

Intelligent Urban Exchange for Transportation: Actionable Insights for Operational Excellence

Digital Software & Solutions Group



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The ability to move citizens from one point to another is critical to the health and vitality of a city. However, as cities continue to grow at unprecedented rates, providing efficient, safe, and affordable public transportation is becoming increasingly difficult. Overcrowded buses, long wait times, missed connections, and empty seats are just a few of the challenges city government and public transportation planners must address, while contending with diminishing budgets and resources.

Tata Consultancy Services' (TCS') unique cloud-based Intelligent Urban Exchange (IUX) Intelligent Transportation integrates data and delivers insights to help launch smart cities transportation initiatives for operational excellence. It helps cities improve their transportation and mobility services while reducing operational costs and increasing revenue. The IUX Platform collects and analyzes all types of data—from networks, sensors, telematics, open city data—for real-time, actionable insights that help city administrators and transportation operators keep their cities moving efficiently and safely—today and in the future.

Overview

As the populations of cities continue to grow, short peak periods exert pressure on the public transportation and mobility system and often cause overcrowding, congestion, and a negative user experience. With static urban transport capacity, transportation services must be designed to absorb peak demand as effectively and efficiently as possible.

Most transportation solutions, however, focus on supply side systems and do not provide insights into citizen demand. To keep urban centers vibrant and sustainable, city governments need to better understand citizen demand and provide affordable and dependable public transit.

TCS' IUX Intelligent Transportation cloud-based solution integrates information on citizen flow, city data, and commute services for real-time insights and next-step recommendations. These insights help city leaders and planners launch and support smart city transportation initiatives that result in improved city planning and operational excellence.

Focused on problems related to the cities' bus services, IUX Intelligent Transportation provides real-time and trend views of wait times, queue build-up, and ridership across various routes and times. Our solution enables city administrators to decrease wait times, optimize bus frequency and capacity across routes, and increase revenues through greater ridership and improved utilization.

Our Solution

IUX Intelligent Transportation is a comprehensive analytics solution with a plug-and-play modular architecture and IUX Platform which provides:

- **Comprehensive analysis:** Analysis on static open city data and real time inputs from sensors, bus telematics systems, devices and wireless access points provides a view of the city's bus services and its impact on customers' experiences over time.
- **Deeper insights:** Real time analytics from citizen movement and demand patterns provide insights that can help transportation operators anticipate and respond to citizens' transportation needs.
- **Recommended actions:** The IUX Platform collects, filters, and analyzes data from multiple sources to generate actionable insights such as real-time and trend alerts to warn city administrators of a sudden breach in any performance parameter from the specified benchmark values so remedial actions can be initiated.



Benefits

With comprehensive analysis, real-time dashboards, capacity utilization reports, key performance indicators (KPIs) and trend alerts, IUX Intelligent Transport helps you:



Deliver improved transportation services

- Reduce wait times
- Reduce commute times
- Redistribute fleet resources to optimize service levels



Increase revenue

- Increase ridership on public transportation
- Boost productivity with greater transport efficiency
- Maximize revenues with cost effectiveness recommendations



Reduce operational costs

- Improve capacity management and fleet planning by aligning to citizen movement and demand patterns
- Optimize capacity utilization through the efficient use of existing infrastructure
- Optimize bus schedules



Reduce environmental impact

- Decrease congestion with fewer cars on the road
- Reduce health problems exacerbated by air pollution by increasing public transportation ridership and lowering car emissions
- Reduce fuel consumption and carbon footprint

The TCS Advantage

The TCS IUX Intelligent Transportation solution was designed specifically for city government and public transportation planners. Only TCS offers the following:

- **Industry solutions:** Our software has been created by government and transportation planning experts with proven experience in implementing large scale eGovernance and citizen engagement programs. Our customized solutions include pre-built city mobility applications that incorporate the latest technologies and wisdom from TCS' world class R&D.
- **Lower cost of ownership:** Our revolutionary platform simplifies smart city initiatives with open, flexible, scalable, cloud-based, and integrated platforms, exposing city intelligence as a utility to all the smart city stakeholders. Our solutions are quick to implement, easy to manage and change, and expandable to a growing ecosystem of apps.
- **Simplified business and engagement models:** We offer flexible business models that adapt to how you want to buy software. Our rapid implementations deliver value within 30 days. Published pricing helps avoid lengthy negotiations and our enterprise software is downloadable from the web.
- **Experience Certainty commitment:** Our corporate culture is one of superior delivery and customer certainty. Our consulting clients know the quality of our work, and now, companies can get that same level of quality, speed, and certainty with our already configured software and solutions.

Awards & Recognition



About TCS Digital Software & Solutions Group

TCS Digital Software & Solutions Group delivers on the promise of Connected Consumer Intelligence™. Our experience working with the world's most successful enterprises drives the development of integrated software that helps them meet the higher expectations of today's wired consumers and citizens. With TCS DS&S Group software, organizations can design experiences that logically connect every touch point of the consumer's digital and physical journey.

To know more

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Blog: [Catering to the Connected Consumer](#)

About Tata Consultancy Services Ltd (TCS)

Tata Consultancy Services is an IT services, consulting and business solutions organization that delivers real results to global business, ensuring a level of certainty no other firm can match. TCS offers a consulting-led, integrated portfolio of IT and IT-enabled infrastructure, engineering and assurance services. This is delivered through its unique Global Network Delivery Model™, recognized as the benchmark of excellence in software development. A part of the Tata Group, India's largest industrial conglomerate, TCS has a global footprint and is listed on the National Stock Exchange and Bombay Stock Exchange in India.

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