

### GEOGRAPHICAL POSITIONING SYSTEM (GPS): A TOOL TO MONITOR THE TOURIST BEHAVIOUR

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#### Abstract

Studying the tourist behaviour is essential for understanding tourism in the urban context, and the differences between women and men within the tourist destination (space-time behaviour). There are a lot of techniques to do so, but most of them were criticized because of their difficulty in application – a lot of time-waste, inaccuracy, ethical questions, and others (Shoval, 2008). The Geographical Positioning System (GPS) technology provides new options in this field of study and it has advantages over the traditional tracking methods (Mcgehee, et al., 2013; HALLO, et al., 2012; Tchetchik, et al., 2009). This abstract aims to present this new technology discussing how it has been applied to the investigation of the tourist movement within the tourist destinations. It is a literature research, with qualitative approach.

As first definition, GPS consists in 24 satellites, equally spaced in six orbital plans, 20,200 kilometres of altitude. These satellites transmit codified signals that can be read by GPS receiver devices. (Monico, 2000; Timbo, 2000) Although a receiver device is necessary to catch the GPS signal, the use of GPS is accessible and applicable to human research because the advance of cell phone technology. Nowadays, there are a number of cell phone applications that can be downloaded for free and used to this purpose. (SHINOHARA, 2013)

The GPS technology method provides information with space-time dimensions that shows the tourist behaviour. The information collected is sequential "dots" with rich data about the places visited by tourists, time spent on each place, the velocity of movement (transport used), and the direction of the movement, this information together shows the paths taken by tourists within a destination; a set of paths show the patterns of behaviour of a certain tourist group. The method of inquiry used with this new technology consists in asking the tourist to carry a GPS device during her or his tour by a delimited region and then, this datum generated by GPS is transferred to software which shows the routes taken by tourist. There are a lot of approaches that can be taken in this kind of inquiry, some of them are shown above.

Shoval (2008) used this method to examine how the Old City of Akko is used by its visitors. He concluded the consumption of the city occurs in an unbalanced way, both in time spent on sites and amount of visitation; this information helps to manage the attractions, tourist flows and destination marketing. McKercher (et al., 2012) led a research to compare the difference in behaviour pattern between first and repeat visitors in Hong Kong. They observed that first visitors move widely in space, visit iconic attractions and visit more sites, while repeat visitors tend to visit specific attractions, but spent more time in each site. Shoval (et al., 2011) used GPS to analyse the hotel location influence in tourist displacement patterns in Hong Kong. Edwards and Griffin (2013) used GPS devices to understand patterns of tourist movement in two cities in Australia (Sydney and Melbourne). The diversity of application, quantity and quality of data generated by GPS makes it a good tool to monitor tourist behaviour within a destination and it can be easily used to understand the differences of gender in tourism. This tool can be applied to answer questions like: how woman use their time in a destination? Do woman and man have the same path in tourist destinations?

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## WOMEN'S ENTREPRENEURSHIP: THE CASE OF WATERLILY IN PORTO

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# Abstract

In 2013, more than a billion people worldwide had a disability and it is estimated that this number will continue to increase due to the aging of the population (Darcy & Dickson, 2009) and to chronic diseases (Lee, Agarwal, & Kim, 2012). Besides that, the tourism industry is not prepared yet to receive these people as tourists, due to the existence of physical, economic and environmental barriers across the whole industry and in all the stages of the trip (Card, Cole, & Humphrey, 2006). In the literature, the main reason pointed out for the lack of investment in accessible tourism is the idea that people with special needs are not a profitable segment (Devile, Garcia, Carvalho, & Neves, 2012).

Tourism can be for everyone, but only if all the industry sectors work together, because barriers start when the tourist decides to travel and end when he or she returns home. Governmental organizations in England, Brazil, Australia and Spain have produced several documents to help tourism stakeholders make their business more accessible. In Portugal, the governmental organization Turismo de Portugal (national tourism administration) has produced some documents to create awareness to this issue among tourism stakeholders and to help them understand the Portuguese law on accessibility. Nonetheless, there is still a lot to do.

Private sector investment in accessible tourism worldwide has improved in the last years, with women having a determining role. A successful example of women entrepreneurship in accessible tourism is located in Porto, where two women founded Waterlily, a business that offers tourist services for those with and without disabilities, such as tour guides, tourist experiences and a unique way to discover a wonderful region with the family.

This work aims to assess, by presenting the case study of Waterlily, the role of women in the development of accessible tourism in Porto, Portugal.

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