

GIS Method in Tourism

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Abstract

GIS (geographic information system) is currently becoming popular among the nations when it comes to tourism GIS shows huge effect such as giving exact information base to visitors who should be sure in where they are safe and there are enough things which are deserve to make effort to see. As well as GIS is connected with portals and new digital media.

Keywords: GIS, nations, information base, digital media, portals, make effort, international data-base.

Introduction

GIS is connected with new different medias as well as, in turn it helps to totally engagement of tour packages. GIS technology is a crucial part of spatial data infrastructure, which the White House defines as “the technology, policies, standards, human resources, and related activities necessary to acquire, process, distribute, use, maintain, and preserve spatial data”.

GIS can use any information that includes location. The location can be expressed in many different ways, such as latitude and longitude, address, or ZIP code.

Many different types of information can be compared and contrasted using GIS. The system can include data about people, such as population, income, or education level. It can include information about the landscape, such as the location of streams, different kinds of vegetation, and different kinds of soil. It can include information about the sites of factories, farms, and schools, or storm drains, roads, and electric power lines.

With GIS technology, people can compare the locations of different things in order to discover how they relate to each other. For example, using GIS, a single map could include sites that produce pollution, such as factories, and sites that are sensitive to pollution, such as wetlands and rivers. Such a map would help people determine where water supplies are most at risk(1). And in turn it depends on updated digital media. Modern GIS didn't really take off until the 1990s with the development of computer technology and the internet for better data management, processing, and sharing. But the logic and process are still quite similar to what it was decades prior.

The key thing in GIS is data layering as seen in the diagram above. GIS is able to take data and create it into individual layers that can then stack on top of each other to create unique visualizations and identify patterns that could go unnoticed. The unique layering and data

patterns working alongside current digital marketing and SEO strategies and techniques can create better planning and new decision-making processes.

To begin any GIS project we need data. Unlike data in a chart, data for GIS requires a reference to a location. In GIS, there are three main data types and all of them can either be used alone or as a combination:

Polygon data – This is like drawing country or state boundary lines. But polygons aren't just limited to political boundaries or pre-drawn data available. With the use of different GIS tools, custom polygon shapes can be made to fit an exact area you're interested in knowing more about.

Line data – This is like roads or rivers. And just like polygons, lines don't just have to be pre-made. Custom lines can be created to fit a project.

Point data – Point data is the most-used data type in GIS, and can either be single instance or distinct data points. This can be addresses for buildings or different points of interest. Point data can be downloaded from different reputable sources, or created and recorded in a table. As long as each row in the table has an associated latitude and longitude or an address, then it can be converted in a GIS program and placed on a map for easier data visualization(2). Data-basement must have been exactly worked according to analysis of researchers. Once you determine the type of data you want to use, it can be created, downloaded, or imported into GIS software to be manipulated and analyzed. The most common GIS programs used are the industry standard ArcGIS Pro developed by ESRI, or an open-source, free alternative is QGIS. Both softwares have pros and cons, but foundationally they both are able to do a high-level analysis of geographic data. GIS softwares work with unique file types that are used to combine table data and information that is relayed to the software on how and where to draw data. Once all this data is put into the software, the fun part of the analysis begins. In GIS there are many different geospatial tools used that can be used in infinite combinations that can accomplish the goal. Various factors of competitiveness of the tourism industry in the context of the digital economy have been extensively analyzed in the scientific literature. These include market conditions, level of socio-economic development, environmental policy, human resource base, infrastructure quality, level of innovative development, and more. Their level of development has a great impact on the competitiveness of the tourist area. Competitive regions offer a wide range of tourism products; attract potential tourists based on their image (e.g. natural landscapes, clean, clean lakes, advanced environmental policies, all of which are an ideal basis for eco-tourism and enhance the country's reputation for environmental cleanliness. At the same time, the services provided are relatively high(3). Industry of tourism also should change its position traditional ways should go digital ways. The study of scientific works published on the problem of tourism development, methodological developments and practical recommendations confirms that the issues of development and implementation of innovations in tourism have not been sufficiently studied, which negatively affects the development of tourism. Therefore, the solution of this problem in tourism is currently of particular relevance. To date, there are five groups of factors of immunity of tourist organizations to innovations: excessive centralization of management can give rise to a dependent mood in the economy, suppress interest in innovations; undeveloped competition contributes to the replication of the traditional volume and quality of services; the same type of organizational "face" of the tourism industry with a predominance of large organizations will exacerbate the problem of innovation; shortcomings in the organizational culture of the company (lack or underdevelopment of values associated with innovation) affect not only the degree of development of innovative activity, but also its quality; The lack of diversity in the forms and methods of management will give rise to uniform and insoluble innovation problems. Innovative processes are necessary for tourism, both due to the trends in the globalization of the tourism market and the use of information technology, and due to the need to establish a new business philosophy-development management.(Decree of the President of the Republic of Uzbekistan dated January 28, 2022 No. PF-60 "On the development strategy of New Uzbekistan for 2022-2026")(4). With the help of GIS digital innovative technology we

can even give tourists exactly the same meaning and it doesn't matter how long tourist lives far away from the detioan and in turn it is updated idea of digital world. Effective use of available opportunities, this network needs to be further improved, which is the time itself. Uzbekistan is also a convenient place to travel and visit. Because our Motherland has been known throughout the world, and our famous ancestors have enjoyed eternity. The rich cultural heritage left by them is of great interest to the international arena. To further develop the industry, it is essential to improve the infrastructure required. The first is transportation, the second one is logistics, President Islam Karimov emphasized (Bassolas, Lenormand, Tugores, Gonçalves, & Ramasco, 2016; Baxtishodovich, Suyunovich, & Kholiqulov, 2017a, 2017b; Lawson & Roychoudhury, 2016)(5). An activity space is should be put that represents all locations visited by an individual within a specified time period. Activity spaces are important to consider because residents often engage in a multitude of activities outside of their local environment. The geographical extent of an activity space is likely to be determined by both environmental and individual-level factors. For instance, the proximity of resources dictates how far an individual is required to travel to reach these while at the individual-level factors such as age, gender, access to a motor vehicle, and/or perception of distance and safety all influence the ability and willingness of an individual to access the resource. Mapping an individual's activity space potentially provides a more precise reflection of their true contextual exposures and therefore improves specificity between the exposure and behavioural or health outcomes. Activity spaces may be captured through personal diaries where individuals record daily activities or the use of Global Positioning System (GPS) devices. An individual's travel patterns can be represented as an activity space within a GIS using a variety of methods] with two examples being mapping a buffer around the travel routes and locations visited during the day or through 3-D visualisation which can be used to display space-time parameters that effectively represent the regularity of travel patterns. In turn we need to take into account accessibility that leads clear data and clear location position. Accessibility refers to the ease of access to a particular neighbourhood feature with more accessible destinations having lower travel costs in terms of distance, time, and/or financial resources. Accessibility to built environment features is not only determined by their distribution across space but also by mobility factors such as private vehicle ownership or public transportation networks. Handy and Niemeier suggest three categories of accessibility measures:

- 1) cumulative opportunity measures which is simply a count of features within a given distance with an equal weight applied to all occurrences of a specific feature;
- 2) gravity based models where features are weighted by factors such as the size of the destination or travel cost;
- 3) random utility-based measures where theory is used to inform the probability of an individual making a particular choice depending on the attributes assigned to that choice (e.g. attractive of destination or potential travel barriers) relative to all choices centroid is a single point, representing the 'centre', of a spatial unit. Centroids may be used as the point from which exposure measures are undertaken such as proximity estimates or the density of features in a buffer. GIS enables the identification of geometric centroids (the geographical centre) or population-weighted centroids (the point that minimises the total distance to all the residents (or households) in an area). Population-weighted centroids are particularly useful when the population is homogeneously distributed in space (such as in rural areas or larger spatial units) and where a geometric centroid will not result in a precise representation of accessibility for most residents. However, neither centroid measure will provide data as precise as individual-level measures (e.g. using individual household location to derive accessibility measures) (8). Just like GIS, big data analysis starts by asking the right questions, says Jack Dangermond, Esri president. Through analytics, we extract the answers to help organizations know their customers better. The joint Esri/IBM Social Monitor demonstration combines GIS with the latest research in that area. That Tweets are rich with consumer sentiment would explain why Twitter commoditized its daily user output back in 2010. Since then, Twitter has been licensing its Tweet streams so that companies and their consultants can pan gold from them. To begin its social

media analysis, IBM licensed a Decahose of Twitter content (10 percent of daily Tweets) from a third-party reseller.

Could all that customer sentiment be monitored in a brand management tool for, say, clothing retailers? Equipped with the tools to analyze Tweets through multiple lenses, researchers at the Accelerated Discovery Lab plunged into an inaugural project to answer that intriguing question. For the Social Monitor demonstration jointly built with Esri, eight nationwide clothing retailers were chosen to be represented during March 2013. To build the Social Monitor demonstration, an Esri developer visited the lab for a day to work side by side with the IBM researchers. For years, social media has provided a rich source of data in Esri maps. In 2011, Esri launched the Japanese earthquake map a proof-of-concept map that contained Twitter feed data composed of millions of Tweets from Japan. Tweets following the 9.0 Honshu earthquake helped reveal where resources were needed in the crisis. Since then, it has become commonplace to enrich maps with this social media content. Last year, Esri officially entered the big data space by integrating big data workflows into ArcGIS and launching a number of open-source projects on GitHub, including GIS Tools for Hadoop, that infuse big data with geospatial capabilities(9).

Conclusion

Animation is different methods of making movies(6). GIS is used only to get information firstly but currently it opens new way to visitors. Using technology saves money it opens new gates with mnew methods. GIS is a powerful technology that has transformed the way we understand and analyze the world around us. It enables us to store, manage, and analyze geospatial data to make informed decisions in a variety of fields.

With its ability to understand and visualize geospatial data, optimize planning and decision-making, enhance emergency response and disaster management, improve environmental management, and enhance business operations and marketing, GIS has proven to be an indispensable tool.

So, whether you're a government agency, a non-profit organization, or a business of any size, there are many benefits to be gained from using GIS to unlock the insights hidden in geospatial data. And, with Geoapify leading the way in geospatial analytics, the possibilities for innovation and progress are endless(7).Features of the built environment are increasingly being recognised as potentially important determinants of obesity. This has come about, in part, because of advances in methodological tools such as Geographic Information Systems (GIS). GIS has made the procurement of data related to the built environment easier and given researchers the flexibility to create a new generation of environmental exposure measures such as the travel time to the nearest supermarket or calculations of the amount of neighbourhood greenspace. Given the rapid advances in the availability of GIS data and the relative ease of use of GIS software, a glossary on the use of GIS to assess the built environment is timely(8). According to international researchers: As a case study, we draw on aspects the food and physical activity environments as they might apply to obesity, to define key GIS terms related to data collection(exactly clear), concepts, and the measurement of environmental features. From all researches GIS should be sure thanks to tourism, its abilities can not be neglected.

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