Article

Smart Tourism Sustainability Narratives in Mature Beach Destinations. Contrasting the Collective Imaginary with Reality

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Received: 21 May 2020; Accepted: 19 June 2020; Published: 22 June 2020

Abstract: This article contributes to the analysis of the relationship between urban renewal processes and sustainable development in mature beach destinations and the adoption of smart tourism. It takes as its case study Spanish destinations taking part in publicly-funded projects and plans designed to convert them into so-called “smart destinations” (SD). Its chief goals are to identify, through the Delphi technique, the smart tourism narrative behind the drive for creating SD, as well as to see how good a fit this is with the strategic positionings of mature destinations seeking to halt their decline or take on a new lease of life by introducing sustainability measures. Based on a review of the existing literature, we perform a critical analysis of this narrative to expose the contradictions arising when it is applied as a tool for urban renewal based on the implementation of sustainability strategies. The results aid with progress in two directions. Firstly, the article contributes new conceptual elements on the role of SD in the urban transformation of tourist destinations as a response to the challenges of global competitiveness. The second contribution, which is applied in nature and based on the study of a variety of Spanish tourist destinations, analyzes the impact the application of smart tourism-based technological solutions may have upon sustainability. Specifically, it examines the actions of different mass tourism beach destinations and discusses their actual ability to foster renewal in the field of tourism and offer solutions for overcoming urban sustainability problems. Lastly, it offers some recommendations for mature beach destination managers interested in implementing smart tourism projects based on sustainability criteria.

Keywords: Smart tourism; beach destinations; sustainability; evolution of tourism; Spanish smart destinations

1. Introduction

Following the trail blazed by their sustainable predecessors, “smart cities” have become a ubiquitous figurehead for a global urban future and the leitmotif of discourses on urban development [1]. This ubiquity is evidenced by both the sheer extent to which smart city concepts and politics are circulated, to the point of creating a “global discourse network” [2], and by the proliferation of initiatives worldwide [3]. Cities that are tourist destinations have not been immune to this trend and have developed their own smart city model, adapting the general concepts to fit with their character as urban centers specializing in tourism production and consumption. Indeed, the so-called “smart destinations” are simply the result of adapting basic smart city parameters to tourist destinations that are also urban spaces.

Indeed, the pioneers in creating SD are countries that have urban sustainability problems, like China, those which are highly urbanized, such as South Korea, or those that feature a great many cities developed for tourism, like Spain [4]. Cities specializing in mass tourism “sun and sand” holidays...
at a mature stage of their lifecycle are especially proactive in the creation of SD, which are particularly attractive to this kind of destination, since their narrative positions them as examples of cities able to promote tourism competitiveness improvement processes with the intensive use of technological solutions, which in turn foster sustainability as the cornerstone of the destination’s management strategy [5].

SD have, in fact, been described as a new paradigm for destination management, for promoting public/private partnerships through the use of digital technologies [6,7], for transforming the experiences of tourists at the destination [8], and for boosting competitiveness via the implementation of technology and smart systems providing support for optimization and efficiency in the management of resources, marketing, and organizations [9]. Mature beach destinations seeking alternatives for improving their competitiveness find it easy to identify smart tourism as a valid tool for their urban and tourism renewal and rejuvenation strategies, as the technological solutions it promises to address the urban issues they need to tackle, such as tourist mobility and overtourism [10]. Nevertheless, the adoption of smart tourism by mature destinations has received little attention in academic literature, and there has been no analysis of the relationship between the narratives promoting the smart tourism paradigm, the associated actions, and the urban renewal strategies of these tourist cities.

In this article, we shall be considering, by analyzing the case of Spain, whether the recent push for the creation of SD can be explained by the alignment between the sustainability narrative accompanying these kinds of destinations and the vision of renewal and strategic interests held by mature tourist destinations to prevent their decline and loss of competitiveness. The results obtained indicated that the narrative around SD fits very well with the goals of the traditional competitiveness strategies followed by mature beach destinations, but becomes little more than rhetoric when one takes into account the actions implemented based on technological solutions for improving sustainability. This latter point also mirrors the criticism received by smart cities.

2. Renewing Mature Tourist Destinations

The evolution of tourist destinations and the relationship with their competitiveness have been the object of academic study for decades. The complexity of the factors involved in the evolution of tourist cities has led to the appearance of a range of pre-established models and fostered the appearance of a variety of theoretical approaches. There are two approaches to explaining this evolution, starting from almost diametrically opposing standpoints. The first interprets this evolution as a one-way street heading inexorably towards the ageing and decline of tourist destinations as their ability to compete wanes with the appearance of new competitors or shifts in tourists’ tastes and preferences. Some evolutionary models arising from this approach provide a logical interpretation of the evolution that may be experienced by tourist destinations over their lifespan [11–13] that, although suffering from blind spots in their predictive capacity, have been implemented as tourism management and planning tools. These models have received significant criticism, both methodological and conceptual, in particular for providing generalizations in the form of universal models that ignore local specificities and for their determinist bias in claiming that decline is inevitable and that renewal programs can only delay the onset of the first signs of obsolescence [14]. The second approach is based on the idea that tourist destinations can be flexible over time, with the ability to continuously adapt to global shifts with specific local responses [15–17]. It criticizes the former approach for the excessive importance it attaches to the economic function of tourist destinations and for regarding trends in supply and demand as indicators of change, whilst holding that little account is taken of territorial dynamics arising from the evolution of such destinations [18]. By way of contrast, they state that any explanation of evolutionary dynamics requires a more in-depth examination of the spatial dimension of tourist destinations’ lifecycles and, above all, of their urban nature [19,20].

Aside from the criticisms levelled at traditional evolutionary models about the explanatory capacity of the patterns they provide for mapping the evolution of tourist destinations, it is interesting to note that the renewal of these destinations is usually regarded as a search for alternatives for
restoring competitiveness and attractiveness to tourists, rather than as an opportunity for reflecting upon their urban nature or the sustainability of the tourism and urban development processes. Indeed, obsolescence and decline are measured using economic variables such as oscillations in tourist arrivals and overnight stays, hotel profits, hotel occupancy rates, and bed places [21]. For example, within the framework of productive restructuring theory, Agarwal regards the decline of destinations as the result of their reduced competitiveness, due to weaknesses in internal factors and intensified competition, regarded as an external factor [22,23]. The recent evolution of tourist destinations has also been interpreted as a shift from Fordism to Post-Fordism. According to this viewpoint, tourist destinations become unattractive due to factors such as cultural shifts [24,25], changes in demand and technological innovations [26], or flexible production systems [22]. More recently, we have seen viewpoints stemming from evolutionary economic geography explaining, from an economic development perspective, the differing behaviors of tourist destinations. The concepts of co-evolution and path metaphors are used in this approach to understand how the courses taken by tourist destinations can change when the initial conditions are altered due to the collective action of local agents and the existence of responses to changing global conditions that alter the quality of such destinations [27]. According to this theory, specific decisions, incidents, or events are catalysts for change impacting prior track records. In other words, it argues that development is strongly rooted in history, the specific local characteristics, and the institutional context of each tourist destination [28].

In short, analysis of the evolution of tourist destinations has seen a progressive shift from focusing on the tourism product to the conditions of the destinations and their response to global change. Similarly, destinations’ responses to decline are now interpreted as their adaptation to constantly-shifting scenarios that, to be effective, call for efficient leveraging of local resources and human capital.

The two aforementioned approaches provide explanations of the decline and obsolescence of mature destinations based on a loss of attractiveness that, if not countered, may lead to impaired competitiveness. Undertaking the required transformation means taking into account these parameters and—depending upon the response—leads to a different kind of destination model. For example, Anton suggested classifying the restructuring paths followed by Mediterranean mass tourism destinations based on the strategies implemented by the local players in question: Reactive destinations (that make use of renewal, differentiation, heritage conservation, tourism image improvement, and tourism activity maintenance policies), creative destinations (that promote new opportunities for differentiation based on innovation and/or sustainability) and transitive destinations (that develop strategies for the intensification of residential functions and the permanent incorporation of urban services) [29].

3. Methodology

Smart Destinations have gained importance in Spain as a new scenario for tourism development, as it is shown by several public initiatives and projects launched in the last 5 years. In this paper, by taking as a relevant case the Spanish mature beach destinations, it is analyzed why tourism managers trust in smart tourism and technology solutions as a sustainable path to urban renewal. The starting point is that the discourse on smart tourism is highly appreciated for those destinations seeking sustainable strategies to tackle maturity and obsolescence problems. Through a qualitative approach based on a Delphi analysis and expert opinion, we obtained useful information that allows us to identify the key sustainability narratives that justify the interest and acceptance of smart tourism plans among tourism destinations facing renewal. Yet, the real fulfillment of these smart destination projects and their real impact remains largely unknown. Smart Tourism has uncritically assumed that sustainability will result from applying technological solutions, although this assumption has no empirical support. As the projects are often experimental and temporary, their integration in management processes is very slow, and requires the development of resources and capabilities which local governments do not always have available, and the effects on urban sustainability are not clear. Despite their significant media impact, smart destinations are still under construction. Through documentary and
other secondary content analysis, we obtained rich data to identify if planned actions in smart tourism plans are engaged with sustainability, quality of life, and livability, including elements related to the ecological and social characteristics of the city.

We have chosen the Delphi technique (or “method”) for testing the validity of SD as a tool for improving sustainability and competitiveness. This is a technique commonly used in the academic literature on tourism [30,31], and has been applied both in the specific field of SD dealt with in this article [32] and in other associated areas [33]. It is a technique employed in forecasting complex events, uncertain scenarios, and in analysis calling for as-yet undefined skills [34]. It has been used in literature on tourism to systematically combine both the knowledge and the opinions of a series of experts to reach a consensus. Traditionally, it has been utilized for three main kinds of forecasts, namely of events, demand, and trends, as Lin and Song noted [30]. The same authors also noted that this method does not replace statistical techniques, but is used specifically (as in this article) in projection and forecasting processes in which mathematical analyses are inappropriate and when there is insufficient data.

We have applied the Delphi method over three phases [32]: Design and testing of the questionnaire, selection of experts, and the sending of the questionnaires in their first and second stages. Despite its acceptance as a research technique, the Delphi method is not a standardized methodology [35], and has received criticism, especially with regard to two key aspects: The definition of “expert” and the generation of feedback in the process of seeking consensus. To reduce the risks raised by these two aspects to a minimum, we have followed the frames of reference suggested in the study by Lin and Song [30]. We regard an expert as “someone whose position and resources mean they can contribute to achieving the goal underlying the decision to use the Delphi method as a qualitative research technique” [34].

In line with Landeta, and to obtain the most all-encompassing vision from strategic stakeholders regarding the implementation of SD, three types of experts have been identified: Specialists (academic or professional experts with the required knowledge, experience, objectivity, and predictive capacity), those affected (people directly involved in the implementation of actions fostering SD), and facilitators (those with the ability to clarify key aspects of SD action implementation processes). Predominant amongst the specialists are academics and, to a lesser degree, consultants. Amongst facilitators, there are those specializing in the technological tools facilitating the implementation of SD; amongst those affected, professionals working in the destinations likely to implement SD actions. The preponderance of any one group of experts will depend upon the object of analysis. In this case, we have chosen to have a balance between the 23 experts taking part.

In the process of application of the Delphi, mechanisms have been carried out to control the method as an indicator of quality of the technique in the analysis of the perception of experts on Information and Technology Communication ITCs, as well as the adequacy of the use of this tool for the defined objective. The areas of control are the degree of dispersion/consensus of the responses, the stability of the views expressed by the experts, and the level of participation [34]. It is considered that, in the face of complex realities and subjective looks, the dispersion in the responses of experts is logical. To facilitate consensus, review and feedback mechanisms are established on responses incorporating supplementary information from the group as a whole. To measure the degree of dispersion, the difference between the typical deviations of the resulting distributions between the first and second rounds performed in this research has been used. The degree of consensus reached in this second round has made a third unnecessary [6].

The Delphi analysis helped to identify five key issues from smart tourism narratives which correspond with the main systems of smart tourism destinations identified in the academic literature. The actions implemented in smart tourism destinations were structured according to those systems, and each action was classified as a smart solution or as a non-technological-based action. According to Ivars et al., Smart solutions can be understood as technology-based applications and tools a smart destination manager organization can employ to fulfill its objectives, namely enrich its visitors’ experiences and its own management processes [32].
To perform our analysis of smart tourism actions implemented by Spanish destinations, we used the information on SD on the website https://www.destinosinteligentes.es/, which details the actions carried out by destinations requesting SD grants from the country’s State Company for Managing Tourism Innovation and Technologies (Sociedad Mercantil Estatal para la Gestión de la Innovación y las Tecnologías Turísticas) [5], a public body reporting to the Ministry of Industry, Trade and Tourism. According to this source, in 2019, Spain saw a total of 121 grants awarded to 27 destinations, 10 of which were beach destinations at a mature stage of their lifecycle. We extracted the following information from the frames of reference provided for each of the SD grant plans: Name and description of the action, and basic details of the proposal for the transformation of the tourist destination. The actions taken by beach destinations have been compared with other types of destinations (emerging, countryside or mountain, and cities with a significant tourist presence) to understand the differences in their proposals for smart tourism actions. Although it was possible to properly identify the actions and their scope, it should be noted that some details were fairly vague and masked by a degree of rhetoric. Some examples include actions featuring “the engagement and key involvement of private investment in tourism-related projects”, that “the private sector is encouraging demand side diversification based on the development and structuring of an innovative, differentiated and quality product”, and “a steadfast commitment to accessibility”.

4. Smart Tourism as a Sustainability Strategy in Tourist Destinations

The narrative cornerstone of SD—and the focus of this article—is the ability to make sustainability proposals for renewing mature destinations. Skepticism is the prevailing tone of the academic debate around tourist destinations and sustainability: Some authors are pessimistic with regard to the possibility of achieving the traditional form of sustainable development, i.e., development without growth [36,37]. The lack of sustainability experiences and cases actually implemented in the field of tourism and the difficulty of transferring, from the conceptual to the operative realm, practical sustainability criteria and guidelines in tourist destinations leads one to assume that there is scant possibility of securing any real implementation of sustainability that goes beyond watered-down token measures. Aside from the practical difficulties involved in implementing sustainability, some authors support the degrowth paradigm. Its core argument is the need for a radical change in the problematic way in which capitalism is developing, suggesting the demystification of the social imaginary pursuing unlimited growth [38]. Supporters of degrowth regard sustainable development as completely insufficient and support degrowth as a way of guaranteeing destinations’ future [39,40]. Within the context of this debate, smart tourism opens up an opportunity for reformulating tourist destinations’ relationship with sustainability. Connections between sustainability and smartness can be expressed on two complementary levels: The destination’s strategy and the implementation of technologies for more efficient environmental management [41]. This is a very attractive vision, since, firstly, it offers formulas based on consensus and on actors’ participation through cooperation and information-sharing and, secondly, it facilitates the transition from a theoretical perspective to the practical application of sustainability to a destination’s problems, which are based on the implementation of technological solutions.

In the case of mature beach destinations, overcoming sustainability issues by means of smart tourism has been received with great enthusiasm. This is because of the peculiarities of this type of destination, which is facing problems of obsolescence and decline. Firstly, smart tourism offers them solutions for dealing with their urban nature [42]. Secondly, it opens the door to some certain measures, such as cooperation between actors and innovation, that are regarded as of greater strategic importance than trends in demand when detecting and analyzing decline [43]. Lastly, it emphasizes constant innovation, with the assistance of technology, as a key factor in attracting and capturing new markets.

Indeed, the three options most commonly identified as destination renewal solutions (seeking new or additional markets, modification of demand and changing the destination’s image, and reorganizing demand to capture niches based on the possibilities offered by growth in the global tourism market) [44]
all have a good fit with the technological solutions offered by smart destinations for resolving urban and tourism-related competitiveness problems.

4.1. Sustainability Narratives in Smart Destinations

Spain has recently seen a range of central state projects for conversion into SD and for improving tourism competitiveness [5]. The narratives have been accompanied by an agency involving the creation of a specific vocabulary and lexicon, providing a paradigmatic vision of smart tourism as a disrupter that permits renewal by reducing destinations’ internal problems whilst also enhancing their assets. This section will analyze in detail the arguments in support of smart tourism proposing its adoption by mature destinations. To do so, we have used the Delphi technique to gauge the opinions of a range of tourism experts on the potential of SD to enhance their competitiveness by introducing technological solutions focused on improving sustainability. Some initial discrepancies notwithstanding, there is a high degree of consensus amongst experts, and SD are regarded as having a real possibility of bolstering their competitiveness by adopting sustainability measures. Experts’ responses have been grouped to be able to reconstruct the three predominant narratives on sustainability witnessed in SD.

The first of these elements is the paradigmatic vision of the urban smart destination model (see Table 1). This narrative stems from the utopic possibility of an infallible urban model that forges ahead to offer what is taken for granted that tourists are seeking. Experts express the view that smart tourism is “inevitable” and recognized by most as such, ensuring that satisfaction with the tourism experience is bolstered by the use of technology, co-creation, and the full consent of tourists, whose numbers are likely to grow and require more personalized services. The logical outcome of this line of thinking is that destinations and companies failing to jump on this bandwagon will lose competitiveness and be wiped off the map.

Table 1. The Smart mentality vision as a narrative argument for SD.

<table>
<thead>
<tr>
<th>Rank</th>
<th>Argument</th>
<th>Average</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>The possible growth in acceptance of smart mobile devices for demand will mean they will always have to be taken into account when designing tourism strategies</td>
<td>4.61</td>
<td>0.499</td>
</tr>
<tr>
<td>2</td>
<td>Smart tourism-based practices will improve pre- and post-sale experiences</td>
<td>4.22</td>
<td>0.736</td>
</tr>
<tr>
<td>3</td>
<td>More and more demand segments will be seeking smart tourism-based experiences and products in the future</td>
<td>4.17</td>
<td>0.778</td>
</tr>
<tr>
<td>3</td>
<td>The personalization of experiences and the made-to-measure experience options will become generalized in SD</td>
<td>4.13</td>
<td>0.815</td>
</tr>
<tr>
<td>4</td>
<td>SD have competitive advantages based on uniqueness and product differentiation compared with other tourist destinations</td>
<td>4.09</td>
<td>0.417</td>
</tr>
<tr>
<td>4</td>
<td>SD will have to establish co-participation models bringing together user networks, the tourism industry, and the authorities</td>
<td>4.09</td>
<td>0.733</td>
</tr>
<tr>
<td>5</td>
<td>The co-creation of experiences (between users themselves and other destination actors) will be the key to creating experiences in SD</td>
<td>4.04</td>
<td>0.638</td>
</tr>
<tr>
<td>5</td>
<td>The introduction of smart tourism will lead to an increase in overall satisfaction amongst destination visitors</td>
<td>4.04</td>
<td>0.878</td>
</tr>
<tr>
<td>8</td>
<td>In the future, destinations failing to include smart tourism will be left behind in the battle for global competitiveness</td>
<td>3.83</td>
<td>1.02</td>
</tr>
<tr>
<td>9</td>
<td>SD have specific characteristic features that differentiate them from other tourist destinations</td>
<td>3.65</td>
<td>0.935</td>
</tr>
<tr>
<td>14</td>
<td>Currently, it is only a minority of tourists that may have an interest in enjoying experiences in SD</td>
<td>2.78</td>
<td>1.043</td>
</tr>
</tbody>
</table>
The second narrative element is techno-optimism based on technological solutions (see Table 2). Constant innovation and the leveraging of technology guarantee—in the view of experts—both efficiency in the use of resources and the emergence of new business models. Although some aspects, such as the consolidation of the sharing economy as a production model in SD, still remain more open, the general view is that innovation will provide a boost for entrepreneurship and make destinations and companies jumping on the digital tourism bandwagon more competitive and receptive to tourists’ needs. The belief is that digital tourists will be the predominant market and, although the digital divide may affect some segments, their satisfaction will increase. A second aspect arising from this narrative is the low level of perceived risk that users may associate with the implementation of smart tourism. Any privacy risks affecting demand, although taken into account by experts, will not have a significant impact on guaranteeing a satisfactory tourism experience. This stands in contrast to the high degree of agreement on technology being a tool that can be used to increase demand. Any impact on tourists’ security or increased risk around their decision-making process arising from the use of technology is regarded as even more improbable.

Table 2. The techno-optimist vision as a narrative argument for SD.

<table>
<thead>
<tr>
<th>Rankig</th>
<th>Average</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technology applied to SD can contribute to improving or making more efficient destinations’ consumption of energy and resources</td>
<td>1</td>
<td>4.35</td>
</tr>
<tr>
<td>SD will permit the creation of new tourism enterprises with technological content</td>
<td>1</td>
<td>4.35</td>
</tr>
<tr>
<td>SD will be associated with the appearance of innovative business models</td>
<td>2</td>
<td>4.30</td>
</tr>
<tr>
<td>SD may encourage inequalities between tourism companies due to the digital divide</td>
<td>6</td>
<td>3.91</td>
</tr>
<tr>
<td>SD may encourage inequalities between tourist destinations due to the digital divide</td>
<td>7</td>
<td>3.87</td>
</tr>
<tr>
<td>Business models created by SD will be more productive than current ones</td>
<td>5</td>
<td>3.87</td>
</tr>
<tr>
<td>The creation of mobile apps on the destination will provide visitors with satisfactory practical solutions</td>
<td>6</td>
<td>3.65</td>
</tr>
<tr>
<td>Progressive dependence upon mobile devices and technology to enjoy tourism experiences will lead to inequalities amongst users based on their knowledge level</td>
<td>11</td>
<td>3.57</td>
</tr>
<tr>
<td>Privacy in SD will be impacted by the private and commercial use of personal data</td>
<td>12</td>
<td>3.48</td>
</tr>
<tr>
<td>SD will foster sharing economy-based business models</td>
<td>7</td>
<td>3.45</td>
</tr>
<tr>
<td>User acceptance of technology and mobile devices may be low or very low in certain segments of demand</td>
<td>13</td>
<td>3.26</td>
</tr>
<tr>
<td>New technology-focused business models will tend to replace rather than complement existing ones</td>
<td>8</td>
<td>2.83</td>
</tr>
<tr>
<td>User security in SD will be reduced due to increased data traffic and georeferenced location tracking</td>
<td>15</td>
<td>2.65</td>
</tr>
<tr>
<td>Smart tourism will lead to interference and little room for maneuver in tourists’ decision-making processes</td>
<td>16</td>
<td>1.83</td>
</tr>
</tbody>
</table>

The third narrative element focuses on an innovative and flexible governance model (see Table 3). The SD governance model is regarded by experts as an opportunity for innovation in their management. Elements such as co-participation, public participation, and collaboration between actors and the
identification and solution of cross-cutting tourism-related problems affecting residents as a whole are particularly noteworthy amongst the aspects most valued by experts. It is quite interesting to note how fluidity in the flow of open and transparent information, the key factor in ensuring that the envisaged management model works, is one of the least-valued of all those analyzed. Nevertheless, the view of governance is markedly optimistic, given that it is also envisaged that smart tourism will not lead to private sector interference in the destination’s management, and that its mission’s remit will not be exclusively technological. The governance model proposed by this narrative is associated with an innovative system that helps break down artificial administrative barriers and promises flexible agreements with the authorities, as well as integrated, holistic solutions to destinations’ problems based on dialogic, open, and democratic processes. In other words, it is a model aimed at resolving problems that call for the participation of and coordination between the different affected actors, and which is open to sustainability-based ideas and strategies.

Table 3. The e-technocracy as a narrative argument for SD.

<table>
<thead>
<tr>
<th>Ranking</th>
<th>Average</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>The technology applied to SD can help improve collaboration and partnerships between different destination actors</td>
<td>1</td>
<td>4.35</td>
</tr>
<tr>
<td>SD governance models will permit better acknowledgement and remedying of the destinations’ most pressing problems</td>
<td>2</td>
<td>4.17</td>
</tr>
<tr>
<td>The public sector must take the lead in the process of creating SD aid and do so in a planned way</td>
<td>3</td>
<td>4.04</td>
</tr>
<tr>
<td>The technology applied to SD can help bolster residents’ participation in destination planning and management</td>
<td>4</td>
<td>4.00</td>
</tr>
<tr>
<td>The implementation of the IoT (Internet of Things) in SD will help improve tourists’ and residents’ quality of life, equally</td>
<td>5</td>
<td>3.78</td>
</tr>
<tr>
<td>SD will tend to establish more transparent, inclusive governance models based on the networked society</td>
<td>5</td>
<td>3.78</td>
</tr>
<tr>
<td>The use of open information on a centralized basis, shared between the different actors, will become generalized amongst SD</td>
<td>6</td>
<td>3.61</td>
</tr>
<tr>
<td>The development of smart tourism and the associated technology will mean that communications, technology, etc., multinationals will have more influence in the destination’s management and decision-making process</td>
<td>13</td>
<td>3.26</td>
</tr>
<tr>
<td>SD objectives are focused more on technological improvements than on solving a destination’s everyday problems and sustainability issues</td>
<td>7</td>
<td>2.70</td>
</tr>
</tbody>
</table>

4.2. The Implementation of Smart Tourism Projects in Mature Beach Destinations

The narratives around smart tourism call on us to imagine an urban scenario in which tourist destinations manage to combine the ideals of entrepreneurship and competitiveness with those of a technological utopia, supported by the promise of a more sustainable urban environment and a radical change in the provision of services through data production and integration. Far from being original, this vision forms part of a broader discourse arising from smart cities [45–47]. The differentiating feature of the narrative around smart tourism is that it adds the tourism dimension, combining the achievement of improvements in both competitiveness and sustainability in an urban setting and putting forward a specific formula for managing this kind of city, based around the provision of knowledge and information. Although smart tourism can, in theory, be applied in any tourist destination, it has been mostly mature destinations that have based their strategies around it, in Spain at least. This section will analyze the main actions carried out as part of the different SD plans implemented until 2020 in mature Spanish beach destinations to ascertain what their real, on-the-ground orientation actually is.
The results show that action plans are aimed mainly at improving tourism competitiveness (see Table 4), the goal of almost one-third (33.06%) of those implemented. Of particular importance are those actions focused on user satisfaction and offering services for digital tourists. We should also add almost all the accessibility-related actions (10.74% of the total), which although classified as a different group, contribute measures fostering inclusive tourism (accessibility to tourist spaces and attractions for the disabled). Governance actions represent close to a quarter of the total (23.97%) and include aspects such as promoting public-private partnerships, public participation, the digitalization of the administrations, and the creation of territorial information system and/or open data systems. Actions associated with innovation (16.53%) and sustainability (15.70%) are less present, in general.

### Table 4. Distribution of Spanish SD actions by area, 2019.

<table>
<thead>
<tr>
<th>Distribution by Initiated Action (all SD)</th>
<th>Total No. Actions</th>
<th>%</th>
<th>Technological Solutions (TS)</th>
<th>% TS (of Total Actions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sustainability</td>
<td>19</td>
<td>15.70</td>
<td>1</td>
<td>5.26</td>
</tr>
<tr>
<td>Accessibility</td>
<td>13</td>
<td>10.74</td>
<td>2</td>
<td>15.38</td>
</tr>
<tr>
<td>Tourism</td>
<td>40</td>
<td>33.06</td>
<td>25</td>
<td>62.50</td>
</tr>
<tr>
<td>Innovation</td>
<td>20</td>
<td>16.53</td>
<td>7</td>
<td>35.00</td>
</tr>
<tr>
<td>Governance</td>
<td>29</td>
<td>23.97</td>
<td>10</td>
<td>34.48</td>
</tr>
<tr>
<td>Total</td>
<td>121</td>
<td>100.00</td>
<td>45</td>
<td>37.19</td>
</tr>
</tbody>
</table>

A second aspect to be borne in mind is that the models for implementing actions in mature destinations differ from those of other types of cities (see Figure 1). In general, aside from tourism, cities act more in the field of innovation, whilst mature destinations focus on governance. A third characteristic feature is that technological solutions are only implemented on a small scale. For example, only 5.26% of sustainability actions were technology-based. The exception to this is to be found in tourism-related actions, 62.5% of which are technology-related. Nevertheless, the majority of these actions introduce simple and relatively low-cost technological elements (apps, widgets, wi-fi, installation of fiber optics, boosting of presence on social networks, etc.) which, aside from their ability to create the facilities and infrastructure needed to underwrite digital tourism, have little real impact upon destinations’ sustainability. Key smart technology actions (e.g., Internet of Things (IoT), big data, tourism intelligence systems (TIS), open data, and sensorization) are in the minority and concentrated mainly in cities, although some mature destinations, such as Benidorm, Marbella, and Puerto de la Cruz, have introduced a few.

![Actions by tourist destination type](image)

**Figure 1.** Focus of Spanish destinations’ smart tourism actions by thematic area, 2019.
The actions implemented in Smart Tourism destinations mainly focus on improving their competitiveness using knowledge creation strategies, the digitization of the tourism product and sustainability approaches. The actions follow a tourism-centric approach where technology is understood as a tool for urban and tourism renewal rooted in a modernization discourse that is considered to increase the overall attractiveness of the destination. Some different examples of this tourism-centric logic are commented on below.

Destinations such as Benidorm or Puerto de la Cruz use technological innovation as a tool for creating shared knowledge between different stakeholders. This use of smart solutions is close to the conceptual approach of knowledge-based destinations [48]. Both destinations have launched tourism intelligence systems where big data is linked to different tourism products. Those initiatives, where all generated data by different stakeholders is encompassed in a single platform (for example using tracking systems, tourist credit card transaction data, monitoring bookings in real-time, and using sensors to measure city parameters) are aimed at creating tourism knowledge. The use of these systems, combined with modern official tourist websites and with the analysis of social networks, allows a real knowledge of the tourist demand and contributes information that facilitates decision-making and target promotion from data-driven marketing.

A second strategic response is based on smart solutions addressed to improve tourism support areas and tourism product. The creation of free wi-fi zones on the beaches in Benidorm, Valencia or Palma are examples of this strategy. In addition, segmented mobile routes have been set up in San Sebastián as a way to differentiate from conventional destinations. Actions aimed at creating certifications or smart tourism brands as in the case of Arona, in the Canary Islands, are also part of this differentiation strategy addressed to improve the results of promotional campaigns and reach new markets.

A third strategy, linked to the triple-bottom-line sustainability approach, is interested in making tourism destinations more inclusive improving their accessibility [49]. Salou, Málaga, and the Vall d’Aran are valid examples. Accessibility actions are aimed at repositioning the destination and improving image both from reputation among professionals in the sector and achieving a better recognition among users.

To sum up, the smart tourism actions implemented by mature destinations are characterized by their tourism-driven approach, and attach very limited importance to technological solutions for improving urban sustainability or resolving problems arising from overtourism, and have a relatively limited technological scope, especially when compared with cities specializing less in tourism activities.

Mature destinations back smart tourism as a way of meeting their medium- and long-term restructuring and renewal goals in order to remain competitive (see Table 5). The defining elements of the smartmentality are associated with the main renewal strategies: Uniqueness, the creation of new products, and the personalization of services to help destinations stand out from their competitors, a sustainability-based image, capturing new markets (such as digital tourists), and continued growth that is compatible with management of the problems stemming from overtourism. Innovation and trust in technological solutions are also associated with some of the arguments commonly made for tackling decline, such as the need for constant renewal and overcoming obsolescence in tourist infrastructure, products, and services. Lastly, the e-technocratic narrative, which argues for an action-oriented flexible management model, with new formulas based on cooperation and collaboration, is highly appealing to destinations seeking governance-based solutions to better adapt to constant change and the global competition by leveraging the potential of local stakeholders and the creation and organization of real-time information for decision-making processes.
Table 5. The SD imaginary in mature destinations’ strategy.

<table>
<thead>
<tr>
<th>Narratives</th>
<th>Destination Renovation Strategies</th>
<th>Examples</th>
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</thead>
<tbody>
<tr>
<td>Smartmentality</td>
<td>Tourism-driven approach</td>
<td>Niche markets, digital tourists</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Singularity/product differentiation</td>
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<td></td>
<td></td>
<td>Smart tourism branding</td>
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<td></td>
<td></td>
<td>New business models</td>
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<tr>
<td>Techno-optimism</td>
<td>Technological solutions</td>
<td>Innovation based on technology</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sustainability (overtourism, resource efficiency)</td>
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<td></td>
<td></td>
<td>Open data</td>
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<tr>
<td>e-technocracy</td>
<td>Solution-oriented</td>
<td>Cooperation</td>
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<td></td>
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<td>Knowledge creation</td>
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5. Discussion the Challenges for and Limitations of Smart Tourism as a Paradigm for Sustainability

The identification of narratives and the subsequent cross-comparison with the actions actually implemented in beach destinations provides us with valuable information for answering the questions initially posed as to the actual capacity of SD to lead the way in the sustainability-based restructuring of mature destinations. The empirical approach of this research is a novelty in the study of Smart destinations and supposes an original contribution as most previous studies have focused on theoretical issues, while this research corroborates to identify with recent data the existing gap among narrative discourses and practices in Spanish smart tourism destinations. Mature destinations have been widely discussed under the prism of evolutionary theories, but, as a new contribution, this research highlights the importance of smart tourism narratives as a catalyst for urban and tourism renewal.

We have identified three sustainability-related narrative cornerstones: Smartmentality, techno-optimism, and e-technocracy. The combination of the three fosters a discourse that depicts SD as a utopic model. That attractiveness of the narrative around SD is due, firstly, to the way it appeals to the responsibility of all the actors, to join in a logical approach to achieving competitiveness in response to what is regarded as a universal trend in demand that will place those destinations failing to do so at a competitive disadvantage. Secondly, it is because it offers technological responses to issues of urban metabolism and the conflicts between local actors. Thirdly, it is because it envisages a flexible model designed to solve real-life problems. Nevertheless, this vision, fully shared by the organizations and authorities promoting SD creation plans, is not immune to debate and discussion.

In this section, we will be reviewing the main challenges that could limit the actual scope of the possibilities encapsulated by this smart tourism narrative with regard to each of the three cornerstones underpinning it.

Smartmentality makes cities and their actors morally responsible for global environmental problems, which must be addressed with “smartness” (2014). This can be seen in the narrative’s call to smart tourism, in which SD are depicted as “natural” approaches whose competitiveness-related goals, strategies, and political decisions are “unavoidable” for those destinations that wish not to be sidelined, in much the same way as subjects can be included in or excluded from power, by means of the restructuring processes occurring in smart cities [50,51].

SD are based on the idea of autonomous cities in which the locals and tourists assume as their own moral responsibility the need to provide responses ensuring global sustainability. Nevertheless, this leads to two practical contradictions. Specific actions are, as we have seen in Spain, viewed as an urban and tourism product renewal strategy, whilst actions of a holistic nature, the only ones that can lead to efficient, global sustainability strategies [2], are far less common. Similarly, initiatives are based on a concept of an autonomous city in which smart tourism-based competitiveness has an individualized, local-scale approach, with no attempt to anchor initiatives within a regional or networked SD context [10].
Smart tourism is based on the use of integrated technologies that permit real-time recognition of the real world and the use of advanced analytical instruments empowering tourism actors to take more efficient decisions. The techno-optimism infusing the smart tourism narrative is uncritical in nature and leaves little room for assessing the risks associated with how tourists interact with these technologies. In this regard, there are a number of areas of discussion on the potentially negative impact of the use of technology that conflicts with this narrative. Firstly, it does not appear feasible to structure real SD outside of major cities, and small and medium-sized destinations have serious problems in funding projects, amortizing technology investment costs, and kick-starting their available human capital [52], issues that lead to a need to promote a flexible approach to their management, adapting it into line with each destination’s individual requirements [53]. Another point for debate is the uncritical value attached to the intensive use of technologies in the destinations. There is an argument as to whether SD will be able to ensure a proper fit between the different levels of use of technology and tourists’ needs and whether or not it will have a positive impact upon the tourism experience. The existence of a digital divide between tourism demand segments [54], potential cognitive overload and the need for a “digital divide” [55,56], and some potentially negative effects of the use of mobile devices and social media networks in terms of reduced spontaneity and discovering places and attractions, the loss of “authenticity” associated with the repetition of behavior stemming from eWOM and tips on social media, and overdependence on technology and the inability to disconnect [57] all call into question the excessively optimistic vision of technology as a yardstick for the efficiency of SD [58].

A third aspect subject to debate is associated with the use of technology for tourism-related purposes. A number of authors claim that the possible privacy and security risks of the intensive use of technology may well be underestimated. Tourists’ unpreoccupied enjoyment of destinations can, on occasion, mean that they will make carefree or even irrational use of mobile devices and social media networks, handing data over the third parties [59], whilst location-based personalization of information services and invasive marketing may also negatively affect tourists’ privacy [58,60,61]. The general lack of privacy in SD, which need to capture information constantly and in real time to make decisions, calls into question the techno-optimistic vision of the smart tourism narrative if it fails to take into account tools to mitigate this and offer a guarantee of trust when sharing data, as well as greater transparency in the terms and conditions for the use of information and data processing when establishing personalized services. The smart tourism narrative also provides a glimpse of the creation of a new subjectivity based on the promise that destinations can resolve the need for sustainability employing technological solutions allowing for more efficient use of resources. Nevertheless, there is unawareness of both the environmental impact and any unforeseen risks associated with the production of smart technology [45] and of the social impact of the lifestyles and emulations of new ways of travelling arising from new technologies and the use of social media networks [62].

The third narrative pillar of the smart tourism discourse is associated with the ability to manage a destination in a transparent way and for the common good. The narrative stresses the operational and problem-solving capacity of data in and of itself (from technology such as sensors, big data, the Internet of Things, open data, etc., integrated into the destination’s management system) based on the ability to transfer data by means of cooperation between actions based on co-responsibility. However, several authors have noted the weakness of this vision, if not accompanied by governance criteria that permit the allocation of investments in line with real urban problems [63] and the creation of knowledge above mere faith in the data. There must also be an awareness of the possible negative effects, such as the lack of social cohesion or the inequality in power relationships between people, that can result from the mass digitalization of services if specific problems are not tackled with projects that are more than experimental or short-term in nature [42].

This e-technocratic vision of management may therefore see its effectiveness severely limited if underpinned by a reductionist technological philosophy that views the changes arising from technology as politically neutral [45] and that falls victim to a win/win rhetoric depoliticizing urban governance and limiting its planning-related imaginative scope [48]. In other words, without the proper governance
framework, there is a risk of overestimating the technology’s capacity for urban transformation and of underestimating the non-technological facets of tourist destinations’ problems.

6. Conclusions

The results have both theoretical and practical implications. First, we examine how the narratives on smart destinations correspond to neoliberal storylines focusing on tourism development through technology as an opportunity to create a dynamic, wealthy, and competitive city. Experts mention some key elements that target the discursive construction and representation of smart tourism as a tool for growth and competitiveness, but they are scarcely engaged with global concern and social issues. That is, sustainable solutions are underrepresented. On the contrary, smart tourism logics follow an imaginary connected to the process of modernizing destinations as a formula to make them more attractive. Smart tourism discourse acts as a lure for mature sun and beach destinations which aim to redevelop the fostering of image improvement, reaching new market segments and using smart solutions for urban renewal and resource efficiency with the promise that technology will address global problems.

6.1. Theoretical Implications

Our work helps explain how the imaginary created around smart tourism leads to destinations taking certain specific strategic actions. When the narratives are compared with the actions implemented, their rhetorical nature is made clear, and serious doubts arise as to their capacity to transform destinations and the real scope of SD as a model for urban sustainability. Although SD pave the way to establishing a form of public funding for destinations seeking renewal (€63.8 million in the last tranche of SD funding from the European Regional Development Fund (ERDF), channeled through SEGITTUR), the proposed actions stemming from this aid actually limit sustainability. Few actions have been taken in this particular area, and those that have make scant use of technology and are rarely designed to tackle sustainability issues, such as those affecting the urban metabolism of destinations, the conflicts caused by overtourism, efficient use of resources, reducing the production costs of technological solutions or support for degrowth initiatives. Additionally, the proposed governance-related actions suggest scenarios in which smart tourism-related competitiveness is restricted to fragmented actions in each individual city, with no attempt to offer shared solutions among different cities. Further, we have not found any actions based on bottom-up mechanisms leveraging active stakeholder participation (there are, for example, no initiatives for urban labs for decision-making in tourism), any monitoring actions or any cost/benefit analysis or reviews of the medium-term return of the proposed technologies—or of their environmental cost.

The results obtained permit a conceptual contribution regarding how smart tourism narratives fit with the theoretical schools of thought interpreting the evolution of tourist destinations. The narratives around smart tourism bolster the idea of global modernity [2]. This is a modernizing perspective on development based on offering technological solutions, suggesting a universal paradigm, and setting out a vision and a set of practices to be followed to achieve it. Nevertheless, this globalizing discourse, based on the infallibility of technological solutions, lacks any reference to location. It is placeless and fails to take into account responses based on the specific characteristics of individual locations. It is therefore possible that the same strategy does not work for other destinations with different attributes and in different cultural contexts. The significant role played by demand in the narratives (exemplified, for example, by the acceptance of the use of technology by digital tourists) and trust in technology in and of itself and in data over open information and shared knowledge is comparable to determinist criteria in renewal processes. We have no doubt that technologies can play a decisive role in the restructuring of mature destinations, but not on their own. There is therefore a need to resize them and place them side by side and integrate them into the tourism management process, mindful that the main goal is knowledge sharing, which is recognized as a crucial factor in resilience and the creation of tourism-related capital [64].
6.2. Practical Implications

The data provided is of relevance as it shows the direction that renewal action investments in Spain’s main mass beach destinations are taking. This is an aspect to be borne in mind as mass beach destinations lead flows of international and domestic visitors, and the potential impact of smart solutions on sustainability is thus very high in global terms.

Smart solutions have been specially applied in three broad tourism areas: The use of information for management purposes, destination commercialization, and the renewal of tourism products and services. In contrast, urban sustainability actions are barely present in mass beach destinations when compared to other tourist cities. This is an indicator that the differentiation strategies of mass beach tourism destinations focus on attaining attractiveness through product renewal and tourist experience enhancement rather than on being engaged in sustainability-based strategies. In the current stage of Spanish destination evolution and according to the evidence provided from smart destinations, in contrast to what is proposed in the official discourse, their ability to adapt and respond to global challenges is in question. Seemingly, SD are not in a position to modify their path dependence and generate new trajectories based on sustainable development.

The majority of destinations have a historical path dependence that prevents them from creating, overnight, evolutionary strategies based on the intensive use of technology, especially if there is a lack of human capital and efficient organization to make this possible. This opinion is backed by the predominance of basic technology actions and the lack of associated input technology detected in our analysis. In view of the results, SD would not appear to be initiating solid innovation scenarios leading towards sustainability or aimed at changing their paths in the short or medium term. On a narrative level, an attempt is being made to equate smart tourism with an evolutionary “turning point”, but the evidence produced by our analysis points to SD being, in reality, far removed from paradigms of sustainability. The elements that promote the so-called transformative sustainable turn in tourism [65,66], such as those based on degrowth [67], socializing tourism [68], or environmental concern and the promotion of low-carbon strategies [69], are not truly identified in the narratives, nor are the actions performed at Spanish smart destinations.

Errors such as placing technology that satisfies tourist demand at the heart of the strategy for change instead of seeking urban improvements, and not making technological innovation in knowledge creation the basic tool for transformation, could end up resulting in the diversion of the necessary investments away from sustainability and towards unfertile ground. Or, even worse, current SD may be mortgaged to such an extent that, when the funding dries up, they collapse like a house of cards, thereby wasting a good opportunity for globally tackling the issue of sustainability in tourism.


Funding: This research was supported by Barcelona Provincial Council (Diputació de Barcelona) through the research project grant “Smart Tourism Destinations’ Characterisation and Strategic Analysis of their Contribution to Competitiveness in the Barcelona Region’s Tourism Destinations’”.

Conflicts of Interest: The authors declare no conflict of interest.

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