Background information

Over the last few years, many changes have taken place in the tourism sector with the objective of adapting to the development and use of new technologies, giving rise to different approaches in working methods as well as in the strategies that companies have implemented to broaden their offerings to new consumers.

Information and communication technologies constitute a whole set of electronic tools that facilitate the operational and strategic management of companies, allowing them to manage information, functions and processes, as well as to establish interactive communication with other interested parties, in order to achieve their mission and objectives.

While information and communications technology are not a miracle formula and by themselves do not guarantee financial success, ruling out their use or taking advantage of them only in a limited manner can generate substantial competitive disadvantages.

For the tourism sector, information is undoubtedly important given that it is an information-intensive sector, characterized by the immediate dissemination of innovations in technology, which has led to greater efficiency in production, an increase in the quality of the services provided as well as the emergence of new products.

Technology, therefore, is essential for the operation of tourism and for its development, as well as to boost tourism activity and help the sector as a whole.

Innovation and technology have changed the profile of the traveller in recent years, who is hyper-informed, and independent—a digital traveller who expects to receive a personalized service, needs to be permanently connected and demands authentic experiences, destinations that offer a differentiated tourism offering, consistent with the natural, social and cultural environment.

In addition, the most characteristic feature of this evolution is the continuous exposure of destinations and industries of the sector in general, due to the amount
of images that consumers generate and publish. The triangle of social networking, geolocation and tourism is undoubtedly a great opportunity for business in the sector as they are instantly visible to everyone, showing the world their facilities and services and interacting dynamically in real time.

**ICT and tourism observatories**

Information and communication technologies can contribute to the value chain of products and services, either by reducing costs or by differentiating them in this regard. Thus, they reorient competitiveness and therefore have strategic consequences for the prosperity of enterprises. The ability of enterprises and tourism destinations to use these technologies strategically and tactically with a view to improving their position in the market will increasingly determine their level of competitiveness.

Only organizations and tourism destinations that can take full advantage of these opportunities will be able to capitalize on future benefits and improve their competitiveness. Social media offers destination management organizations (DMOs) a tool to reach a global audience with limited resources.

Destinations require a comprehensive renewal that does not repeat or merely modify old patterns. The ultimate goal is to make the destination sustainable in the long term economically, socio-culturally and environmentally. In this changing context, where new offerings appear every day around the world, it is essential to reflect deeply on these new models.

The use of sustainable tourism indicators is essential for improving the effectiveness of tourism policy planning and destination management. It is essential that decisions be taken more and more based on real data and that regular and timely measurements be carried out to enable responsible policy-making and tourism management at the local level.

At present, the role and the new opportunities of non-traditional data sources are essential in measuring the impact of tourism on destinations, such as social network analysis, geospatial data maps, the use of live data and data intelligence, as well as the analysis of credit card spending patterns and the movements of visitors based on information from mobile devices. To this end, in 2014, the UNWTO Observatory Network (INSTO) was created. The Network includes destinations around the world that have made a commitment to regularly monitor tourism in order to better understand the use of resources in the tourism destination entire environment and to promote responsible tourism management.

**Big Data and Tourism**
In recent years we have witnessed an unprecedented transition in our history: data of diverse nature on human behaviour has gone from being a non-existent or very scarce resource to being available in massive amounts and in real time.

The analysis of aggregate data on large-scale human behaviour opens up extraordinary opportunities for us to understand and model patterns of behaviour, as well as to assist in decision-making, so much so that we are no longer the ones making decisions—decisions are determined by algorithms constructed from the data.

The potential of data to help improve the world is immense in many areas including public health, response to natural disasters and crisis situations, citizen security, global warming, education, or urban planning. In fact the use of Big Data is a central element in the 17 Sustainable Development Goals: data—and the conclusions that can be reached through its analysis—are and will be a key element to help us address the major challenges we face.

In the case of tourism we should keep in mind that Big Data offers our sector an excellent opportunity with the concept of Smart Cities and, more specifically, in the so-called smart destinations. These are territories with a sufficiently advanced and integrated technological infrastructure to guarantee their sustainable development and, at the same time, facilitate the experience and interaction between the territory and the visitor.

Therefore, companies and managers of the destination must evolve to be able to respond to this new traveller throughout the travel cycle. A destination capable of innovating by implementing new systems that facilitate the analysis of multiple sources of information (Big Data, Business Intelligence) and allow them to be more efficient and competitive.
New Platform Tourism Services

Consumer trends are also changing the landscape of tourism. Trips are getting shorter and people are looking for unique and personalized experiences in alternative destinations. The growing demand for unusual tourism experiences extends to tourist services. Peer-to-peer exchanges help facilitate such experiences and offer an alternative to more traditional tourist services.

The growing importance of digital technology and social networks in tourism, generate challenges and opportunities for national and regional tourism administrations and tourism enterprises. These trends in consumer behaviour and expectations in relation to the digital economy require a major shift towards digital marketing and promotion, but also in relation to capacity building and product development.

Digital platforms for renting private accommodation such as Airbnb or transport like Uber are challenging traditional operators in their development and operations.

The rapid growth of the sharing economy provides an opportunity for governments to reflect on how tourists experience their country and how citizens can benefit from participating in this new form of economic activity. However, it poses a challenge for incumbent operators and raises broader issues on consumer protection, taxation and regulation. In this rapidly moving environment, careful reflection is needed to establish the appropriate policy responses.

The new platforms of tourism services are manifested mainly in four sub-sectors of tourism:

- Accommodation, with short-term rentals of all or part of private accommodation. A small number of platforms dominate the market: Airbnb has nearly 2 million properties in more than 190 countries and is the third most valuable venture capital company in the world with an estimated value of USD 25.5 billion in June 2015.
- Transportation includes ride sharing, tours or bike sharing. The Uber service platform operates in about 400 cities in 68 countries and was valued at USD 62.5 billion in January 2016.
- Food and sharing platforms include EatWith, BonAppetour and Feastly, which deal in buying home-made meals or attending dinners hosted by local residents.
- Travel platforms include itinerary planning and visits by locals offering personal and personalized experiences, including Vayable, ToursByLocals and VoomaGo.
Opportunities and challenges for the tourism sector economy:

Opportunities stemming from the dynamic growth of the sharing economy include:

- Expand and improve consumer choice, travel experiences and cultural exchange;
- Increase the market for tourism services, especially among younger travellers; or
- Spreading tourism to less visited areas where new investments are limited

However the challenges are also evident and include the following aspects:

- Risk of unfair competition for traditional regulated companies;
- Decrease or breach of tax requirements that leads to loss of tax revenue; or
- Impact on local communities and disturbances to neighbours in areas of high supply.