

Cubic Road User Charging

Tackling Urban Congestion





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The road user charging industry faces formidable new challenges. Long gone are the days of anonymous patrons throwing money into a basket or handing over cash to a toll collector. The transportation landscape is undergoing the transformation of the century: innovative services, new partnership models and changing user demands add unprecedented layers of complexity to transportation networks. This new landscape calls for powerful, modern and flexible congestion management approaches which seamlessly integrate with the more traditional electronic tolling systems that first transformed the industry more than 20 years ago.

That's why we developed the Cubic Road User Charging Solution — a robust, integrated and customer-focused congestion management platform that offers efficient, accurate and low-cost collection of revenue in the context of user journeys. Featuring multi-modal integration, complex pricing models and a single user account for managing all transportation needs, the Cubic Road User Charging Solution provides cities with the necessary back office to keep up with today's infrastructure demands, while helping them better prepare for the future.

Flexibility When You Need It

The Cubic Road User Charging Solution provides an alternative to inflexible and proprietary systems that are difficult and expensive to change, customize, maintain and modernize. Our solution is designed for

configurability, so that changes can be made in an instant. We leverage proven components from Cubic's urban revenue management systems. We also integrate best-of-breed components familiar to the top blue chip firms in the financial services and logistics industries with an extensive experience in transportation revenue management. By working closely with our industry partners using commercially available, leading-edge technologies, our platform is designed to grow as customer's needs change, thus extending the life of the system.

Designed with an Eye to the Future

The Cubic Road User Charging Solution was developed to enhanced operations, customer services, and financial security management. It embeds specific deployment requirements within business processes rather than compiled code, resulting in low-cost, future-proof deployments that are both horizontally and vertically scalable. The platform can be adapted to integrate with new technologies, operational and payment models and can easily scale to add capacity, facilities and agencies, including multi-authority support and multimodal transportation.

Big Data Focus

Built around the Cubic Data Management & Analytics Platform (DMAP), the Cubic Road User Charging Solution benefits from cutting-edge, secure, multi-tenant cloud-based data management and analytics, capable of satisfying even the most demanding transportation

- **One-stop-shop for congestion management**
- **Flexible, easily configurable system**
- **Robust CRM component**
- **Superior financial accountability**

Financial Accounting and Revenue Apportionment

A robust system manages the day-to-day clearing and settlement for financial transactions including payment receipts, fees, refunds, customer adjustments and chargeback processing.

Daily closings and summaries make revenue allocation simple, while transaction level detail and reconciliation provide full auditability.

Customer Management

A number of commercial, off-the-shelf (COTS) product capabilities enhance customer service operations and shorten call center response times. Customer interactions are managed through a web and smartphone-enabled Customer Relationship Management (CRM) platform. Available customer-assisted channels include retail points of sale, Integrated Voice Response (IVR) and call center systems. Customer self-service channels consist of interactive and mobile websites, smartphone applications and Short Message Service (SMS) capabilities. This easily extends to Cubic's One Account capabilities for a single account for managing customer profiles and funding sources.

Flexible Business Rules and Workflow Management

Business and financial apportionment rules are configurable and intuitive to enable easy changes over time. Workflows are also highly configurable to account for agency-specific requirements around various processes such as account management around prepaid accounts, N days to pay and ageing, violations and collections.

External Interfaces

Our configurable approach to external interface management not only provides a high level of configurability, but enables similar processes to be quickly copied and modified. Data provenance capability provides valuable information on any data blockages.

Efficient Image Review

Transaction images are provided in a user-efficient manner to minimize time per image. Machine learning capabilities minimize the number of manually reviewed images and present images with variations to avoid manual adjustments during review.

Trip Reconstruction and Pricing

Cubic Road User Charging Solution can be extended to include capabilities such as trip reconstruction and sophisticated dynamic pricing. Integrated trip building and reconstruction enables a complete trip to be constructed and appropriate rates applied based on business rules. Pricing models are available by facility or plaza, including static, variable and dynamic pricing.

analytics needs. An enterprise-class database retains the highest levels of performance at all transaction volumes and system loads, while a highly secure architecture provides Personally Identifiable Information (PII) protection and Payment Card Industry (PCI) compliance for payment transactions.

Services that Enhance the Journey

The Cubic Road User Charging Solution integrates easily with a number of Cubic's Services, including community outreach and customer education, operational planning assistance, and data analytics, to make journeys safer, smarter and more efficient for providers and commuters alike.

The Future of Road User Charging

Revenue management systems share a number of common needs, whether they manage accounts for transit, road user charging or other transportation systems. The Cubic Road User Charging Solutions leverage proven components from our Urban Mobility Back office, deployed throughout the world and currently processing millions of transactions daily.

Common components include areas such as customer notification management, payment processing, and system monitoring. In addition, other capabilities have been modified or developed from the ground up to address the specific need around road user charging.

Cubic Road User Charging provides the flexibility you need to keep up with today's changing technology, while preparing for the future.

NextCity – building a smarter tomorrow

The Cubic Road User Charging Solution is inspired by NextCity, Cubic's vision for city management and integrated traveler payment and information that centers on three core principles: the delivery of an integrated customer experience, one account, and integrated operations and analytics.

As the world's population moves to urban centers, the result is greater traffic congestion, frustrated travelers and lessened productivity. Intelligent and actionable information is the key to ensuring that everything is running as smoothly and efficiently as possible within the travel networks – and will empower travelers to make smarter, more informed decisions based on facts. NextCity provides a roadmap for a coordinated framework – using legacy and emerging payment methods and information systems to integrate all travel information and payment, customer experience, operations and analytics 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 individual authority flexibility. For travelers, NextCity offers a solution for personalized, actionable information sent directly to their mobile device, all supported by a single account to pay for their entire trip.

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. 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 throughout cities. Innovation is in our culture, and our history speaks for itself. In our 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.

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