

## From smart city to smart destination. The case of three Canadian cities

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### INTRODUCTION

In the last decade, numerous cities around the world—Seattle, Singapore, Montreal, Santiago, Amsterdam, Casablanca, to name only a few—have undertaken initiatives to position themselves as smart cities. In the context of globalization, postmodernism and the rapid and continuous development of information technology, municipalities are increasingly recognizing smart city initiatives as a way to improve the quality of life of their citizens (Boes et al., 2015) and to increase their cities' attractiveness.

In 2007, Giffinger developed a model for understanding the scope of the smart city concept. Since then, a number of other models have been developed (Leydesdorff & Deakin, 2011; Cohen, 2011; Nem & Prado, 2011; Anthopoulos, 2015) with the aim to conceptualize the dimensions of the smart city concept and to provide city stakeholders with measurement and analysis tools to monitor their smart city initiatives.

This article aims to understand the perspective and the context in which three Canadian cities—Montreal, Sherbrooke and Quebec City—have implemented smart city initiatives, and to explore the relation between the smart city and smart destination concepts. As part of this effort, this article also seeks to understand to what extent the fact that a city is designated as a smart city calls for an adaptation of the city's tourism governance or might, itself, contribute to the city's attractiveness as a tourism destination.

### 1. FROM SMART CITY TO SMART DESTINATION

According to Hall et al. (2000), a smart city is one that optimizes the management of its infrastructure with the objective to provide its citizens a high level of service. More specifically, these researchers state that a smart city is one "that monitors and integrates conditions of all of its critical infrastructure, including roads, bridges, tunnels, rail/subways, airports, seaports, communications, water, power, even major buildings, can better optimize its resources, plan its preventive maintenance activities, and monitor security aspects while maximizing services to its citizens." According to Komninos (2002), a smart city should solve urban problems through the use of IT. For him, the smart city (i) uses technology available to communities and cities, (ii) uses digital data in order to transform the quality of life and workplace of the inhabitants, (iii) integrates IT in the city and, finally, (iv) implements good practices across the territory with the aim of stimulating innovation, learning and knowledge transfer. In short, the smart city represents a new way to use technology to better serve citizens.

According to the Centre of Governance (2003), the well-being of communities will always be at the centre of an intelligence approach. However, the use of technology is not a requirement for the success of a smart city. For the Centre, the word "smart" refers to the use of "new policies, strategies, and programs for targeting sustainable development, sound economic growth, and better quality of life for their citizens and their communities" (p. 5). Technology is ultimately a tool for such policies and strategies. This position is also adopted by other authors, such as Glaeser and Berry (2006) and Nam

Prado (2011). For them, it is important to integrate the human dimension in developing and implementing a smart city initiative. Indeed, the development of the human dimension in a smart city initiative is a guarantee for success since it stimulates creativity, innovation and knowledge development. Glaeser and Berry (2006) consider the link between the smart city and human capital to be obvious. Cities that are most likely to be recognized as smart cities are those where the level of education of citizens is high, this being an established factor of attraction. Using as an indicator the university graduation rate, Glaeser and Berry (2006) demonstrate that the growth rate of populations was three times as high in U.S. metropolitan areas and in regions with the most qualified work force than it was in regions where inhabitants were primarily low-skilled workers.

There is a fuzzy relationship between the concept of the smart city and the concept of the smart destination. In general in the scientific literature, no distinction is made between the two, and a smart destination is by default integrated into the smart city concept. However, as pointed out by Buhalis and Amaranggana (2014) and Boes et al. (2015), technologies used in a smart destination are fundamentally different from those used in a smart city. For example, the authors state that tourists use technology before, during and after the trip, while the technology implemented in a smart city remains limited to being used within the city. According to Wang et al. (2013), Guo et al. (2014), Zhu et al. and Boes et al. (2015), the majority of researches on smart destinations deal with improving the visitor experience and only very few focus on the smart destination concept.

According to Giffinger and Gudrun (2008), Cohen (2011), Cocchia (2014) and Galoul (2015), cities' urban and/or tourism governance structures are not necessarily aligned with the smart cities and smart destinations concepts. In light of this context, this study aims to answer the following question: What might be the best type of governance structure for successful smart city/smart destination initiatives?

## **2. METHODOLOGY**

To answer this question, we compared the structures adopted by three Canadian cities located in the province of Quebec, namely Montreal, Quebec City and Sherbrooke. Our choice was guided by the fact that these cities have been, since 2011, on either the Top 21 or Top 7 list of smart cities ranked by the Intelligent Community Forum, which assesses cities based on their degree of adoption of the digital economy. More concretely, and using the model of Giffinger (2007), we analyzed the three dimensions that characterize smart governance in the context of smart cities, namely: form of governance (whether or not a structure is dedicated to the smart city); the degree of citizen involvement in the implementation of public policies, and tourism projects in particular; and the usage of new technologies in the deployment of the smart city concept.

To analyze these dimensions, we proceeded in two stages. The first consisted of a literature review of the documentation provided by the three cities. The objectives of this first step were to identify the stakeholders involved in the project, the process that led to the construction of a smart city, and the form of governance chosen at the end of the process. In the second step, we engaged in a deeper reflection of some aspects of the literature, especially those concerning the relationships between stakeholders, and held discussions with representatives of tourism organizations involved in smart city projects at a symposium organized in June 2016 on the theme of smart destinations.

### 3. RESULTS

In terms of results, the three cities were clearly shown to be at different stages of implementing their vision of the smart city.

#### Montreal

At the organizational level, Montreal seems to be the most structured city-level governance, with the creation in 2014 of the Smart and Digital City Office. The Office has the ambition to make the metropolis of Quebec into a world-recognized leader in this field by 2017, the year which marks the city's 375th anniversary (BVIN, 2015). To this end, the city has surveyed, by conducting four internet and telephone surveys, 7,601 citizens since 2012 (BVIN, 2015). The survey responses highlighted two citizen priorities: urban mobility and road construction and maintenance. This latter priority is likely explained by the fact that Montreal has been engaged in revamping its infrastructure since 2014, causing closures of street sections and highways and worsening traffic congestion in the city.

During the same period, Montreal conducted a comparative analysis of seven smart cities around the world (Arlington, Barcelona, Columbus, Eindhoven, Lyon, New York and Toronto) aimed at identifying best practices in those cities. The committee in charge of this project identified six key areas—urban mobility, direct services to citizens, living environment, democracy, sustainable development and economic development—that should, ideally, form the strategic framework for Montreal's smart city and smart destination concept. Following public consultations, at which 203 people participated, the city decided to focus on five of the six key areas, to be implemented with 70 projects, in its 2015–2017 plan.

The tourist dimension, it should be mentioned, was *not* identified as a priority for citizens and experts. Therefore, both in the process and the projects, this dimension has and will remain marginal. Based on the documentation of the process that led to the creation of the Smart and Digital City Office of Montreal, and a discussion held with representatives of the Office and Montreal's tourism bureau (Tourisme Montréal), three reasons explain the sidelining of the tourism dimension. First, insofar as the smart city project is seen as a driver of economic development, the tourism industry is integrated by default in the economic ecosystem of the metropolis, due to which it is not deemed necessary to devote additional or special attention to this area. Secondly, Montreal's tourism bureau was not present at the initial consultation process, where the specificity of the tourist user as compared to the citizen user could have been determined and highlighted. Finally, the smart city project remains primarily a political project, insofar as the Montreal municipal administration is primarily dedicated to citizen satisfaction. Nonetheless, it is assumed that tourists will benefit from the facilities offered to citizens, as is the case with the free Wi-Fi hotspots downtown and the intelligent bus navigation system (iBUS).

#### Sherbrooke

The City of Sherbrooke initiated a process to launch the Sherbrooke Smart City project at the end of 2012. The objective at this stage of the process was to create a dynamic partnership and to mobilize local stakeholders around a common vision (CEFRIO, 2012<sup>1</sup>), which resulted in the holding of a roundtable of *Sherbrooke intelligente et innovante*. This roundtable, attended by all project stakeholders (universities, public transit corporations, economic development corporation, private companies, tourism office, etc.), identified five initiatives that were to enable Sherbrooke to gradually build its smart city project between 2013 and 2015. The ultimate goal of the committee, which still meets, is to establish a digital map adapted to the realities and identity of the city. Unfortunately, the process has been delayed and the digital plan is still a work in progress, although slated to be

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<sup>1</sup> <http://bit.ly/29UWzcp>

completed in early 2017 (Custeau, 2015). Nonetheless, this has not prevented Sherbrooke from being selected in 2015 among the top 21 smart cities by the Intelligent Community Forum, which rewards city initiatives worldwide for successfully deployed—or in this case planned—smart city projects. As part of receiving the award, Sherbrooke has been organizing brainstorming events and making its data available to IT businesses, citizens, experts and researchers seeking to develop applications to improve the quality of life of citizens.

In terms of tourism, the city of Sherbrooke stands out for its flagship organization Destination Sherbrooke, which is responsible for promoting tourism in the city. This organization actively participated in the development of Sherbrooke's vision of the smart city, albeit without adapting the governance structure of the Sherbrooke Tourism Bureau. Specifically, Destination Sherbrooke helped launch an interactive map that asks citizens to propose and vote for a new tourism activity (Barry 2015).

### **Quebec City**

In Quebec City, the smart city is pursued on two fronts: building the future infrastructure, and transitioning the communication with citizens into the Web 2.0 era. In terms of infrastructure, Quebec City began deploying free Wi-Fi hotspots in 2006, making it the most connected city in Canada in 2011 (Pelletier, 2012). During this year, the city had more than 500 hotspots installed in various public places, which were together used more than 500,000 times by citizens (Quebec City, n.d.). In addition to the deployment of hotspots, Quebec City is investing in the optimization of infrastructure dedicated to citizen services. Its main focus here is to bolster police and civil protection (9-1-1) services, namely through: the optimization of patrol routes during emergency interventions; the optimization of snow removal routes; the monitoring of the quantities and locations of salt spread in winter to facilitate traffic; the development of a sidewalk snow removal guide to facilitate pedestrian movement; and the deployment of message boards to provide information to citizens about the different city services (etc., library, pool, arena) (Quebec City, n.d.). As for transitioning into the Web 2.0 era, Quebec City has increased its presence online and on various web platforms and social networks. For example, the city noted a startling 247% increase in web traffic to its site after the posting of a mobile version that is available through Twitter, Facebook and YouTube.

On governance, the City of Québec has set up a committee in charge of work related to the smart city. The committee consists of an elected official, a representative of the municipal administration, a deputy general manager, as well as people working in communications services, economic development and IT. As with Montreal and Sherbrooke, the priority of Quebec City is to improve the lives of citizens, in this case by focusing on six areas of intervention: water, transport, security, economic development, infrastructure and buildings, and services to citizens. At the same time, Quebec City wants to benefit from the smart city project to improve its overall organizational performance. For example, it envisions that certain applications concerning payroll, human resources management and the municipal court could be shared between cities as part of a Quebec intercity service and cost sharing network.

Finally, the tourism sector is, here as well, seen as a motor of economic development. Indeed, Quebec City identified the tourism industry as a growth driver on par with the four other areas. In this sense, the Quebec tourism bureau is recognized as a potential partner of the strategy and as a facilitator in the endeavor to achieve the economic development goals set by the city. In 2012 and 2013, the Quebec tourism bureau conducted a campaign entitled "Effet Québec" which asked citizens to share which of the city's attractions they cherish the most and to rank their ten favourite places (Barry, 2015).

### **CONCLUSION AND DISCUSSION**

Results show that the three cities are at different stages of development with regard to the smart city. At the organizational level, Montreal seems to have the most structured governance, with the creation in 2014 of the Digital and Smart City Office. However, Sherbrooke and Quebec City, unlike Montreal, have established committees that bring together a wide range of stakeholders concerned by smart city projects. Overall, tourism stakeholders in all three cities have actively participated in the development of the vision concerning the smart city concept, without this leading to any substantial adaptation of the

governance structure of the tourism bureaus. Nonetheless, Sherbrooke distinguishes itself from Montreal and Quebec City thanks to Destination Sherbrooke, a destination management organization which launched an interactive map inviting its citizens to propose and vote for new tourism activities (Barry, 2015).

At the level of citizen involvement in the implementation of policies and projects, the three cities follow, to varying degrees, open data guidelines for encouraging the contribution of the local population in the development of smart city projects. Here, two major initiatives were identified; one being the portals where citizens can submit their proposals, and the other being the brainstorming events open to IT companies, citizens, experts and researchers who want to develop applications to improve the quality of life of citizens. Finally, with regard to the areas of intervention, the projects undertaken in the three cities essentially have two priorities. First, improve the economic attractiveness of the city through the improvement of business services (access to high-speed internet, business incubator, use of open data) and, secondly, develop applications with the objective of improving the quality of services to citizens, including transport, security and infrastructure.

Despite the development of several tourism-oriented initiatives, as is the case with the applications "Montreal History" and "Discover Quebec," the tourism dimension is understood primarily as an economic development factor. None of the three cities has identified tourism as a priority sector, and the "smart" dimension does not appear to be a factor of attractiveness for tourists. Moreover, while the three cities were listed among the top 21 smartest cities in the world, no reference to this distinction has been made on the websites of the various tourist offices of the three cities. Even the more prestigious award of Intelligent Community of the Year in 2016, awarded by the Intelligent Community Forum to Montreal, was in no way flaunted or exhibited on the website of the city's local tourism office. This situation leads us to conclude that the link between the smart city and smart destination, as a dimension, remains very limited and neglected as a factor of competitiveness and attractiveness by tourism destinations (Amaranggana & Buhalis, 2014).

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