



# Brussels-Capital Region, Belgium

## Smarter Cities Challenge executive summary

### Introduction

The Brussels-Capital Region was one of 16 cities selected to receive a Smarter Cities Challenge® grant from IBM in 2014 as part of the company's citizenship efforts to build a Smarter Planet®. During three weeks in February and March of 2015, a team of six IBM experts worked to deliver recommendations on a key challenge defined by the Minister of Mobility and Public Works, Pascal Smet, and the State Secretary, Bianca Debaets, as well as their senior leadership team:

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Address traffic congestion problems through the use of open data and encourage citizens to participate in mobility improvement efforts.

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### The challenge

During peak travel hours, the Brussels-Capital Region faces serious traffic congestion challenges involving both private vehicles and public transportation. In 2013, the Organisation for Economic Co-operation and Development (OECD) published an economic survey for Belgium, which cites Brussels as one of the most congested cities in Europe.

This is partly due to the Region's rapidly growing and diverse population, as well as the presence of numerous international institutions, such as NATO and the European Community, which each have specific traffic needs of their own in addition to the needs of visitors when hosting events or summits.

Another challenge faced by the Region is the wide range of transportation stakeholders that exist across the local, national and European levels, each pursuing various objectives. This lack of centralized oversight has impeded the control and governance of traffic and transportation, contributing to the Region's mobility issues.

### Findings and recommendations

The Brussels-Capital Region comprises the largest city in Belgium and is the de facto capital of the European Union (EU) as it hosts the official seats of the European Commission, Council of the EU and European Council. The Brussels-Capital Region comprises 19 separate municipalities, with traffic flow spanning all of them.

There are two primary groups of commuters causing congestion in the Region. The first involves the 52% of the commuter population that travels daily from outer regions to the Brussels-Capital Region for work. The second group comprises commuters who live in the Brussels-Capital Region and travel within the Region.<sup>1</sup>

Traffic congestion in the Brussels-Capital Region can be addressed only as a metropolitan-area issue given that the flow of traffic spans the regions of Flanders and Wallonia, as well as the municipalities comprising the Brussels-Capital Region.

Another contributing factor to traffic congestion is the prevalence of personal vehicle use rather than public transportation. This is a result of the significant federal tax benefits provided to employers and employees using company cars.

Parking availability also is an important factor causing traffic congestion. During peak hours, as much as 30% of the vehicles circulating in traffic in the Region are looking for parking.<sup>1</sup> The lack of available parking is a two-fold issue. First, parking capacity itself is insufficient to accommodate the number of vehicles each day. Second, capacity is not available where it's needed, such as at park-and-ride facilities located at public transportation hubs.

The IBM Smarter Cities Challenge team found that public transportation offerings are not compelling alternatives to cars for many people. One reason for this is that the Region's various transportation providers are managed independently, which results in a lack of metropolitan-wide planning, difficult access to public transportation services and nonintegrated multimodal mobility services.

Finally, the region's limited integrated mobility data, both static and dynamic, has impeded effective planning across the metropolitan area and its various modes of transportation.

With the region's current transportation and traffic environment, consisting of high regulation and fragmented decision making, the introduction of new concepts and business models could pose a challenge, particularly when it comes to acceptance and implementation.

Based on these findings, the Smarter Cities Challenge team has made recommendations to address the congestion issues in the Brussels metropolitan area from a citizen-centric mobility perspective. The recommendations fall under the following four categories:

1. **Open data** — The use of open data will help address the Region's limited integrated mobility data and lack of insights and efficiencies. The Smarter Cities Challenge team recommends establishing a framework for open data, which would be owned and managed by Brussels Mobility. By implementing this framework, the Region would be able to establish clear ownership and end-to-end management of its open data and establish a solid fact-based foundation to implement all subsequent recommendations from the IBM team.
2. **Infrastructure** — In response to its traffic congestion problem, the Brussels-Capital Region must deploy smart technologies and introduce new strategies across the metropolitan area. To accelerate this deployment, the Region should focus on optimizing its existing infrastructure. The expected outcome is improved fluidity of traffic, as well as the ability to effectively manage traffic flow across transportation modes.
3. **Mobility experience** — The Region should focus on providing a mobility experience shaped by citizens' perspectives and involvement. This citizen-centric approach is essential to addressing the Region's congestion and mobility challenges while encouraging greater citizen participation in improvement efforts. The Region should create a mobility communications strategy that engages citizens for feedback and provides social media solutions and tools, including multimodal travel planners with real-time, location-based alerts and notifications. By taking advantage of today's mobile technologies, the Region can deliver an improved mobility experience that better serves the citizens and the metropolitan area.
4. **Execution and governance** — Establishing oversight to execute and govern mobility initiatives is essential to the effective implementation of all of the Smarter Cities Challenge team's recommendations. The Brussels-Capital Region should establish a transportation alliance, a legal entity that would be owned and governed by today's transportation operators and would be responsible for managing mobility services according to a "One timetable. One fare. One ticket." framework across the Brussels metropolitan area. Execution and governance are key as they enable fast and effective implementation of initiatives to deliver mobility services across the Brussels metropolitan area that achieve an improved, citizen-centric mobility experience.

All four categories are closely linked and are designed to support one another, reflecting the IBM team's holistic approach to the Brussels-Capital Region's traffic congestion challenge.

## Conclusion

As the Brussels-Capital Region moves toward a more integrated, multimodal transportation system that shares more information with its customers and stakeholders, citizens and visitors will enjoy faster and better services, cleaner air, as well as greater alignment and collaboration among transportation stakeholders. Citizens will take pride in knowing that the Region is economically competitive and is recognized for its livability and quality of life.

While Brussels Mobility and other transportation stakeholders in the Region have already launched efforts to improve citizen mobility, adoption of the Smarter Cities Challenge team's recommendations will help elevate the Brussels-Capital Region even more as a best-in-class city. Using open data and smarter technologies, optimizing current infrastructure and implementing a transportation alliance will help the Brussels-Capital Region achieve a citizen-centric mobility experience.

## For more information

To learn more, send an email to [ccca@us.ibm.com](mailto:ccca@us.ibm.com) or visit [smartercitieschallenge.org](http://smartercitieschallenge.org)

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- 1 Brussels Enterprises Commerce and Industry (BECI). "Le Livre Blanc de la mobilité: 50 Idées Pour Faire Bouger Bruxelles," 2nd edition, December 2013. [www.beci.be/media/uploads/public/\\_custom/Voice\\_of\\_Brussels/Livre\\_blanc\\_mobilite.pdf](http://www.beci.be/media/uploads/public/_custom/Voice_of_Brussels/Livre_blanc_mobilite.pdf)