

Chapter 7

Digital Cartography Transforming Travel Decision–Making With VGI

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ABSTRACT

Volunteered Geographic Information (VGI) significantly enhances travel planning by offering dynamic, user-generated data across diverse categories such as POIs, restaurants, shops, historical sites, hidden gems, and natural wonders. By leveraging VGI, travelers can uncover unique, off-the-beaten-path experiences and stay updated with real-time information on transportation networks, accessibility, and live traffic conditions. VGI can also provide valuable reviews and ratings, real-time updates, and visual content that aid in decision-making. However, to maximize the benefits of VGI, it's crucial to identify reliable sources, cross-reference with traditional resources, and consider the strengths and limitations of user-generated content. Integrating VGI with guidebooks, travel blogs, and diverse perspectives can allow travelers to build personalized, well-rounded itineraries that cater to their specific interests and preferences. The emergence of new technologies like AI, ML, AR, and VR will further revolutionize VGI, making travel planning even more intuitive and immersive.

DOI: 10.4018/979-8-3693-3715-8.ch007

INTRODUCTION

Travel planning has undergone a profound evolution in the digital age, marking a significant departure from the reliance on bulky guidebooks and rigid itineraries of the past (De Gruyter et al., 2021; Shi et al., 2021; X. Yang et al., 2024; Zhou & Xue, 2022). In today's interconnected world, travelers benefit from unprecedented access to a vast array of information right at their fingertips. This accessibility empowers them not only to navigate the complexities of global travel but also to craft deeply personalized experiences that cater precisely to their preferences and interests. With just a few taps on a smartphone or clicks on a laptop, travelers can explore destinations, read reviews from fellow adventurers, discover local attractions, and even interact with real-time updates on weather, events, and cultural happenings (Bigne & Maturana, 2023; Mishra, 2022; Y. Yang et al., 2020). This wealth of information not only enhances convenience and flexibility but also fosters a sense of empowerment and adventure, transforming how individuals plan and embark on their journeys.

The traditional model of map creation, where information primarily flowed from professional cartographers to users, is undergoing rapid transformation in the dynamic realm of digital cartography. The advent of Volunteered Geographic Information (VGI) has revolutionized travel planning, offering travelers unprecedented capabilities to enhance their journeys (Alattar et al., 2021; Astaburuaga et al., 2022; Howe, 2021; Santos et al., 2022). By leveraging VGI platforms like OpenStreetMap travelers can delve into detailed local knowledge contributed by individuals worldwide (Gjura Godec & Nikšič, 2023; Schröder-Bergen, 2024). This participatory approach has led to a constantly evolving tapestry of geographic data, enriched by diverse insights and perspectives that traditional maps frequently overlook. For travelers, VGI offers myriad benefits, including access to real-time updates on local attractions, hidden gems off the beaten path, and community-curated tips that enhance the authenticity of their travel experiences. As travelers increasingly seek unique and personalized journeys, VGI can play a pivotal role in providing them with the tools and information needed to navigate unfamiliar terrain confidently and discover destinations that resonate on a deeper level.

This chapter's primary objective is to explore the transformative impact of VGI on digital cartography and its subsequent influence on travel decision-making. To pursue this objective, we explore the various types of VGI data available, analyze their strengths and limitations, and showcase how travelers can effectively leverage this information to plan their journeys. The chapter concludes by discussing the future of VGI and its potential to revolutionize the travel landscape further.

DIGITAL CARTOGRAPHY AND VGI

Digital Cartography, also known as digital mapping, is the process of creating, managing, and using maps that are created and displayed in a digital format (Gu et al., 2024; Suleymanov et al., 2024; Visvalingam, 1990; Wu et al., 2024). Unlike traditional cartography, which relies on paper maps and manual updating processes, digital cartography utilizes computer technologies and Geographic Information Systems (GIS) to produce dynamic and interactive maps. Key characteristics of digital cartography include interactivity means users can interact with maps, zoom in and out, and customize the information displayed. Real-time updates are another characteristic that relates to digital maps that can be updated in real-time to reflect current data and conditions. Another aspect is that digital maps can integrate data from various sources, including satellite imagery, sensors, and user-generated content. Moreover, digital

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