

Reflections on the use of the territorial data and GIS in tourism: the Italian case

Descrizione

Introduction

The ever more widespread use of digital technologies is inducing to a change in the habits and in the choices of consumers. This change of attitude is involving various sectors of the economy and production, thereby opening a new and not yet fully explored scenario.

Thus, it occurs that marketing strategies and product offerings are shaped to a greater extent on those information that individual consumers leave in their online activities.

Among these activities it may include – as an example – comments and reviews on platforms social, monetary transactions or more simply like on Facebook, Instagram, comments on Twitter, or a purchase on Amazon.

All these, are by now common and widespread activities, carried out in the vast majority of cases in an automatic manner and sometimes unconsciously.

Yet these activities represent an important source of data to which nowadays businesses and institutions draw to obtain information on potential customers and secure new market segments, through a greater customisation of the offer.

Data released on internet thus become the base through which to develop strategies for the marketing and promotion of products. Various sectors of the economy are therefore adapting to this change in habits, opening themselves to the possibilities and the challenges posed by the digitisation and from web communication. Among the main sectors involved in this digital transformation there is undoubtedly the tourism.

Social networking, digital platforms and the internet, in general play an increasingly important role in the communication and in the promotion of tourism, giving users detailed information and often in real time. **[1]**

According to the data provided by the report Flash Eurobarometer European Commission on tourism in 2016, 63% of respondents resort to internet and to social media as a source of information for planning a trip **[a]**. Numbers in growth if compared with data supplied by the same source for the previous years **[2]**.

In 2015 the number of respondents who relied to the internet and to social media for the planning their trip settled at 54% **[3] [b]**, while the previous year to 53% **[4] [c]**.

Further confirmation of the importance of digital platforms in tourist choices derives, in the Italian case, from data collected by ISTAT. The report on tourist movement in 2014 showed that 47% of tourists is relied on internet to plan their travel **[5] [d]**.

The traditional communication channels (tourist guides, newspapers, magazines, travel agencies) are progressively giving way to a type of immediate and accessible information without necessarily passing through intermediaries such as tour operators.

What are the advantages provided by digital technologies to tourists? How can digital technology be used by public and private operators for the purposes of tourism promotion?

Digital technologies on the one hand offer tourists the possibility to personalize their travel experience and enjoy a constant updating in real time; on the other hand offer tourist operators the possibility to develop marketing strategies aimed at the promotion of cultural and local landscape heritage. Technologies, internet and social media offer new opportunities but also new challenges from the uncertain outcome **[6]**.

This paper intends to illustrate how the recourse to digital technologies and data products from users, tourist operators and public administrations is functional to the tourist promotion and territorial development. Specifically it will focus on the possible uses in the fields of tourism and of geographic information systems (GIS) and of territorial data.

The first paragraph focuses on the concept of tourism and on its diversified forms, which adapt gradually to a very segmented market demand. Second paragraph is devoted to smart tourism and to the contribution provided about by ICT. Paragraphs third and fourth focus on GIS and on their contribution aimed at the promotion of tourism, with reference to some cases applied in Italy.

Tourism: an evolving concept

Tourism represents one of the main objects of study for different disciplines. Each provides its supply and contributes to its definition from different and (sometimes) complementary points of view.

On one aspect in particular it may observe a shared agreement: tourism is an activity socio-economic unavoidably linked to the territory.

According to the definition from the UNWTO **[7]** tourism is “the activities of persons traveling to and are located in different places from their own usual environment for a total period of not more than one consecutive year for leisure, business or for reasons other than the exercise of an activity remunerated within the environment visited”.

This definition shows first of all that the tourist activity is the search for something different in comparison to the usual practice.

A recreational activity that allows to a person – or groups of persons – to experience and to know new, varied and different realities. It is however temporally defined: not more than one consecutive year. This activity is therefore a transient condition and not permanent.

Tourism has deep historical roots, but assumes connotations of economic activity from the end of the XIX century. In this period the first companies that offer tourist packages are born, first in England and shortly afterwards also in Italy. For a long time the tourist activity remains an exclusive practice of the wealthy classes urban areas. It begins to involve the popular social class under totalitarian regimes situated on between the twenties and thirties of the last century, through the establishment of summer camps. But this experience binds to the sphere of social policies rather than economic **[8]**.

The phenomenon of tourism assumes mass dimensions starting in the sixties. Different reasons contribute in this phenomenon: high rates of economic growth, the passage from agricultural society to an industrial one which in turn involve a greater purchasing power on the part of the working classes and a mass dissemination of private means of transport **[9]**.

In this context the tourist activity is transformed into a simple pastime, which reduces to the choice between seaside or mountain **[10]**. For a long time in Italy the phenomenon of tourism has developed in a spontaneous way, involving in addition to the already mentioned seaside and mountain resorts, also the art cities. The rich cultural heritage and landscape has been – and still is – the main element of attraction for the tourist flows. But the sector is long been excluded from development policies that are strategic to the territory **[11]**. Such a neglect has expressed negative externalities, visible especially in the degradation of the landscape and the environment that hosts the tourist flows.

The mass tourism has led to a progressive and intense consumption of soil and urbanization in places of holiday, in order to host the accommodation facilities and the necessary infrastructure to receive large flows of people **[12]**. The territory has been perceived as a passive element, devoid of value. The environmental alterations that are derived have consequently led to the loss of territorial value and to the imbalance in socio-economic internal to the local communities that host them.

In more recent times there have emerged new paradigms of tourism, attentive and sensitive to environmental sustainability, cultural and socio-economic conditions of places of destination. The turning point is represented by a document drawn up on the occasion of the First World Conference on Sustainable Tourism in Lanzarote (Spain) in 1995. This paper discusses the guidelines on which the tourist activity must be based: respect for the environment, social and ethics equity toward the local community and economic convenience for the same. Tourism must integrate natural, cultural and human aspects of the territory and takes into consideration their effects on the cultural and historical heritage and on local traditions **[13]**. In this perspective the territory takes an active role in the planning of tourist activity, through the rediscovery of its identity, cultural and socio-economic value.

Territory, landscape and local cultural identities, assume a greater weight in the current choices of tourists (representing the demand) and public and private tour operators (representing the offer). The definition of new strategies for the tourism sector, aimed at improving the quality of the offer, then passes through a systematic practice of cultural and territorial enhancement. In the Italian context, on the basis of the Code of cultural heritage and landscape **[e]**, the enhancement is defined as an exercise and discipline of activities aimed at promoting knowledge and the fruition of culture **[14]**. This legal instrument recognizes in the territory a determinant factor in the processing of landscaped plans through the identification of those elements impressed by nature, history, from the men and their interrelations **[15]**.

Tourism is gradually gaining strategic positions in the context of territorial planning and economic development. The territory and its peculiar characteristics are perceived to a greater extent as elements that generate economic value. This is what happens at least in some cases on a local scale. Reference will be made hereinafter to cases of Italian study in which the territory was brought back to the heart of the tourist

planning, with the support of technologies such as geographical information systems (GIS).

The tourist offer is moving toward greater diversification of the product. Its strategy does not give preference to the quantitative aspects – as is traditionally accomplished with mass tourism – but the tip is on the quality and originality. The guidelines of the tourist market correspond, in a more or less adequate to a segmentation of demand well marked. The tourist today tends to look for in fact tourist products capable of offering an authentic experience of the place visited, sometimes custom **[16]**.

The authenticity can be given only through the restoration and enhancement of the intrinsic characteristics of the place, not traceable or reproducible elsewhere. These include undoubtedly material elements (architectural and artistic works for example), but also landscapes, food and wine products and intangible elements such as knowledge and traditional practices. So new forms of tourism appears, specialized in a particular aspect or quality that a place can offer. For this reason we can talk about religious tourism, food and wine tourism, tourism of wellness, ecotourism and so on **[17]**.

At the base of each of these tourist proposals there is the concept of sustainability. Each also pertains to the sensitivity and the personal feelings of the individual tourists **[18]**. The specialization of the tourist offer turns so in the definition of itineraries, directed to arouse charm and to reconstruct the historical-cultural context of the places **[19]**.

The history and the identity of the places are of interest by the Council of Europe. This institution started in 1987 its program Cultural Routes **[20]**. Goals of this program are: promoting the awareness of common european identity; promoting the dialogue among cultures and religions; protecting and enhancing cultural and natural heritage as source of socio-economic development **[f]** . This program has inspired a lot of plan of territorial development, based on sustainable tourism and often connected with the Rural Development Plan, financed by European funds.

The territory represents thus a tourist product that need to be valorised and submitted to the global market.

In this perspective, the territory and the tourism product derived therefrom are full members of the logics of marketing. Territory and tourism product must be communicated and sponsored through promotion campaigns targeted and tailored to specific market segments. The territory must therefore become a brand, the bearer of value and meaning which it alone can give **[21]**.

Communication and promotion are essential to the competitiveness of a destination on the tourist global market. They must therefore be adequately conveyed through channels of information relevant to the habits of consumers. It is clear how the tourism sector must be open to new forms of communication via the internet and social networks. At a global level the ICTs play an increasingly important role in the promotion and diffusion of information related to tourism and culture. This is true both as regards the question whether the offer.

In recent years in Italy it is being discussed on the causes of the stagnation of the tourism sector and on possible ways to relaunch its competitiveness. This debate has arisen within the TD Lab (2014) **[g]** – established by Ministry of Cultural Heritage, Activities and Tourism (MIBACT) – and of the association ItaliaDecide (2014) **[h]**.

The data supplied by the UNWTO say that Italy amounted to fifth place in the ranking of arrivals foreigners with a number equal to 50.7 million in 2015 (with a slight rise compared to 48.6 the previous year) **[i]** .

The tourism sector affects around 10% of national GNP and 11 % of employment **[22]**.

The data presented do not homogeneously reflect the trends of the whole country.

Different areas occupy a marginal position with respect to the usual national routes. According to the conclusions put forward in the documents referred, the main problems arise primarily from the lack of a unitary strategy for tourism.

Despite its enormous potentiality (in terms of the richness and variety of cultural, landscape and enviromental heritage) the Italian tourist sector lives a phase of stagnation and loss of competitiveness in relation to other foreign destinations.

This is because it is not yet fully perceived as strategic for the national economy.

The Italian tourist supply still remains too general and holding on to retrograde forms, incapable of attracting new market niches **[23]**. The relaunch of the tourism sector must therefore take place through two passages-key:

- Diversifying the tourism product, through strategic actions that depart from the territory and the enhancement of its cultural and landscapes components.
- Encouraging modern forms of communication and tourist promotion, adapted to new social trends of consumers and linked to information and communication technologies (ICT).

These two points are part of the objectives laid down by the Italian government in 2013, with Plan for Tourism 2020.

ICT for the promotion of territory

Promoting a territory as an ideal tourist destination is a very complex task. A similar work requires a deep knowledge of the potential customer to which the offer must address. The complexity of the market imposes sophisticated and innovative communication and marketing strategies.

The goal is to intercept the request and propose an efficient and adequate offer so fast, sometimes immediate. The challenge for the promotion of a tourist destination is located where it is possible to collect the greatest possible number of customer

information: habits, needs, desires and everything it needs for help in the choice and in the conduct of his journey. In a similar context the use of information and communication technologies (ICT) in digital format is an essential tool for the promotion of tourist services.

In a socio-cultural context permeated from the internet and social networks, these technologies are gradually causing changes in daily habits. The information that they convey through the web have greater impact to the choices of consumers.

This seems particularly true in the context of tourism. According to some studies, travelers tend to rely more on information received via social platforms by users rather than those supplied by tour operators **[23]**. The direct experience of the people seems to constitute a guarantee of neutrality and truthfulness of judgment: this is because the feedback expressed by other users is interpreted as disinterested and not conditioned by particular interests **[24]**. The judgment delivered via web and smart applications would thus influence the choice of tourist destination or activities to play therein.

The advantages offered by ICTs can be classified and subdivided on the basis of offer and demand. As regards the demand, technological devices support tourists-users at all stages of the journey: organization, arrival, planning of activities, return home.

Social networks have made more direct and easy access to useful information for the trip **[25]**. The role of the tourist so changed. He/She has the opportunity to be the visitor but at the same time the protagonist and planner of his/her itinerary **[26]**. Smartphones, Tablets and mobile devices in general allow to customize the travel experience based on needs and wishes.

As regards the offer instead, ICTs constitute at the same time an advantage and a challenge. An advantage because they allow to promote tourist vehicle of its offer through social platforms and web. A challenge because this implies a constant

updating work and promotion so that product could be known, chosen and appreciated. The ability to know how to promote on the web by means of ICTs, has now become essential for the economic competitiveness of a tourist destination **[27]**. It is essential also the ability to implement technologies able to gather and analyze data increasingly complex that users generate and release on the Internet, known as user generated content (UGC) **[28]**. Among the best known examples of UGC fall comments on Facebook or reviews on applications linked to food & beverage and receiving such as TripAdvisor and Airbnb.

The ICTs constitute the meeting point between the tourism demand and offer. These allow the tourist-user to express their needs and the tour operators to develop an adequate supply for the benefit of the service. Public administrations can use them to adopt strategies for tourist promotion for the benefit of the territory and of its economy. At the base of the functionality of tourist guides mobile there is the so-called context-awareness, i.e. the ability to provide adequate information to users in real time and on the basis of the indications supplied by the same.

The goal is to make the user aware of the reality that is experiencing and to interact with it. Some studies have led to the deployment of mobile devices and applications targeted to this **[29]**. Such technologies can therefore constitute a competitive advantage for who is responsible for the promotion of tourism, because they are addressed specifically to the needs expressed by users through social and internet.

In recent times it is spreading among the scientific community attentive to the ratio of ICT and Tourism, the concept of smart tourism. This is a concept whose definition is the subject of debate. In general and synthetic terms this concept is based on the social communication and on the interconnection between users and objects connected to the internet (IoT). The concept of smartness is borrowed from other fields that do not relate directly to tourism (which is the case for example of smart cities) **[30]**.

The tourist activities are thus associated to the concept of smart. This association leads to new forms of tourism, based on social communication and on the interconnection between users and objects (internet of things, IoT). The term smart reported to tourism substantially indicates the intensive use of a tourist destination to technology infrastructure. These in fact serve to strengthen and improve the tourist experience, making the user aware of the services and products available.

In this way a user is supported in his decisions and actions to be undertaken in his travel itinerary **[31]**. Tourism smart therefore contributes to the personalization of the trip, through interactive communication between the various stakeholders involved. A tourist destination smart must therefore be provided with digital platforms able to put into communication the two poles of the tourism sector: tenderer and clientele. The quality of smart tourist services is based on the ability to collect, analyze and process the data provided by the people **[32]**.

The use of the data is now functional to qualitative definition of tourist products. This is especially true for the more complex and unstructured data, generally designated by the term currently in vogue of big data **[33]**. The international conference on the theme of ICT in tourism of 2015, held in Lugano (Switzerland), has concentrated mainly on the implementation of appropriate technologies to treat such data. Herein studies and innovative and interesting proposals were presented, which have given impetus to research on the topic.

However tourism is an activity closely connected with the territory. Therefore those data that contain georeferenced information acquire a considerable weight, because those are able to locate on the map a certain phenomenon or aspect deemed useful. The treatment of these data however requires the use of a type of a particular technology: the geographic information systems (GIS). Thanks to the cartographic support, this technology provides immediate information and easily understandable, very useful in the strategic planning of a territory and in the promotion of tourist services.

A very frequent mistake is to equate a GIS with cartography, especially in digital format. This is an improper and incorrect assimilation. The (digital) cartography is a graphical representation, symbolic and approximate overview of the geographical reality **[34]**. Its function is limited to describe a territory and (part) of its components in a unique scale of representation. A GIS is instead a particular information system able to collect, store, process and manipulate geography data type, in order to make graphically and projected on the map the information. The special feature of a geographical data is in fact that of contain georeferenced information, that is accompanied by a reference coordinate system which allows an immediate geolocation.

The benefits of this technological support are the ability to represent geographical data on multiple levels of scale and manage a large amount of data which relate to the territory. It occurs in fact with a GIS to perform queries of the spatial type (what there is in a place), questions about the attributes of the datum (where is located the selected item), spatial analysis as check the proximity of the phenomena, measure the distance between the geographic elements, understand and explore the relationships between them. These are only the main operations to which a GIS performs. If it can locate other depending upon the objective of the study and of the use that is meant to assume.

The territory is by definition a complex and dynamic reality, result of millenary and continuous interrelations between society, environment, nature and culture **[35]**. In this sense, the study of the territory and of the activities in it falling requires the ability to operate on multiple levels of information. A geographic information system is structured precisely in order to achieve this end. By correlating the various layers and territorial elements, this instrument constitutes a valid support for strategic decisions which relate to the territory.

Geographic data are divided in two categories: vector and raster. The datum of the vectorial type is composed of two parts associated: graphic and tabular. The first refers of course to the graphic object represented in the form of points, lines or polygons depending on the geographical element to describe, while the second relates

to the attributes of information relating to the element. The raster data are more complex. In summary they form the cartographic support on which rests a project in GIS environment. Among the best known examples it can be mentioned aerial orthophotos, satellite photographs (e.g. Google Earth) or graphs maps (e.g. Open Street Map).

The data used in GIS instrument are usually classified and organized within the appropriate database (also appointed “geodatabase” for its peculiarity to preserve the geographic data). This is a definite advantage because it allows to put in relation the various elements pertinent to the territory. The relationship between data is therefore a passage-key to compare different levels of information and provide a more complete and detailed framework of territory object of study. For any graphic data corresponds in fact a tabular component that collects information **[36]**. In fact, the data can be integrated with one another through tabular reports, carried out by means of unique key values **[37]**. In this way there are obtained data increasingly detailed on the territory, useful to deepen and enrich the knowledge and to adopt appropriate strategies for its development.

It could think therefore at the positive contribution that a similar instrument may provide to the tourism sector, especially in the definition of travel itineraries targeted to a specific market segment. The GIS allows in this case to locate and geolocalise all those points of tourist interest and catapult them on a map. Thus combines points of interest (POI) with a specific territory. As a result each element present on that territory can be represented in the same way: accommodation facilities, infrastructure and services of various kinds and everything can serve to tourists in its travel itinerary **[38]**. Each of these elements represents a level of information that can be related to each other and provide further indications arising from spatial analysis (calculating distances, proximity, accessibility).

It could also think to the advantages that this instrument may affix within the framework of the cultural valorisation, putting for example in relation to the sites of cultural interest with information relating to natural and environmental hazards concerns to which they may be subject (hydrogeological seismic, for example). This

explains how the GIS play an important role in the planning of the territory and the interventions to be taken for its development, based on the exploitation of those elements that distinguish it.

GIS as a tool for knowledge, study, analysis and planning. But at the same time instrument of interactive communication and promotion of tourism. In addition to collecting and processing data, the GIS must be capable of providing a rapid communication and immediate information. This is what makes it particularly advantageous with respect to other systems. The graphic restitution must therefore be linear, homogeneous and especially readable even for not expert users. In this perspective a GIS must be operational both for those who take decisions and for users who need to receive information. The implementation of webGIS platforms can be very useful in this sense because they allow users direct access via the internet, to information georeferenced. They can in turn interrogate and treat the geographic data depending on their interests.

Some GIS software available on the market are also capable of providing very sophisticated and detailed territorial information, thanks to their ability to integrate data in various formats. Geographic data can often be flanked by video, images and tables that deepen and integrate the information represented [39]. In this way, the geographical information can convey a sense of place and contribute to the search for experience peculiar to the tourist, through new narrative forms of storytelling.

Some Examples of GIS in Italian Tourism Promotion

In the Italian context recourse to GIS technologies is not systematic and capillary. However it may encounter various cases in which the processing of strategic policies for tourism has been supported by the GIS (or from its web format), with the intention to involve citizens in the decision-making process and offer tourists a promotional image of its territory. Despite the good intentions, sometimes the results have not fully satisfied the expectations. The reasons are many and complex: non-disclosure of data and of the cartographic reports to the public; non-realization of platforms webGIS

on territory . Where this has been done, sometimes results have interfaces do not updated or little understood by the average user. In some cases access to links of the WebGIS is unfortunately denied.

In recent years the interventions of cultural and territorial valorisation has been part of strategic actions taken at the headquarters of EU Community or regional institutions: for example the LEADER program for the development of rural areas. The definition of plans of territorial development is often served the support of GIS technologies and geographic information.

The development plan for rural, drawn up by GAL Patavino (Veneto) [j] for example, is addressed in the first place to the knowledge of the territory, in order to promote and encourage sustainable forms of tourism and compatible with the local reality. In this regard, a first phase of the project involved the creation of a data bank complex database comprising each type of cultural heritage and landscape. The realization of the geographic database has provided so a logistic support and practical in the definition of themed itineraries. Once georeferenced, information collected were exported in a web-gis suitable to be interrogated and consumed by users. The export in a web-gis platform thus allows the user to interact with the map, through questions and spatial analysis [k] .

In the context of Veneto it is also noted the project I'VE Map, implemented by VirtualGEO in collaboration with the GAL of the Venice of the East [40]. It is a platform webGIS that promotes the knowledge of the area of the Venice of the East, illustrating in map tourist routes and points of interest divided by topic. The user can query with a simple click the items represented in the map in order to obtain detailed information about the places or the possible routes to go. This application tends to integrate various kind of data concerning cultural and natural points of interest, infrastructural and receptive elements. The WebGIS is then enriched with videos and photos that make more performant information [l].

The GIS technologies have played an important role in the definition of some plans regional landscaped. The landscape plan of Sardinia (adopted in 2006) constitutes a particular example because it was oriented to the definition of strategies for the development of tourism. The Plan has set itself the goal of conjugating the environment, culture and sustainable tourism to preserve but at the same time exploit those resources present in the Sardinian territory. The Instrumentation GIS was then used to identify those units landscapes (especially coastal) on which to guide and implement strategies for sustainable tourism. The analysis of the territory has brought to light the criticality and risks linked to the territory and its assets. The data bank thus collected has allowed to catalog information by environmental, demography and historical-cultural categories **[41]**.

The GIS has also been used to promote innovative and experimental forms of tourism. This is what has happened in Sicily with the MOTRIS project **[m]**. This project has been carried forward by the university college ARCES, with the help of local universities and the funding of the Region of Sicily. Its goal is to promote the so-called relational integrated tourism (TRI). A form of tourism that favors the relations between people and the environment; stimulates the historical-cultural sensitivity; promotes the dialog between tourists and local actors; integrates different productive sectors of medium-small size are present on the territory.

It is a form of tourism pivoted on the territory and is mainly aimed at promoting small centers, usually marginal in the large tourist flows **[42]**. It thus serves of digital technologies (GIS especially) to locate the peculiar elements of the territory and put them in relation with the socio-economic local. After all, the letter M of acronym (which stands for mapping) suggests the importance of technological geographic support in pursuit of objectives. The data bank of the project MOTRIS is structured in such a way as to provide information georeferenced on cultural, natural, tourist, socio-economic and infrastructural aspects **[43]**. In this way it seeks to foster communication and promotion of the territory, integrating a wide range of data relating thereto.

These are only some examples of use of GIS in the context of tourism. These were reported in order to clarify the benefits that a similar technology can bring in the promotion of a territory. The advantages that can be synthesized in the collection and integration of data in order to provide detailed information on the trip itinerary. Directions aimed at making the experience of the journey more comfortable and possibly calibrated on the inclinations of the user. The galaxy of GIS solutions for culture and tourism is wide and varied. The Universities of Florence and Trieste, for example, has for several years promoted workshops on environmental and cultural heritage and GIS. It was an occasion to present valid possibilities offered by this technology in the management of cultural heritage and promotion of the territory **[44]**. Conferences of ASITA **[n]** often turn attention to the issue of monitoring and enhancement of cultural and environmental heritage through the GIS. The Italian Association of Cartography is very sensitive to the contribution of new technologies to the cartographic discipline and promotes their development **[o]**. However the interest in GIS appears confined within the specialists and university research. The general interest in geographic information does not correspond to the adequate dissemination of such technology by the large mass of users.

Conclusions

It is not easy to draw conclusions in the field of ICT and GIS applied to tourism. The topic is very vast and complex, in continuous evolution and constant updating. But precisely for these reasons it causes a lively interest and offers suggestions for new unexplored reflection and deepening. Digital technologies are therefore oriented to facilitate the choices of tourists-users. Their aim is to make the tourists more aware of the reality that is experiencing and places that visit. Strengthen (or at least try to do so) experience linked to the trip. The GIS tools can offer major advantages in this direction, in comparison to other ICT. This is because the information provided to them is closely connected with the dynamics that involve the territory. And the territory, as seen, is an active element in the practices of cultural valorisation and tourist promotion.

However the GIS remains a technology underestimated and little used in the tourist sector, at least in Italy. The various GIS solutions for tourism – arisen often among the academic research – remain too often confined in the circle of specialists. This does not want to be in no way a criticism of the quality of the proposed solutions, nor the methodologies applied. This supposes problems related to their communication and disclosure to the public at large who are not expert (or not informed) in this matter.

The main problem – according to the opinion of the author – is of a technical nature: GIS is a complex technology and poorly suited to persons without adequate training on. This perhaps makes it unattractive for a large audience, despite its communication capacity is performative and immediate.

A second order of problems is instead of normative and institutional nature: GIS does not occupy a prominent position in the policies for the relaunch of tourism nor for the digitisation of the sector and of public services closely connected with the territory. The discussion and the regulation of geographic data is rather in a wider discourse on the digitalization of the services. The agreement concluded in 1996 between the Italian State, Regions and Local Authorities – known as Intesa GIS – has constituted a first step toward an organic accommodation of geographical information, aimed to stimulate the broader participation of public and private actors. At a distance of twenty years, there are still major differences between regions and local authorities in relation to the production and accessibility of open geographical data. The guidelines for the enhancement of information assets – established in 2014 by the Digital Agenda (AgID) – are opening up new possibilities to geographic information **[45] [p]**. Geographic data are in fact among the number of open data that the public authorities must provide to the public. The hope is that this measure will encourage the use of geographical data and GIS software in the strategic sectors of the national economy. And tourism should not miss out on this opportunity.

Notes

[a] Result obtained by the sum of 34% of people that resort to websites collecting and presenting comments, reviews and ratings from travellers; 17% of people that resort to websites run service provider or by destination; 12% of people that resort to social media pages.

[b] Result obtained by the sum of 46% of people that resort to internet sites and 8% that resort to social media.

[c] Result obtained by the sum of 46% of people that resort to internet sites and 7% that resort to social media.

[d] Published in December 2015 and available on: www.istat.it

[e] Code of Cultural Heritage and Landscape was adopted by d.lgs. January 22nd 2004, n. 42.

[f] http://www.beniculturali.it/mibac/export/UfficioStudi/sito-UfficioStudi/Contenuti/Archivio-Newsletter/Archivio/2010/Newsletter-3/visualizza_asset.html_5274203.html

[g] TD Lab was instituted by MIBACT in 2014 with the scope of defining and promoting a digital strategy for Italian tourism sector.

[h] ItaliaDecide is an association that involves in research about public policies.

[i] UNWTO data reported by ENIT (Agenzia Nazionale del Turismo – National Agency for Tourism, www.enit.it).

[j] GAL is an italian acronym stands for Gruppo di Azione Locale. It is a group composed of public and private players for promotion of their own territory. GAL usually need for EU Community funds for their activity.

[k] More information about GAL Patavino, its program, objectives and activities available on: www.galpatavino.it.

[l] www.i-ve.it

[m] MOTRIS stands for Mappatura Offerta Turismo Relazionale Integrato Sicilia.

[n] Italian acronym stands for Federazione Italiana delle Associazioni Scientifiche per le Informazioni Territoriali e Ambientali: www.asita.it.

[o] www.aic-cartografia.it.

[p] The document of the guidelines are available on:

http://www.agid.gov.it/sites/default/files/linee_guida/patrimoniopubblicolg2014_v0.7finale.pdf

References

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[2] (Flash Eurobarometer Report 432, 2016)

- [3]** (Flash Eurobarometer Report 414, 2015)
- [4]** (Flash Eurobarometer Report 392, 2014)
- [5]** (cfr. Movimento turistico nel 2014, ISTAT)
- [6]** (Choi et al. 2007).
- [7]** UNWTO (1994)
- [8]** (Giansanti, 2014).
- [9]** (Leone, 2007)
- [10]** (Giansanti, 2014)
- [11]** (Italia Decide, 2014)
- [12]** (Leone, 2007)
- [13]** (Lanzarote chart, 1995)
- [14]** (Codice dei beni culturali e del paesaggio, art. 6).
- [15]** (Codice dei beni culturali e del paesaggio, art. 143)
- [16]** Td Lab - 2014
- [17]** (Meini, Nocera 2012; Trono, Oliva 2013; Giansanti 2014)
- [18]** (Timothy, Boyd 2003).
- [19]** (Trono, Oliva 2013)
- [20]** (Trono, Oliva, 2013; Nagy 2012)
- [21]** (Caroli 2006; Ferri 2012; Giansanti 2014)
- [22]** (Celant, 2014)
- [23]** (Arsal, 2010; Gretzel et al. 2007)
- [24]** (Huerta, Marine-Roig 2015, Gretzel et al 2007)
- [25]** (Huertas, Marine-Roig 2015)
- [26]** (Giordano, Ranieri 2013)
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