

# Chapter 4

## Innovation Contests: How to Engage Citizens in Solving Urban Problems?

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### ABSTRACT

*Cities all over the world are challenged with problems evolving from increasing urbanity, population growth, and density. For example, one prominent issue that is addressed in many cities is mobility. To develop smart city solutions, governments are trying to introduce open innovation. They have started to open their governmental and city related data as well as awake the citizens' awareness on urban problems through innovation contests. Citizens are the users of the city and therefore, have a practical motivation to engage in innovation contests as for example in hackathons and app competitions. The collaboration and co-creation of civic services by means of innovation contests is a cultural development of how governments and citizens work together in an open governmental environment. A qualitative analysis of innovation contests in 24 world cities reveals this global trend. In particular, such events increase the awareness of citizens and local businesses for identifying and solving urban challenges and are helpful means to transfer the smart city idea into practicable solutions.*

### INTRODUCTION

Today, many governments as well as municipalities open up their data and make them available online on governmental open data portals. Such open data portals are available on the international level, e.g. <http://data.europa.eu/euodp/en/data/> (European Union Open Data Portal), on the national level, e.g. <https://www.data.gov/> (U.S.), <https://data.gov.uk/> (United Kingdom), but also on the city level, e.g. <https://open.>

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wien.gv.at/ (Vienna, Austria) or <https://opendata.cityofnewyork.us/> (New York City, NY) and typically provide data that is available free of charge and possible to be re-used without any limitations or technical restrictions (Open Knowledge International, n.d.a). This data is often referred to as open government data and offers non-rivalrous, non-excludable as well as valuable information to citizens (Jetzek, Avital, & Bjørn-Andersen, 2013). Primarily on the municipal level, there are huge amounts of data generated e.g. by sensors which are relevant in citizens' everyday life and can be referred to as open urban government data (Mainka, Hartmann, Meschede, & Stock, 2015a). By opening their data, governments aim at fostering participation, collaboration, and transparency, as well as economic and social values as citizens and companies can or will use the data to produce innovative products and services (Albano, 2013; European Commission, 2011). In particular, open data competitions (European Commission, 2011) or digital innovation contests are assumed to be helpful means to foster civic participation in the re-use of open data. Hjalmarsson & Rudmark (2012, p. 10) define such a contest as "an event in which third-party developers compete to design and implement the firmest and most satisfying digital service prototype, for a specific purpose, based on open data." This idea is taken one-step further by the concept of app competitions or hackathons (hack marathons) where governments and citizens develop new (mobile) applications in cooperation. These events are aimed at involving citizens to solve specific problems or address stated topics and are assumed to be a new way for civic engagement and participation. People from different backgrounds can come together at one table and try to create something value added to improve city life. The involvement of citizens in developing problem-solving innovation can be referred to as open government (Mainka et al., 2015a). However, do hackathons or similar contests help to develop value added services? Do all municipalities host the same events or are there differences? What are the outcomes of these events and how do governments accomplish them? This chapter aims at exploring the phenomenon of open innovation contests like hackathons and app competitions in more detail in order to figure out whether these events are indeed used by smart cities around the globe to engage citizens, to highlight differences between contests, and emphasize best practice examples. The analysis is based on informational world cities defined by Mainka et al. (2015a). Those cities are prototypical cities of the knowledge society and provide an enhanced ICT infrastructure. Hackathons and app competitions often take place in big cities, therefore a set of 24 cities was chosen as a starting point of a global investigation of innovation contests.

## **THE IDEA OF INNOVATION CONTESTS**

More than the half of today's world population lives in urbanized areas. This evokes many problems for citizens, urban planners, and the government. In addition, smartphones and mobile connectivity have gained increasing importance in recent years and mobile exceeds fixed broadband subscriptions (Burger, 2012). In so-called "informational cities" (Castells, 1989) or "smart cities" (Castelnovo, Misuraca, & Savoldelli, 2015) citizens own and use mobile devices (Stock, 2011) and their demand for "services that increase their productivity, efficiency, communication skills, or create experiences that enhance their quality of life" (Walravens, 2015, p. 282) rises. Thus, especially in larger cities, governments are increasingly challenged to solve citizens' problems, improve their services and the quality of life. Data driven investigations and mobile apps that help citizens in everyday life could be a solution.

In informational cities not only a well-developed ICT infrastructure plays a crucial role in a city's growth and development but also human and social capital. Therefore, smart municipalities should aim

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