The Future of Transportation

As the global population becomes more urbanized, the challenges continue to grow for transportation operators and authorities to predict, influence and manage transportation demands within the available infrastructure – demands that fluctuate hour to hour across multiple transportation modes. This can only be managed by using intelligence about travel patterns and behavior to more equitably distribute traveler loads on public transit or on private modes on the road network.
Cubic’s answer is NextCity, our vision for city management and integrated traveler payment and information that centers on three core principles:

- The delivery of an integrated customer experience
- A single customer account for all travel
- Integrated operations and analytics

NextCity provides a roadmap for a coordinated framework – using legacy and emerging payment methods and information systems to integrate all travel, payment, customer experience, operations and analytic information in the region for all modes of transportation.

The NextCity vision is built on a model for real-time data gathered across a transportation network through payments, sensors and other touch points, increasing travel efficiencies without losing the flexibility of an individual authority. For travelers, this means personalized, actionable information sent directly to their mobile device, all supported by a single account to pay for their entire trip.
Turning vision into reality
By integrating emerging payment methods and information modules with legacy systems and existing transportation infrastructure, operators and authorities can create their own vision for the future. In addition, platforms designed using modular architecture will allow additional authorities or public transport systems to be added as demand grows.

Cubic’s back office solution focuses on outputting transaction data to other integrated platforms, including the clearing and settlement system, which automates monetary flows and reconciliations between multiple transportation operators. A pioneering central business intelligence component combines data on historical trends with predictive analytics to give operators and transportation planners the information they need to understand current demand for the existing infrastructure and determine where excess capacity exists and where new capacity is needed. Pricing policies can then be implemented to move demand from one mode to another, spreading the load across the entire network. Operators have the ability to apply real-time, multimodal dynamic pricing to transactions that match travelers’ previous travel choices or preferences with the prevailing network capacity.

Traveler convenience
By integrating transportation accounts, travelers don’t have to pay separately for highway tolls, parking charges, transit tickets, bike- and car-share programs – it can all be managed through one account.

Because it’s a cloud-based solution, operators are able to provide travelers with a branded suite of mobile services to manage their account in real time. Apps available on a smartphone or tablet can be used to manage ticket purchases and transactions, set service alerts and even store tickets directly on a smartphone using either bar code or Near Field Communication (NFC) technology. Operators are able to alert travelers through the app to network problems affecting their proposed journey and advise them of alternative routes.
Value in understanding travel patterns
Real-time data gathered across a transportation network provides accurate insights on travel behavior and network utilization. By understanding how, why and when travelers and transportation interact, operators and authorities can match demand with capacity – by pricing urban transportation assets and services centrally, dynamically and in real time – and encourage travel decisions that are most efficient for both the network and travelers. When transportation stakeholders can predict, influence, and eventually manage transportation demand so that it can be best met and safely optimized within existing transportation supply capacity, traffic congestion and pollution is reduced and movement around the city becomes easier.

Understanding and utilizing transportation data helps cities to reduce congestion and pollution, and become more livable and economically competitive.
Why Cubic?
Cubic has a rich history in revenue collection – on the one hand, we understand transit and passenger behavior, on the other, the needs of transportation authorities and traffic management. Our unique partnerships with world-class providers including Microsoft’s Azure cloud platform, Cisco’s data management and transmission contributions and Mastercard’s statistics on mobility and purchasing patterns, set us apart in the world of complex information technology systems.

NextCity – building a smarter tomorrow
Intelligent and actionable information is the key to ensuring everything is running as smoothly and efficiently as possible within the travel networks – and will empower riders to make smarter, more informed decisions based on facts.

By capturing high-quality, integrated, concise, real-time data on how a city’s population moves and why it chooses to move that way, we can prepare for and even strongly influence the future.

Cubic – a leader in intelligent travel solutions
At Cubic, we believe our identity is intrinsically linked with our customers, and the people our customers serve. We care about how they get from one place to the next – how that impacts their lives, their fellow travelers and their cities – and how it feels along the way.

That’s why we’re passionate about developing transportation solutions that improve the way we move safely through our cities. Innovation is in our culture, and our history speaks for itself. In Cubic’s 45-year history, we’ve delivered transit fare collection systems to over 450 operators, including 20 regional back office systems, and traffic and transportation management systems for major cities and regions on four continents.