

# Chapter 12

## Open Source Urban Governance: Crowdsourcing, Neogeography, VGI, and Citizen Science

Carlos Nunes Silva  
University of Lisbon, Portugal

### ABSTRACT

*The chapter explores the emerging paradigm of Open Source Urban Governance, a new urban policy model associated with the extensive use of computer-mediated communication and with the use of different modes of citizen mass collaboration – Crowdsourcing, Neogeography, Volunteered Geographic Information (VGI), and Citizen Science. The chapter is organized into five main sections. The first section discusses the concept of e-participation. The next two sections address the objectives, context, determinants, and ethical issues in e-participation, and the different levels of e-participation in each policy stage and by stakeholder. The last two sections explore the e-tools available for citizen participation in urban governance and the impacts and benefits of e-participation. The chapter ends with a reference to future research directions in this field.*

### INTRODUCTION

Municipal governments' use of advanced information and communication technologies – the Internet, geographical information systems, and virtual reality – to inform, consult and actively engage citizens in the urban policy process is expected to revolutionize the reach and scope of collaboration between local government and citizens as well as the effectiveness of local public service delivery, now that around one third of the world population is connected to the Internet. These changes in the last decades are closely related

to local e-democracy initiatives, in all regions of the world, with the implementation of local e-government, e-planning, and with the growing amount of information generated by citizens in the Internet (OECD, 2003; Gascó, 2003; UN, 2006; 2009; Peart & Diaz, 2007; Schatteman et al., 2012; Klosterman, 2012). These e-participation initiatives include a variety of methods, applications and tools that can be used in highly innovative ways to involve citizens in the urban governance process, at any time and from any place, if necessary in an asynchronous mode.

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These overall changes in citizen-government relationship seems to configure the emergence of a new policy model based on the idea that citizens can be empowered in order to have a more active role in the (urban) governance process through an ubiquitous use of Web-based collaborative tools. This new urban governance paradigm sees the policy process as a large Wiki built continuously by all interested citizens within the community. In this concept is embedded the idea that citizen e-participation aims to shape the content of urban policies, monitor and evaluate the implementation of these policies. Local/urban government acts as a networked organization, uses citizen mass-collaboration in different stages of the policy process, co-innovates with citizens and other local stakeholders, and shares resources. Different terms have been used, by different authors, to describe similar forms of citizen-government relationships, as is the case of Open Source Politics (Sifry, 2004) or Wiki Government (Noveck, 2009), or the notion of Open Source Urbanism that has been used, among others, by Saskia Sassen. Inspired by the 'Open Source' and the 'Wiki' metaphors, employed by these and other authors, this emerging paradigm in urban governance will be referred in this chapter as Open Source Urban Governance.

## **BACKGROUND: THE CONCEPT OF E-PARTICIPATION**

E-participation is taken by some authors as synonymous of e-voting, while for others it has a broader meaning, being synonymous of e-democracy or digital democracy (Macintosh & Whyte, 2006). For this perspective, citizen e-participation includes e-voting but also innumerable other modes of citizen involvement in the policy making process. It is the case of Ann Macintosh (2004, p. 2), for whom "e-democracy is concerned with the use of information and communication technologies to engage citizens, to support the democratic decision-making pro-

cesses and strengthen representative democracy." It is also the case of Albrecht et al. (2008, p. 4), for whom e-Participation is "the participation of individuals and legal entities (including groups thereof) in political and administrative decision-making processes by means of information and communication technology."

Therefore, in this broader perspective of e-democracy, the term e-Participation refers new modes of citizen involvement in the public policy process. It is an addition to conventional forms of citizen participation, more than a replacement for it. E-participation usually refers participatory initiatives within an institutional context, but can also be used to refer other modes of participation that emerge from the practices associated with the co-creation of digital content through the use of digital media technologies, as Saad-Sulonen (2012) shows in her study of Helsinki.

E-participation is confronted with numerous challenges and barriers, in particular when there is a declining participation in formal political processes, in elections, in political parties and trade union affiliations, and a growing disconnect and distrust between citizens and politicians (Coleman & Gotze, n.d.; Irvin & Stansbury, 2004), or between youth and politics (Macintosh et al., 2003; Lara & Naval, 2012). And all this when the number and importance of social movements, focused on single and temporary issues, tend to increase (Van Laer & Van Aelst, 2010), and when the incorporation of these online participatory tools and practices in the structures and processes of conventional urban governance seems to face, in some cases, significant resistance from the most conservative sections within municipal administration.

E-participation is referred under different names: tele-democracy, IT-democracy, e-consultation, Web-based citizen input, e-government 2.0, online public engagement (Coleman & Gotze, n.d.; Gronlund, 2003; Albrecht et al., 2008, among others). The terms Crowdsourcing, Neogeography, Volunteered Geographic Information and Citizen

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