Chapter 1
The E-Planning Paradigm – Theory, Methods and Tools: An Overview

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ABSTRACT

The chapter discusses the relationships between planning theory and the use of information and communication technologies in urban planning. It explores how recent organizational transformations in urban planning, associated with the widespread use of information and communication technologies, are incorporated by different planning theories. It is argued that the way information and communication technologies tools are considered or included by the different planning perspectives is in part responsible for the various forms of e-planning.

INTRODUCTION

Contemporary urban planning practice is embedded in a complex and diverse social, political and economic urban world. The implementation of e-Planning, the new urban planning paradigm, requires new concepts, methods, and tools, as happened in the past when other technologies were introduced in this professional field. The history of urban planning, since the end of the nineteenth century, reveals a process of continuous change in the prevailing theories and methodologies, which led to an increasingly complex professional practice (Friedman, 1996; Hall, 2002; Peterson, 2003; Silva, 1994; Talen, 2005; Ward, 2004). The Garden City model, in the formula proposed by Ebenezer Howard (Hall and Ward, 1998, Howard, 1902/2001), or the CIAM discourse on urbanism, steered among others by Le Corbusier (Le Corbusier, 1971; Mumford, 2000), had a vision of planning rather different from the rational planning paradigm that followed it as the main planning paradigm and which framed most of the twentieth century urban planning practice. Rational scientific planning, system theory and the following paradigms, namely the political economy perspective of planning, collaborative or communicative planning, and the various streams of post-modern planning put forward different visions of
what urban planning is, who benefits from it, and how it should be practiced (Allmendinger, 2002; Faludi, 1973; 1973a; Hillier and Healey, 2008).

Even though information and communication technologies may be seen as neutral technologies, they can certainly be applied to serve different political and social purposes, or to respond to different principles and values (Anttiroiko and Malkia, 2007; Budthimedhee et al., 2002). It is for this reason that the use of information technologies within the rational planning approach has different objectives compared to what happens in collaborative or communicative planning. In the first case, the introduction of information and communication technologies allows planners and planning departments to carry out new actions or to implement conventional practices through new tools, such as geographic information systems, virtual reality technologies, e-participation devices, including public participation GIS applications, among other tools, with the aim of improving conventional decision-making processes. In the second case, the use of similar information and communication technologies tend to be associated with an epistemological turn and in the limit with a change of planning paradigm that goes beyond the basic objective of improving established planning routines.

The provision of better planning and urban management services, more efficient, with lower costs and, at the same time, a more collaborative and participative, transparent and accountable planning decision-making process are some of the basic objectives usually associated with the move from conventional urban planning to e-planning, as the empirical evidence collected in this handbook illustrates. However, this move is not always followed by a paradigm shift from the point of view of planning theory. Neo-positivist as well as post-positivist epistemologies and the corresponding urban planning paradigms do incorporate and use information and communication technologies with different purposes and under different rationales. If e-planning is seen simply as the extensive use of information and communication technologies in urban planning, there will be as much types of e-planning as planning theories that frame them. An e-planning system organized according to the principles of rational planning or system theory will be different from another framed by the principles and by the rationale of collaborative planning or from a third one that combines elements from both in a hybrid and contradictory form of urban planning. For that reason, the term e-planning is frequently used with slightly different meanings, and this handbook is no exception in that respect. In this chapter the term e-planning stands for the new urban planning paradigm, characterized by the extensive use of information and communication technologies in all phases of the urban planning process, within the framework of a post-positivist planning theory.

BACKGROUND
Planning Theory

The questions “who gains from urban planning?” and “what role citizens can play in the planning process?” and, more specifically, “how to handle communication and collaboration between different urban stakeholders?” , a discussion renewed due to the new possibilities offered by information and communication technologies, are key points in the planning theory debate. To some extent, the ways these issues have been addressed are responsible for the differences between the various modern and post-modern planning paradigms, which more than well delimited theories must be seen as clusters of perspectives co-existing in time and with strong commonalities.

In the Garden City movement, City Beautiful movement or in the CIAM discourse on Urbanism, for example, urban planning was regarded as urban design (Silva, 2003; 2005; 2005a). This planning as design paradigm was largely dominant until the 1960s, when the rational theory of planning