The World’s best toll operators

As the international tolling community prepares for the IBTTA annual meeting this September, Jack Roper catches up with the winners of the association’s annual awards, and uncovers some of the latest innovations that are leading progress in the industry.

The International Bridge, Tunnel and Turnpike Association (IBTTA), established in 1932, works to connect toll facility owners and operators across six continents with the common goal of developing cutting-edge solutions to modern transportation challenges. To this end, the IBTTA’s annual Toll Excellence Awards recognize innovation and excellence in the field.

The 2017 Awards are being presented during a special session on September 11 at IBTTA’s 85th Annual Meeting in Atlanta, Georgia. Over the next six pages you’ll meet the winners in the six categories. During the Closing Banquet, on September 12, IBTTA president Emanuela Stocchi will bestow the coveted President’s Award on one of them.

“The 2017 awards submissions consisted of 28 public and eight private sector entries,” says Oklahoma Turnpike Authority’s David Machamer, chairman of the 2017 Awards. “The committee, consisting of 12 members, selected five winners from the public sector and one from the private, scoring submissions against a set of criteria. The committee determines that the project’s objective was reached, that it is applicable to the toll industry and provides excellent customer service.”
IBTTA Awards

Technology Award

Pennsylvania Turnpike Commission

After winter storm Jonas underlined the shortcomings of procedures for emergency communication with drivers, Governor Tom Wolf challenged Pennsylvania Turnpike Commission (PTC), PennDOT and the Pennsylvania Emergency Management Agency (PEMA) to develop a smartphone-based solution. They identified three imperatives: communication must be unplanned, instantaneous and two-way. This led to the development of 511PAConnect, which has won the IBTTA Technology Award this year.

As soon as a trapped-driver scenario is identified, 511PAConnect pushes a wireless emergency alert (WEA) to all mobiles in a geo-targeted incident area. This WEA explains how to receive incident updates, offering a choice of phone, text or website communication, thus initiating a two-way channel. Location data is requested from smartphones, and drivers are asked a few critical questions (vehicle type, number of passengers), helping responders to build a clearer picture of the situation. Motorists enjoy a reassuring sense of ongoing dialog with agency staff; whenever 511PAConnect has been activated, agitated calls from motorists to call centers have quickly fallen away.

“511PAConnect is about keeping travelers informed in situations where they may be stranded for hours,” says Pennsylvania Turnpike CEO Mark Compton. “It helps PennDOT and the PTC better serve drivers regardless of conditions. Drivers have rapid communications when major incidents impact their travel – along with peace of mind that responders are aware of their situation and precise location.”

Pennsylvania Turnpike still has toll booths, but as the march of technology makes all-electronic tolling more and more prevalent, for how much longer?
Private Sector Innovation Award

Raytheon

Give Raytheon staff a challenge and nothing, it seems, will stop them meeting it, even if it means pioneering an entirely new construction process – thereby minimizing disruption to road users, while providing a seminal template for future all-electronic tolling system (AETS) installations.

The Massachusetts Department of Transport (MassDOT) hired Raytheon to design and build a statewide AETS infrastructure capable of collecting tolls at highway speeds, replacing a legacy toll booth system that cost 79% of tolling revenue to operate. Raytheon’s contract entailed constructing 32 AETS toll zones and providing the system host with a MassDOT go-live date of October 2016. But after three months, a directed change order stipulated that, instead of Janus (E-Z Pass) readers, multiprotocol readers had to be installed instead due to emerging nationwide interoperability standards. Additional antennae and a sixfold increase in cabling would necessitate new gantries – and a three-month projected delay.

Raytheon’s inexorable commitment to the original timeframe drove an accelerated construction procedure entailing off-site gantry assembly running parallel to vertical support construction. Rather than the three-night road closures envisaged for each of the 32 AETS zones there were typically six hours of lane closures, with traffic completely stopped for just 15 minutes during cross-member placement. Miraculously, 90 days were saved and the system went live as planned in October 2016.

MassDOT says its new free-flow AETS now routinely saves 132,000 commuters two hours on the road each week while reducing congestion and emissions, improving safety and increasing revenue. “Going through an automated toll today should be like logging on to your computer and going to your favorite search engine – just an ordinary, seamless experience,” says Raytheon Transportation vice president Bob Delorge. You don’t need to worry about what is happening behind the scenes. And that’s what we and our partners accomplished with MassDOT.”
Customer Service and Marketing Outreach

State Road and Tollway Authority, Georgia

Created through a strategic consolidation in 2014 to provide a more integrated response to Georgia’s transportation needs, the State Road and Tollway Authority (SRTA) is being recognized for its innovative Commuter Credits program, a pilot scheme promoting alternatives to solo travel during peak periods on Atlanta’s congested I-85.

This three-pronged Commuter Credits scheme leveraged the partnership between SRTA’s existing Peach Pass system and the robust commuter bus network on the corridor’s Express Lanes to incentivize traffic-reducing journey choices. The first element of the pilot was Shift Commute, which offered selected Peach Pass customers US$3 per week in toll credits for reducing their weekly number of peak period Express Lane commutes. The second element – Start a Carpool – offered US$3 per day to Peach Pass customers who organized a carpool. The third element – Ride Transit – offered toll credits to customers opting to ride on buses rather than driving at peak times. Shift Commute was offered to 243 Peach Pass customers and saw around 500 commutes translated to an alternative time or mode, while the Ride Transit pilot involved 210 participants and converted some 4,500 solo car trips into bus rides.

“A growing state means more cars than ever on Georgia’s busy highways,” says SRTA executive director Chris Tomlinson. “SRTA wanted to encourage commuters to explore alternatives to driving alone during the most congested periods. The Commuter Credits program gave people the positive incentive they needed to experience the benefits of alternative commuting and still reap the benefits of Georgia’s Express Lanes. As a result of the pilot’s success, SRTA plans to continue with a broader program in conjunction with the opening of the Northwest Corridor tolled Express Lanes in 2018. Our team is proud of the program and grateful to IBTTA for recognizing our efforts with their award.”
Social Responsibility Award

North Texas Tollway Authority

Every day people suffer death or injury when drivers become distracted, perhaps only for the few seconds needed to read a text or switch playlists. Driving distractions fall into three fundamental categories: visual (taking one’s eyes off the road), manual (taking one’s hands off the wheel) and cognitive (taking one’s mind off the road). Texting while driving is singularly pernicious in combining all three – and statistically, at any given moment, 660,000 drivers across America are doing it. This parlous situation has spurred the North Texas Tollway Authority (NTTA) into action with a safety campaign entitled Spreading the Dangers of Driving ‘Intexticated’, which urges ‘red thumbs for all’.

“Safety is NTTA’s top priority,” explains NTTA board chairman Kenneth Barr. “Our challenge – not unique to North Texas – is to reduce accidents caused by distracted driving. To address this grave issue, we took a humanized, positive approach and not a punitive one. We didn’t harp on about what not to do, but concentrated on what every passenger could do. A picture means a thousand words, so we took a visual approach in order to tell our safety story.”

In 2015 the NTTA joined a nationwide campaign encouraging drivers to redden their thumbs as a sign of their resolve not to text and drive. A community engagement program was mounted, spreading the simple, consistent message across North Texas, through storefronts, online and in coordination with businesses and municipal partners, distributing nearly 100,000 NTTA-branded red thumb bands bearing the legend ‘W82TXT’ since 2015.

The campaign’s preventive impact is not readily quantifiable, but its message has been cemented in the public consciousness in an enjoyable, uncensorious fashion, benefiting NTTA’s profile and community partnerships. “It’s an old-school solution to a 21st century issue, fueled by the evolution and accessibility of technology at drivers’ fingertips,” says Barr.

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Kenneth Barr, board chairman, NTTA
The Administration and Finance Award recognizes the innovative procurement approach the Indiana Toll Road Concession Company (ITRCC) adopted for the US$220m 80/90 PUSH construction project. This imposed an exacting deadline, delivering excellent value and a favorable allocation of risk while minimizing the impact of the works. The ITRCC sees the 80/90 PUSH procurement process as a template of excellence that can benefit other toll agencies and DOTs in the future.

“The 80/90 PUSH project is the largest undertaken on the Indiana Toll Road since its original construction in 1956,” explains chief financial officer Ashley Holmes. “The procurement approach successfully delivered mutually favorable outcomes for ITRCC, the contractor (Rieth-Riley), customers and the State of Indiana.” The project involves 292 lane miles of interstate highway pavement upgrade, rehabilitation of nine interchanges and 53 bridges, and installation of a fiber-optic backbone to facilitate state-of-the-art ITS deployment. The project is several months ahead of schedule and tracking to be completed under budget.

A payment of US$250,000 to the unsuccessful design-build team kept multiple teams involved and provided the tension of competitive pricing. The ITRCC maintained a strong contractual position to mitigate budget risks, with terms including liquidated damages for non-completion by the agreed date and non-compliance with maximum queuing levels in workzones, while a reduced 20-month completion schedule also sought to minimize road user disruption. An extended warranty ensured that the contractor would be accountable for any remediation or repairs within a seven-year term.

“ITRCC is delighted to be recognized by the IBTTA for the innovative process pursued in procuring such a large-scale construction program within a highly abbreviated period,” says Holmes. “The procurement approach leveraged an aggressive schedule via early contractor engagement, running concurrent processes and maintaining a high degree of interaction and transparency with our contractors.”
Toll Operations, Engineering and Maintenance Award

Road and Transport Authority, Dubai

Can paying tolls ever make you happy? The answer, it seems, is ‘Yes’, if you’re using the award-winning Smart Salik online system, developed as part of a government Happiness Strategy aiming to make Dubai the happiest city on Earth.

It is an all-electronic tolling system with three million existing customers, and won the 2014 IBTTA Technology Award for a sophisticated system expansion, featuring state-of-the-art gantry design. Subsequently the Road and Transport Authority (RTA) set its sights on a cash-free, paperless future with a target of shifting 80% of all its tolling transactions online by 2018.

RTA and its contractor, TransCore, pursued this goal through a host of projects amounting to a coordinated self-service development strategy. This included an upgraded user interface, a revamped website and mobile app and use of personalization features and user experience analysis tools. Interactive voice response, mobile fingerprint log-in and smartphone integration have been introduced, along with a PIN-free ‘Recharge by Mobile and Plate’ facility and an enhanced dashboard with near-real-time account and violation data. The list goes on – and the net outcome is friendly and usable online tolling with minimal clicks.

“As the world of ITS evolves, the RTA continues to lead in encouraging their partners to provide innovative improvements to already successful solutions,” enthuses TransCore’s MENA-region managing director Karim Rizkallah. “TransCore is proud to be involved in Dubai’s dynamic approach and forward thinking.”

The project targets have already been exceeded, with over 90% of Salik tolling now transacted online and call center demand down 30%. But chiefly, the system’s Happiness Rating has shot up since the Smart Salik launch – from 72.2% to 93.2%, to be exact.

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Karim Rizkallah, managing director, MENA region, TransCore

Georgia on my mind

This year’s IBTTA Annual Meeting venue is Atlanta, Georgia

Founded in 1837 at the intersection of two railroad lines, Atlanta, Georgia, has grown into a populous multimodal transportation hub for the southeastern USA, with Hartsfield-Jackson International becoming the world’s busiest airport. Originally named Terminus, Atlanta rose phoenix-like from its ashes after being razed to the ground during the Civil War. It was the birthplace of Martin Luther King Jr and hosted the 1996 Summer Olympics.

In recent years the city’s vibrant economy has drawn a rapid influx of people and the population of the Atlanta Metropolitan Area is fast approaching 5.8 million. Such growth creates transportation challenges – especially given the millions of visitors choosing the city as a destination each year – and tolling has been fully embraced as a means to provide reliable road network mobility. The State of Georgia opened its first reversible managed lanes in 2017 and more than 60 center-line miles of tolled Express Lanes will follow over the next 18 months. They will run alongside existing interstates in Atlanta’s most congested corridors, offering drivers the option of paying a toll to bypass congestion during peak times, with dynamically priced, all-electronic tolling maintaining free-flowing travel.

Atlanta’s civic resilience was put dramatically to the test in March 2017 when a fire caused a 100ft (30m) section of bridge to collapse on I-85 – a major arterial route carrying 243,000 vehicles per day. Around 6,500 tons of debris were removed and 13 columns and 61 beams were replaced, while 253 tons of steel, 56,786ft³ (1,608m³) of concrete and 54,000 hours of manpower were required to repair the damage in just six weeks. Grown great out of the ruins of the Civil War, this is a modern city that shows its true mettle in a crisis, taking rebuilding in its stride.