Chapter 30
Opportunities and Challenges for Civic Engagement:
A Global Investigation of Innovation Competitions

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ABSTRACT

The population in many cities all over the world is continuously growing and with this growing number of people infrastructural, health and location-related problems increase. It is assumed that these problems could be addressed by means of open government data which many governments publish on their web portals so that it can be further processed and transformed. Since the citizens themselves know best what they need, governments encourage them to participate in open data innovation competitions and to create value added services for their city. The reuse of open urban government data during hackathons or app competitions is a new trend in knowledge societies of how governments and citizens work together. But have these events still become practice in local governments and are they helpful means to foster government-to-citizen communication and collaboration? The authors analyze innovation competitions in 24 world cities to see how they are applied and whether they have the potential to make the city "smart".

INTRODUCTION

Today, many governments as well as municipalities open up their data and make them available online on government data portals. Such open data portals are available on the international level, e.g. open-data.europa.eu (European Union Open Data Portal), on the national level, e.g. data.gov (U.S.), data.gov.

uk (United Kingdom), but also on the city level, e.g. open.wien.at (Vienna, Austria) or nycopendata.socrata.com (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, n.d.a). 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). Especially 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 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 to make civic engagement and participation possible. People from different backgrounds can come together at one table and try to create something value added to improve city life. 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? Summing up, this study is aimed at exploring the phenomenon of innovation competitions like hackathons and app competitions in more detail and providing example cases in order to help governments in taking more advantage of these events. Accordingly, we investigate hackathons and app competitions on city level and emphasizes best practice examples. In our analysis we focus on informational world cities defined by Mainka, Hartmann, Meschede, and Stock (2015). 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 we used a set of 24 cities as a starting point of our global investigation. In the following we will specify open urban data in the context of open government data and draw out the types of hack and app development events, their aims, their participants, and finally take a look at these events' outputs and the challenges they face.

OPEN URBAN GOVERNMENT DATA

Open data which is generated by the government and also referred to as "open government data" (Open Knowledge, n.d.a) offers non-rivalrous, non-excludable as well as valuable information to citizens (Jetzek, Avital, & Bjørn-Andersen, 2013). Especially on the municipal level, there are huge amounts of data generated e.g. by sensors which are relevant in citizens' everyday life. Consequently, the data which originates from that urban areas can be named *open urban government data* (Mainka et al., 2015; Mainka, Hartmann, Meschede, & Stock, 2016).

There are mainly three types of sources of open urban government data: official statistics, sensor-based data, and user- or company-generated content. Official statistics include data on population, business and economics, jobs, crimes and justice, health, etc. Additionally, there are city-specific official data collections like the urban forest map of San Francisco with detailed data about trees in the city. Sensor networks (Kitchin, 2014) consist of sensors which are embedded in specific structures and measure—in real-time—levels of light, humidity, temperature, gas, electrical resistivity, acoustics, air pressure, movements, speeds, etc. and of transponders monitoring empty spaces in car parks, data from closed

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