



Tolling Europe 2025: The future of road user charging

Summary Report of Report TOL-25-001
Aurora Insights



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Executive Summary by Keith Mortimer

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INTRODUCTION

The Road User Charging Conference is the world's longest-running independent annual gathering of tolling, mobility pricing, and transportation management experts. Offering attendees exclusive insights into global road user charging (RUC) and tolling, the event brings together key public and private sector stakeholders to discuss global and local aspects of tolling, pricing, and RUC. With 26 presentations spanning Europe and North America, the 2025 Road User Charging Conference Europe reaffirmed the evolving role of user-financed transportation models in shaping equitable, sustainable, and efficient transport systems.

The European region continues to be a pivotal player in the tolling sector, facing unique challenges and emerging opportunities. From the escalating use of tolls to mitigate emissions and support green transition objectives to the growing adoption of distance-based tolling and advanced technologies, the conference highlighted several key trends shaping the future of tolling in Europe. Key developments included the rise of CO₂-based tolling, the ongoing shift from time-based to distance-based tolling models, and the adoption of tolls to alleviate congestion and fund infrastructure development. Other notable trends included growing cross-border interoperability, increasing toll rates to meet public policy objectives, and the expanding adoption of advanced technologies in tolling systems.

LONDON AND NEW YORK ON CONGESTION CHARGING

Major cities like London and New York City are at the frontline of tackling urban congestion while pushing for cleaner, more sustainable mobility systems. Transport for London's (TfL) Capita-led presentation detailed how its modular and scalable systems support London's clean air and congestion reduction targets. Since the launch of the Congestion Charge Zone in 2003, TfL has expanded its RUC schemes and integrated intelligent transport system (ITS) technologies to support environmental improvement, reduce car dependency, and promote user-centered public transportation. Revenue from these schemes has been reinvested into public transport to encourage the efficient use of lower-pollution vehicles. These measures have contributed to a significant reduction in congestion and air pollution, benefiting 90,000 children who no longer live in high emission zones. However, London continues to rank high on the INRIX congestion index, reflecting the ongoing challenge of balancing increasing mobility demands with the growing public desire to reclaim urban spaces from cars. In

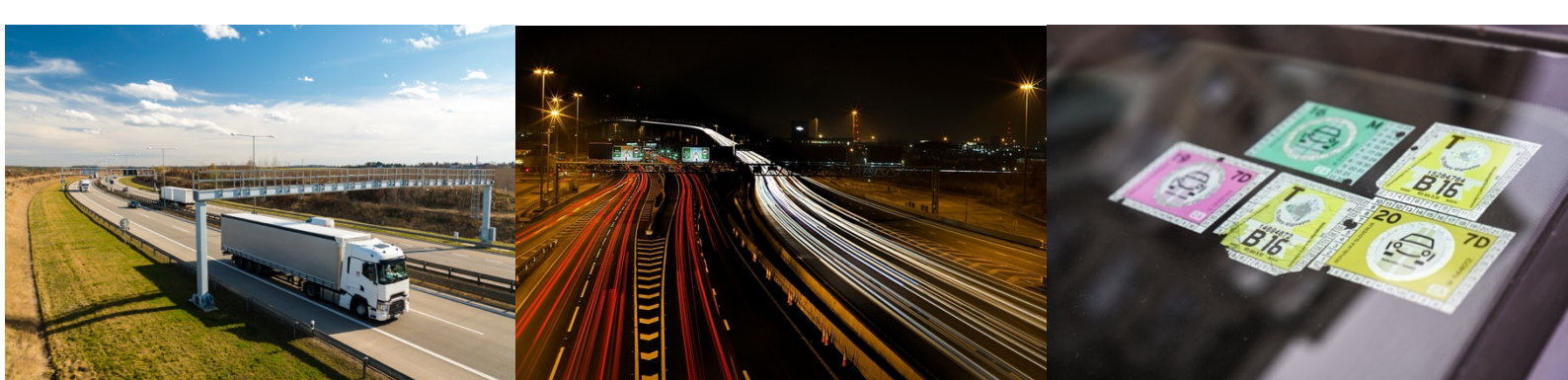
response, the work continues, with this year's agenda including the launch of the new Silvertown and Blackwall Tunnel tolls. The next major shift is the 15-year goal of increasing active travel and public transport from 65% to 80% while eliminating road deaths and serious injuries.

Dr. Allison C. de Cerreño, COO of MTA Bridges and Tunnels, discussed the early impact of New York City's groundbreaking congestion pricing scheme, which launched in January. Traffic congestion imposes a high burden upon the region, its residents, workers, and visitors, and exerts a USD 20 billion annual drag on the economy. Although the scheme had only been in place for two months, early results are encouraging. Traffic volumes within the congestion reduction zone have decreased, with some drivers adjusting their travel times to benefit from off-peak rates. Looking ahead, the MTA's Transit System is aged, so revenues from the congestion zone will directly enable essential repair and modernization.

TRANSITIONS TO DIGITAL AND DISTANCE-BASED TOLLING

Representatives from Türkiye, Iceland, Belgium, and Denmark shared updates on transitions to digital and distance-based tolling. Türkiye's toll highways have undergone a significant transformation with the introduction of the High-Speed Toll System (HGS). Dr. Üsâme Ekici, civil engineer with Türkiye's Ministry of Transport, discussed the congestion benefits of the transition, showing how technology advances have made travel smoother for everyone. Since 2022, the obligation to pay tolls via HGS tag applies to all categories of vehicles from motorcycles to heavy goods vehicles (HGVs). Modern infrastructure brings a "hassle-free" experience for travelers on Türkiye's highways. Payment options include a prepaid mode with top-up at purchase, at points of sale, or via the Internet, and automated fee collection using a post office or bank account.

Iceland successfully launched an odometer-based national RUC for electric and hybrid vehicles in January 2024. The schemes began with EVs to fairly compensate for the revenue loss caused by reduced petrol tax contribution, as explained by Pétur Matthíasson, head of communication at the Icelandic Road and Coastal Administration. From its January 2024 launch, the scheme has been highly successful, with very little discussion or complaints. This was an initial step on the way to a kilometer-based charge for all vehicles, however wider public criticism about the fairness of the new tariffs has led to setbacks during a change of government.



Viapass, Belgium's national kilometer-based charging system for HGVs exceeding 3.5 tons, showcased its ongoing digital evolution with the introduction of a new 'Book and Drive' system for occasional HGV users. The recently announced "Book and Drive" solution, which has completed initial testing, offers a flexible alternative to the traditional mandatory on-board unit (OBU) for occasional users, allowing users to access the system for up to five days per year.

EXPANSION OF MULTI-LANE FREE FLOW TECHNOLOGIES

Multiple sessions explored the shift to MLFF tolling, with case studies from the Netherlands, France, and Croatia highlighting the critical role of communication, user-focused design, and operational flexibility in successful implementation.

Jan Strijk, director of tolling for RDW Netherlands, presented the eTOL scheme, an MLFF tolling system that was launched in December 2024 on the A24 highway beneath Rotterdam Harbor. He emphasized the importance of ensuring that users pay the toll, noting that the success of such systems relies heavily on clear and consistent communication. Early signs indicated that the messaging encouraging registration was effective. While no technical challenges were encountered, Strijk suggested that the complexities of hired and leased vehicles must always be handled with care.

Paulo Santos from Ascendi discussed the growing influence of MLFF tolling in the French market. Serving the Toulouse urban area, its 53 km length includes new and redeveloped sections. Ascendi's system will be optimized to cater both for ETC users (contracted to their TSP) and VTC users (with access via ATOSCA portal or local point of sale). The "customer-centric approach" supports France's eco-friendly and digital transformation goals, fully designed for up to 15 years' usage without loss of performance. Santos stressed the importance of strong communications, and awareness of possible political constraints in forward planning.

Maria Mardzinova from SkyToll discussed tolling in Croatia, and the advantages in transitioning from "stop-go" manual tolling to MLFF operation. The flexibility of MLFF tolling system helps Croatia to manage high traffic volumes in peak seasons, while its experience with cross border and non-Schengen visitors provides valuable insights for other countries developing similar systems.

STRENGTHENING TOLL ENFORCEMENT

On enforcement, DARS Slovenia presented a robust integration of its tolling systems with EUCARIS and national databases to combat cross-border toll evasion. Slovenia's tolling systems consist of two key road user charges, which are the distance-based DarsGo system for HGVs and the distance-based e-vignette system for vehicles below 3.5 tons. ETS specialist Luka Babnik from DARS pointed out that each of the Slovenian systems is integrated with both EUCARIS and MRVL (national database). This means toll offences from the tolling systems can be automatically transferred to the Toll Offence

application system, where each case can be processed against legislation, enabling real-time data collection, due process, and efficient decisions.

Similarly, Mária Mardzinová from SkyToll emphasized that effective enforcement is essential to the success of Croatia's new MLFF tolling system, particularly in ensuring all vehicles and payment information are correctly registered and non-compliant users are addressed. Additionally, as a popular tourist destination, Croatia also faces enforcement challenges related to foreign-registered vehicles, especially those from non-EU countries. To strengthen enforcement, the system will combine DSRC technology for toll collection with ANPR cameras for vehicle identification, while OBUs will be mandatory to ensure accurate tracking and charging. Mobile enforcement vehicles will also be deployed to ensure compliance.

ADOPTION OF CO₂-RELATED TOLLING

A number of presentations focused upon internationally agreed carbon reduction policies. Bernd Datler from ASFINAG presented Austria's new CO₂-based tolling system. Since 2024, Austria's mileage-based GO toll system for HGVs has integrated CO₂-related pricing, classifying vehicles into five emission categories. Vehicles with higher emissions are subject to higher toll rates, while lower-emission vehicles benefit from reduced charges, supporting the transition to cleaner transportation. High user acceptance was reflected in the strong uptake of the CO₂-class calculator tool. Looking ahead, Datler outlined Austria's plans for 2025 to expand the system's scope with steeper targets, a redefinition of zero-emission performance, and strengthened legislation.

Toll Collect is also en-route to carbon neutrality by 2028. Dr. Peter Junker presented the track record of the German RUC leader in finding opportunities to reduce climate emissions. The national Truck Toll's revenues improve federal highway infrastructure and mobility services including rail. With its extension to commercial freight vehicles over 3.5 tons capacity, charges are earmarked to reflect external costs related to infrastructure wear, air pollution, noise, and carbon emissions.



PUBLIC-PRIVATE PARTNERSHIPS AND POLICY ALIGNMENT

Across sessions, the importance of consistent policy, public-private collaboration, and public trust emerged as key to long-term success. PPPs have been instrumental in transforming and maintaining Ireland's national road network, delivering major infrastructure improvements over the past 25 years. However, with declining fuel tax revenues and all existing PPP contracts set to expire between 2033 and 2052, Ireland is actively planning for a post-PPP future. Sarah Maddock from Transport Infrastructure Ireland (TII) introduced BRUCE (Better RUC Evaluation), a new RUC framework that aligns with a "user and polluter pays" approach. By learning from Norway, New Zealand, and Denmark, TII aims to ensure that Ireland's future funding mechanisms not only address congestion, emissions, and population growth but also maintain the essential balance between public policy objectives and private sector engagement.

Adrian Moore, vice president of policy for the Reason Foundation, noted that while raising finance for road infrastructure construction can be politically fraught, private capital can spur expansion, with governments providing appropriate and fair risk-sharing. He also highlighted the value of private sector innovation, particularly in delivering tolling technologies that enhance revenue optimization and user experience.

Teresa Santos, cabinet mobility advisor in Portugal, stressed the importance of a well-defined PPP framework and maintaining balance between public and private interests to ensure effective collaboration. She also underlined that consistent, transparent communication is essential to securing stakeholder engagement throughout the PPP process.

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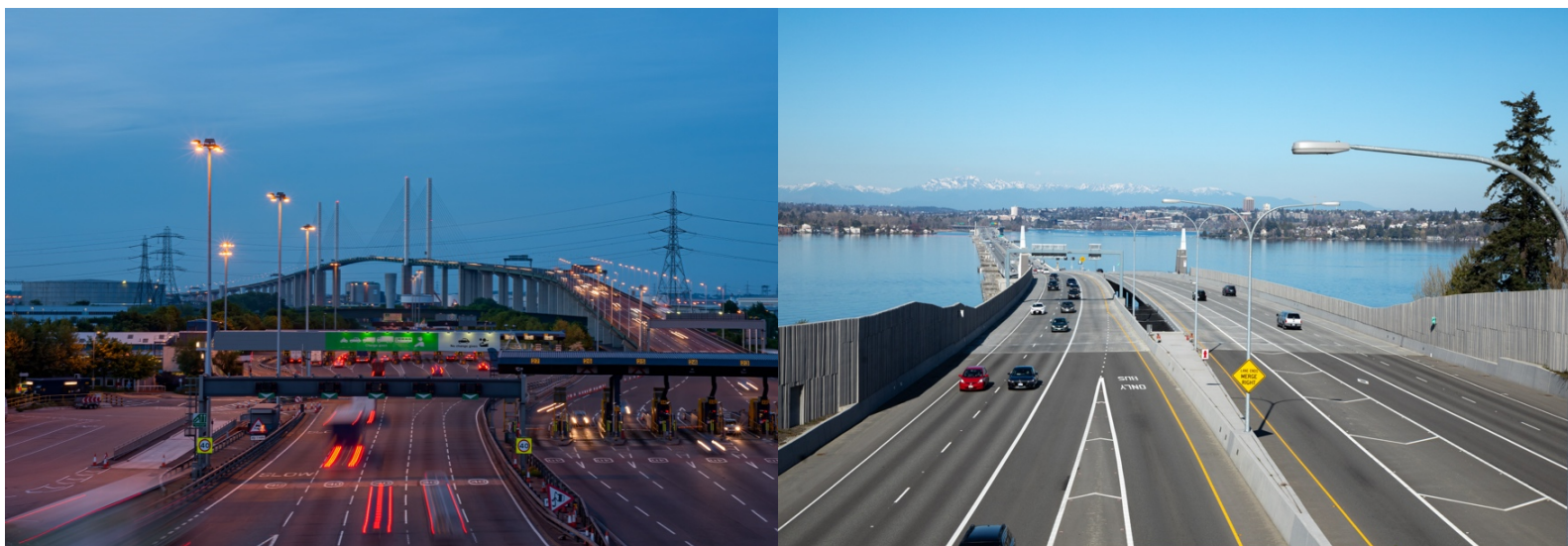


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