

Wireless and Wireline: evolving Infrastructure & Applications

GIS of Place, GIS of People.
Pervasive technologies and new geographies of mobility and production

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Questions

- Is it possible to give an assessment of Oman's tourism mobility, infrastructure endowment, tourism services and resources, and actors involved in tourism development processes?
- Would putting GIS technology at the service of tourism mobility through interactive tools and GIS based Applications be useful for mobility and tourism purposes?

State of the art

- Smart Tourist Destinations "can be perceived as places that use available tools and technologies to enable supply and demand to co-create value, pleasure and experiences for the tourist and wealth, profits and benefits for organizations and the destination" (Boes, Inversini, Buhalis, 2015, p. 394)
- Lopez de Avila (2015) defines an Smart Tourist Destinations as an innovative destination based on a technological infrastructure that ensures the sustainable development of the tourist area, accessible to all, and facilitates the interaction and integration of visitors with its environment.
- An Smart Tourist Destinations needs both technological innovation and human and social capital and institutions integrated into a flexible, open-access, multi-sectoral network. (Komninos, 2006; Shapiro, 2006; Hollands, 2008; Nam, Pardo, 2011; Albino, Berardi, Dangelico, 2015).

The approach

An analysis was carried out within the framework of a research project conducted by a team from the University of Milan and the Sultan Qaboos University (SQU), which involved the creation of a prototype of the app

a dynamic platform, mediated by ICT and GIS technologies to support the exchange of information on tourism activities through information filtering which improves the decision-making process.

The methodology

- Preliminary study of current regional tourism in Muscat Governorate and geographical locations of particular tourist interest or popularity;
- Preliminary study of significant clusters of tourism preferences;
- in-depth analysis of the areas of tourist interest, evaluated on the basis of the presence and distribution of tourists, taking into account the preferences expressed in the choice of resources and socio-economic variables that influence the type of travel chosen;
- analysis of tourism patterns present in Muscat Governorate based on specific geographic variables such as, for example, types of resources, level of tourism-territorial sustainability, types of hotel and non-hotel accommodations, infrastructure endowment, public-private land management, level of maturity of the tourist area, degree of access to resorts, free Wi-Fi coverage, 4G coverage, technological progress of the tourist area;
- data collection on tourist and non-tourist resources and services to be applied with ArcGIS (via CSV and Excel sheets) for the creation of multilevel maps;
- programming, technical development and app design.

Limitations

- The 5G revolution will only be possible with widespread outdoor and indoor coverage.
- These wireless infrastructures should plan to be present in places where 5G coverage will need to be excellent-train stations, stadiums, small towns, museums, hotels, universities, and shopping malls-hosting on the facilities any operator who is interested in developing not only coverage and data capacity, but also those very innovative vertical services that 5G will enable.
- The 5G network means investment, development, but also territorial revitalization. Distributed Antenna Systems (DAS) or Small Cells, for example, can change the face of small villages, with a view to an increasingly connected country.

- Information providers are tourists
- Tourists are the actors in the processes of narration and promotion of the territory: they inform, communicate, judge (liking for certain locations, attractions, activities)

concluding reflection:

- 1) The advantage of the IoT is to encourage a spread of tourists throughout the Sultanate and not only in the country's well-established tourist destinations.
- 2) The idea of the personalized itinerary on the one hand and themed itinerary on the other opens the country to new modes of participatory tourism, through which the tourist meets the local.
- 3) The app fosters a continuous process of co-creating territorial identities. Nature, culture, landscape become the subjects of memorable tourism experiences to be told, suggested and preserved.

- Importantly, there are non-invasive tools for 5G deployment where there are places of cultural interest to be preserved.
- Microcoverage systems, for example, have lower emission powers and power consumption than traditional antennas. With fifth-generation networks, then, cities will experience major demographic, urban, ecological, productive and social changes.
- "According to a McKinsey Global Institute (MGI) study, with 5G, Smart Cities will be safer (-10% accidents, -30% theft), faster (-45-65% of time in public offices), greener (-10/15% emissions) and more sustainable (+3% employment and lower cost of living)."
- 5G, then, is the push we need to take a decisive step into the future.

THANK YOU!

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