

## Chapter 8

# Participatory E–Planning: Bridging Theory and Practice through Improvements in Technology

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### ABSTRACT

*This chapter discusses the importance of leveraging information technology to link theory and practice of participatory planning. Citizen participation in urban planning and development processes is an important exercise that enriches community involvement in local planning decision-making. The advancement in Geographic Information Systems (GIS) and Planning Support Systems (PSS) technologies has provided the opportunity for planning agencies to adopt and facilitate participatory e-planning for improved decision-making. Despite this opportunity, studies show that a number of impediments to the widespread adoption these technologies exist. Drawing on the theoretical perspectives of planning, the literature on participatory planning and e-planning, as well as reviews of some existing technologies for supporting participatory planning practices, this chapter concludes that although a well designed participatory e-planning system could be an enabler for collaborative decision-making and help reduce tensions and conflicts that surround many urban development projects, the deliberative features of newer e-planning systems will have to be improved to move beyond general documented feedback, exploit the spatiality of the participatory environment, and allow more real-time dynamic consultation, if they are to be effective participatory tools.*

### INTRODUCTION AND BACKGROUND

This chapter discusses the importance of leveraging information technology (IT) to bridge the gap between theory and practice of participatory plan-

ning. The advancement in Geographic Information Systems (GIS) and Planning Support Systems (PSS) technologies has provided the opportunity for planning agencies to adopt innovative processes to aid and improve decision-making. Although studies show that a number of impediments to the widespread adoption these technologies exist, emerging

DOI: 10.4018/978-1-61520-933-0.ch008

trends point to opportunities for using GIS to facilitate participatory planning, as well as the integration of planning supporting systems with various models to help estimate urban growth, environmental, economic and social impact.

A potential value of e-planning is the use of GIS to assess the economic, fiscal, social, traffic and environmental impacts of urban development projects. A recent development, which has motivated the development of PSS, is the view of planning as “a process for articulation and negotiation among stakeholders, consensus building and dispute resolution” (Susskind and Cruikshank 1987; Leung 2003; p. 22). Despite the potential of e-planning in enhancing citizen involvement, empirical studies appear to show mixed results. In a comparison of online and face-to-face citizens conference to determine the applicability of information and telecommunication technology in planning, Chen et al. (2009) concluded that the online mode does bring some improvement to such deliberation with online participants gaining more policy knowledge and greater opportunities than the participants in the face-to-face mode. However, in an initial evaluation, comparison and analysis of 12 participatory planning GIS applications on the basis of their usability, interactivity and visualization, Steinmann et al. (2004) concluded that a highly citizen information exchange platform is the exception rather than the rule. These results imply that in order to bridge the gap between the theoretical postulations and the practical benefits of e-planning tools from the standpoint of participatory planning, more has to be done to improve their interactive features.

While public participation in planning has a long history, the literature on e-planning is less well developed. As argued by Kingston (2006) much of the recent research in e-participation, e-democracy and what is now e-planning has attempted to map out the relationship between the citizens within a digital environment. Additionally, much of the research on e-planning has focused on specific aspects of the planning process and attempted to

mirror traditional participatory planning methods and investigate how information and telecommunication technology can enhance participatory processes. Although several studies have been conducted on the use of information technology to aid urban planning and development, (e.g. French & Skiles 1996, Warnecke et al. 1998, Yaakup et al. 2004), the role of web-based mapping in public participation in local policy decision-making (Kingston 2007), the role of citizen participation in e-planning (Kingston 2006) as well as the design of Internet tools for participatory planning (Seeger 2004, Howard & Gaborit 2007), few studies have attempted to bridge the theoretical and practical aspects of participatory e-planning. Drawing on the theoretical perspectives of planning, the literature on participatory planning and e-planning, as well as reviews of some existing technologies for supporting participatory planning practices, this chapter concludes that although a well designed participatory e-planning system could be an enabler for collaborative decision-making and help reduce tensions and conflicts that surround many urban development projects, the deliberative features of newer e-planning systems will have to be improved to move beyond general documented feedback, exploit the spatiality of the participatory environment, and allow more real-time dynamic consultation, if they are to be effective participatory tools.

## **THEORETICAL PERSPECTIVES OF PLANNING**

The theoretical underpinnings of planning assume instrumental and communicative rationality as two key frames for planning. Instrumental (functional) rationality is based on a positivist ideal, which puts information gathering and scientific analysis at the core of planning. This approach to planning can be traced back to Auguste Comte (1798-1857) who sought to apply the methods of observation and experimentation to the study of societies and social

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