C. S. (2020). Recent evolution of research on industrial heritage in Western Europe and China based on bibliometric analysis. *Sustainability (Switzerland)*, 12(13). <https://doi.org/10.3390/su12135348>
- Zhao, Z., & Liu, Z. (2021). Development path of industrial heritage tourism: A case study of Kitakyushu (Japan). *Sustainability (Switzerland)*, 13(21). <https://doi.org/10.3390/su132112099>
- Zuo, H., Li, W., & Alam, S. S. (2023). Relationship between Diversification, Institutional Environment and Growth: A Study of Agricultural Companies in China. *Sustainability (Switzerland)*, 15(7) C7 - 6216. <https://doi.org/10.3390/su15076216>

ANNEX I

Table – Selected articles

Title	Authors	Year	Source title
Urban industrial tourism: Cultural sustainability as a tool for confronting overtourism—cases of madrid, brussels, and copenhagen	Hidalgo-giralt, C., Palacios-garcía, A., Barrado-timón, D., Rodríguez-esteban, J.A.	2021	Sustainability (Switzerland)
Tourism development in post-industrial facilities as a regional business model	Józwiak, M., Sieg, P.	2021	Sustainability (Switzerland)
Post-industrial tourism as a driver of sustainable development	Kuzior, A., Lyulyov, O., Pimonenko, T., Kwilinski, A., Krawczyk, D.	2021	Sustainability (Switzerland)
Mining for Tourists: An Analysis of Industrial Tourism and Government Policy in Wales	Price, WR	2021	Tourism Planning & Development
Italian corporate museums as industrial tourism destinations: segmentation study based on strategic orientation	Riviezzo, A; Garofano, A; Mason, MC; Napolitano, MR	2021	European Journal of Tourism Research
The sustainability of industrial heritage tourism far from the axes of economic development in Europe: Two case studies	Somoza-Medina, X., Monteserín-Abella, O.	2021	Sustainability (Switzerland)
Sustainable development of industrial heritage tourism – A case study of the Industrial Monuments Route in Poland	Szromek, A.R., Herman, K., Naramski, M.	2021	Tourism Management
From axe to awe: assessing the co-effects of awe and authenticity on industrial heritage tourism	Yan Y.Q., Shen H.J., Ye B.H., Zhou L.	2021	Current Issues in Tourism
Development path of industrial heritage tourism: A case study of kitakyushu (japan)	Zhao Z., Liu Z.	2021	Sustainability (Switzerland)
The relationship between industrial heritage, wine tourism, and sustainability: A case of local community perspective	Andrade-Suárez, M., Caamaño-Franco, I.	2020	Sustainability (Switzerland)
The european union's policy in tourism: Cultural tourism and the sustainability of industrial heritage in integration [A política da União Europeia no turismo: O turismo cultural e a sustentabilidade do patrimônio industrial para integração do bloco europeu]	Custódio, M.M., dos Santos, F.B.	2020	Brazilian Journal of International Law
A study on the origin of china's modern industrial architecture and its development strategies of industrial tourism	Han, R., Liu, D., Cornaglia, P.	2020	Sustainability (Switzerland)
Assessment of Geotourism and Industrial Tourism Development: A Case Study of Pars Special Economic Energy Zone, Iran	Khaleghi, S., Hosseinzadeh, M.M., Moridsadat, P.	2020	e-Review of Tourism Research
Coal dust in the wind: Interpreting the industrial past of South Wales	Price, W.R., Rhodes, M.A.	2020	Tourism Geographies
Cheese as a tourism resource in Russia: The first report and relevance to sustainability	Ermolaev, V.A., Yashalova, N.N., Ruban, D.A.	2019	Sustainability (Switzerland)
The Post-Industrial Landscapes of Central Urals, Russia: Heritage Value, Tourist Potential, and Unrealized Opportunities	Givental, E., Stepanov, A.V., Ilyushkina, M.Y., Burnasov, A.S.	2019	Regional Research of Russia
Perceptions of the local resident to industrial tourism as a sustainable development model [Percepciones del residente local sobre el turismo industrial como una modalidad de desarrollo sostenible]	Moral-Moral, M., Fernández-Alles, M.T.	2019	Revista de Estudios Regionales
Exploring heritage tourism performance improvement for making sustainable development strategies using the hybrid-modified MADM model	Peng, K.-H., Tzeng, G.-H.	2019	Current Issues in Tourism
Revealing "salt city's" geological and mining heritage at strataca	Ronck, C.L., Price, W.R.	2019	Great Plains Research
The limits of industrial tourism in disadvantaged areas. Singular experiences in Spain [Les limites du tourisme industriel dans les zones défavorisées. Expériences uniques en Espagne]	Ruiz, M.C.C., del Pozo, P.B., Ruiz-Valdepeñas, H.P.	2019	Cuadernos Geograficos
Creative destruction: the commodification of industrial heritage in Nanfeng Kiln District, China	Yang, X.S., Xu, H., Wall, G.	2019	Tourism Geographies
Roles of tourism involvement and place attachment in determining residents' attitudes toward industrial heritage tourism in a resource-exhausted city in China	Yuan, Q., Song, H., Chen, N., Shang, W.	2019	Sustainability (Switzerland)
Theoretical and methodological model for the study of social perception of the impact of industrial tourism on local development	Andrade, M., Caamaño-Franco, I.	2018	Social Sciences
The coexistence of tourism and mining: a strategic framework for cross-sectoral interaction	Moyle, B.D., Moyle, C.-L.J., Bec, A.	2018	Current Issues in Tourism
Environmental management prospects of industrial area: A case study on mcie, Indonesia	Sjaifuddin, S.	2018	Business: Theory and Practice
The local development challenges of industrial heritage in the developing world: Evidence from Cullinan, South Africa	Van der Merwe, C.D., Rogerson, C.M.	2018	Geojournal of Tourism and Geosites
The crisis of granite and the success of marble: errors and market strategies. The Sardinian case	Careddu, N., Siotto, G., Marras, G.	2017	Resources Policy
Energy tourism: An emerging field of study	Frantál, B., Urbánková, R.	2017	Current Issues in Tourism
Urban and industrial tourism in the "post-industrial" periphery: Imaginaries and narratives of the inhabitants of the Left Bank of the river Nervión in metropolitan Bilbao [Turismo urbano e industrial en la periferia "postindustrial": Imaginarios y narrativas desde los habitantes de la Margen Izquierda del Nervión en el Bilbao metropolitano]	González Durán, S.	2017	Scripta Nova
Transformation of Gunkanjima (Battleship Island): from a coalmine island to a modern industrial heritage tourism site in Japan	Hashimoto A., Telfer D.J.	2017	Journal of Heritage Tourism
Transnationalizing industrial heritage valorizations in Germany and China—and addressing inherent dark sides	Li, L., Soyec, D.	2017	Journal of Heritage Tourism
Cultural change and industrial heritage tourism: material heritage of the industries of food and beverage in Catalonia (Spain)	Prat Forga, J.M., Cánoves Valiente, G.	2017	Journal of Tourism and Cultural Change
Which industrial tourism in touring? (area of Lille)	Laloyaux, S.	2016	International Journal of Sustainable Development and Planning
An investigation of factors determining industrial tourism attractiveness	Lee, CF	2016	Tourism and Hospitality Research
Research for a comprehensive and active planning method in an industrial-residential mixed areafocused on ota creative town vision in Ota Ward, Tokyo	Nohara, T., Okamura, Y., Kawahara, S.	2016	Planning Malaysia

Tourism aesthetics in ruinscapes: Bargaining cultural and monetary values of Detroit's negative image	Tegtmeyer, L.L.	2016	Tourist Studies
Possibilities of industrial heritage reuse as tourist attractions - A case study of City of Zrenjanin (Vojvodina, Serbia)	Žopi?, S., Tumari?, A.	2015	Geographica Pannonica
Reconstruction of former industrial complexes and their utilisation in tourism - case study	Klempa, M; Bujok, P; Jelinek, J; Porzer, M; Pavlus, J	2015	Tourism
Roşia montană , Romania: Industrial heritage in situ, between preservation, controversy and cultural recognition	Merciu, F.-C., Cercleux, A.-L., Peptenatu, D.	2015	Industrial Archaeology Review
Public Opinions on Oil Shale Mining Heritage and its Tourism Potential	Metsaots, K., Printsman, A., Sepp, K.	2015	Scandinavian Journal of Hospitality and Tourism
Indicators of touristic sustainability applied to the industrial and mining heritage: Evaluation of results in some case studies [Indicadores de sostenibilidad turística aplicados al patrimonio industrial y minero: Evaluación de resultados en algunos casos de estudio]	Pardo Abad, C.J.	2014	Boletín de la Asociación de Geógrafos Españoles
Industrial heritage as a boost for the country: The case of eco-museum the Farinera, in Castelló d'Empúries (Catalunya) [El patrimonio industrial como dinamizador del territorio. el caso del ecomuseo la Farinera, en Castelló d'Empúries (Cataluña)]	Prat, J.M., Valiente, G.C.	2012	Documents d'Anàlisi Geogràfica
In search of authenticity: A case examination of the transformation of Alabama's Langdale cotton mill into an industrial heritage tourism attraction	Alonso, A.D., O'Neill, M.A., Kim, K.	2010	Journal of Heritage Tourism
Understanding Residents' Attitudes toward the Development of Industrial Tourism in a Former Mining Community	Vargas-Sanchez, A; Plaza-Mejia, MD; Porras-Bueno, N	2009	Journal of Travel Research
Identity and community - Reflections on the development of mining heritage tourism in Southern Spain	Ballesteros, E.R., Ramírez, M.H.	2007	Tourism Management
Developing industrial heritage tourism: A case study of the proposed jeep museum in Toledo, Ohio	Xie, P.F.	2006	Tourism Management
The role of industry in formation of functional structure of torun	Gieranczyk, W.	2005	Bulletin of Geography
Exploring the sustainability of mining heritage tourism	Cole, D.	2004	Journal of Sustainable Tourism
Industrial heritage tourism and regional restructuring in the European union	Hospers, G.-J.	2002	European Planning Studies
Heritage tourism and textile "model villages": The case of River Park, Barcelona, Spain	COIT, J.C.L.I.	2001	Tourism Recreation Research
Mines and quarries: Industrial Heritage Tourism	Edwards, J.A., Llurdés I Coit, J.C.	1996	Annals of Tourism Research

ANNEX II

Table – Selected articles

Title	Authors	Year	Source title
Green tourism and Scottish distilleries	McBoyle G.,	1996	Tourism Management
Industrial heritage tourism at the Bingham Canyon copper mine	Rudd M.A., Davis J.A.,	1998	Journal of Travel Research
Industrial heritage attractions: Types and tourists	Kerstetter D., Confer J., Bricker K.,	1998	Journal of Travel and Tourism Marketing
Showing off what you do (and how you do it)	Mitchell M., Mitchell S.,	2001	Journal of Hospitality and Leisure Marketing
Exploring the sustainability of mining heritage tourism	Cole D.,	2004	Journal of Sustainable Tourism
Developing industrial heritage tourism: A case study of the proposed jeep museum in Toledo, Ohio	Xie P.F.,	2006	Tourism Management
Industrial Tourism: Opportunities for City and Enterprise	Nielsen N.C.,	2012	Tourism Geographies
Towards a common agenda for the development of industrial tourism	Otgaar A.,	2012	Tourism Management Perspectives
Analysis of demand of olive tourism in Andalusia [Análisis de la demanda del oleoturismo en Andalucía]	Morales P.M.C., Guzmán T.J.L.-G., Cuadra S.M., Agüera F.O.,	2015	Revista de Estudios Regionales
Customer communication facilities with tourism: A comparison between German and Japanese automobile companies	Endo Y., Kurata Y.,	2015	Advances in Culture, Tourism and Hospitality Research
Key success factors on the implementation of the une 302001 standard on industrial tourism in the autonomus region of galicia [Factores chave de implantación/certificación da norma une 302001 de turismo industrial na comunidade autónoma de galicia]	Martínez Carballo M., Guillén Solórzano E., Portela Maquieira S.,	2015	Revista Galega de Economía
Tourist satisfaction with factory tour experience	Lee C.-F.,	2015	International Journal of Culture, Tourism, and Hospitality Research
In praise of iron grandeur: the sensibility of kōjō moe and the reinvention of urban technoscape	Amano I.,	2016	Contemporary Japan
An investigation of factors determining industrial tourism attractiveness	Lee C.-F.,	2016	Tourism and Hospitality Research
Building brand equity through industrial tourism	Chow H.-W., Ling G.-J., Yen I.-Y., Hwang K.-P.,	2017	Asia Pacific Management Review
Industrial heritage tourism development and city image reconstruction in Chinese traditional industrial cities: a web content analysis	Yang X.,	2017	Journal of Heritage Tourism
Flaming smokestacks: Kojo Moe and night-time factory tourism in Japan	Orange H.,	2017	Journal of Contemporary Archaeology
Renewable energy sources as an attractive element of industrial tourism	Beer M., Rybár R., Kaľavský M.,	2018	Current Issues in Tourism
Towards a Smart Tourism Business Ecosystem based on Industrial Heritage: research perspectives from the mining region of Rio Tinto, Spain	Perfetto M.C., Vargas-Sánchez A.,	2018	Journal of Heritage Tourism
The coexistence of tourism and mining: a strategic framework for cross-sectoral interaction	Moyle B.D., Moyle C.-L.J., Bec A.,	2018	Current Issues in Tourism
A business creation in post-industrial tourism objects: Case of the industrial monuments route	Szromek A.R., Herman K.,	2019	Sustainability (Switzerland)
The analysis of sustainable development strategies for industrial tourism based on IOA-NRM approach	Lin C.-L.,	2019	Journal of Cleaner Production
Three rising tourism directions and climate change: Conceptualizing new opportunities	Ruban D.A., Molchanova T.K., Yashalova N.N.,	2019	e-Review of Tourism Research
Industrial Heritage 2.0: Internet presence and development of the electronic commerce of industrial tourism	Cristobal-Fransi E., Daries N., Martin-Fuentes E., Montegut-Salla Y.,	2020	Sustainability (Switzerland)
Industrial tourism: moderating effects of commitment and readiness on the relationship between tourist experiences and perceived souvenir value	Lin C.-H.,	2020	International Journal of Culture, Tourism, and Hospitality Research
Future strategies for promoting tourism and petroleum heritage in Khuzestan Province, Iran	Amirkhani S., Torabi Farsani N., Moazzen Jamshidi H.,	2021	Journal of Tourism Futures
Industrial heritage tourism as a driver of sustainable development? A case study of steirische eisenstrasse (Austria)	Harfst J., Sandriester J., Fischer W.,	2021	Sustainability (Switzerland)
Post-industrial tourism as a driver of sustainable development	Kuzior A., Lyulyov O., Pimonenko T., Kwilinski A., Krawczyk D.,	2021	Sustainability (Switzerland)
Potentials of Cultural - Historical and Tourism Heritage for the Development of Tourism in the Timok Region	Bugarin D., Veličković S.K., Tucović M.,	2021	Serbian Journal of Management
Role of tourism in promoting geothermal energy: Public interest and motivation for geothermal energy tourism in slovenia	Pavlakovič B., Demir M.R., Pozvek N., Turnšek M.,	2021	Sustainability (Switzerland)
Managers' perception of the effects of creative and industrial tourism on industrial companies	Montenegro Z., Sousa C.,	2021	Proceedings of the International Conference on Tourism Research
The underground city: The tourism potential of water and sewage infrastructure: The example of Poland	Dębczyńska K., Piasecki A.,	2021	Bulletin of Geography. Socio-economic Series

ANNEX III

Questionário Delphi – Ronda 1

Propostas para o desenvolvimento do Turismo Industrial

Ao preencher este questionário está a dar o seu consentimento na participação deste estudo, permitindo a utilização dos dados que de forma voluntária fornece, sendo certo que apenas serão utilizados para investigação e tratados de forma confidencial.

Pede-se que responda com o máximo de rigor e honestidade. Não há respostas certas ou erradas relativamente a qualquer dos itens, pretende-se apenas a sua opinião pessoal e sincera.

Email:

A. Perfil do Participante

Esta secção estará presente apenas nesta primeira ronda.

1. Género:
2. Ano de nascimento:
3. Habilitações Literárias:
4. Área(s) de Formação:
5. Profissão/atividade atual:

B. Empresas e Turismo Industrial

6. De acordo com a sua perspetiva, indique 5 principais **vantagens** do Turismo Industrial para as EMPRESAS.
7. De acordo com a sua perspetiva, indique 5 principais **desvantagens** do Turismo Industrial para as EMPRESAS.
8. De acordo com a sua perspetiva, indique 5 **estratégias ou ações específicas** que poderiam contribuir para potenciar o desenvolvimento do Turismo Industrial nas EMPRESAS.
9. De acordo com a sua perspetiva, indique 5 **barreiras ao desenvolvimento** do Turismo Industrial nas EMPRESAS.
10. De acordo com a sua perspetiva, indique 5 **stakeholders/parceiros** essenciais para o sucesso do Turismo Industrial nas EMPRESAS.

C. Territórios e Turismo Industrial

11. De acordo com a sua perspetiva, indique 5 principais **vantagens** do Turismo Industrial para os TERRITÓRIOS.
12. De acordo com a sua perspetiva, indique 5 principais **desvantagens** do Turismo Industrial para os TERRITÓRIOS.

13. De acordo com a sua perspetiva, indique 5 **estratégias ou ações** específicas que poderiam contribuir para potenciar o desenvolvimento do Turismo Industrial nos TERRITÓRIOS.

14. De acordo com a sua perspetiva, indique 5 **barreiras ao desenvolvimento** do Turismo Industrial nos TERRITÓRIOS.

15. De acordo com a sua perspetiva indique 5 potenciais **oportunidades** para o Turismo Industrial em Portugal.

16. De acordo com a sua perspetiva, indique 5 **contributos** do Turismo Industrial para a valorização turística de Portugal.

D - Sugestões

Existe alguma pergunta ou assunto que gostaria de ver tratado na próxima fase do questionário? Deixe a sua sugestão.

Qualquer comentário que gostasse de fazer sobre o questionário ou a investigação, por favor escreva aqui.

Obrigada pela sua colaboração. As suas respostas serão uma mais valia para o resultado final desta investigação. Brevemente será informado das conclusões gerais deste primeiro questionário e será solicitada a sua contribuição numa segunda ronda de questionário, de dimensão mais reduzida que o primeiro. Com os melhores cumprimentos, Zulmira Montenegro

ANNEX IV

Questionário Delphi – Ronda 2

Propostas para o desenvolvimento do Turismo Industrial

Ao preencher este questionário está a dar o seu consentimento na participação deste estudo, permitindo a utilização dos dados que de forma voluntária fornece, sendo certo que apenas serão utilizados para investigação e tratados de forma confidencial.

A. Empresas e Turismo Industrial

1. De entre as seguintes afirmações, por favor selecione as **5 principais vantagens** do Turismo Industrial para as EMPRESAS.

- Valorização e divulgação da marca e seus produtos
- Partilha de conhecimento com público externo à empresa
- Fonte extra de receitas
- Motivação e valorização dos colaboradores - marketing interno
- Contacto com novos clientes e stakeholders
- Fonte de inputs criativos e inovadores
- Diversificação do negócio (turismo)
- Promover a ligação emocional com os clientes
- Participação na dinâmica turística e económica do território onde está inserida
- Estratégia de recrutamento
- Abertura e vínculo à sociedade
- Criação de postos de trabalho
- Acesso a financiamento para melhoria de infraestruturas e equipamentos
- Visibilidade junto dos profissionais do sector
- Prática de responsabilidade social
- Diminuição da sazonalidade

Caso pretenda, poderá colocar aqui os seus comentários adicionais.

2. De entre as seguintes afirmações, por favor selecione as **5 principais desvantagens** do Turismo Industrial para as EMPRESAS.

- Investimento inicial e custos de implementação
- Perturbações na cadeia produtiva e no funcionamento da empresa
- Custo acrescido com conservação e adaptação das instalações
- Necessidade de mais Recursos Humanos para alocar ao Turismo Industrial
- Sazonalidade e horários de visitas
- Espionagem industrial
- Cuidados extra com segurança e higiene
- Perda de foco da atividade principal
- Recursos Humanos expostos a olhares externos
- Banalização de processos por via de apresentação constante
- Pouca adesão
- Dificuldade na implementação
- Danos ambientais
- Burocracia acrescida
- Risco de percepção negativa sobre o processo produtivo
- Risco de empresas se transformarem em espaços artificializados e encenados

Caso pretenda, poderá colocar aqui os seus comentários adicionais.

3. De entre as seguintes afirmações, por favor selecione as **5 principais estratégias ou ações específicas** que poderiam contribuir para potenciar o desenvolvimento do Turismo Industrial nas EMPRESAS.

- Promoção do Turismo Industrial no mercado nacional e europeu e em diferentes canais de comunicação
- Promoção de ações de formação nas empresas sobre o Turismo Industrial
- Criação de incentivos, benefícios fiscais e programas de financiamento
- Apoio à definição de itinerários e visitas guiadas
- Criação/associação a uma rede de Turismo Industrial nacional e internacional
- Existência de uma plataforma única de divulgação/marcação junto dos vários operadores turísticos
- Realização de parcerias com agentes turísticos e hotéis
- Implementação de propostas de Turismo Industrial seguindo a Norma Portuguesa de Qualidade 4556:2017
- Elaboração de um manual de boas práticas com exemplos de sucesso (nacionais e internacionais)
- Simplicidade e proximidade na relação com Municípios e órgãos governamentais
- Utilização da tecnologia para a criação de experiências imersivas e interativas
- Criação do storytelling sobre a empresa
- Ações de benchmarking em destinos de Turismo Industrial maduros
- Criação de uma equipa regional que coordene o investimento e implementação prática do Turismo Industrial nas empresas
- Oferta de Turismo Industrial baseada em Turismo de experiência
- Realização de parcerias público-privadas
- Elaboração de um plano anual de atividades do Turismo Industrial
- Criação de loja de fábrica
- Disponibilização de Recursos Humanos externos às empresas para acompanhamento das visitas
- Investimento interno das empresas na divulgação das suas propostas
- Visitas em mais do que um idioma
- Reforço do Turismo Industrial na Estratégia e Cultura da empresa

Caso pretenda, poderá colocar aqui os seus comentários adicionais

4. De entre as seguintes afirmações, por favor seleccione as **5 principais barreiras** ao desenvolvimento do Turismo Industrial nas EMPRESAS.

- Turismo Industrial não faz parte da estratégia e cultura da empresa
- Necessidade de sigilo de processos internos e riscos de espionagem industrial
- Custos de implementação
- Limitações no horário das empresas
- Falta de incentivos e dificuldade em financiamento bancário
- Escassez e necessidade de formação dos Recursos Humanos
- Burocracia excessiva
- Dificuldade de criação e implementação dos percursos e guiões das visitas
- Procedimentos extra de segurança
- Localização e acessibilidade da empresa
- Pouca atratividade do Património Industrial da empresa
- Desconhecimento sobre Turismo Industrial
- Natureza da atividade industrial impossibilita a realização de visitas (pó, barulho, perigo)
- Resistência e desconforto dos funcionários (exposição vs privacidade)
- Promoção deficitária das atividades de Turismo Industrial
- Pouca receptividade a parcerias
- Falta de colaboração dos municípios
- Dimensão da empresa
- Pouca comercialização do Turismo Industrial através de agentes privados
- Não envolvimento dos colaboradores no processo
- Visitas realizadas em apenas um idioma
- Incumprimento de alguns requisitos legais por parte da empresa (Ex: sustentabilidade ambiental)
- Necessidade de criação de showroom

Caso pretenda, poderá colocar aqui os seus comentários adicionais

5. De entre os seguintes **stakeholders/parceiros**, por favor seleccione as **5 principais** para o sucesso do Turismo Industrial nas EMPRESAS.

- Administração pública nacional (Ex: Turismo de Portugal, Ministério da Economia, Direção Geral do Património Cultural, IAPMEI)
- Administração pública regional (Ex: Câmaras Municipais, Juntas de Freguesia, Entidades Regionais de Turismo, Direções Regionais de Turismo)
- Agências de viagens e operadores turísticos
- Escolas, Universidades e Centros de
- InvestigaçãoEmpresas
- Associações Empresariais
- Rede Portuguesa de Turismo Industrial
- Associações de Turismo
- Comunidade local
- Colaboradores da empresa
- Hotéis e restaurantes locais
- Entidades financiadoras
- Associações de Proteção ao Património Industrial
- Espaços Museológicos, Tecnológicos e Industriais
- Incubadoras/aceleradoras de empresas

Caso pretenda, poderá colocar aqui os seus comentários adicionais.

B. Territórios e Turismo Industrial

6. De entre as seguintes afirmações, por favor seleccione as **5 principais vantagens** do Turismo Industrial para os TERRITÓRIOS.

- Divulgação dos recursos territoriais a nível nacional e internacional
- Preservação e valorização do património industrial (tangível e intangível)
- Captação de visitantes
- Diversificação da oferta turística da região
- Estimulação e desenvolvimento económico e social da região
- Criação de identidade/orgulho industrial nas comunidades
- Promoção do desenvolvimento sustentável ligado à indústria
- Aumento da procura turística ao longo de todo o ano, combate à sazonalidade
- Aumento da empregabilidade
- Captação de receitas do turismo
- Diversificação da economia local
- Envolvimento das empresas no processo de desenvolvimento turístico
- Reconhecimento das empresas/marcas industriais sediadas nos territórios
- Criação e manutenção de empresas no território
- Rapidez de implementação
- Aumento do tempo de permanência de turistas no território
- Promoção da cultura local

Caso pretenda, poderá colocar aqui os seus comentários adicionais.

165. De entre as seguintes afirmações, por favor selecione as 5 principais **desvantagens** do Turismo Industrial para os TERRITÓRIOS.

- Danos ambientais
- Perda de qualidade de vida dos residentes
- Perda de identidade e cultura local
- Risco de criar uma imagem negativa do destino
- Excesso de turistas
- Comportamento do visitante inapropriado
- Aumento de preços a nível local
- Impactes sócio-económico e cultural poderão ser diminutos
- Pouca importância dada a outros segmentos turísticos existentes na região
- Possibilidade de ocorrência de investimentos sem retorno
- Economia local ficar dependente do Turismo Industrial
- Relação do Turismo industrial com a procura turística - estagnação do próprio produto turístico
- Experiências/atividades muito focadas no espaço da empresa
- Ausência de propostas de Turismo Industrial que permitam aos territórios fixar os visitantes por mais tempo
- Poucas empresas industriais com propostas turísticas

Caso pretenda, poderá colocar aqui os seus comentários adicionais.

8. De entre as seguintes afirmações, por favor seleccione as **5 principais estratégias ou ações específicas** que poderiam contribuir para potenciar o desenvolvimento do Turismo Industrial nos TERRITÓRIOS.

- Desenvolvimento de rotas turísticas e produtos turísticos específicos
- Criação de redes de parcerias e projetos colaborativos
- Elaboração de uma boa estratégia de marketing (Ex:envolvimento de várias entidades, participação em feiras nacionais e internacionais, livros, roteiros, desdobráveis, redes sociais, etc.)
- Existência de apoios financeiros
- Recuperação e valorização do património industrial tangível e intangível
- Envolvimento da comunidade local
- Elaboração de programas articulados com a restante oferta turística da região
- Existência de produtos e serviços complementares (alojamento, alimentação, etc.)
- Estudo e inventário do património industrial do território
- Apoios e incentivos às empresas
- Sessões de esclarecimentos sobre o património e Turismo Industrial
- Identificação, qualificação e contacto com as empresas industriais com potencial para o Turismo Industrial
- Formação dos Recursos Humanos
- Elaboração de um manual de boas práticas com exemplos de diferentes empresas nacionais e internacionais
- Investimento em infraestrutura turística
- Análise de estratégias implementadas por destinos mais maduros no Turismo Industrial
- Criação de uma marca para o território
- Existência de sinalética específica
- Bons acessos rodoviários

Caso pretenda, poderá colocar aqui os seus comentários adicionais.

9. De entre as seguintes afirmações, por favor seleccione as **5 principais barreiras** ao desenvolvimento do Turismo Industrial nos TERRITÓRIOS.

- Fraca acessibilidade dos territórios e do património industrial
- Necessidade de Investimento
- Dificuldade no envolvimento dos empresários
- Escassez de comércio local, restauração e alojamento para os visitantes
- Falta de empresas com condições de adesão
- Falta de visão estratégica/vontade política
- Falta de interesse dos turistas pelo Turismo Industrial
- Dificuldade de acesso a incentivos e financiamento
- Estratégias de comunicação e divulgação pouco eficazes
- Desconhecimento sobre o Património e Turismo Industrial
- Falta de confiança dos stakeholders turísticos no Turismo Industrial
- Regulamentação inadequada
- Escassez de Recursos Humanos com competências na área
- Sazonalidade
- Falta de entidade promotora
- Distância entre indústrias
- Concorrência com outras atrações turísticas
- Resistências/barreiras laborais
- Dificuldade em alinhar os diversos stakeholders
- Falta de apoio de parceiros públicos e privados

Caso pretenda, poderá colocar aqui os seus comentários adicionais.

10. De entre as seguintes afirmações, por favor selecione as **5 principais oportunidades** para o Turismo Industrial em PORTUGAL.

- Reconhecimento de produtos, empresas e marcas portuguesas
- Diversificação da oferta
- Afirmação dos territórios como património industrial
- Desenvolvimento de territórios com menores fluxos turísticos
- Criação de emprego qualificado
- Promoção de experiências de qualidade
- Conservação e recuperação do património industrial
- Promoção da Indústria viva portuguesa
- Desenvolvimento económico
- Programas de financiamento da U.E. (Ex: PRR)
- Abrir prespetivas de ensino e contacto com as populações locais
- Promoção da história e processo industrial
- Criação de equipas multidisciplinares (académicos, especialistas em turismo, especialistas em financiamento, jornalistas, etc.)
- Existência da norma Portuguesa NP4556:2017
- Responsabilidade social e corporativa
- Diminuição da sazonalidade
- Desenvolvimento do turismo cultural
- Sustentabilidade ambiental
- Visibilidade e alcance do "Turismo de Portugal" para lançamento de produtos
- Fam e Press Trips (Visitas de familiarização e imprensa)
- Nova geração de empresários, potencialmente mais recetivos

Caso pretenda, poderá colocar aqui os seus comentários adicionais.

11. De entre as seguintes afirmações, por favor selecione os 5 **principais contributos** do Turismo Industrial para a valorização turística de Portugal.

- Diferenciação e variedade do Turismo Industrial (Vinho, Cerâmica, Azulejos, Conservas, Azeite, Cortiça, Calçado, Transporte Ferroviário, Tecnologia, etc.)
- Participação em redes de Turismo Industrial nacional e internacional (Rede Portuguesa de TI; CREATOUR; Creative Tourism Network, etc.)
- Contributo do Turismo Industrial na sazonalidade da oferta turística existente
- Reconhecimento do património industrial português tangível e intangível
- Autenticidade, promoção do contacto de proximidade com o produto local e os ativos dos territórios
- Utilização das infraestruturas locais, regionais e nacionais na promoção/divulgação do Turismo Industrial
- Aproveitar os fluxos turísticos existentes na região e atrair novos tipos de visitantes
- Fortalecimento da imagem da marca "Portugal"
- Reconhecimento de produtos e marcas portuguesas
- Disponibilização de experiências únicas complementadas com outras ofertas
- Integração do Turismo Industrial nas estratégias regionais
- Criação de roteiros industriais
- Melhoria dos indicadores de desempenho turístico
- Necessidade de reduzir o fluxo turístico dos centros das grandes cidades
- Desenvolvimento territorial
- Fomentar o turismo sustentável
- Potenciar exportações

Caso pretenda, poderá colocar aqui os seus comentários adicionais.

