

Intelligent transport

How cities are creating improved mobility

Cities are facing urgent transport challenges. Many cities are starting to tackle these by planning and implementing new intelligent transport solutions, and some already have posted impressive benefits. However, progress varies, and most cities are at “the early adopter” stage, with ambitious plans to utilize the latest technologies but little practical experience. How can they move forward? We believe cities can learn from one another’s success while engaging customers, mapping progress against leading practices, and utilizing crossmodal collaboration and new technologies to integrate transport services.

The world is urbanizing rapidly, and population densities are increasing. Along with population growth, there is an increase in car ownership and demand for transport journeys across all regions (see Figure 1). This growth is expanding demands on urban infrastructures of all kinds, including transport. IBM research in over 50 developed and developing world cities reveals that although cities face unique transportation challenges, their leaders share a number of common ambitions. Most strive for cleaner, less congested cities and improved traffic flow, primarily through increased use of enhanced public mass transit systems and other alternatives to private vehicles. In terms of transport systems, most leaders agree that infrastructure investments are necessary. However, they also emphasize the importance of using technology to better manage transport demand and supply through deploying intelligent transport systems (ITS).

Progress implementing ITS

We used IBM’s intelligent transport maturity model to measure the progress of cities, defining a global leading practice benchmark against which we could measure the progress of a typical city.

This analysis highlighted that:

- Different cities prioritize the model’s initiative areas in different ways – there is not one solution that fits all.
- There is a material gap between the typical city and the global leading practice.
- There are particularly large gaps in data collection, data integration and analytics, and customer relationships.
- The typical city is having difficulty making progress with data integration and analytics, especially across modes.
- The more sophisticated services, including demand management, incident management and traveler information, are relatively undeveloped even among leading cities.

- Each city will have a different implementation path based on its unique starting position and the priorities it sets out in its transport strategy.

Enhancing ITS

To find out what the leaders in transport are doing, we talked in depth to transport officials and experts responsible for transport policies, programs and service operations in selected cities about their transport visions out to 2020, the role of ITS in meeting their objectives and their implementation strategies.

From our conversations, we summarized a series of recommendations to assist cities as they progress toward solving their transport challenges:

1. Develop and implement comprehensive ITS strategies that are long term, flexible and integrated with the city’s transport vision.
2. Adopt customer-centered approaches to improve services, understand customers and influence customer behavior patterns.
3. Integrate service delivery across transport modes.
4. Secure funding and apply innovative business models.
5. Effectively manage implementation by addressing the complexity of ITS projects.

Above all, our research concluded that intelligent transport is about more than implementing discrete technologies.



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IBM Global Services
Route 100
Somers, NY 10589
U.S.A.

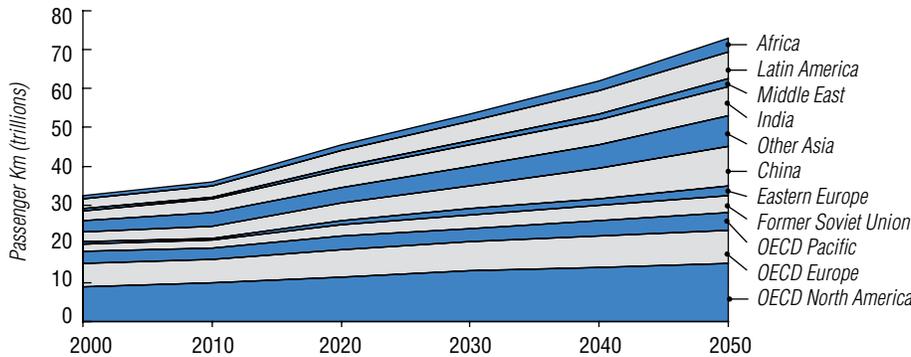
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FIGURE 1.
Personal transport activity by region.



Note: OECD = Organisation for Economic Co-operation and Development.

Source: "Mobility 2030: Meeting the challenges to sustainability." The Sustainable Mobility Project. World Business Council for Sustainable Development. December 2004.

Leading cities are using these technologies to evolve their transport systems from single modes to integrated ones, improve transport services and provide an improved value proposition to customers.

Innovative city officials exhibit a common set of attributes. They:

- Provide leadership and vision in transforming their network of modes of transportation through crossmodal collaboration.
- Treat transport as an integrated service, moving from just managing infrastructures to providing integrated

services, making this style of management a team sport that involves collaboration among customers, suppliers and all levels of government.

- Adopt a customer-centric approach to transport strategy and execution.

As cities move toward more integrated systems and sharing more information with their customers and stakeholders, consumers enjoy faster and better services, cleaner air, greater alignment and collaboration among transport stakeholders, and pride in knowing that their cities are becoming more economically competitive than before.

To request a copy of the full paper,
please e-mail iibv@us.ibm.com

How can IBM help?

- **Business Consulting and Delivery Services** – IBM helps transport officials formulate, implement and operationalize programs to respond to changing transport requirements, meet the goals of cities and nations, and improve customer experiences.
- **Intelligent Transport Systems** – IBM has a team of more than 200 intelligent transport specialists providing a range of solutions to transport authorities globally, including integrated fare management, road user charging, automatic fare collection and asset management.
- **Research** – IBM's eight research labs are applying the latest science to the most challenging business problems faced by cities and their transport authorities.

Key contacts:

- Global:** Jamie Houghton, jamie.houghton@uk.ibm.com
Americas: Naveen Lamba, naveen.lamba@us.ibm.com
Europe: Gunnar Johansson, gunnar.s.johansson@se.ibm.com
Asia: John Hawkins, jhawkins@au1.ibm.com