

Industrial Tourism: a study on the creation of an industrial network in Vila Nova de Gaia (Portugal)

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Abstract: Industrial tourism asserts itself as a tourist product of high economic, cultural and recreational value, through which the visitor can experience the dynamics of companies in activity and/or relive activities from other times, visiting archaeological and museum spaces. The main objective of this work is to investigate the feasibility of implementing an industrial tourism network in Vila Nova de Gaia (Portugal). It was decided to focus on an aggregation of active companies, with the aim of re-dimensioning the tourist offer and giving the municipality notoriety in industrial terms. The case study method was used, which was associated with a set of data collection tools, namely the survey through interviews with municipal entities and stakeholders, in this case industries interested in joining the network. It was possible to assess the degree of maturity of the project and how the intended industrial tourism network in the region could be implemented.

Keywords: Industrial Tourism; Industrial Heritage; Portuguese Network of Industrial Tourism; Industry; Vila Nova de Gaia.

Turismo Industrial: un estudio sobre la creación de un tejido industrial en Vila Nova de Gaia (Portugal)

Resumen: El turismo industrial se afirma como un producto turístico de alto valor económico, cultural y recreativo, a través del cual el visitante puede experimentar las dinámicas de empresas activas y/o revivir actividades de otras épocas, visitando espacios arqueológicos y museísticos. El principal objetivo de este trabajo es investigar la viabilidad de implementar una red de turismo industrial en Vila Nova de Gaia (Portugal). Elegimos centrarnos en una agregación de empresas activas, con el objetivo de redimensionar la oferta turística y dar notoriedad industrial al municipio. Se utilizó el método de estudio de caso, asociado a un conjunto de herramientas de recolección de datos, concretamente la encuesta a través de entrevistas a entidades municipales y actores interesados, en este caso industrias interesadas en sumarse a la red. Fue posible evaluar el grado de madurez del proyecto y cómo se podría implementar la red de turismo industrial prevista en la región

Palabras Clave: Turismo Industrial; Patrimonio Industrial; Red Portuguesa de Turismo Industrial; Industria; Vila Nova de Gaia.

1. Introduction

According to Frew (2000), any type of tourism does not exist without initially having a tourist attraction. This attraction may have tourism as its main activity, or its core business may be the

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production of goods and/or non-tourist services. This type of service can become an industrial tourist attraction. Soyez (1986) indicates that industrial tourism comprises "every type of movement that can be deduced to the appeal of operational or former industrial systems", which obviously is a much wider definition, also covering heritage.

The present work has, therefore, as its basic theme Industrial Tourism. It tried to understand if it would be possible to implement an Industrial Tourism network in the municipality of Vila Nova de Gaia (Portugal), where it would be an aggregation of active companies, in order to resize the tourist, offer of the municipality and give notoriety to its industry. The proposal focuses on a differentiating tourist product in the region, in clear expansion in various tourist destinations in the country. Vila Nova de Gaia is a municipality with a vast set of industrial structures, and it seemed to be an added value to use these resources for tourism purposes.

Visits to "living industries" should be considered of touristic interest for the discovery of the authenticity of the company's culture (Savoja, 2012), either by deepening the knowledge of the host community, or for the opportunity to experience, taste and buy local products. Many companies have a potential interest in opening their doors to visitors (Otgaar, 2012), as industrial tourism can be beneficial to host companies as well as to the places where they are located. The development of industrial tourism therefore requires cooperation between the regions (tourism and marketing), the organisations and the individual companies that open their doors (Otgaar, 2012). An important condition for cooperation is the development of a common goal, i.e. a fundamental principle in urban regime theory in which public and private actors reach a consensus on how to develop industrial tourism. This requires agreement on the main objectives and strategies. Promoting commitment to local voluntary activity, encouraging loyalty from local buyers and sellers, enhancing traditional indigenous culture and economic activity and adding vigour to local government efforts to invest in local economic development, landscape, historic protection and conservation, are all aspects that can increase inhabitants' sense of pride in the distinctiveness of their locality (Bramwell & Rawding, 1996).

Vila Nova de Gaia is a municipality rich in industrial structures, mainly in the textile, metallurgical or agricultural areas. As a result, a research question was formulated: "What is the importance and impact of the creation of an industrial tourism network in the municipality of Vila Nova de Gaia?". In order to answer the research question, we tried to identify a set of objectives that would support the research, namely: i) identify the business fabric of the municipality; ii) identify the advantages/ benefits of industrial tourism for the region; iii) list a set of companies with certain characteristics that could integrate the future network; iv) establish contacts with some companies in the municipality to understand their interest in joining the network; v) identify if those industries fulfil the prerequisites to join the network.

2. Theoretical framework and literature review

The concept of industrial tourism is not unanimous. For some, it is considered as the visit to industrial production places, whether they are in operation or not; for others, it is subdivided between the visit to industrial heritage areas (in the archaeological sense) and the live and operating industry, whose visit is made in the middle of the work of the industry in question. More refined, industrial tourism is considered in terms of visits by tourists to operational locations where the main activity of the site is not tourism-oriented (Frew, 2000). However, industrial heritage tourism is considered to constitute another type of tourism and should not only be understood as visits/tours to companies, but also visits to company museums and branded parks (Marcon et al., 2000), such as the World of Coca Cola (Atlanta, USA) or Autostadt (Wolfsburg, Germany). Industrial heritage sites are only included in the definition if they require the participation of working companies. Furthermore, they also argue that consumers of Industrial Tourism are not only tourists (as in the WTO definition), but also residents and excursionists (people staying less than a day), including academics, students and journalists (Soyez, 1986). According to Edwards and Coit (1996), Industrial Heritage Tourism concerns the development of tourism activities and industries in humanised places, buildings and landscapes resulting from past industrial processes.

According to the Portuguese Network of Industrial Tourism (RPTI, 2021), industrial tourism comprises experiences arising from activities developed in places of living industry or industrial heritage, related to the products and production processes, or to their historical and cultural past, addressed to national and international visitors. They define as living industry organizations that are active and operating in the production sector where they relate to the production processes (RPTI, 2021). Industrial tourism can even be aggregated of all tourism practices whose travel motives are the discovery of past, present or future "worlds of work", i.e. of work-related places, techniques, organisations and cultures (Cuvilier, 2001). The demand for industrial tourism is a special type of tourist interest: it grows with the increased interest for unique and authentic experiences. Consequently, company tours allow people to learn about the economy of a region or, in other words, to discover the regional economy (Otgaar, 2012). Furthermore, industrial heritage tourism is an industrial area, past or present, evolving for new purposes, which may include a change or expansion of the site's function from just industrial to a tourist attraction, or a new functional purpose quite distinct from its original and/or current use (Xie, 2006).

In Portugal, the practice of industrial tourism has been consolidating, mainly through the increase of an offer supported by visits to factories in operation and museum equipment associated with old industrial complexes. There are already several companies and municipalities all over the country that are promoting industrial tourism initiatives, contributing to a better knowledge of the national production, distinct in tradition and modernity.

According to the General Direction of Industrial Heritage, it was in the year 1980 that more attention began to be paid to the industrial world in Portugal. It was through exhibitions and the first scientific studies that industrial archaeology began to be disseminated. When we speak of industrial heritage we refer to the vestiges left by the industry, be it textile, glass, ceramic, metallurgical or foundry, chemical, paper, food, extractive (the mines) besides the public works of transport, commercial and port infrastructures, workers' housing and others. It should be noted that the industrial tourism based on active enterprises, we can consider a second typology, the industrial heritage tourism (Frew, 2000). The differentiation consists in the fact that industrial heritage tourism is characterised by operational industrial places or buildings, but which are no longer in operation, often these same installations have been rehabilitated and transformed into museums which the visitor/tourist, motivated by the historical and cultural value, is interested in getting to know. According to the Portuguese Tourism Good Practice Guide (RPTI, 2021), industrial heritage is considered to be all tangible and intangible assets used for the execution of productive activities or provision of services, testimonies of industrial culture with historical, architectural, archaeological, social, technological or scientific value. Tangible assets are considered to be industrial sites and complexes, buildings and machinery, mills, factories, mines, warehouses, power stations and related social structures, such as housing, religious or educational facilities, monuments, artefacts or documents. Intangible assets are considered to be industrial memory, working conditions or cultural manifestations, such as workers' traditions.

Industrial tourism has undergone a rapid evolution from simple exploratory projects to professional forms of tourism supply, with the entry into the scene of companies seeking to explore a sector that shows promise from the economic point of view (Cordeiro, 2012). In January 2020, Turismo de Portugal, I. P. launched the programme for structuring the Industrial Tourism offer with the aim of developing a differentiating tourism offer, anchored in the territories' assets. It is important to note that at this moment in Portugal, a Portuguese Industrial Tourism Network is being developed at a national level. With the development of this network, the aim is to enhance the heritage and industrial tourism in Portugal.

For a better distinction of industry/industrial heritage and a better structuring of the offer it was essential to create typologies. The typologies are structured by sectors, in which present the activities which are more evident in Portugal. According to the Portuguese Industrial Tourism Network, companies should be segmented by the following typologies of sectors: a) Fashion and Textile; b) Gold smithery; c) Ceramics and Glass; d) Cork; e) Agro-food; f) Extractive; g) Energy; h) Transport, Services and Communications; i) Metalwork; and j) Other Sectors (Construction; Graphic Arts; Furniture and Bedding; Cosmetics and Hygiene).

For a better evaluation and perception, the Portuguese Industrial Tourism Network has prepared an offer characterization file, which is addressed to manufacturing entities in order to understand if the companies have the necessary conditions for the integration in the Industrial Tourism Network. The diagnostic file is the method used to pass on to companies that are interested in integrating the industrial tourism network. The characterisation file is structured by sections for a better understanding and reading. It is composed of open and closed questions. The first section is for the characterization of the management entity where the personal data of the company should be provided, such as its name, the person in charge, the telephone contact as well as an email. The second section refers to the typology of the resource, where they must mention the name of the company, its website, the scope in which it is inserted (living industry, industrial heritage or mixed), the sector in which it is inserted as well as the sub-sector can also indicate complementary attributes. The third section is devoted to characterization, where those in charge briefly describe the company, identify its opening hours and state whether they accept guided tours of the company and whether it is necessary to make a reservation (if so, they should provide the contact details for previous visits and in which languages the visits would be made). The fourth section focuses on accessibility, to understand if the company has accessibility for people with reduced mobility and if it has communication supports for visitors who need them. The fifth section refers to the access conditions, namely if there are any type of restrictions. The sixth section refers to the support services that the company provides, whether it has a shop, educational service, programme and restaurant. Finally, the last section is dedicated to complementary information.

In Portugal we can already count on some successful municipalities, such as S. João da Madeira, Vila Nova de Famalicão, Marinha Grande and Sines. S. João da Madeira, for example, is known as the footwear capital, with industry as its main economic activity. In 2012 the project Industrial Tourism of São João da Madeira was launched, having as main objectives the preservation of the industrial archaeological legacy and the promotion of the industries of the region with the creation of industrial tourist circuits that are subdivided in living industry, industrial heritage, and also, creativity and technology (academies and technological development centres). The circuits through the industrial heritage of S. João da Madeira are a tourist product that combines the recovery and preservation of the industrial estate of the region and that projects the heritage as a source of tourist dynamism of what is an unavoidable pole of the Portuguese business map. Viarco (pencil manufacturing), Helsar and Evereste (footwear), Cortadoria Nacional de Pelo and Fepsa (headgear) and Heliotêxtil (trimmings factory) are companies that integrate the S. João da Madeira Industrial Heritage Circuits (CMSJM, 2022). Another example is Vila Nova de Famalicão, a city recognised nationally and internationally for its tradition and its strong industrial potential, whether in the textile and agro-food sectors, or in metalworking or in the automobile components industry. Owner of the trademark "Famalicão Cidade Têxtil", Famalicão combines tradition, innovation and creativity that the textile, design and fashion boast, always with an eye on the future. Otherwise, also the agro-food, metal-mechanic and automobile industries configure a strong and dynamic business context in the famalicense municipality reinforcing its status as an industrial territory (CMVNF, 2022). In the launching of the industrial and business tourism experience, Famalicão Turismo Industrial, there were 11 partners, of which 3 represent industrial heritage, 3 living industries, 1 research and development and 4 wine tourism partners are also presented. They are part of this project, the Textile Industry Museum of Bacia do Ave, the Automobile Museum, the National Railway Museum - Lousado Nucleus, Empresa Têxtil Nortenha, Troficolor Têxteis, Fábrica de Chocolates - Casa Grande, Citeve, Casa de Compostela, Castro - Vinhos de Portugal, Adega Casa da Torre and Casal de Ventozela.

The industrial tourism over the last few years has been evolving in what concerns the development of certain municipalities (Mota, 2011), where Vila Nova de Gaia can be inserted, as we are in a territory with a vast industry.

3. Methodology

The research is of a qualitative nature, since it is methodologically presented as a case study, although a mixed area with some quantitative treatment was used. For the development of the study, pre-existing data was collected, namely a literature review and several documents about industrial tourism. Field work was also carried out with regard to the selection of industries to be part of this possible industrial tourism network.

The research question was then formulated: "What is the importance and impact of creating an industrial tourism network in the municipality of Vila Nova de Gaia?". In order to provide an answer, a set of objectives were identified, namely: a) identify the business fabric of the municipality; b) identify the advantages/benefits of industrial tourism; c) select a set of companies with certain characteristics that could be integrated in the future network; d) contact some companies in the municipality to understand their interest in joining the network; e) identify if those industries fulfil the conditions to be integrated in the network.

To answer the research question, it was necessary to understand the degree of importance that industrial tourism already has in other municipalities that have implemented the idea and already integrate the "Industrial Tourism Network". The data collection technique used for this step was the survey, which had as an instrument of data collection the interview. In this way, researchers were able to collect the necessary information that was capable of answering the formulated question and the identified objectives (Quivy & Campenhoudt, 2008).

Two interview surveys were prepared. The first was aimed at municipalities that are linked to the "Portuguese Industrial Tourism Network", such as the municipalities of São João da Madeira, Santa Maria da Feira, Vila Nova de Famalicão, Santo Tirso, Vila do Conde and Vale de Cambra. The second interview survey was designed to listen to those responsible for Turismo de Portugal, I.P. . It was therefore necessary to prepare a set of questions addressed to representatives of industrial tourism from the municipalities that are part of the "Portuguese Industrial Tourism Network" and also to the representative of Turismo de Portugal, I.P. in order to obtain information on the various steps towards the creation of an industrial tourism network and to understand what the main difficulties were that the municipalities experienced in the initial phase of the network's creation and also what their objectives are from now into the future.

The questions focused on trying to understand what benefits industrial tourism brought to these municipalities. In addition, we tried to understand what impact(s) the theme would bring to the region. We also asked what the representatives of these municipalities considered to be the top 10 companies that had the most impact on the region. It was also our desire to understand how the level of satisfaction of visitors is monitored. Still within the scope of the theme, we tried to understand if they considered that the implementation of industrial tourism in the area under study contributed to an increase in tourist demand and how they verified this increase. We were also enquired as to the relevance of the implementation of business incubators and industrial clusters with the objective of creating a connection network between them. For a better understanding of how many industries could be part of the network, they were asked about the number of companies in their network and if this was an adjustable number. This question aimed to understand how many companies or industries the future industrial tourism network of Vila Nova de Gaia could start with. We also questioned the interest in further increasing the number of companies. For a better perception of how the difficulties in the creation of a network in a municipality were initially, we inquired about what was the most complicated process in that creation and also if nowadays they would do something different from what was done when the network was created.

We also wanted to interview the representative of Turismo de Portugal, I. P., in order to understand the level of importance given to industrial tourism, as well as to understand how industrial tourism is seen in the country and also how this whole process of developing this tourism product was elaborated. In addition, we tried to clarify the relevance of the "Portuguese Network of Industrial Tourism" and what are the objectives for the evolution of this subject in the future. Initially, we questioned what would be missing in the network for an effective development of the associated municipalities. Furthermore, in order to understand how far demand had increased, we questioned whether this had been achieved with the creation of the network and if it had a good adherence and interest from visitors. For a better perception of the benefits for municipalities when joining this network, we asked about the advantages brought to the municipalities and the interest in including industries in the network that do not belong to the identity heritage of the municipality. They were also asked about the reasons that led to the creation of this network and what are the next steps. We also tried to understand any possible obstacles to the creation of a structure that would be responsible for it.

We also investigated which companies are active in the municipality. Subsequently, we selected some industries which we considered to be the most relevant for a first selection process. These were chosen taking into consideration two variables: i) the investment in the wine industry, being Vila Nova de Gaia a municipality known for its Port Wine, whose objective would be to develop and make known the stages and the manufacturing process, not only of wine, but also of beer since there are already some factories in the municipality that have invested in this production (the variety and evolution of new products is always a call for attention by visitors/tourists); ii) we tried, however, to distance ourselves from the companies that visit Port Wine lodges, as their notoriety and consolidated brand could be an obstacle to the creation of the industrial tourism network; ii) the second variable focused on companies that have been operating for a long time. With this it was intended to bring to the municipality of Vila Nova de Gaia and to the industries a greater industrial recognition at a national and international level and also a greater bet on the dynamization of the economic sector of the region.

4. The territorial object of study: Vila Nova de Gaia

4.1. A socio-economic characterisation

Vila Nova de Gaia is the third most populous municipality in Portugal, and the third largest city in the country. It is part of the NUT II North Region and the sub-region "Área Metropolitana do Porto". Its limits comprise, to the North, the Municipality of Porto, to the Northeast, the Municipality of Gondomar, and to the South, the Municipality of Espinho and the Municipality of Santa Maria da Feira.

Rich in history, Vila Nova de Gaia already in the eighteenth century begins to assert itself by its connection to wine, whose urban planning was marked by buildings belonging mostly to a wine-growing bourgeoisie. In more recent times, other activities would mark its urban fabric, namely the ceramic and glass industries, for example.

Tourism represents an important segment in Vila Nova de Gaia's economy. Accommodation is the area of activity that provides the most employment (growth of over 112% between 2015 and 2016) (Vila Nova de Gaia, 2020). Between October 2019 and July 2020, in order to position the municipality in the international market and reach audiences of high value for the territory, the Strategy for Promotion and Attraction of New Tourists was prepared. It is a guiding document of the tourism development of Vila Nova de Gaia for the period 2020-2025. Besides, the municipality's tourist offer is considered to be increasingly diversified and qualified. In the area of accommodation, tourist developments have 4 to 5 stars and in the main online platforms are evaluated on average above 8 points out of 10. The number of Local Accommodation (LA) grew 4288% between 2014 and 2019. Between 2015 and 2019 the number of tourism animation companies increased 300% (Vila Nova de Gaia, 2020).

Owning the brand "Gaia, The Home of Port Wine", the municipality presents a vision and a mission that passes through the promotion and differentiation of the offer, the preservation of resources and traditions, sustainability and the generation of value for all. It intends, therefore, to galvanise tourism in Vila Nova de Gaia and achieve 13 goals by 2025, projecting a product strategy anchored in Port Wine, complemented by the dynamisation of products that add value to the other qualifying elements of the destination. They have defined a model for boosting the territory that comprises four poles (1- Port Wine, 2- Sun and Sea, 3- Nautical, 4- Central) and 10 thematic circuits (Beaches, Religious Heritage, Artists, History and Culture, Fauna and Flora, Active Tourism, Popular Expressions, Markets and Fairs, Competitive Sports, Meeting Industry and Industrial Tourism). In support of the municipality of Santa Maria da Feira, they intend to invest in the meeting industry. In order to decentralize the visit through all the territory with the implementation of this strategy, they bet on the dynamization of touristic circuits dedicated to several themes with the presence of attractive and transversal resources to the territory.

4.2. Industry in the municipality and the idea of industrial tourism

For a finer analysis concerning the business activity in the municipality of Vila Nova de Gaia it is possible to observe through Table 1 that in the year 2020 the municipality had a total of 42,348 establishments/companies. The large number of establishments/companies is concentrated in the sector of accommodation, restaurants and similar, accounting for 8,030 establishments. This is followed by the administrative activities and support services sector with 7,270 establishments.

With a lower number of establishments/companies, we have the electricity, gas, steam, hot and cold water and cold air sector with 69; the water collection, treatment and distribution, sanitation, waste management and depollution sector with 35 establishments; and, finally, the extractive industries with 7 (Table 1).

Two paradigmatic examples in the municipality of Vila Nova de Gaia that, submitted to a rehabilitation intervention, could work as a complement in the industrial tourism strategy in the region, are the old factory "Molin" and the "Companhia da Fiação de Crestuma". Both patrimonies are closed, although the Spinning Company has already been intervened, hosting the Biennial project of the municipality. The old Molin factory, located in the municipality of Canelas, may become a visiting structure, provided that it is re-dimensioned as a museological and interpretative space. Another good example of industrial archaeology is Companhia de Fiação de Crestuma. municipality. Located in the parish of Crestuma, in the extreme part of the municipality of Vila Nova de Gaia, it was known for its cotton spinning industry. It could now be open to the public to leverage/promote industrial tourism in the municipality.

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Agriculture, animal production, hunting, forestry and fishing	673
Extractive industries	7
Manufacturing industries	1.772
Electricity, gas, steam, hot and cold water and cold air	69
Water Collection, purification and distribution; sewerage, waste management and remediation activities	35
Construction	2.036
Wholesale and retail trade; repair of motor vehicles and motorbikes	6.390
Transport and storage	1.209
Hotels, restaurants and similar activities	8.030
Information and communication activities	555
Real estate activities	1.561
Consulting, scientific and technical activities	4.099
Administrative and support service activities	7.270
Education	2.003
Human health activities and social support	3.456
Artistics, entertainment, sports and recreation	1.116
Other service activities	2.067
Total	42.348

Table 1: Companies by Sectors in Vila Nova de Gaia

Source: INE (2022)

5. Analysis and Discussion of Results

5.1. Interview with municipalities about industrial tourism

To answer our research question, a set of objectives was formulated as the basis of the planning and resolution of this empirical study. The first analysis focuses on the answers obtained in the municipalities of Santo Tirso and Vila Nova de Famalicão. In this sense, it was possible to see that the municipalities are not at the same level of development regarding the subject of industrial tourism. In fact, one of them is already much more advanced and with more concrete ideas in this bet on the industrial tourism network for its region (Vila Nova de Famalicão). The other municipality is still in an initial phase of construction of the network (Santo Tirso).

In order to clearly understand the benefits brought by industrial tourism in municipal terms, the Santo Tirso municipality mentions high expectations in the implementation/construction of the product in the municipality and that it brings real benefits to the territory, both economic and social, as well as notoriety and prestige for tourism. Vila Nova de Famalicão indicates that the development of tourism products is an added value for the municipality and those involved in the process, as well as for the host community. They also mention that the main objective is to value the existing heritage and production in the municipality.

Regarding the impacts that industrial tourism can bring to the region, the Santo Tirso municipality points out that they intend to recover old memories and leverage historical heritage (industrial archaeology). The municipality of Vila Nova de Famalicão considers that by dynamising a product around the Industrial Tourism the whole region will be valorised, not only by the promotion of the living industry existing in the territory, but also by the public attraction that it potentiates, with direct impact in the local and regional economy.

When questioned about the direct impact of industrial tourism in the territory, the Santo Tirso Municipality indicates that there is no evidence to draw conclusions yet. As for the municipality of Vila Nova de Famalicão, the project started at the end of 2018 and was very affected by the Covid-19 pandemic, so it is also difficult, at this moment, to be able to measure the impact it had on the territory. In fact, the pandemic has brought profound consequences for all sectors, tourism being one of the most affected. At the moment they are in a phase of reactivation of the product, and that when they planned the Industrial Tourism product they thought in a way that would have a positive impact on the territory, both economically and socially.

When questioned about the Top 10 companies that have more impact in the territory, the Municipality of Santo Tirso indicates that the territory holds a vast set of companies with potential to consider the integration in the future network. Currently, the greatest demand focuses on the manufacture of the Licor de Singeverga. The municipality of Vila Nova de Famalicão reveals some difficulties in this initial phase, especially in attracting the partners they consider important for the valorisation of industrial tourism in the municipality. They then indicate some of the sectors that can arouse more interest in people and motivate them to visit, such as the chocolate industry, the automobile industry, the technology industry or even the agro-food industry.

Regarding the role of the municipalities in raising the awareness of the industrial heritage among the school community, Santo Tirso states that "Yes...", a short answer due to the fact that it is still in its initial stage and they are not able to give a more concrete answer. Vila Nova de Famalicão emphasises that this awareness is very important. In fact, they consider it very important to make the community aware of what tourism is as an economic activity and of its importance to boost the local economy.

When asked how visitors' satisfaction is monitored, the municipality of Santo Tirso indicated that it is still in the implementation phase. The municipality of Vila Nova de Famalicão mentions that at the end of each visit a small, optional opinion survey is distributed.

When asked about the implementation of industrial tourism in the territory as a contribution to an increase in local tourism demand, the municipality of Santo Tirso mentions that there are no indicators that show a possible increase due to it being a project still in its initial phase. The municipality of Vila Nova de Famalicão indicates that, given the constraints caused by the Covid-19 pandemic, they are also unable to assess this element.

Once questioned if they consider relevant the implementation of business incubators or industrial poles with the purpose of creating a network between them. Santo Tirso indicates that it is undoubtedly important. Vila Nova de Famalicão goes further, stating that the municipality has developed a remarkable work in this aspect. Soon that if it questions for how many companies it encloses the "Net of Industrial Tourism", Santo Tirso indicates that at the moment only three companies enclose the net. Vila Nova de Famalicão refers that already holds fifteen companies in the built network. Questioned on if the number of industries is adjusted/reasonable, Santo Tirso indicates that no, that detains conditions to increase the offer. Vila Nova de Famalicão emphasises that the project is open and dynamic and aims at the gradual growth of the number of partners. We tried to understand if the municipalities think of increasing the number of companies within the "Industrial Tourism Network". The municipality of Santo Tirso indicates that it has assets capable of becoming attractive to the network. The municipality of Vila Nova de Famalicão also states that it does, because the project was planned so as not to close doors, both to people and to companies. It also indicates that it only makes sense to increasingly seek to include more and better partners, with Industrial Tourism working as a unifying subject.

When asked about the most difficult part of the process of creating the "Industrial Tourism Network" in the municipality, Santo Tirso states that it will be to win the confidence and interest of the entrepreneurs of the living industry. The municipality of Vila Nova de Famalicão points out that working with the private sector, where they are asked to open their doors to people is always a delicate and complex process. On the one side, they always see this opening of doors as something positive and capable of enhancing the value of the products and brands targeted for visitation. On the other side, they have to understand that the visitation always implies some disturbance in the normal functioning of the companies, besides the issues of secrecy about the production processes.

At the end of the interview, the person responsible for the creation of the Network was asked if he would do something different from what he did when the Network was already set up. The municipality of Santo Tirso indicates that the network is under construction as the tourism product Industrial Tourism. It states that it would do everything the same, as it considers that the process is being very well led by the Portuguese Tourism Board and feels honoured to be part of the Promoting Group of the Portuguese Industrial Tourism Network. The municipality of Vila Nova de Famalicão also stated that it would not do anything different, that the project is currently according to plan, apart from the difficulties created by the Covid-19 pandemic. It also indicates that it is a project that is intended to

be dynamic and that naturally it will go through different phases than the current one, but that it is part of its consolidation process.

When asked what was missing in the Portuguese Industrial Tourism Network for the effective development of the member municipalities and also what the obstacles were, the managers of Turismo de Portugal I. P. consider that providing quality services in terms of visiting conditions and implementing measures that enable inclusive visits in terms of accessibility and sustainability, is one of the biggest challenges for Industrial Tourism. They also replied that the Guide of Good Practices provided by the Promoting Group of the Portuguese Industrial Tourism Network incorporates this mission, aiming to support the implementation of quality services and consolidate the offer of Industrial Tourism, particularly with regard to the conditions of visitation and sustainability.

On the question of whether there has been more demand since the creation of the industrial tourism project and whether, as chairman/representative of industrial tourism, people/visitors felt a good adherence/interest in it, they said that the subject of industrial tourism has been consolidating in Portugal through the increase of an offer supported by visits to factories in operation and museum facilities linked to old industrial complexes, complemented with different contact experiences with the productive processes and that there are already several companies and also municipalities from all over the country that dynamise industrial tourism initiatives, thus contributing to a better knowledge of the national production, distinct in tradition and modernity. And in a context of progressive development, industrial tourism aims to meet the expectations of today's tourists seeking authentic and original experiences.

When they were questioned about the main advantages of creating this network, they stated that the great advantage of the differentiated tourist offer lies in the affirmation of the search for authentic and original experiences, of greater contact with the communities and with the identity aspects of the territories.

With regard to the question about the extent to which it is interesting to have companies in the network that are not part of the heritage and identity of the municipality, they stated that only through concerted action with the agents of the territories, both public and private, favouring a national approach to boost networking, it is possible to achieve, gain scale and greater notoriety, ensure quality and competitiveness compatible with the expectations of tourists visiting Portugal.

When asked about the reasons that led to the creation of a Portuguese Industrial Tourism Network, they pointed out that in January 2020, the programme for structuring the Industrial Tourism offer was launched, whose aim is to achieve a differentiating tourist offer, anchored in the territories' assets, which reinforce the attractiveness of low density territories and capture the national and international market, throughout the year, in alignment with the Tourism 2027 Strategy. They noted that from Living Industry to Industrial Heritage, it is essential to contribute to the enhancement of the Industrial Tourism offer, through the notoriety and qualification of the territories' offer, the promotion of the country's image through its differentiating economic activities and authentic heritage, the strengthening of the attractiveness of the industrial sector and its potential for innovation and growth among young people.

When questioned about the next steps, they replied that it is important to continue the work of validating the conformity criteria, of training the agents, as well as identifying programmes and circuits for sale to national and international tourists, and they highlighted the following initiatives:

- a) Executive Training in Industrial Tourism, the 1st edition of which was launched on 3 March and will run until 21 April 2022, at the Digital Academy, and the 2nd edition of which will start in May 2022;
- b) Capacity building for resource managers and regional tourism agents, with webinars and regional capacity building actions;
- c) Actions to promote the Industrial Tourism offer, such as the National Week Dedicated to IT (April 2022), through activities that enable the discovery of the industrial heritage or living industry that characterise and differentiate the territory where they are located.

The national agenda of the initiative "Discovering Industrial Tourism" was presented at the Lisbon Tourism Fair (BTL), in 2022, showing the "Strengthening of the Sustainable and Accessible Offer", both in terms of physical and communicational accessibility. They stated that it is essential to consolidate and expand the network of associated resources, train the agents and increase the quality of the tourism offer, in order to project Portugal as an original and authentic destination of excellence in industrial tourism.

When asked if it would be interesting to have a body responsible for this Portuguese network, alongside the regional entities, they considered that the dynamisation of the Programme has been done through the Dynamic Group of the Portuguese Industrial Tourism Network, an informal structure coordinated by Turismo de Portugal and which includes the Regional Tourism Authorities, including the Azores and Madeira, the Portuguese Association of Industrial Heritage, the Portuguese Mines and Mining and Geological Sites of Interest Roadmap, as well as representatives of 7 municipalities.

5.2. Process of creation of industrial tourism network in the municipality

The municipality of Vila Nova de Gaia has several companies connected to the subject in study. Initially we had thought of limiting ourselves to the wine sector. This was not possible as there was a major obstacle to the participation of those companies. Therefore, we extended the idea of creating the network to various sectors. In an initial stage, research was carried out on the active industries existing in the municipality of Vila Nova de Gaia, with the help of documentation provided by the Tourism Division of the Vila Nova de Gaia Municipal Council. With the execution of the research it was possible to observe the existence of many companies in the municipality, but only 50 industries were selected. For their selection, the type of product they developed was taken into account, in order to bet on a diversification and to be able to implement a possible network in the municipality (table 2).

	n.º
Rubber and Plastics Industry	1
Waste Materials Industry	1
Ceramic Industry	1
Bread Industry	5
Automobile Industry	5
Paints Industry	1
Foundry Industry	3
Wood Industry	3
Craft Beer / Wine Industry	4
Electrical Cable Industry	1
Garment Industry	3
Agricultural Industry	1
Capsule Industry	2
Nautical Craft Industry	1
Polyester Fittings Industry	1
School Supplies Industry	1
Chemicals Industry	1
Aluminium industry	1
Metal industry	4
Chocolate Industry	2
Paper/Cardboard Industry	1
Mould Industry	1
Catering Industry	1
Glass Industry	3
Health Products Industry	1
Bottling Industry	1
Total	50

Table 2: Selected industries in Vila Nova de Gaia

Source: Elaborated by the authors

Initially, telephone contacts were made with the selected companies to understand how the process of replying to the diagnostic file should be carried out. Next, the diagnostic file was sent to the email address of the person responsible, and only two responded. The other companies did not give any type of feedback. So, it was necessary to go to them and meet the person in charge in a personal way. As referred by Santo Tirso and Vila Nova de Famalicão municipalities, the most difficult thing is to conquer the confidence and the interest of the entrepreneurs of the living industry so that there is an integration of the companies in the Industrial Tourism network. With the visit to the companies that had not given any kind of feedback previously, it was possible to get four more diagnostic files answered which makes a total of six companies that expressed interest in being part of the possible network (table 3).

Table 3: Feedback from the companies selected for the creation of the Network

Answered the Survey	6
No Answer	40
No interest	3
Does not meet the conditions yet	1

Source: Elaborated by the authors

After receiving responses from the six companies that showed interest in forming part of the possible Industrial Tourism network to be implemented in the municipality of Vila Nova de Gaia, it was possible to verify that all are from the scope of the Living Industry with differentiated sectors. Two of these industries are from the Transport, Services and Communications sector, three from the Agro-Food sector and one from the Graphic Arts sector. Through the analysis of the diagnosis sheets, it was possible to analyse that only two of the companies do not have the capacity to receive guided tours. The other companies have the capacity to receive guided tours, but booking is necessary. The languages of the guided tours of both companies that have the capacity to do so, are mainly in Portuguese and English. Only one company has the capacity to receive visitors in French and two of the companies in Spanish. Regarding accessibility for people with reduced mobility, half of the responding companies still have difficulties in terms of accessibility. Two of the companies have exterior access and one has interior circulation and an adapted WC. With regard to communication supports for all (language of the exhibition contents and signposting, website languages) it was observed that only one of theompanyies has them in three different languages (Portuguese, English and Spanish), one of the companies has them in Portuguese and English only and another has them in Portuguese and Spanish. Only half of the companies have it only in Portuguese. Regarding the restrictions section, only three of the companies do not allow photographs to be taken. Concerning the support services, one of the companies indicates that the shop has a snack-bar and drinks service. The programming focuses on cultural events and the restaurant has gastronomic events. Another company indicates that, at educational service level, they are able to demonstrate the entire label printing process. The other companies replied that in this section it was not applicable.

From the analysis made to the answers given by the six companies that showed interest in being part of this possible network, it was possible to observe that many still do not meet the sufficient requirements to have the possibility of receiving visits and thus be able to be part of the network to be implemented in the municipality in the near future.

6. Conclusions

Industrial Tourism has been one of the tourism products with a great growth and recognition in recent years. Being holder of a great dynamism in various regions of the country and the world, its development has been notorious, verifying a great influence not only in the economic sector, but also in the growth of industries that are inserted in it.

Through the formulated research question it was possible to reach the conclusion that the municipality of Vila Nova de Gaia does not have the viability to implement a network of Industrial Tourism in the

region at this moment, because there needs to be a better understanding on the part of those responsible for the industries of the advantages of belonging to a network of Industrial Tourism. Through the diagnostic files of the industries interested in joining the network, it was possible to observe that some do not fulfil the requirements proposed by the Portuguese Industrial Tourism Network. However, it is our understanding that these obstacles can be overcome, as long as the companies make the necessary changes so as to be accepted in the network.

Nevertheless, we consider that this work was a starting point for the possible creation of an Industrial Tourism network in the municipality of Vila Nova de Gaia. Furthermore, we corroborate what the municipalities interviewed referred to, that in the initial phase of the network's creation they have not yet managed to attract all the partners/industries that they understood to be important for the valorisation of Industrial Tourism in their municipality. There is therefore a need to gain the trust and interest of entrepreneurs to integrate their companies into an Industrial Tourism network.

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