



Highlights:

Integrated fare management solutions help both commuters and transportation system operators.

Transportation systems operators get:

- A reduced need for cash handling and simplified cash management
- A facilitator for seamless transfer throughout different modes of transportation and operators
- A way to achieve revenue sharing and apportionment among the different operators providing the service—based on actual usage
- Tamper-proof storage of transaction activities
- Decreased levels of fare evasion and fraud loss
- Improved asset utilization resulting in lower maintenance costs
- The ability to implement creative and flexible fare policies
- A way to help manage passenger numbers and prevent overcrowding on buses and metro gates

Integrated fare management

- A source of extra revenue generation when the use of the fare media (transport card) is extended to micro-payment, access control, attendance, etc.
- A wealth of data about public transportation usage which can be used by transport planners and operators to plan routes and schedules more efficiently; this helps achieve higher levels of asset and network optimization.

Commuters see benefits, too:

- Reduced boarding times
- No need to wait for tickets when auto top-up or load is introduced as part of the fare management system
- Less need for cash or correct change
- Fast, secure and convenient transactions
- Customized service: the ability to recharge or cancel the card
- Easy access to their own transport usage transactions

The impact of automobile traffic on the environment and society are well-documented. On American roadways alone, cost estimates for those stuck in traffic are staggering¹:

- 4.2 billion hours of lost productivity
- 2.3 billion gallons of gas
- \$87 billion in cost

Public transportation has long been seen by commuters as inconvenient and slow. Now, intelligent transportation solutions from IBM® can help change the way transportation systems work. One key aspect of intelligent transportation is integrated fare management. Integrated fare management is an automated revenue collection system. Commuters can purchase a “SmartCard” that allows them access to railways, subways, buses—and even lets them pay for parking.



As the demand for public transport increases, there is a requirement for the optimization of existing services such as infrastructure, timetables and schedules. The goal: increased system throughput. Integrated fare management is a powerful way to deliver tangible benefits for both transportation system operators and commuters.

Benefits of integrated fare management

For transportation system operators, the benefits of integrated fare management are clear. This approach makes any public transportation system more efficient by minimizing the need for cash (and cash management). Boarding passengers can take a long time, so shortening that boarding time helps commuters feel as if their commute is off to a good start.

Integrated fare management makes possible seamless travel and transfer throughout different operators and modes of transportation. It improves service by making the system easier to use.

Integrated fare management also provides tamper-proof storage of transaction activities. This reduces security concerns for the operators by lessening the opportunities for fare evasion and fraud loss. IBM integrated fare management solutions are built on reliable and proven technology in volume production environments.

There are other benefits of integrated fare management. Maintenance costs can be reduced, since card readers have no moving parts. The card can be used for purposes other than travel, including micro payment, road tolls and building access control and attendance. This integrated approach provides a tool to implement creative and flexible fare policies—which encourages usage. Integrated fare management also helps operators gain better insight about usage, enabling them to optimize the use of assets and networks.

Commuters benefit from integrated fare management, too. They see improved service when boarding times are reduced and when the lines for ticket purchases are shorter. They no longer need to worry about the need for correct change. Transactions are fast, secure and convenient—and the cards are customizable and reusable.



Customer Example:

Thousands of passengers use public means of transportation in Dublin every day—especially during rush hour—with commuters travelling to the Irish capital from as far as Dublin’s neighboring counties. The City of Dublin’s Railway Procurement Agency (RPA) created and implemented the infrastructure for an integrated ticketing system throughout all public transportation in the greater Dublin area and has partnered with IBM to make this happen.

The Integrated Ticketing System (ITS) is designed to process up to two million transactions a day, with the possibility to be extended and to include other value-added services such as Internet “top-ups” and micro-retail payments.

ITS eliminates the need for commuters to carry cash to pay for tickets, ensuring fast, secure and convenient transactions. The SmartCard is simply re-charged as needed and enables seamless travel. The card transfers throughout different operators and modes of transport, and can provide for flexible fares and ticket products as well.

The RPA believes this ticketing system will change the way public transport is viewed. This change will have such a profound impact that it will be hard to imagine travelling without an ITS card.

These SmartCards are the de-facto standard for electronic ticketing in public transport. Customers hold their card over a reader at the gate or point of entry and speed through the ticketing process. With an immense worldwide installed base, it is a well-proven technology and is currently used for high-volume public transport ticketing in cities such as Hong Kong, London, Belfast, Nottingham, Singapore and many more.

The systems are being delivered in a phased basis and undergo extensive testing before being gradually rolled out. They provide a pay-as-you-go system on re-usable SmartCards and hold weekly, monthly and annual tickets for regular commuters on Luas, Dublin Bus, Irish Rail, Bus Éireann and privately-operated services.

To date 60,000 Luas SmartCards have been sold. SmartCard users save 25 to 35 cents on off-peak adult single tickets and 35 to 45 cents on adult peak single tickets. This represents an average savings of over 15 percent on adult off-peak singles and 20 percent on adult peak singles. Adult passengers save if they use a SmartCard instead of purchasing a return ticket.

Why IBM?

Integrated fare management can be quite complicated, requiring the orchestration of a variety of hardware and software components in addition to services. IBM provides a strong consulting element for all hardware, software and services components and delivers an application solution for back office operations. This provides cost-effective ticket and SmartCard management, central reconciliation and settlement services to all public transport providers.

IBM offers three solution areas designed to help reduce congestion, increase funding for transport programs and manage environmental impact. The intelligent transportation approach from IBM provides comprehensive solutions that enable a cost-effective, optimized infrastructure—one that can incrementally integrate and expand transportation capabilities.

IBM methodologies are tested and backed by 1,600 highly skilled government and industry solution professionals. IBM offers a documented history of helping to reduce traffic congestion and an ability to deliver results anywhere in the world that is virtually unmatched.

Integrated Fare Management solutions include:

- Rate engine
- Transport data gateway
- Data models
- Information architecture

Conclusion

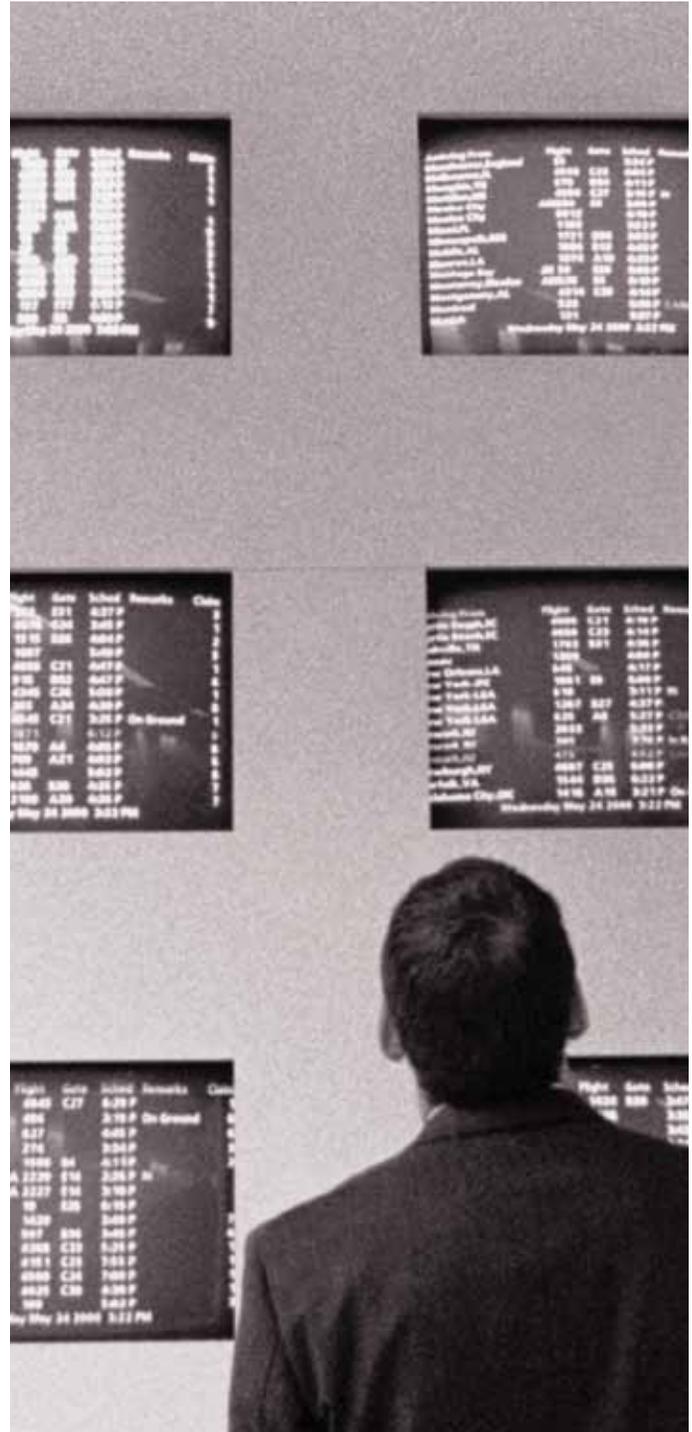
Integrated fare management is a key aspect of intelligent transportation—but it is just one aspect. There's no “one size fits all” solution: Transport challenges, priorities and solutions vary by region. IBM has implemented cost-saving, intelligent transportation systems around the world. Learn how IBM can help with yours.

Change is possible. The tools exist today.

For more information

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¹. The Texas Transportation Institute, 2009Urban Mobility Report



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