

Overtourism:

A Challenge for Smart Cities

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Abstract- Major tourism destinations are facing increasing difficulties to tackle overcrowding, which seriously affect the quality of the tourists' experience and undermine the residents' quality of life. As a result, some cases of tourismphobia are starting to emerge. Therefore, dealing with this trouble is becoming a hot topic for tourism managers, particularly in urban destinations. To this respect, smart tourism initiatives can help to address this problem, facing the following questions: Is the disproportionate growth of tourism (too many tourists) the issue or, instead, a poor tourism management? Or both? A variety of approaches will be presented as possible remedies to this illness. Within them, technological solutions have a relevant role to play, having shown a significant capacity to be helpful. The compendium of best practices released by the European Commission in occasion to the "2019 European Capital of Smart Tourism competition" is also examined, particularly with regard to tourism dispersal.

Keywords: *smart tourism; smart cities; overtourism.*

I. INTRODUCTION

The development of smart cities has been the cradle of what we know today as smart tourism destinations (STDs), particularly in Europe, where "many of the smart tourism initiatives were born out of smart city projects, and their focus is more on innovation, competitiveness and developing smart end-user applications that support enriched tourism experiences" [1].

In general, smartness (or intelligence) represents the ability for a better understanding and solving problems (such as those related to overtourism) using knowledge, that is, based on data and information.

In the specific field of STDs, a literature review can be found in [2]. In addition, the following definition of this concept is suggested: "A STD is one that, from a shared vision by the actors involved in it, is based on an extensive use of cutting edge technologies in order to create an advanced digital space ... able to improve the whole management of the destination and, therefore, its differentiation and competitiveness. A STD is built on the values of innovation and sustainability, working to improve the tourist's experience and enhance the quality of life of local communities".

Overtourism problems, although not new, have definitely come into stage in the last few years, gaining momentum as tourism flows intensify: "overtourism volcanoes erupted all over the world and the issues associated with the industry's unmanaged and unsustainable growth were thrust into the media and the public spotlight" [3].

In order to have shared understanding of concerns arising from it, a situation of overtourism can be defined as "destinations where hosts or guests, locals or visitors, feel

there are too many visitors and that the quality of life in the area or the quality of the experience has deteriorated unacceptably. It is the opposite of Responsible Tourism which is about using tourism to make better places to live in and better places to visit" [4]. Major tourist destinations around the world, urban and others, are suffering this phenomenon and are struggling to minimize its negative impacts, which are becoming more and more noticeable. Thereby, how to address this challenge (consequence of a quantitative success) has emerged rapidly as a priority for both public and private tourism managers in an increasing number of destinations.

Without effective measures to offset this "tsunami" and the subsequent disaffection, the consequences of overtourism will get worse and worse, since "there are 300 million people from China and India getting ready to travel the world. We are in a hurry to do something", in Eberhard van der Laan's words, Mayor of Amsterdam [5].

But problems are not only caused by excessive quantities of tourists/excursionists. Its complexity is also affected by changes in how people behave. What is known as "Millennials Instagrammability" is an example. To this respect, Justin Francis, chief executive of Responsible Travel, declared that "years ago, tourism was about experience seeking. Now it's about using photography and social media to build a personal brand. In a sense, for a lot of people, the photos you take on a trip become more important than the experience" [6]. Therefore, social media has been also blamed as one of the catalysts of overtourism.

As a result, more and more experts are claiming for a new metric of success. One of them is André Gerondeau, Meliá Hotels' Chief Operating Officer: "I think it has to do a lot with quality over quantity and how do you segment correctly" [7]. This has favoured a perverse approach of tourism development rooted in the maximization of the quantity of visitors, along with the short term visions of business people and politicians, neglecting the need of "having a tourism industry that thrives rather than grows. Without this clear distinction, problems will continue" [8].

Around this multidimensional and complex phenomenon, as described by [9], a couple of critical questions arise, which should be answered in order to find the most convenient approach for each particular case:

*Is the disproportionate growth of tourism (too many tourists) the issue or, instead, a poor tourism management? Or both? In general, destinations need to push tourists beyond the bucket-list spots, and use everything (from local artists and technology) to push tourists to less-visited places.

*But firstly, do we know our market? Not everyone is keen to set off the beaten track. If it's a first-time visit to a popular city, then the big sights are going to be a must. Therefore, it's essential a proper evaluation of who are visiting, where they are from, how long they are staying and what attracted them to visit in the first place. Only then you can start to work out which travellers to target, and how to do it.

In the next section a number of approaches to overtourism will be synthesized.

II. APPROACHES TO OVERTOURISM

Starting with the consultancy company McKinsey [10], it has established its own framework composed of five "tactics for addressing overcrowding": smooth visitors over time (establish arrival limits, deploy reservations and ticketing systems, use technology to nudge visitors in real time, extend seasons and shift the focus of promotions); spread visitors across sites (promote less-visited attractions, develop new routes and attractions); adjust pricing to balance supply and demand (implement specific taxes and fees, charge the "actual" cost, shift to variable or tiered pricing); regulate accommodation supply; limit access and activities.

Secondly, the media company Skift, Inc. -through its site Skift.com devoted to offer reporting and analysis on the travel industry- proposes the following five lines of actions to struggle against the adverse effects of overtourism [11]: limiting transportation options (such as the access of low-cost carriers to airport terminals or cruise ships); make it more expensive (adjusting price policies); better marketing and education (sometimes de-marketing); better collaboration among stakeholders (favouring their coordination); protect overcrowded areas (with new and tighter regulations).

Thirdly, the organization specialized in responsible tourism "Conserve Tourism" contemplates seven solutions in its own proposal [12]: complete destination closure; time restrictions; segregation of tourists from the local population; taxing tourists (including visas to control the number of entries); reducing (or even suspending) the granting of new accommodation licenses; encouraging a more responsible behaviour when travelling through education; creating alternative routes and destinations.

Fourthly, the recommendations from the World Travel & Tourism Council [13] are listed next:

*Planning: solutions require long-term planning; public sector, private companies and local communities must work together.

*Product: diversify the product away from mainstream; encourage visits to different places at different times to experience different things.

*Technology: use technology to improve visitor experience /offer and to communicate with communities.

Fifthly, the World Tourism Organization (UNWTO) has identified 11 strategies (deployed in 68 measures) to help understand and manage visitors' growth in cities [14]. These strategies are: 1. Promote the dispersal of visitors within the city and beyond. 2. Promote time-based dispersal of visitors. 3. Stimulate new visitor itineraries and attractions. 4. Review and adapt regulations. 5. Enhance visitors' segmentation. 6. Ensure local communities benefit from tourism. 7. Create city experiences that benefit both residents and visitors. 8. Improve city infrastructure and facilities. 9. Communicate with and

engage local stakeholders. 10. Communicate with and engage visitors. 11. Set monitoring and response measures.

And finally, a proposal drew from the observation of successful experiences of tourists in highly congested destinations -thus centred on the tourist's behaviour- reveals five superordinate themes: smart preparation, smart traveller, smart guest, smart technology user and smart immersion [15]. The fourth one is the pivotal one for our purpose here.

III. TECHNOLOGICAL SOLUTIONS AND TOURISM DISPERSAL

Although the analysis of the variety of causes of overtourism is beyond the scope of this paper, it is clear that "the way tourism is managed has a direct impact on carrying capacity and the resilience to overtourism" [16]. In this regard, new technologies can help to improve tourism management performance. In fact, to "invest in technology, innovation and partnerships to promote smart cities – making the best of technology to address sustainability, accessibility and innovation" is one of the policy recommendations offered by the UNWTO [14]. For example, the use of new technologies (apps and others) to stimulate dynamic time-based dispersal; and the use of big data and new technologies to monitor and evaluate tourism performance and impact.

Some good practices follow:

*In Italy's hugely popular Cinque Terre, where a ticketing system began in 2016, a phone app shows visitors real time congestion on the trails, and points them in the direction of alternatives.

*The Australian state of Tasmania has experimented with offering travellers with free smartphones that track their movements to provide more visibility to industry stakeholders on traveller behaviour.

*Barcelona is one of the first cities to install SmartCitizen (<https://smartcitizen.me/>) 'environmental monitoring' sensors to track noise and pollution levels and generate statistical evidence of tourists' impact on the quality of life of local residents.

*The city of Trento, with its TreSight experience, has created Smart POIs (Points Of Interest) outside the overcrowded areas and encourage tourists to enjoy them using digital technologies (such as Physical Web technology based on Bluetooth Beacons).

*To tackle overtourism in central London, dispersing visitors across the city to avoid congestion, a free mobile gaming app ("Play London with Mr Bean") "shows travellers different attractions around London that, when visited, earns the points to redeem for vouchers and discounts around the city" [17].

*The Valencia Tourism and the Valencia Institute of Housing have joined forces to start a new project known as "Alter Eco", intended to collect data with the aim of reducing the concentration of tourists in hot spots by showcasing new areas. By downloading the "Alter Eco Valencia app", tourists can discover new routes through the city and local traditions [18].

*CzechTourism is betting on the geographical diversification of tourism in the Czech Republic to alleviate the tourist pressure on Prague. In this sense, a number of start-ups are focused on facilitate contact with local drivers who speak English, select a car and driver to move around the country or discover amazing places in their various regions

through platforms, apps and video games such as “Kingdom Come: Deliverance”.

Other inspiring actions for tourism dispersal are listed below:

*Thailand, beyond its most popular destinations, is marketing its “12 Hidden Gems Plus”, and has experienced tourism growth at these attractions. Amsterdam is marketing the hidden treasures in the various city’s neighbourhoods, like other cities (Venice, Barcelona...), with a consistent redesign of City Cards. To this regard, travel influencer (such as bloggers) have a vital role to highlight the referred “hidden gems or treasures”, in addition to make sure that they are easy to explore (accessible via public transport, with clear, transparent information on ticket prices and promotions for visitors). It has to be noted that succeed in attracting travellers away from crowded hotspots requires knowing how to appeal to their sense of curiosity and how to fulfil their desire for different experiences.

*To manage tourist flows more sustainably, the Brussels tourism board has launched the initiative ‘MIXITY walks’ to encourage visitors to explore all city districts [18]. Off-season travelling incentives in Lyon, Poznań, Tallinn and Ljubljana have been also listed in the compendium of best practices released by the European Commission in 2019 [18].

*Some tour operators are also taking actions to avoid overcrowding [19]: offering off-season and off-the-beaten-path trips, adjusting their itineraries; travelling in smaller groups; employing local guides and favouring the enjoyment of local authentic experiences.

Nevertheless, some voices, such as “Amsterdam in Progress” (an independent think tank that develops concrete plans to stimulate balance in the city), argue that spreading tourists will not solve the problem of overcrowding, favouring, conversely, more growth and preventing for addressing the real foundations of this problem. Specifically, six reasons are provided by “Amsterdam in Progress” [20]: spreading requires certain conditions; the concept of spreading clashes with human behaviour; spreading tourists is as effective as whistling in the wind; spreading does not provide a solution to the perceived pressure; spreading will quickly disrupt the balance outside the city centre; spreading will probably aggravate the problem.

IV. CONCLUSIONS

Overtourism refers to “the impact of tourism on a destination, or parts thereof, that excessively influences perceived quality of life of citizens and/or visitors’ experiences in a negative way” [14]. As a result, when local communities are becoming increasingly hostile to forms of tourism that are imposed on them and diminish their quality of life, it is evident that something has to be changed, since “the state of overtourism is a consequence of tourism using the destination rather than the destination using tourism” [21].

Overtourism relates to other concepts such as carrying capacity, resilience and sustainability, so that problems come out when certain limits are surpassed. Although these are site specific problems, in general “it is clear that economic priorities have taken precedence over social and environmental concerns. What is also clear is that, although relative, more and more destinations may face these issues if action is not taken” [22].

In [8] the most frequently cited solutions for dealing with overtourism issues are outlined: dispersal of tourists, de-marketing, responsible marketing to attract a different type of visitor, limiting numbers, facility provision, imposition of controls, information/education (for tourists and residents), taking a long-term view in planning and management, resilience rather than sustainability. Within this framework, new technologies, as a transversal factor, have a valuable role to play, if efforts in this field are aligned with a long-term plan to combat and mitigate (even prevent) overtourism troubles. The examples collected here can illuminate their potential, being aware that technology will not solve all the problems and that its effectiveness will be adversely affected if these initiatives are isolated and uncoordinated.

Nevertheless, the experience gathered on managing the problems that overcrowding is causing in tourist destinations of any type, including cities (where this is becoming a major issue in more and more cases across the globe), leads us to conclude that not simple solutions exist. By the contrary, a holistic approach and long-term planning are needed. In any case, a significant improvement will take time and conflicts will be unavoidable in this process, so that the ability to dealing with them is critical. More specifically, remedies will require: a creative tourism management, fixing pricing failures, regulation and encouragement of cooperation among stakeholders, a reliable measurement of impacts and a significant effort for educating tourists -Venice with its #EnjoyRespectVenezia campaign (<https://www.comune.venezia.it/en/content/enjoyrespectvenezia>), Iceland with its “Icelandic pledge” (<https://www.inspiredbyiceland.com/icelandicpledge>), and Lisbon with its ‘we hate tourism’ tours (<https://www.independent.co.uk/travel/europe/lisbon-tourists-we-hate-tourism-tours-locals-responsible-travel-portugal-a7919571.html>) are good examples-. Even some experts argue in favour of a strategy of degrowth: “The conflicts represented by overtourism are a wake-up call; pursuing equitable and just degrowth strategies will be increasingly vital if tourism is to have a sustainable future” [23].

It is also worth to mention a new approach that came out very recently, with a different perspective of this problem, named as “Planet Happiness”, which “provides a methodology and resources to enable host communities and wider stakeholders to guide tourism development away from overtourism and towards destination happiness, well-being and sustainability” [24].

Finally, going back to new (smart) technologies, some qualified voices warn that “technological or smart solutions alone will not solve overtourism—The importance of technological solutions to combat overtourism should not be overestimated, given that the issue of overtourism is largely social in nature—different groups of city users sharing and competing for the same space. In addition, new technologies also lead to or intensify specific issues in the city (e.g., sharing economy accommodation platforms)” [9].

Likewise, the UNWTO is crystal clear to this respect: “Technological or smart solutions alone are important but will not solve the issue of tourism congestion. Smart technologies are considered the most effective solution to tackle congestion management. Yet notwithstanding the immense potential benefits of such tools, they alone are not enough. Addressing the challenges facing urban tourism requires intense

cooperation between multiple stakeholders, which is a long-term effort, particularly if stakeholders have conflicting interests” [14]. A broad alliance with society seems, therefore, essential. In other words, a public-private-people partnership, where local communities (people) cannot be absent.

This perspective is reaffirmed by Milano, Cheer & Novelli [25] when they state: “Planning strategies to deal with overtourism or solutions tied to use of smart technologies might help in the short term, but adequate long-term solutions require policy maker interventions rather than simply relying on technical and industry-driven approaches. As far as policy maker interventions are concerned, nothing less than a paradigm shift is needed to move from simply associating tourism success with simplistic appraisals of tourist arrivals and their associated expenditure, and instead to give hosts (and wider social-ecological concerns) due consideration”. This is the real dimension of the challenge, much beyond technologies.

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