

CULTURAL HERITAGE EXPERIENCES AT THE SMART AIRPORT

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Abstract:

In the current context of energy crisis due to the Ukraine war and in a highly competitive environment, improving passenger satisfaction at the airport is essential to guarantee its profitability and survival. On the other hand, the airport is an ideal space to show the cultural heritage of the region where it is located. Passengers in transit, who do not know an area in question, can make the decision to revisit it alone or in company, attracted by what they have learned about it at the airport. The smart airport, with its technological advances and different devices, can provide cultural experiences far superior to the traditional ones in terms of quality, immersion and enjoyment. This paper identifies these devices, and proposes and analyzes, in the light of Pine and Gilmore's Theory of Experience, actions in the smart airport to turn it into a space for the spread of cultural heritage, as well as memorable experiences that induce the passenger to visit and revisit that country. The airport so designed, produces direct benefits, since some of the proposed experiences reduce stress, which increases store sales, and indirect benefits, since it publicizes certain services in the country, such as restaurants, and can increase exports of typical products.

Keywords: Urban development; Smart airport; Air transport; Cultural heritage; Tourism

EXPERIENCIAS CULTURALES EN EL AEROPUERTO INTELIGENTE

Resumen:

En el actual contexto de crisis energética debida a la guerra de Ucrania y en un entorno altamente competitivo, mejorar la satisfacción de los pasajeros en el aeropuerto se hace fundamental para garantizar su rentabilidad y su supervivencia. Por otra parte, el aeropuerto resulta un espacio ideal para dar a conocer el patrimonio cultural de la región donde se ubica. Pasajeros en tránsito, desconocedores de la zona en cuestión, pueden tomar la decisión de revisitarla solos o en compañía, atraídos por lo que han conocido de ella en el aeropuerto. El aeropuerto inteligente, con sus avances tecnológicos y diferentes dispositivos puede proporcionar experiencias culturales muy superiores a las tradicionales en calidad, inmersión y disfrute. En este artículo se identifican estos dispositivos, y se proponen y analizan, a la luz de la Teoría de la Experiencia de Pine y Gilmore, una serie de acciones en el aeropuerto inteligente para convertirlo en un espacio de difusión del patrimonio cultural, así como de experiencias

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memorables que induzcan al pasajero a visitar y visitar ese país. El aeropuerto así diseñado produce beneficios directos, ya que algunas de las experiencias propuestas reducen el estrés, lo cual aumenta las ventas de las tiendas, y también beneficios indirectos puesto que publicita ciertos servicios de la zona, tales como los restaurantes, y puede incrementar las exportaciones de productos típicos, los ingresos por turismo y contribuir a la sostenibilidad del sector turístico de ese país.

Palabras Clave: Turismo, Aeropuerto Inteligente, Patrimonio Cultural, Teoría de la Experiencia, Tecnología

1. INTRODUCTION

In this work, an smart airport model is proposed that brings the cultural heritage of the region where it is located to the passenger. It should be noted that the model is applied to the land side of the airport, that is, the area where the terminals, security control, baggage delivery, boarding gates and leisure and restaurant services are located. This model produces multiple benefits, since, as it will be discussed below, some of the proposed facilities reduce stress, which increases store sales, attracts tourists and advertises certain services in the country, such as restaurants, and can even increase exports of typical products.

Although we can find some partial initiatives in different airports around the world, there is currently no airport designed as a tool for disseminating the cultural heritage of the place where it is located.

The cultural smart airport plays an essential role in the promotion of the destination where it is located. The airport can be used as a showcase for the country to which it belongs. The first and last perception that a passenger has of a tourist destination takes place at the airport. For this reason, passenger satisfaction at the airport is one of the ways to increase the competitive advantage of both the airport itself and the destination tourist next to it (Rendeiro Martín-Cejas, 2006). The impression of a experience as memorable impacts on the intention to recommend the destination and to repeat the visit (Ali, Ryu & Hussain, 2016; Oh & Fiore, 2007; Hossany & Witham, 2010). On average, when satisfaction increases by 1%, non-aeronautical revenue increases by 1.5% (Airport Council International, 2018). The correlation is stronger than that of adding retail space or an increase in the number of passengers. This suggests that if airports invest in satisfying the service expectations of passengers, everything else being constant, passengers will spend more.

Smart airport is a concept that comes from the Smart City, understood as the one that uses technology for the benefit of the citizen (Caragliu, Del Bo & Nijkamp, 2011; Komninou, Pallot & Schaffers, 2013). Therefore, it is a much broader term than Airport 4.0, since, like tourist destinations or smart cities, it has many facets.

Boyd Cohen creates the Smart City Wheel as a tool for developing and monitoring Smart City strategies (Cohen, 2012). In his Smart Cities Wheel model identifies six key dimensions: “smart economy, smart environment, smart governance, smart living, smart mobility and smart people” along which cities can be identified or ranked. These dimensions can be equally applied

to the smart airport, and this job focuses on smart living dimension, which is the one that refers to building a brilliant cultural community and improving citizens' quality of life in terms of health, safety and welfare. Customer experience is much more than customer service; it is a holistic view of the way the passenger lives and feels within the airport. Moreover, customer experience is all about emotions.

Traditional heritage envisionment involves legacies of the past that are considered important and should be preserved in the present for future generations. However, currently notion of ‘heritage’ in tourism has been broadened with new manifestations, reaching new meanings (Zhang, 2017). Intangible cultural of heritage is of the utmost importance in tourism, as many studies have stated (Casey, 2013; Chen, Suntikul & King, 2020; Esfehiani & Albrecht, 2018; Park, 2011; Su, 2019). Since the end of the twentieth century the rising importance of cultural heritage has been reinforced with the acknowledgment and protection of other typologies of heritage, such as intangible and natural heritage (Suárez, Alonso, & Sendra, 2013).

According to UNESCO’s universally accepted definition, the term “Cultural Heritage” refers to several main categories of heritage (UNESCO, 2017). It is a prerogative of every country to establish its own terminology and interpretation of heritage, so, there is no common terms, scope and terminology (UNESCO, 2003). All the elements corresponding to these categories can have their representation at the smart cultural airport.

Historically, the role of airports have been to transport passengers and their luggage as quickly and efficiently as possible (Florido-Benítez, del Alcázar & González, 2014). Initial design guidelines were focused on facilitate the transit of passengers in a strained way (Odoni & de Neufville, 1992), therefore, most terminal buildings were designed like this (Adey, 2008)). All efforts were aimed at the traveler spending as little time as possible at the airport, because it was considered a cumbersome and unpleasant experience, a waste of time.

The atmosphere of terminal buildings affects the mood of consumers, either encouraging them to stay in the retail zones or discouraging them from doing so (Puccinelli et al., 2009). Reducing passenger stress increases the airport revenues from retail; that is why it is important that the design of the terminal induces relaxation (Adey, 2008; Lin & Chen, 2013). Travelers prefer greenery on airport passengers’ areas (Van Oel & van den Berkhof, 2013) as well as in malls (Chebat & Morrin, 2007).

Different authors consider the airport from different perspectives. Augé (1992) understands airports as “non-places” where the intricate game of identity and relationship is constantly reinscribed: “If a place cannot be defined neither as a space of identity nor as relational nor as historical, will define a non-place”. According to Bitner (1992), the airport is a physical space with a series of tangible or intangible services that he baptized as servicescape; a holistic space where signs, symbols, instruments and people interact as a whole. Blichfeldt study participants agree that airport terminals make generic environments; they simply do not see much difference from one to the other (Blichfeldt, Pumputis & Ebba, 2017).

However, the cultural heritage of the territory where an airport is located, together with technology, can make it a place with capital letters, a historical, relational space, with an identity and life of its own that tourists do not want to leave and that even attracts people who are not going to take a plane but want to visit it. Not only does the airport improve, but the city where

it is located is also made known. Properly designed, a modern airport is a glamorous symbol of modernity, which can differentiate a city from its rivals and validate its “Intelligence” (Huston, 2015). In this way, feedback between airport and territory is produced.

In this work we propose an airport model that embraces the cultural heritage of its surroundings in all its extension, using all available technology to improve passengers experience and their knowledge of the area they are going to visit. Some partial initiatives already exist in different airports around the world, for example, figures and fabrics by musqueam of the Coast Salish and a small local forest are displayed at the Vancouver International Airport and butterflies flutter in an indoor garden at Changi airport in Shanghai; but not a comprehensive cultural design.

2. METHODOLOGY

This research uses a methodology that can be considered non- experimental, descriptive and of a qualitative type. Based on the observation of certain needs of the tourism sector and the dissemination of cultural heritage, the concept of cultural smart airport has been built and its constituent elements have been determined.

Conceptual research is essential in analytical research (Leuzinger-Bohleber, 2004); establishes new ideas and reconstrues existing ones (Kothari, 2008), characterizes complicated ideas and develops new ideas as a combination of existing ones (Xin, Tribe & Chambers, 2013). It can offer new understandings to problems, new line of research and build bridges between different disciplines (Leuzinger-Bohleber & Fischmann, 2006), or *indiscipline*, as Tribe described tourism (Tribe, 1997).

The objectives of this work are to identify elements and devices in the smart airport with which to bring the local cultural heritage closer to the passenger and to propose an airport model that embraces and disseminates cultural heritage and attracts tourists to the area where it is located.

3. EXPERIENCES IN TOURISM

Cohen (1979) defines the tourist experience as the relationship between the person and their view of the world depending on its location with respect to the society to which he belongs. Holbrook & Hirschman (1982) defend moving from product marketing to the world of experience, understood not only as information processing, but also as pleasure and enjoyment of the senses.

Havlena & Holbrook (1986) found three factors that describe the emotional nature of consumption experiences: pleasure, arousal and dominance. Pleasure measures the happiness or satisfaction of a person by a situation; arousal, if the situation is stimulating, and dominance measures whether he or she perceives that the situation is under his or her control.

Otto & Ritchie (1996) identified six fundamental dimensions of construction of a quality tourist experience: hedonistic, social or interactive, search of the novelty or dimension of escape, comfort, safety, and seeking stimuli or challenges. (Smith, 1994) considers that the tourist experience is the tourism product.

The Experience Economy Theory of Pine and Gilmore (1998) proposes to increase the value of services that a company offers by upgrading them to experiences and defines an experience across two dimensions: customer participation and connection (the client's relationship with the environment), being passive participation and absorption the lowest degree of participation and connection, and active participation and immersion the highest (figure 3). So, experiences are sorted in four wide categories: entertainment, educational, escapist and esthetic. Escapist experiences are the most participatory and immersive. To design an experience, it is necessary to detect the needs of the consumer, script it and stage it (Pine & Gilmore, 1998; Pine & Gilmore, 1999).

Based on the detected needs for the spreading of cultural heritage and reactivation of the aviation and tourism sectors and in order to study the feasibility and convenience of including these elements and the different devices to be used, as well as their impact on the well-being of passengers, a review of the scientific literature related with each element has been carried out. Elements of the model are analysed in the light of the Experience Economy Theory.

4. FACILITIES AND EXPERIENCES AT THE SMART CULTURAL HERITAGE AIRPORT

Proposals for different facilities that bring cultural heritage closer to the airport are described below. As far as possible, they should be in common areas, so that the passenger does not have to access them, but rather finds them and walks through them on his way through the airport and immerses himself in the culture in question. Its location will depend on the characteristics of each infrastructure and its architectural design.

4.1. Art exhibitions

Amsterdam Schiphol Airport has its own Dutch master's gallery run by the famous Rijksmuseum. Las Vegas McCarran Airport runs the Howard W. Cannon Aviation Museum, that is always open. But to see them, it is necessary to have time to access the gallery. We propose that the local art be in the different airport halls, so that even the traveller who is not very interested can be surprised by the beauty of the different pieces.

To preserve works of art in crowded spaces as a terminal, where they can be damaged, painting, sculpture and architecture may be represented in the smart airport through different displays. LED screens enables exhibit paintings in any size and even with movement. Using a spinning screen, a 360-degree scene can be displayed floating in the air (Xia et al., 2013) Water screens are also an appealing way of showing pictures. Sculpture reproductions may be placed at different points of airport and archeological buildings can create a nice atmosphere at boarding gates. For example, boarding through a reproduction of the columns of the city of Pergamon in Berlin Brandenburg airport could be an unforgettable experience.

Virtual reality booths are a very versatile device in this project, since they can be used to show both paintings such as landscapes, architectural heritage in their environment and even industrial heritage. These booths make possible to use all five senses to produce a sensation of immersion. There are several definitions of virtual reality that differ in the characteristics required to consider an experience as virtual reality (Burdea & Coiffet, 2003; Mario Gutierrez & Vexo, 2008; Vince, 2004). Guttentag (2010) defines Virtual Reality as the use of a 3D Virtual

Environment generated by computer in which you can navigate and with which you can interact. Virtual creates an immersive experience (Rebelo, Noriega & Duarte, 2012). The user's sense of "presence" is determined by the immersion level offered by the VR system (Baños et al., 2004). Like VR, "presence" has been defined in different ways (Lombard & Ditton, 1997), but "the general opinion is that presence is the feeling of being in a virtual environment rather than where actually the body of the participant is found" (Sanchez-vives & Slater, 2005).

The visual aspect of virtual reality tends to be the most striking, but an audio element is also very important in creating realistic virtual environments. Similarly, it is important to consider directionality, since sounds can come from different points in the VS (Mario Gutierrez & Vexo, 2008; Tsingos et al., 2004). Likewise, researchers have developed "touch devices", such as gloves to reproduce the sensation of force, as well as thermal and pressure signals that mimic the weight of an object (Guttentag, 2010; Vince, 2004). The user's sense of presence can be improved by olfactory simulation (Dinh et al., 1999). Typically, it is accomplished with olfactory devices that spray certain odors onto a specific area or target (Washburn & Jones, 2004). Olfactory devices have been developed capable of storing and reproducing a wide variety of scents, such as citrus aromas, mixing up to ninety-six elements (Boyd, 2008; Greimel, 2006; Somboon, Wyszynski & Nakamoto, 2007; Wyszynski, Yamanaka, & Takamichi, 2005).

Research on taste and VR is even scarcer than those on odors (Washburn & Jones, 2004; Mario Gutierrez & Vexo, 2008). However, a group of researchers has developed a quite successful "Food Simulator" that simulates the sensation of taste by injecting a small amount of flavored liquid into the customer's mouth. This liquid was synthesized from the main types of flavors to reproduce apple cookies or jellybeans (Iwata, 2004).

Another possible device that can be included is a detailed replica of the airport city which can be interactively explored using an iPad with different digital points of interest containing text, videos and 3D animations. The possibilities are numerous: There may be smart windows over the vertical garden, greenhouse, or both, where visitors are informed of the native plants and animals they are viewing using augmented reality technology, and seater virtual reality simulator, complete whit hydraulics, or virtual reality booths can offer visits to places of cultural interest and tourist establishments in the country.

4.2. Local flora and fauna

4.2.1. Vertical greenery systems

Studies on vertical greenery systems have been published in different disciplines, such as architecture, engineering, agronomics, sustainability, management, and environmental psychology, using various to describe them: living walls, green walls, biofaçades, green façades, vertical hydroponics, vertical landscapes, vertical gardens and vegetal façades (Ghazalli, Brack, Bai & Said, 2019). They are a way of bringing natural heritage of the area where the airport is located by planting local vegetation, thus showing the flora of the area to the passenger.

And they have many other benefits: they can be used to ameliorate thermal properties and to reduce unwanted noise. They also embellish the environmental aspect and improve the acoustics of indoor spaces or public areas such as urban squares (Davis, Tenpierik, Ramírez & Pérez, 2017; Guillaume, Gauvreau, & L'Hermite, 2015; Veisten et al., 2012) what is of the

utmost importance in airports, where noise levels are very high. They have been successfully used to upgrade thermal properties and as a passive energy saving system (Alexandri & Jones, 2008)(Coma, et al., 2017); (Raji, Tenpierik & van den Dobbelsteen, 2015). They finally have proved been useful to improve air quality and having positive psychological effects on people.

Traditional green façades, that is, those formed by climbing plants that grow on the wall without any subsection system, have troublesome such as damage to the wall materials, high maintenance costs and animal attraction. But today there are other systems, such as green curtains, double-skin green facade or living walls. Living walls are those made of panels and/or geotextile felts, sometimes pre-cultivated, which are fixed on the wall structure or to a vertical support. In our case, systems with substrate are more recommended, since they can reduce noise by up to 10 decibels (Pérez et al., 2011).

In the eighties, the use of plants for solar control began to be studied. Different uses of plants were chosen to study how they reduce solar radiation, minimize the cooling load and ameliorate the indoor and outdoor temperatures with notable results (Hoyano, 1988). When using vegetation as a modifier of wind in buildings, care must be taken not to block ventilation in summer and not to promote air circulation in winter.

Plants in cities help mitigate contamination since they increase the surfaces where pollution particles can be deposited (Weber, Kowarik & Säumel, 2014), what improves air quality. Plants on building façades can protect historic walls by adsorbing these particles (Sternberg, Viles, Cathersides & Edwards, 2010). Plant leaves provide an excellent surface for pollutants and other particles to settle and be filtered, as has been demonstrated by scanning leaves of outdoor vertical garden systems. Electron scanning images of this leaves evidenced their effectiveness as particulate sinks (Ottelé, van Bohemen & Fraaij, 2010).

Different studies find an innate relationship between human beings and nature by analyzing the positive reactions and responses of individuals toward nature (Kaplan, 1995; Ulrich, 1986). Natural environment can ameliorate emotional state, condition and attention (van den Berg, Koole & van der Wulp, 2003; Herzog & Maguire, 2003), with the advantage that small green spaces produce the same benefits as larger ones (Perschardt, Schipperijn & Stigsdotter, 2012). In this way, the stress-reducing ability of a vertical greenery system can be the same as that of a park.

Traditionally, vertical gardens have played an aesthetic or, at most, an educational function. Participating in the care of the gardens by planting new specimens or grafting cuttings constitutes an escapist, participatory and immersive experience.

4.2.2. Greenhouse

Human contact with nature has been shown to assist human health (Frumkin, 2001). Theories about the restorative value of nature propose that contact with unthreatening nature improves physical and emotional recovery after stressful situations, and helps to recover depleted cognitive abilities, and support rapid emotional and physiological recovery from stressful events (Berto, 2014). Beautiful and well-designed green spaces can promote mental health (De Vries, van Dillen, Groenewegen and Spreeuwenberg, 2013).

Green spaces reduce stress and increase well-being (Tzoulas et al., 2007; Hartig, Mitchell, De Vries & Frumkin, 2014; Van den Bosch & Sang, 2017). Natural environment with plants and water reduces fear and anger, quickly relieves illness and reduces stress (Ulrich et al., 1991). It has relaxing effects on physiological responses such as lowering heart rate and lowering cortisol levels (Hartig et al. 2003; Berman, Jonides & Kaplan, 2008; Ulrich, 1981; Ulrich, 1984; Annerstedt et al., 2013).

A beautiful garden must have color. The color is provided by the flowers, which must be placed creating a pleasant harmony. If we want to improve it, it must also have a smell and for this we must place the plants correctly. But to be wonderful, it must also have music, which will come from fountains and waterfalls.

4.2.3. Local fauna display

After psychological stress, physiological recovery is faster during exposure to pleasant nature sounds (Alvarsson, Wiens & Nilsson, 2010). Bird sounds improve attention restoration and stress recovery (Ratcliffe, Gatersleben & Sowden, 2013). Interaction with fish in aquariums reduces anxiety (Buttelmann, 2014).

Many people feed wild birds because doing so brings them pleasure (Galbraith et al., 2014), while watching wild birds feeding is associated with increased relaxation (Cox & Gaston, 2016). Viewing fish in aquariums decreases blood pressure, increases relaxation (Riddick, 1985), improves affective state and reduces levels of arousal. People attending an aquarium exhibit enjoy watching the exhibit, find it interesting, feel better after watching and would be happy to watch again (Cracknell, White, Pahl, Nichols & Depledge, 2016).

Insects, fishes, or little animals can live in the greenhouse or in the ponds inside it. For the passenger, take a walk through the greenhouse observing them is an esthetic activity, immersive but not participatory. The level of participation can be increased by information activities about the animals or allowing passengers to feed or pet them, in case it is possible without harming the animals.

4.3. Gastronomy

Eating is a basic human need (Kumar, 2019) which is why all tourists are, to a certain extent, customers of their destination's gastronomy. There are different types of tourists according to their attitude towards gastronomy (Boyne, Hall & Williams, 2003) (Özdemir, & Seyitoğlu, 2017), but even those who are not interested in food can participate in gastronomic activities and be attracted by the local foodstuff.

Gastronomy is an essential element of intangible heritage, and a powerful originator of cultural identity which has an enormous capability to single out a destination empowering local community (Chang, Kivela, and Mak, 2011). Gastronomic identity may be a strategic resource for destinations (Seyitoğlu & Ivanov, 2020).

Understanding and appreciating another culture involves knowing its gastronomy. Food experience is the result of the interaction of physical, emotional, conductual and social sensations (Mason & Paggiaro, 2012) and may lead tourists to pleasurable sensory experiences, that make them want to recommend the destination and repeat the visit.

Food may strengthen environmental protection and improve the sustainability of the tourism sector. It is therefore a key factor in advertising local products and conquering new visitors (Kivela, & Crotts, 2006; Sidali & Hemmerling, 2014). Some products have their own line of research in tourism, such as extra virgin olive oil or wine. Gastronomy tourism may build inclusive economies as it can raise local businesses, social and economic integration, personal joyfulness, and social development, and promotes the preservation and development of local produce, culinary traditions and know how (UNWTO, 2021).

Cultural contrast adds value to the food experience, helps make it exclusive and meaningful, influences the intention to revisit even if the experience has not been positive, and therefore it influences also in the ‘word of mouth’ (Antón, Camarero, Laguna, & Buhalis, 2019). According to (Cohen & Avieli, 2004) the non-adapted product is preferable in visual experiences, but when the perceived experience depends on the taste, the adapted product is better. However, it is necessary to take into account that certain products can be rejected for some people depending on their culture and religion, for example, European tourists may be disgusted by insects and Muslims may be offended by pork products.

Different actions may be performed in airport, such as showing and selling typical products, that can be reminders of a memorable travel. Famous chefs can perform show cooking and passengers can participate in cooking lessons of typical dishes in a escapist type of experience.

4.4. Music

Embodied cognition theory implies the integration of physical sense and mental state. Embodiment relates to the dynamic tourist body moving through place (Veijola & Jokinen, 1994), which allows us to include other senses in tourism analysis, such as hearing and listening (Waitt & Duffy, 2010). Music is a cultural element that individuals use in the emotional work involved in building their identity.

Music is a cultural resource that individuals use for the self-construction of their identities; is a material that actors use to elaborate subjective stances and identities. Music in tourism stimulates a sense of identity and community, especially through the role of live music experiences (DeNora, 1999).

A concert hall can be located anywhere in the city and fans of a certain artist who performs in it will certainly go, but not the traveler who is passing through. So that music reaches everyone, it is advisable locate free shows at suitable points in the terminals, leisure areas or, if the climate of the region makes it possible, outdoors, in the entrance or in the parking lot. The music is highly immersive, so these experiences are esthetic. To increase participation and achieve escapist experiences, activities can be designed such as classes of the typical dances of the country or offer passengers the possibility of playing local instruments.

4.5. Industrial heritage

Industrial heritage is part of the collective identity of a people, as well as a vector of its history. Although the Industrial Revolution dates back to the eighteenth century, only in very recent years –let’s say at some point in the seventies of the past century—an interest towards the industrial heritage arose widely in the world. According to the UNESCO World Heritage

Centre, the new discipline of industrial archaeology honours the items of the workplace that are as important in our history as others that have received more attention, such as architecture and domestic artefacts.

Our industrial heritage includes not only manufacturing artefacts, but also the social and engineering milestones caused by emerging technologies: neolithic flint, roman aqueducts, railways and other forms of transportation. There is a broad line of research regarding industrial sites, understood as the physical place where production activities were located and the remains of these activities. We can find industrial heritage of all eras, from prehistory to the industrial revolution (Falser & Yang, 2001).

Heritage is able to become a powerful element of human identity, either national, regional or local and, accordingly, industrial heritage, as a part of cultural heritage, is susceptible of becoming a strong symbol of the geographical and social environment where the airport is located (Wicke, 2018). It is without effort that, as a mere exercise of imagination, Manchester can be identified by Ancoats cotton mills (Rose & Falconer, 2011), The Netherlands by the windmills and dams, Pittsburg by its steelmills, Torino by the Lingotto building, Carcassonne by the Canal du Midi and so on. Thus, industrial heritage can be a part of the full set of symbolic elements linking the airport with its surroundings and its social network. Although still a small part of total heritage, industrial heritage is therefore, an element to be taken into account as a means of building identity and integrating the airport in its geographical and social context.

As for the material way of incorporating industrial heritage to the airport toolset for passengers' satisfaction, it is to be noted that many pieces of industrial heritage frequently offer the possibility to be displayed in motion, and even to allow interaction with visitors, thus appealing to some strong human feelings: curiosity and the pleasure of understanding (the way work was done in the past, the way artefacts work, etc.).

Activities that involve gastronomy and industrial heritage can be performed. Elaborating typical products in the traditional way, such as making oil in an oil mill, treading the grapes with feet or distill whiskey in a pot still, with a subsequent tasting, are highly participatory and immersive experiences.

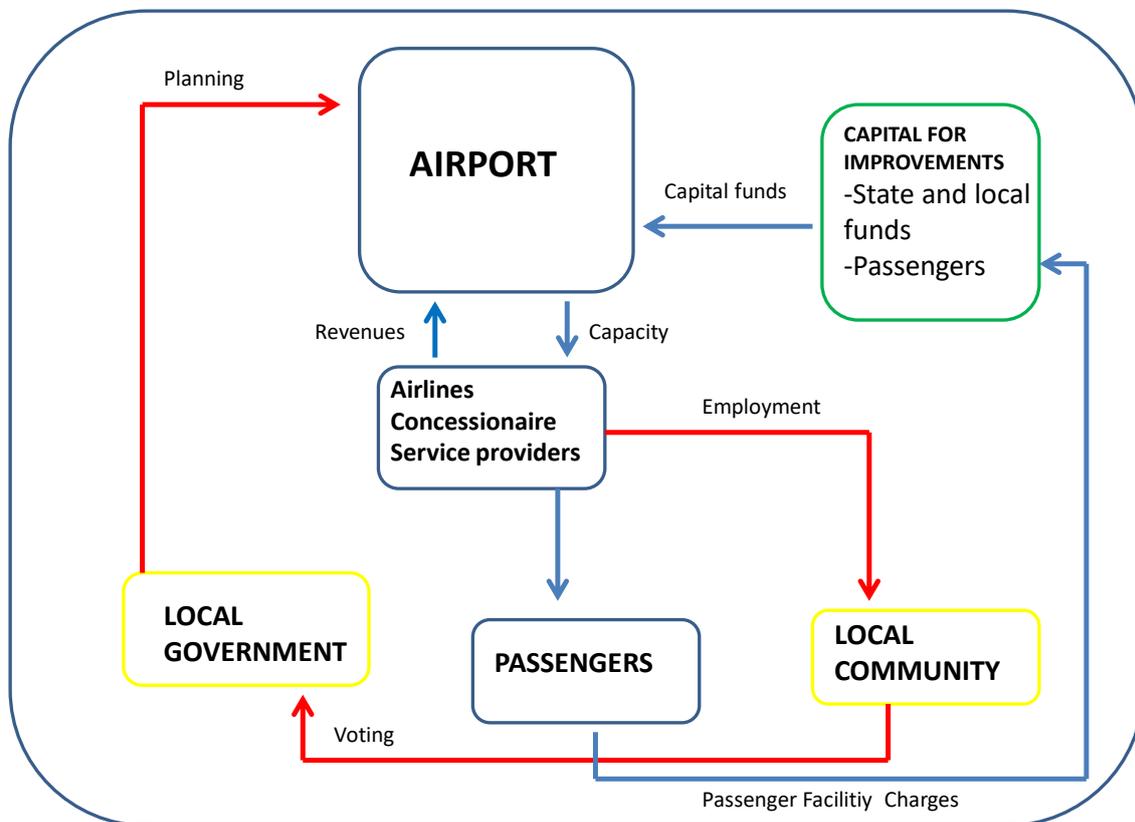
5. STAKEHOLDERS AT THE SMART CULTURAL HERITAGE AIRPORT

Airports in Europe and the United States are a public service, and therefore must serve to all stakeholders. Figure 1 shows the relationships between the main stakeholders of the airport.

Airport revenues can be classified as aeronautical operating, nonaeronautical operating and nonoperating revenues, which are mainly grants and passenger facility charges (figure 1). Airlines and concessionaires are customer of airport; they pay it and demand good services and more capacity. An appealing airport is a claim for these companies. Memorable experiences will generate more business incomes.

More traffic in airport also means more revenues. The capacity of the airport is increased with improvements and expansions financed with these revenues and with funds from central and local governments. These improvements, in turn, will increase airport revenues, both through revenue from non-airport operations and passenger facility charges.

Figure 1. Stakeholders of the Model



Source: own elaboration

Local governments are elected through the votes of the local community, and they are responsible for improvements at the airport. Service providers, airport concessionaires and origin and destination passengers are part of the local community, as well as certain pressure groups with diverse interests: ecologists, cultural or business associations.

Local community has a paramount importance in the model. The airports employ the surrounding inhabitants, who vote for the local governments in charge of planning reforms and improvements in the airport. In addition, the airport purchases goods and services from local suppliers, which contributes to the economic growth of the area. This model provides the local community with a way to promote and export their products.

Governments may decide to invest in an airport not only for its possibilities as transportation but for its role in promoting culture.

6. CONCLUSIONS

This work provides a new means to spread the cultural heritage as well as a theoretical design for that spreading that is the concept of Smart Cultural Airport within the framework of

the Experience Economy Theory. The current study identifies actions and devices to create new experiences at airports. Previous researchers have focused mainly in airport marketing, but not on the potential of the airport to create new and memorable experiences that attract new visitors to the country where it is located.

Likewise, it constitutes a contribution to the well-being of passengers and the economic and social development of the inhabitants of the areas near the airports. It helps to the resilience of the country's economy, since the better its transportation, the better its ability to recover from different disasters.

The design proposed in this article can be adapted in hundreds of different ways to enrich the passenger experience at almost any airport. The joint effort of professionals from different disciplines (tourism scholars, architects, agronomists, aeronautical engineers and biologists) can prove useful to design heritage smart airports. That is why future studies should analyze each proposed action deeper.

The costs of realizing this model may be too high to address all at once; elements and activities can be added after its initial launch. Local companies and artisans can benefit from carrying out promotional actions at the airport within their own advertising and promotion policies. Municipalities, state entities and cultural associations may also wish to participate by promoting their heritage. Some actions will be punctual (such as the tasting of typical products), and others, such as facilities for animals, must be permanent. Thus, the financing of this model can rest on all these stakeholders.

In order to be legitimised, results obtained by conceptual reflections often have to be tested in practice (Xin, Tribe & Chambers, 2013). Therefore, the smart airport model should be tested empirically as soon as it becomes a reality. In the same way, it must be proven and quantified to what extent it favors the region where it is placed and the indirect income it generates.

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