# **Tourism Distribution Channels: Knowledge Requirements**

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**Abstract**: This chapter presents a summary of the presentations and the discussions concerning electronic distribution channels in tourism and hospitality held at the 2015 t-Forum. Both academics and practitioners examined the present situation and elaborated on the problems and possible ways to overcome them. The main topics that emerged were distribution channels and their best use and optimization, interoperability between the many different technological systems, the need for a standardized representation of data and transactions, and the role of the Internet and Web as source of information useful for market analysis and product planning. Finally, the importance and the necessity of a more intense collaboration among all the stakeholders and between academic researchers and the industry was emphasized. Keywords: Distribution channels; interoperability; standards; big data; collaboration and cooperation

### INTRODUCTION

There is little doubt, today, about the importance of the Internet and the Web for any aspects of individual, social, and economic life. The number of users mean this virtual environment is a wealth making machine, able to contribute significantly to the World's GDP (BCG, 2012). The most recent advance, collectively known as Web 2.0 or social media, have continued this "tradition" of substantial impact, and today it accounts for a large majority of the world's online usage (Deloitte, 2012; wearesocial.sg, 2016). Tourism has been thoroughly affected by these technological developments. The relationship between tourism and information technology has a long history, and tourism has long been one of most important components of the online world, whose impact has profoundly changed the structure of the industry. Online usage lead the development of new market dynamics and consumer behaviors (Werthner & Klein, 1999).

The implications of the information and communication technologies (ICTs) for tourism competitiveness and promotion are globally recognized and have deeply modified the structure of the industry (Iyer, Dey, & Chakraborty, 2015). This is mainly in the area of the distribution, where the advent of online travel agencies (OTAs) has altered the power relationships, the structure of markets, and ultimately the production process. Consumer participation is the main factor

leading these modifications; and is forcing all intermediaries to incorporate ICT solutions into their business practices (Berne, Garcia-Gonzalez, & Mugica, 2012). New challenges and opportunities flow from these changes. ICTs provide the tools and promote tourism demand and supply, and facilitate these endeavors. On the other hand, ICT usage by tourists requires supplies to become more flexible, and provide faster and more efficient responses to customers, while reducing operating costs and offering more competitive prices (Ramos, Rodrigues, & Rodrigues, 2015).

This chapter presents a summary of the presentations and the discussions concerning electronic distribution channels in tourism and hospitality held at the 2015 t-Forum. Both academics and practitioners examined the present situation and elaborated on the problems and possible ways to overcome them. Four main themes emerged: the role played by the main actors in the distribution chain, the importance of sharing knowledge and experiences, the need for a set of standards to help developing and managing online tourism activities, and the significance of the data generated by the incredible usage of online platforms for better and more reliable understanding of the market. Each of these is discussed below.

# ICTS AND ONLINE DISTRIBUTION

ICT is not changing the hospitality sector in itself; it is only a medium. What is inducing change is how customers, guests, or consumers use them. Millennials (also known as generation Y, or people born in the years ranging from the early 1980s to the early 2000s), for example, use smartphones as an extension of their life, lifestyle, and personality. If the integration of ICT into business is not understood—no matter in which business, but particularly in hospitality—the business is heading for failure. The last major transformation of this type was due to the invention of the steam engine which started the industrial revolution. Today a new technological revolution is unfolding. Over the last 20 years, the world of Internet has changed lives worldwide and created a real global market.

Consumers have the power to access and purchase products from any place at any time, providing the tourism industry a real time management issue, as customers want everything "now." They want to get reliable information and immediately make a purchase. This industry is living in the "now" age. This calls for a very high efficiency, as failure in answering a request directly translates into a loss of a transaction. In the past, a bad comment on inefficiency of a business would have been known by a handful of people. Today, if a business gets a bad comment, millions of people are made aware of it in a few hours. All the social environment will know, and significantly will trust what is written, because social friends are considered highly reliable. In 2000, the company of one of the panelists started an e-transformation, backed by a large investment and driven by the consumer. The company created channels and facilitations so that consumers making a decision could use different means to satisfy their needs.

Evolution in this area is very fast. Consider Melia Hotel, for example. From 70% up to 90% of their business was coming through tour operators and they did not actively promote their products online, fearing that this would displease these intermediaries. In less than seven years,

the situation completely changed and now more than 70% of bookings are done direct using mobile devices. The industry now needs a combination of money, technology, knowledge, and relationships with technology developers. Today the main question is "who controls the inventory?" If a hotel opens a booking.com channel and 80% of reservations come from this source, the manager does not care how much the channel charges, as the increase in occupancy pays for it many times over. Many hotels have realized that they have made large investments but do not really control their core business. Players such as Booking or Expedia are not alone any more, as new powerful competitors such as AirBnB are entering the market. The capacity of the "shared" economy for accommodation is now larger than all the hotel rooms available in the world.

A second disruption to the industry concerns Google. If Google enters the accommodation market, it is not clear how a hotel should respond; should the hotel communicate direct to the consumer so the customer can book direct with the hotel. To make the situation more complicated, technology has made huge advancements in cognitive computing and artificial for example, is investing massive resources in "Watson," a intelligence; as IBM. platform which will let people search in a more "natural" way, and which will suggest solutions to their problems. This is not like Google (or some other search engine) where users make a number of searches and receive a series of answers with the best still needing selection. With a Watson-like tool users can receive a few outputs with an evaluation of how good they are, in a way closer to what a human mind is expecting. The choices presented to users are based on their online activities (websites visited, comments posted, messages exchanged, etc.) while using the different platforms; basically interpreting who they are and the way they think and act. The platform is not fully developed yet, but already has been applied in the medical field and is soon to be applied in tourism. Is the industry prepared for this changes? Is it another revolution? The quicker it is possible to understand this new platform, the quicker the industry can respond.

Let us examine a specific area of the tourism distribution system, that of travel management companies (TMCs), which provide added value services for business travel. This is a niche market where the driver of growth is connected to technology. The role of a TMC is to provide not only ticketing services, but instead a full travel consultancy to business companies, helping them lowering travel expenses and providing cost control instruments in order to save money and time. Historically TMC evolution started in the 1960s with the birth of computerized reservation systems, which later evolved to Global Distribution Systems. These gave the opportunity to introduce new elements to classic business-to-business, and recently even for business-to-customer interactions, letting employees plan their own travel, according to their companies' policies. What the TMC market is looking for now is a continuous increase in the sophistication of tools for easing the direct planning activity. For instance, Cisalpina provides a number of solutions for these tasks. A business booking engine manages travel requests and a Hotel Dynamic Rate app optimizes the choice. After booking and the ticket issued, Diogene, an electronic robot starts working, proposing new fares options to the company so that they can cancel and re-book with the new fare (if allowed by the travel policy conditions).

Tourism is transforming. As companies' needs change, it is likely the industry will move from the traditional concept of business-to-business and business-to-customer in the direction of human-to-human relationships. Such a philosophy or practice would suit the business travel market

perfectly well. Human-to-human means having a real personal relationship among companies or between company and tourists. Technologies are, of course, the base, the fundamental instruments to create new approaches in a professional way: linking electronic distribution to human professional contacts. The role Amadeus is playing as an IT company providing technology solutions for the tourism industry, puts it at the center of the travel ecosystem, and gives it a privileged position in terms of assessing and understanding what present and future trends in the field suggest. There is a sort of dichotomy in the tourism market. On one hand, one finds the request and desire of customers for personalization and real time response, interpreting the concept of "nowism" which means getting everything fast. On the other hand, there are companies struggling to understand how they can generate revenues, optimizing their operations (which would imply a strong standardization) and meeting the needs of the customer at the same time.

The more sophisticated and more advanced technological players in the market are the Online Travel Agencies (OTAs). In some countries, like Italy, they have done well in aggregating the travel package which was previously dispersed and fragmented. But now OTAs are facing a big challenge: these companies are providing the same inventory, but they are generally small and competing with a few very large providers, who offer scale and depth of product. They need to deliver services in real time, according to the changing needs of the customer; a challenge also faced by metasearch platforms such as Skyscanner or Kayak. The problem is no longer what distribution channel to activate, as there are many, the difficulty is in choosing the best for contacting and connecting with the customers. Then the problem is how to retain or acquire access at the minimum cost, while at the same time being competitive and differentiated with respect to the others. No one, not even metasearch engines, have found the right balance, allowing long term sustainable revenues growth, combined with a strong connection to the customer.

The technological revolution means distributors have to deal with intermediation and disintermediation while hotels are more easily booked. However, hotels and operators need not only to maximize revenues, regardless of the distribution channels, but also to compete with them, as they provide their own customers with a seamless tourism experience, the very essence that tourists expect. In order to provide a seamless service, a business needs two components. One is technology, an enabler easy to supply but difficult to develop. This is why Amadeus is investing heavily in research and development, and this is one of the reasons why Amadeus is the leading company in this industry. On the other hand, a business requires infrastructure, which is not something that a single private company can provide, as infrastructure requires collaboration between different private and public entities, which, unfortunately, do not necessarily work together.

As an example, Interline is a simple combination of train travels and air transportation, giving thus the customer the possibility to configure a trip using whatever medium of transportation is necessary for reaching a destination. On the technology side, combining these two means of transportation is really easy. What is difficult is agreements between airline and train companies. When it comes to train travel, Italy is a peculiar example, because it is a country having a duopoly of competing brands: Trenitalia and NTV. In markets such as France, Germany, or Spain, only one railway company dictates the rules for this means of transportation. Distributors face the fact that revenues are shrinking while offerings are increasingly standardized. Thus, it is

becoming more and more difficult to find a relevant way of showing the product to the customer, while collaborating with the industry to ensure a seamless experience. This is very difficult and is forcing the majority of the distribution channels, OTAs included. to become a commodity, with the consequences of strong margin reductions. It is a vicious circle, as a company that does not have enough financial resources, cannot afford a higher cost of customer acquisition, and if the company cannot afford it, the customer cannot be attracted. In this sense, customer retention is very important and there is a need to think about alternative ways for products to be distributed. A new era in the airline sector is starting, as airline companies have begun thinking like retailers, using ancillary offers to maximize revenues from each booking. The revenues are (in percentage terms) decreasing, so they really have to use other ways of selling. This is even more complex and difficult when it comes to a broader distribution player in this market.

New travel distribution companies have been successful because not much has been accomplished during the last 20 years by the "standard" tourism operators. At the same time, operators continue to complain about "digital" players. Instead of complaining, it would be better to understand how they work—which is the best way to use and optimize the different channels— and how to target different customers for different purposes. This is not an easy thing to do, but it is what the government should be doing, instead of chasing projects that might give a partial relief for a short period but risk failing in the long run. Governments, industry association, and business groups should be working collaboratively to make a difference.

### Shared Knowledge for Strategic Planning

The transfer of knowledge and experiences is the second important theme. One of the most relevant examples has been the activity of the Laboratory for the Digital Tourism created in 2014 by the Italian Ministry of Cultural Heritage and Activities and Tourism. Its aim was to set an agenda for improving the conditions of the Italian tourism and to shape an integrated digital ecosystem. The operations were guided by a team of experts, chosen by the Minister, which has worked intensely for almost six months as a community. The group included representatives from academia. institutions. and tourism stakeholders (represented the main by associations). This team (in which the authors of this chapter worked) opened the participation to the general public. In the end, more than 300 people contributed their ideas, comments, priorities, and proposals, also providing numerous examples of best practices for the digital promotion and commercialization of the Italian tourism.

A series of public auditions with institutions, stakeholders, and consultants discussed the different items that were then further commented through an online forum. The final document, the Strategic Plan for the Italian Digital Tourism, contains three areas of intervention: interoperability and big data, digital development, and promotion and marketing. These came with more than 30 concrete actions for implementation: (a) interoperability and big data proposed solutions on the issues of tourism digital ecosystem as standards, unique identifiers, points of interest, events, data integration, and digital processes with the aim of understanding and forecasting how tourists behave and which the best framework to create a competitive ecosystem are; (b) digital development

defined actionable proposals for the digitization of public and private operators, for fostering professional skills and education, and lifelong learning in the tourism industry in order to enhance their competitiveness; and (c) promotion and marketing solutions and advanced digital tools for the strategic management, promotion, and marketing of Italian tourism products. The final document (http://www.slideshare.net/MiBACT/ tdlab-piano-strategico-per-la-digitalizzazione-del-turismo-italiano) is important because it has been developed in a participative and shared "public" way, thereby opening the way for a closer collaboration among the diverse components of the Italian tourism.

## **Big Data**

To all practical extents distribution, today, means electronic distribution and therefore there is a need to understand the role of information technologies. Despite all the efforts of researchers and academics, in fact, no one has provided yet a comprehensive and clear definition of tourism. The term is used to cover a number of different objects, activities and businesses that can be examined from different points of view. It may seem that since the phenomenon mainly concerns people moving, everyone is a tourist (Framke, 2002; Leiper, 1979; Pearce, 2012). No matter its definition, tourism was one of the first and most sophisticated users of information technologies (Werthner & Klein, 1999). However, the sector has not fully participated in the recent revolution and has missed out on a number of possibilities (Alford & Clarke, 2009). ICTs, also lack a comprehensive and clear definition and where everything seem to be included since today no activity, object, or phenomenon looks possible without the use of ICT tools.

Tourism processes and services and ICT go together to create an incredible set of possibilities for analysis of data. There is potential for understanding customers, targets, and markets by collecting and analyzing the huge amounts of data produced when customers use the many online applications existing today. Unfortunately, few businesses are effectively using these sources (at least in the tourism arena). Despite the hype and the many calls for the adoption of Big Data methods (see e.g., Davenport,

2013), the tourism and travel industry seems to have few active projects analyzing data, and few studies exploiting the possibilities have been published so far (Baggio, 2016).

Data analysis tools and methods are available suitable for very small organizations, but their adoption still lags behind and many actions are decided based on anecdotic evidence or on hearsay (d'Amore, Baggio, & Valdani, 2015). The industry mostly relies on generic statements, such as the fact that people are using mobile phones or certain other types of devices, but this is not enough, it is necessary to go deeper and try to understand well the customer behavior. Jeff Bezos, sometimes ago, said that he could ship something without even waiting for a formal order (Bensinger, 2014). It looks like a joke, but Amazon has a patent on this system, and they can understand the needs of a specific part of the market so well that they can use this information to feed warehouses in advance. This is the potential of good practices in dealing with Big Data. The effects they could have on the tourism industry can easily be imagined.

Large companies, such as Online Travel Agencies or metasearch, are struggling to understand how they can maximize revenues by better serving specific customer needs. No matter if the player is

a business travel company, an OTA, or a traditional agency, they all are struggling to find the "magical" formula to personalize their services while getting out of standardized products without losing a share of their markets. Technologies and availability of cloud computing, and Big Data can make a huge difference in tourism, a sector which is the most advanced in establishing good relationships with the customers, using personalized and customized data.

## **Interoperability and Standards**

Tourism is the largest e-commerce market, and the digital transformation has changed the way in which travel suppliers compete (Berne et al., 2012; Mariani & Baggio, 2012) and requiring them to make huge investments in both technology and advertising. In the fragmented travel market, one of the priorities is to create a framework of interoperability and standards. Other industries, logistics for example, have defined products with unique identifiers (digitized with bar codes or QR codes). In tourism this could mean giving a recognized digital identification to all the parts of a touristic package: transportation means, hospitality rooms, and more in general points of interest or events.

The market space continues to evolve, because customer are "moving" from desktop, to tablet, experience has become a complicated process. It includes and to mobile. The customer collecting information, searching alternatives, and sharing experiences before, during, and after the trip. Depending on the stage of the customer journey, people switch from one device to another, depending on where they are and what they are doing. They are called "silent travelers" because they no longer ask other people questions, and instead consult technological devices, mostly mobile, and compare prices on metasearch engines. For these reasons innovation in distribution is not only a matter of technologies, but it is more related to different business models or habits and behavior, in a new framework that divide who owns the content from who "owns" the customer. The new frontier is how to tailor services for each individual. The use of personal profiles that give access to distributed, cloud-based repositories, demands stronger security, as very sensible information can be stored such as payments and credit card codes. Personal data possess high value. They can allow building specific dedicated offer and their interpolation with geolocation technology can enable new services. Knowing positions of customers through GPS or via near field communication and proximity hardware, such as beacons, opens a room to a different way to be engaged with customers.

The European Digital Identity is a revolutionary innovation for the identification of individual consumers. It will bring digital and physical market closer together, allowing profiling of tourists by collecting more effectively information about their activities, behaviors, and interests.

Businesses' demands for trust, security, and convenience in online crossborder transactions are increasing and interoperability beyond EU jurisdiction is a must, where the digitalization of processes is strategic for creating yield improvements. The European Commission has noted that in a digital single market, electronic identification and electronic trust services will be key enablers for secure cross-border electronic transactions (see http:// ec.europa.eu/priorities/digital-single-market\_en).

A common electronic identification system offers new business model possibilities, ensuring

that people and businesses will be allowed to use their electronic identification to access public services in other EU countries. This digital system will have the same legal status as traditional paper-based processes. Businesses and citizens will use their credentials for digital interactions and to do online transactions in just "one click," thereby providing certainty of their legal validity. Such electronic identification means higher security and more convenience for any online activity, such as remotely opening a bank account or authenticating Internet payments. Many services such as booking a room or checking-in in a hotel or in a bed and breakfast would benefit. The application of one electronic identification for multiple purposes will increase its value for the user, thus stimulating its uptake. It will also reduce fraud, a risk always present when conducting transactions through online channels.

In the near future, "distributed ledgers" technology (blockchain) offers a way of recording transactions and updating payments in multiple distributed databases, with identical copies maintained on numerous computer systems, controlled by different entities without a single centralized authority. Any digital interaction will be traceable through a transparent and secure structure, highly resistant to hacking attacks. This technology will enable new business models possibly changing the traditional trust in financial services.

Much of the above discussion has been around Big Data, but Fast Data is the next challenge, mining real time information from the mix of hospitality and booking statistics, attraction events, weather forecast, costs of flights, and other components. Predictive analytics will benefit destinations and travel companies allowing them to become more customer-centric and optimizing revenue generation. Some digital business solutions can help revenue management by predicting the optimum price. One basic requirement for this to be implemented is stronger and more stringent standardization in the whole digital chain, and the need for institutions to agree on standardized representations of data and transactions, starting from a common and complete digital identification of all the organizations and individuals that form the tourism market. In tourism, many of the operations today are run by machines, not by human beings. This means there is a need to allow machines to connect together smoothly. Machines today have little use if they are not connected in networks, and network, in turn, have grown based on some simple criteria and characteristics. The adoption of standardized communication network protocols has been the main reason for the incredible explosion of so many creative and innovative applications (Baggio, 2014).

An efficient and effective use of technologies calls for creating a cooperative "environment," not one with a multitude of companies fiercely competing and fighting each other. When it comes to distribution it must be understood that selling products efficiently requires compatibility. What a country needs for the digital tourism arena today is standardized infrastructure. Standardized infrastructure means not only physical fast communication connections (that are still largely missing in Italy) but also a common open scheme for applications, data, transactions, and identification of the players. This is the basis for being able to build innovative, competitive, and attractive products (Baggio, 2014).

CONCLUSION

The conference discussions has found that there are multitude of gaps in the field of tourism distribution. One of these gaps is between ICT and tourism information technology. The industrial and academics fields have made successful efforts in reducing this gap but tourism has not (yet). This may be because tourism is a highly fragmented arena, with many small highly competitive companies, running a differentiated set of activities, and much more complicated than other industries such as automotive and finance, where there is more uniformity (in size or in activities). Most tourism business models sees ICTs mostly as a side tool and not in their core activities. Although digital technology affects their operations, the effect on distribution is still not well understood. Further, little or no public funds are given to promote "tourism" innovation, as the perception of innovation is still bound more to the renewal of infrastructure than to digital research and development. In Italy, for example, many tourism projects have been funded through European Smart City program rather than tourism initiatives.

When people travel, they do not buy a hotel, a flight, or a train trip; they do not buy a museum or a meeting. Tourists buy an experience. In order to construct an experience, all services and information need to be provided in a timely and organized fashion. One of the best examples is the smart city idea. The smart tourism city operates through clusters of people working together to make things happen. Significantly, not all contributors are from the tourism industry. Smart cities require physical infrastructure, such as roads, airports, railways, as well as all the technologies which supports small enterprises. Distribution in tourism is always about e-commerce, and the latter always revolves about tools created to save money, pushing for the best buy. All the search engines, tools, projects, and platforms have one main objective: that of giving a good experience, which cannot be compressed, because hospitality and tourism are human experiences. The new distribution channels must understand this issue, otherwise the "dream" is sacrificed to considering prices only. The new concept of customer experience is different from the old models, because the core of the human experience is emotion, feeling, and understanding of different encounters; thus, all new instruments have to consider this goal in any new project. A question to be addressed is if whether this a distribution channel task or not.

A final comment on the relationship between academia and industry and the exchange of knowledge is in order here. The relationship and the exchange of knowledge between academia and industry is not very efficient, to say the least, in the area of ICTs. It is difficult to fully understand the reason behind this disconnect. Perhaps one is (again) the high fragmentation and the relatively small size of tourism companies, at least in Italy. This, as the academia knows, means that the absorptive capacity (the ability of the industry to recognize the value of new information, to embrace it and apply it) is rather low. It must also be said that the academia does very little to select the best possible outputs and to "translate" it into terms that might be easily understood by the industry. Research efforts should be more directed towards real issues and less influenced by the current fashions, as unfortunately often is the case. All without forgetting that a sound and rigorous set of theoretical models is fundamental. The industry, on the other hand, should better understand the real meaning of "research" and not to consider it (as often happens) a form of "free consultancy." Unfortunately, in tourism there are only two monologues not a dialogue. More effort is needed in organizing and holding common events in which a better sharing of conceptual and applied knowledge can be pursued. More and better

popularization of the results of high-level research is needed, together with a more effective rendition, for what is possible, of these results into practical and actionable solutions.

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