

# THE BIG DATA REVOLUTION IN TOURISM



What real and tangible advantages does Big Data bring for tourism?  
What are the business opportunities offered by this technology?

As a first consequence, digital transformation and technological advances can radically change the way people consume and get informed. A digital scenario that brings with it new forms of business management. **To ensure their survival, all businesses are being forced to adapt to the online environment.**

Tourism sector is not an exception. The data analysis benefits tourism in all its areas, exploiting its possibilities and presenting new business opportunities.

The implementation of Big Data in tourism means having real-time information about users, their movements and their preferences.

Information about the movement of individual travelers, their buying preferences, their aspirations... these data, if correctly treated, represents a huge advantage for companies in the tourism sector which now have the opportunity to define and optimize their strategies to increase their sales.

The online activity of tourists provides macro data that delivers a better picture of their behavior. Because of that, studies based on surveys or interviews with experts, lacking the necessary objectivity to get conclusive answers on the real situation of tourism now belong in the past.

In particular, this technology allows to gather some parameters which make possible to improve the services, the decision making process and the management of tourism businesses.

Parameters such as the number of visitors, as well as where they come from; the average time people stay according to their nationalities; what are the most common trips in the cities; places preferred by tourists to spend the night; or average expenditure.

## What Does Big Data Contribute to Tourism?

Compared to traditional methods, data analytics provides six important advantages.

Reliability

The data extracted with the Big Data application are based on actual consumer actions and not on data obtained from surveys, predictions or projections. Therefore, the results obtained are objective, not valuations subjected to different interpretations.

#### Representation

The more sources of data collection, the better the sample representation is. A sampling frame based on data accurately gathered which increases considerably compared to that extracted from conventional research studies.

#### Information detail and segmentation capacity

By handling the contrasted data, the information obtained is easily readable and can be converted into more accurate and effective actions which allows optimizing the results of tourism management by knowing in detail what the customer wants.

Thanks to Big Data, companies know the actual volume of customers, their habits and their preferences and, based on it, they can predict, for example, the price that best suits each customer and improve their experience.

#### Hybridization of data with other current or future sources

Both current or future data can be combined with other sources of information such as the social media data or public data. Merging the obtained data with other variables leads to new conclusions. For example, the possibility of having not only an attendance record but an attendance record sorted by time, place of origin and average expenditure.

#### New flows of information

Big Data emerges as a new source of data extraction through technologies that the tourist provides himself (such as card payment or the connection of his mobile device). In addition, the rise of portable technology and the boom of smartphone apps allows to rate and share opinions so the chances of obtaining a much larger sampling frame increases significantly.

#### Chances of new business opportunities

Companies can compare their internal data with the results obtained by applying the Big Data, this allows to determine if the offers are adjusting to the tourists' demands and to have the necessary information to redefine them in case they're not adjusting. This way, the opportunity to innovate, generate new lines of business and to customize the experience of tourists emerges.

### **Challenges to Solve**

The combination of traditional architectures with Big Data management architectures. The gap between the amount of professionals with Big Data knowledge and the large amount of companies dedicated to the tourism sector. Set the data privacy level of the client, as well as the responsible use of the data to ensure the client to benefit without violating their privacy.

Through Big Data, tourism companies will develop a serious, costly, ambitious and highly technological customer understanding work. **The large volumes of data will allow the implementation of highly useful predictive models to improve the efficiency of customer service and the products we all demand.**

In this way, distribution channels will gradually move into the hands of purely technological companies, these are the only companies capable of facing huge investments in the development of Big Data analytics.

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