Intelligent Transport Systems

ITS EDGE MAGAZINE

2026 GANGNEUNG ITS WORLD CONGRESS

No. 9 - Gangnueng ITSWC 2026



Welcome to Korea

Intelligent Transport Systems - Explained

Technologies to operate and manage transport infrastructure

ITS now .org

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PUBLISHER

ITS Edge is published by **ITS Now**, which exists to promote best practice and professional development within the Intelligent Transport Systems (ITS) sector, in the UK and internationally.

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NO. 9 - GANGNEUNG ITSWC 2026

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WELCOME to ITS EDGE MAGAZINE





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Whether you're in Gangneung or at home, be HERE, at ITS Now

Hey everyone!

There is something special about the ITS community coming together. Ideas move from conversation to collaboration, familiar faces reconnect and new relationships begin, all against the backdrop of places that show mobility at its most ambitious. This edition of **ITS Edge** celebrates two major gatherings for which **ITS Now** is proud to be Official Media Partner: the 2026 Gangneung ITS World Congress and Singapore Urban Mobility Week.

Our coverage will bring both events closer to readers, whether you are travelling to Gangneung, joining the conversations in Singapore or following developments from home. Alongside the magazine, each event has its own dedicated page on ITSNow.org, creating a place to discover the people, projects and perspectives shaping the discussion before, during and after the doors open.

Attention is also turning towards the 2027 ITS World Congress in Birmingham, where preparations are gathering pace and the scale of the opportunity is becoming clearer. Gangneung will provide an important stepping stone, with plenty happening around the UK & European Pavilion as partners, innovators and sector leaders build momentum towards welcoming the world to the UK.

These events are about more than dates in the diary. They give our industry a shared stage on which to demonstrate progress, challenge assumptions and consider what comes next. **ITS Now** will be here to capture that energy, connect the stories and help the conversation travel beyond the venue. Wherever you are reading, we invite you to take part, follow the coverage and feel connected to the action.

Welcome to the ITS World Congress 2026, hosted by the beautiful city of Gangneung, Korea.

Minister Hong Jee-sun welcomes you to Korea for the ITS World Congress



Chair of the ITS World Congress, Hong Jee-sun, Minister of Land, Infrastructure and Transport (MOLIT), Republic of Korea.

*"The **32nd ITS World Congress** will be held under the theme, Beyond Mobility, Connected World.*

ITS integrates transport systems and infrastructure with information and communication technologies (ICT) to enhance safety, efficiency, and convenience. Recent advances in autonomous driving, artificial intelligence (AI), and edge computing have further contributed to reducing traffic accidents and congestion.

Korea has continued to expand infrastructure for autonomous driving, urban air mobility (UAM), and AI-powered cities, while placing the highest priority on creating a safe and convenient transport environment. We are now poised to take mobility innovation to the next level and share our experience and achievements with the international community.

*Building on Korea's experience in hosting the 1998 and 2010 ITS World Congresses in Seoul and Busan, as well as the 2025 Suwon ITS Asia-Pacific Forum, we are committed to making the **2026 Gangneung ITS World Congress** a truly memorable and successful event. The Congress will serve as a platform to carry forward the momentum of cooperation and innovation witnessed in Suwon, share it with the world, and present a vision for a sustainable future of transport.*

We invite you to be part of the "Transport Olympics" in 2026, hosted in Gangneung, a city that carries on the legacy of the PyeongChang Winter Olympics.

Let us come together in Gangneung to build a connected future powered by ITS."

GANGNEUNG
ITS World Congress 2026
Beyond Mobility Connected World

To find out more, visit ITS World Congress or scan the QR code>

What to expect in Gangneung

The 2026 Gangneung ITS World Congress Organising Committee introduce what will be happening at the 2026 ITS World Congress

Conference Programme

The programme for the 2026 ITS World Congress in Gangneung is shaped by a theme that feels unusually precise for a global gathering, "*Beyond Mobility, Connected World*" is not a slogan in search of meaning. It is a statement about where the sector now stands and where it intends to go. The sessions across the week show how deeply transport has become part of a wider digital ecosystem, and how mobility technologies are beginning to influence the way cities function, services operate and communities interact. Gangneung provides a setting where this shift can be explored with clarity, and the programme reflects a sector ready to examine the implications of genuine connectivity.

The opening sessions establish the tone by focusing on digital infrastructure as the foundation of a connected world. Presenters explore how sensing, communications and data exchange have moved from supporting roles to central components of transport planning. Digital twins, corridor modelling and predictive analytics are discussed not as experimental tools but as operational systems shaping real-time management. These sessions show how mobility has expanded beyond the movement of vehicles and people, becoming part of a wider digital fabric that influences energy use, land planning and service delivery. The programme uses these discussions to anchor the theme, demonstrating how connectivity is now inseparable from mobility.

Automation is treated with a similar sense of integration. The programme recognises that autonomous mobility has matured to a point where the questions are no longer about technical capability. They are about how automated systems fit into a connected world. Sessions examine how autonomous shuttles, freight vehicles and service robots interact with digital infrastructure, and how safety assurance frameworks are evolving to reflect continuous data exchange. Presenters explore the realities of mixed-traffic environments, the importance of shared situational awareness and the operational lessons emerging from deployments across continents. These discussions show how automation is becoming part of a wider ecosystem rather than a standalone innovation.

Energy and electrification are woven into the theme with careful intent. The programme highlights how charging infrastructure, grid management and fleet operations are increasingly shaped by connectivity. Smart charging, interoperability and cross-sector coordination are explored as essential components of a connected world rather than optional enhancements. Sessions examine how electrified freight corridors, depot optimisation and dynamic pricing models rely on data flows that extend far beyond the transport sector. The narrative reflects a recognition that mobility cannot be separated from energy systems, and that electrification is reshaping both operational practice and strategic planning.

Public transport receives sustained attention, reflecting its central role in delivering connected mobility at scale. The programme explores how digital platforms are transforming service planning, passenger information and operational control. Presenters discuss AI-driven optimisation, real-time crowding management and integrated ticketing systems that link modes into coherent networks. These sessions highlight how public transport authorities are using data to improve accessibility, reliability and inclusivity. The discussions show how public transport is becoming a backbone of the connected world, providing structure and predictability within increasingly complex mobility ecosystems.

Traffic management is presented as a discipline undergoing significant reinvention. The programme explores how connected vehicles, advanced sensing and AI-based decision support are reshaping traditional approaches. Presenters examine how cities are using real-time analytics to manage congestion, improve safety and support environmental objectives. Sessions highlight the integration of roadside systems with cloud-based platforms, enabling more dynamic responses to incidents, weather events and fluctuating demand. These discussions show how traffic management is evolving into a form of digital orchestration, reflecting the theme's emphasis on connectivity beyond conventional mobility.



Cybersecurity is treated as a defining issue for a connected world. The programme acknowledges that transport systems are now deeply interdependent with energy networks, telecommunications and cloud services. Sessions explore how operators are strengthening resilience, building secure architectures and developing response strategies for emerging threats. Presenters highlight the importance of continuous monitoring, robust standards and cross-sector collaboration. These discussions show how cybersecurity has become a core component of mobility planning, reflecting the risks and responsibilities that accompany widespread connectivity.

Mobility-as-a-Service is examined through the lens of integration rather than novelty. The programme explores how MaaS platforms are being embedded into city strategies, and how operators are navigating the complexities of data sharing, commercial models and regulatory oversight. Presenters discuss the importance of trust, transparency and user experience, recognising that successful MaaS deployment depends on more than technical capability. These sessions show how MaaS is becoming a mechanism for shaping behaviour, supporting modal shift and improving accessibility within a connected world.

Freight and logistics feature prominently, reflecting their growing importance in digital mobility ecosystems. The programme examines how connected freight corridors, intelligent loading zones and integrated supply-chain platforms are reshaping operations. Presenters explore how data is being used to optimise delivery routes, manage kerbside activity and support low-emission strategies. These discussions show how freight is becoming part of a wider connected environment, where efficiency, predictability and sustainability depend on continuous information exchange.

Safety is threaded throughout the programme rather than treated as a separate theme. Sessions explore how connected vehicles, intelligent infrastructure and advanced driver assistance systems are being used to reduce collisions and protect vulnerable road users. Presenters discuss how data analytics can identify high-risk locations, support targeted interventions and improve post-incident analysis. These discussions show how safety is being reframed within a connected world, where risk management depends on shared information and coordinated action.

The human dimension of connectivity receives thoughtful attention. The programme explores how workforce roles are evolving in response to automation, digitalisation and new operational models. Sessions examine how training, leadership and organisational culture influence the success of ITS deployment. Presenters highlight the importance of interdisciplinary collaboration, recognising that modern mobility requires engineers, planners, designers and data specialists to work together. These discussions show how the connected world is reshaping professional practice as much as technical capability.

Across the week, the programme maintains a sense of coherence. It reflects a sector that understands the implications of moving beyond mobility and into a world where transport is part of a wider digital ecosystem. The discussions show how connectivity is reshaping planning, operations, governance and public engagement. Gangneung provides a setting where these ideas can be explored with depth and authenticity, offering delegates a chance to engage with the issues that will define the next decade of intelligent transport systems.

Exhibitions, Demonstrations and Technical Visits

From 428 exhibition booths and live demonstrations by 14 companies, to technical visits at ITS sites in operation, the advanced mobility technologies and innovative services will come together in Gangneung this October as the city hosts the 2026 Gangneung ITS World Congress.

Taking place between 19-23 October across the Gangneung Olympic Park area, the five-day international event will be held under the theme “Beyond Mobility, Connected World”. Government and public-sector representatives, companies, researchers, academics and mobility experts from around the world will gather to share their visions for the future of transportation and intelligent mobility.

A Global Showcase of ITS Technology

The Congress exhibition will feature 428 booths representing 108 organisations, including 72 Korean companies and 36 international organisations. A wide range of technologies and services shaping the future of transportation will be showcased, featuring autonomous driving, smart cities, Mobility-as-a-Service (MaaS), Urban Air Mobility (UAM) and more.

The exhibition will serve not only as a platform for introducing new technologies, but also as a place for global business and collaboration. Networking lounges will provide casual atmosphere for participants to freely exchange ideas and build links, while the business matching program will help companies discover potential partners and open new business connections. At Conference Stage, companies and organisations from different markets will come together to exchange knowledge and explore potential technology partnerships and business cooperation.





Experiencing Advanced ITS Technology Firsthand

The technology demonstration program will provide a glimpse for participants to experience Korea's ITS capabilities. A total of 14 companies will participate in the demonstrations, presenting a range of advanced transportation technologies, including autonomous vehicles, smart crosswalks and smart bus stops.

The demonstrations will take place indoors at the exhibition venue and outdoors at the Hockey Centre parking area. This will allow participants to experience how technologies operate beyond conventional product displays and presentations. Visitors will be able to observe the systems directly and gain a clearer understanding of their potential applications in real transportation and urban environments.





Discovering Korea's ITS in Real-World Environments

The 2026 Gangneung ITS World Congress will take participants outside the exhibition venue to the demonstration areas through a dedicated technical visit program. Participants will be able to observe ITS technologies operating in a variety of environments, ranging from urban traffic management, highways, tunnels to disaster-response facilities and areas near the Demilitarized Zone (DMZ). The technical visits will particularly highlight how Korea's ITS technologies are integrated into different regional and geographical conditions. Gangwon State has a unique natural environment. The state is characterised by mountainous areas, urban centres, and highways. Participants can see how transportation and smart-city infrastructure can be adapted to different operational requirements.



Technical visits will be divided into four sections:

- Technical Visit 1, "Gangneung City Information Centre & ITS Field Tour" will introduce Gangneung's urban traffic management systems and ITS operations to participants.
- Technical Visit 2, "Inje-Yangyang Tunnel & Naerincheon Service Area" will focus on ITS and transportation infrastructure applied on major highways.
- Technical Visit 3, "Gangwon Special Self-Governing Province Forest Fire Prevention Centre & Goseong Unification Observatory" will focus on disaster-response facilities utilised in the region's unique transportation and geographical environment near the DMZ.
- Technical Visit 4, is a special program titled "Korea Expressway Corporation Traffic Control Centre & Deokpyeong Service Area" will provide a closer look at highway traffic control and the operation of highway service facilities.



All technical visit programs will be conducted with Korean-to-English consecutive interpretation, allowing international participants to understand the technologies, infrastructure and operational practices presented at each site.



Beyond Technology, to Connection and Collaboration

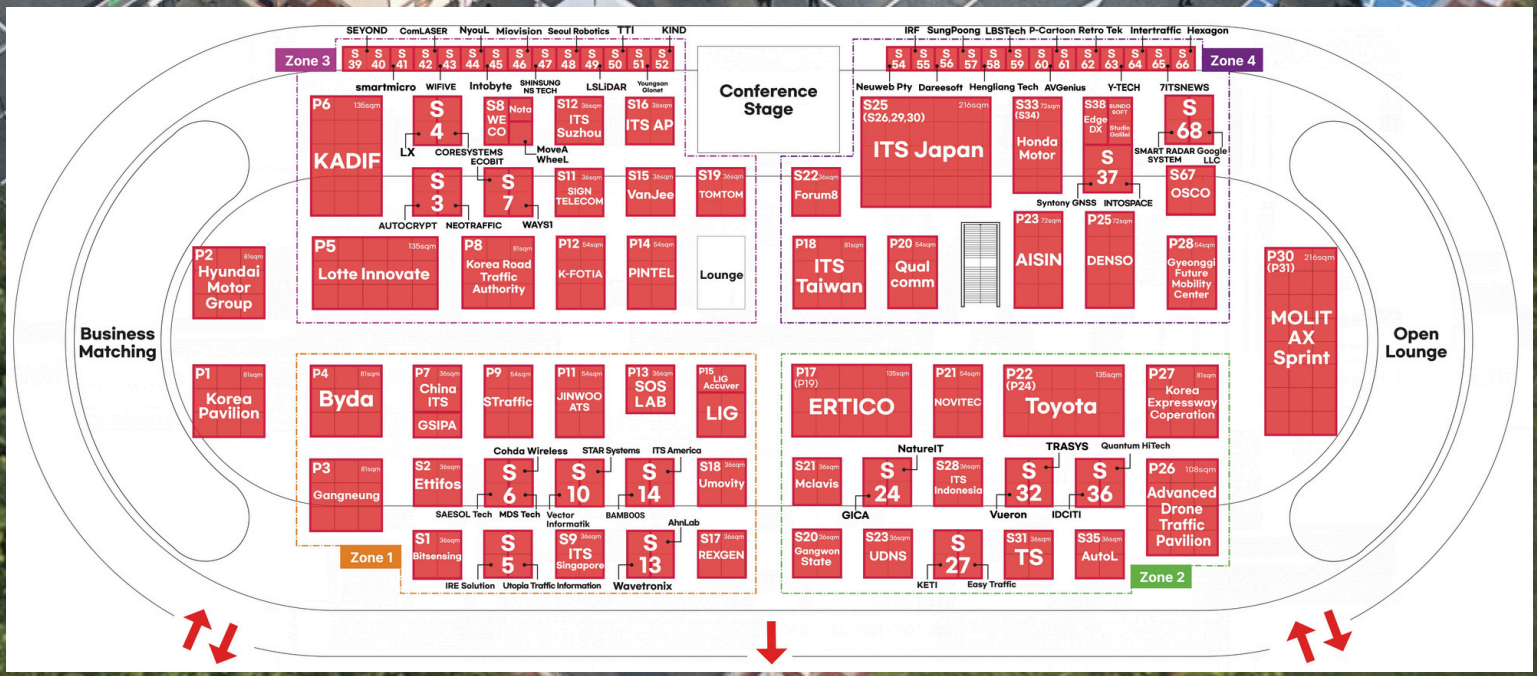
The exhibition, technology demonstrations and technical visits at the 2026 Gangneung ITS World Congress offer a different perspective on future mobility. However, they share a common purpose to help participants understand how ITS technologies are being developed, demonstrated and applied in real transportation and urban environments.

At the exhibition, visitors can explore the latest technologies and services from Korean and international exhibitors. Through the technology demonstrations, they can see advanced solutions in operation. During the Technical Visits, they can visit cities, roads, tunnels and disaster-response facilities where ITS systems are already being operated in the field.

Together, these programs give participants a broader perspective on Korea's ITS ecosystem, from innovative technologies and commercial solutions to the infrastructure and operational experience required to deploy them in real-world environments. They also create platforms for companies, public institutions, researchers and industry professionals to meet and gain insight into potential technology partnerships and business opportunities.

At this five-day event in Gangneung, it will showcase Korea's ITS technologies and operational experience to an international audience while creating a platform for discussion on the future direction of the global mobility industry. The message of the 2026 Gangneung ITS World Congress, "Beyond Mobility, Connected World," reflects the broader vision of the event. The future of mobility is not only about transporting people and vehicles more efficiently. It is also about connecting technologies with cities, people with industries, and Korea with the global mobility community.

For detailed information on participating exhibitors, technology demonstrations, technical visit programs, schedules and visitor information, please visit the official website of the 2026 Gangneung ITS World Congress at Official website at: https://2026itsworldcongress.org



Beyond Mobility
Connected World

2026 GANGNEUNG ITS WORLD CONGRESS

October 19-23, 2026 | Gangneung Olympic Park

Where technology, people, and cities come together.
Discover the future of mobility at the **2026 Gangneung ITS World Congress.**

Congress by the Numbers

90+ Countries

60,000+ Participants

190+ Sessions

420+ Exhibition Booths

A Wide Range of Programs

- Opening & Closing Ceremonies
- Ministerial Roundtable
- Gala Dinner
- Drone Show
- Session Program
- Exhibitions
- Technical Visits & Demonstrations
- Ice Show

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Welcome remarks by Joost Vantomme to the UK & ERTICO – ITS European Pavilion

"As we gather in Gangneung for the 2026 ITS World Congress, it is a pleasure to welcome the global ITS community to a country that has become a benchmark for intelligent mobility. South Korea's commitment to innovation, its readiness to test and deploy new solutions at scale, and its strong culture of collaboration make it an inspiring host for this year's Congress.

For ERTICO – ITS Europe, this moment carries particular significance as we celebrate our 35th anniversary. Founded in 1991 through the cooperation of 15 industry leaders and public authorities, under the auspices of the European Commission, ERTICO has been guided by a clear ambition from the outset: to bring together the people, expertise, ideas and partnerships needed to turn innovation into real-world deployment.



Joost Vantomme, CEO of ERTICO - ITS Europe

Over three and a half decades, ERTICO has contributed to the evolution of the ITS sector, connecting public and private stakeholders, advancing European innovation and creating platforms where collaboration can translate into tangible impact. The ITS Congresses have been an important part of this journey, bringing the international mobility community together to exchange knowledge, experience new technologies and connect policy, innovation and deployment.

Standing here in Gangneung, surrounded by Partners, colleagues and friends from across the world, we have an opportunity not only to celebrate how far we have come, but also to look ahead. The mobility landscape continues to evolve, but the need for shared ambition, knowledge and action remains as relevant today as it was when ERTICO was founded 35 years ago.

Our participation this week is part of that continuing journey. From Gangneung, the road leads towards Birmingham, where the 2027 ITS World Congress will bring the global ITS community to the United Kingdom. Preparations are already underway, and the connections and momentum built here in Korea will carry into the year ahead. In the following article, we look more closely at that journey and how Europe is preparing for its next moment on the global stage."



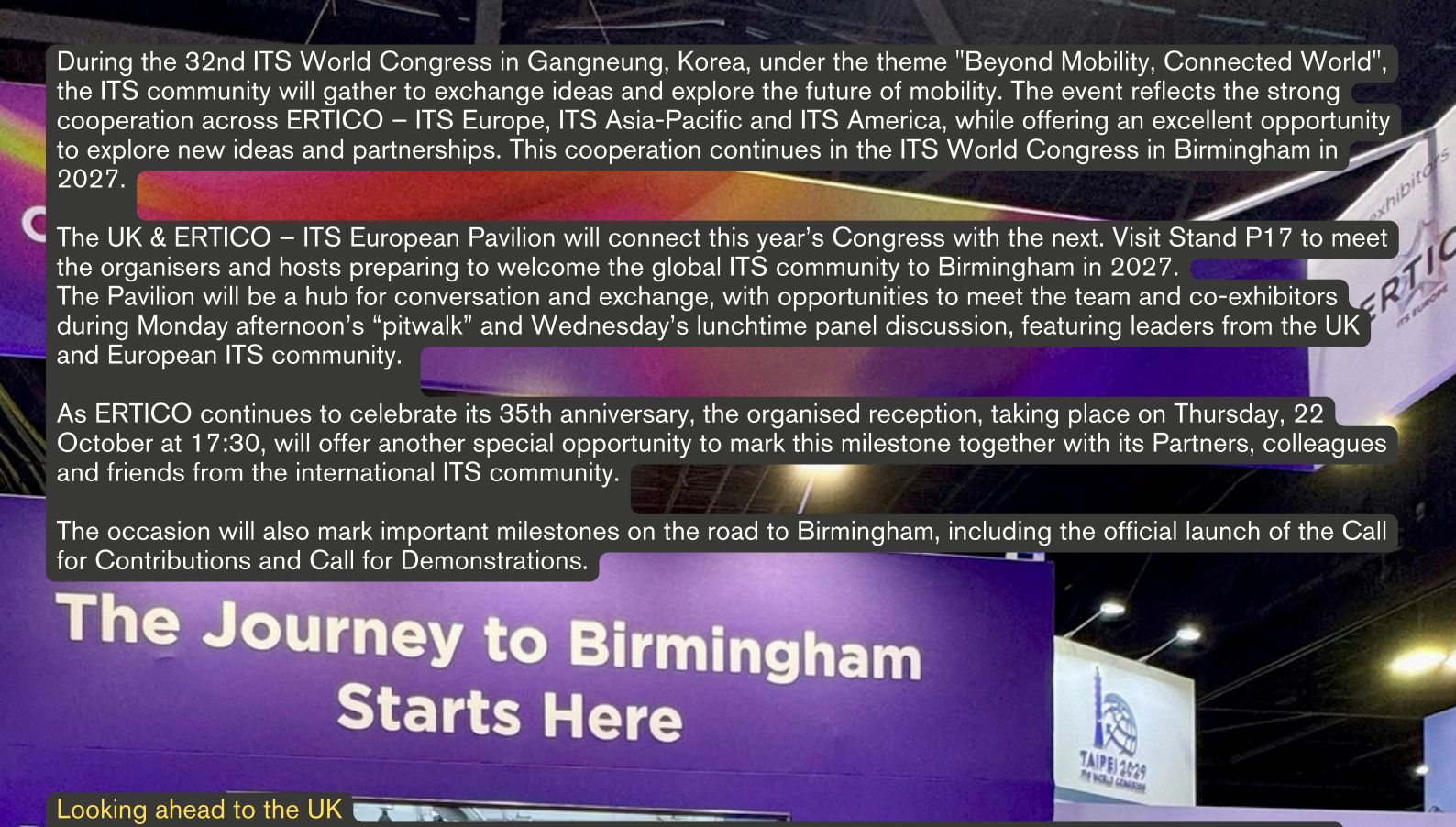
To find out more, visit ERTICO at:
https://ertico.com/
or scan the QR code>

During the 32nd ITS World Congress in Gangneung, Korea, under the theme "Beyond Mobility, Connected World", the ITS community will gather to exchange ideas and explore the future of mobility. The event reflects the strong cooperation across ERTICO – ITS Europe, ITS Asia-Pacific and ITS America, while offering an excellent opportunity to explore new ideas and partnerships. This cooperation continues in the ITS World Congress in Birmingham in 2027.

The UK & ERTICO – ITS European Pavilion will connect this year's Congress with the next. Visit Stand P17 to meet the organisers and hosts preparing to welcome the global ITS community to Birmingham in 2027.
The Pavilion will be a hub for conversation and exchange, with opportunities to meet the team and co-exhibitors during Monday afternoon's "pitwalk" and Wednesday's lunchtime panel discussion, featuring leaders from the UK and European ITS community.

As ERTICO continues to celebrate its 35th anniversary, the organised reception, taking place on Thursday, 22 October at 17:30, will offer another special opportunity to mark this milestone together with its Partners, colleagues and friends from the international ITS community.

The occasion will also mark important milestones on the road to Birmingham, including the official launch of the Call for Contributions and Call for Demonstrations.



Looking ahead to the UK

Next year, the ITS World Congress will move to Birmingham, UK, from 25-29 October. The 33rd Congress will bring together more than 15,000 transport professionals from over 100 countries for five days of ideas, innovation and international collaboration.

Decision-makers, researchers, industry leaders, policymakers and transport authorities will gather to share what is already working and explore what comes next for intelligent transport. The Congress will provide a platform to share practical experience and new ideas, bringing together the people shaping how we move today and tomorrow.

Be part of the Programme

The Technical Programme is one of the cornerstones of every ITS World Congress and will feature around 200 expert sessions with more than 600 speakers. It will cover the technological, operational and societal dimensions of intelligent transport, including the conditions that help new solutions deliver measurable results. The Call for Contributions opens on 22 October 2026 and closes on 22 January 2027, giving the global ITS community an opportunity to help shape the conversation and share current work.

Technical Programme Contributions will be organised around four Congress Topics:

- Trustworthy and Resilient Systems will examine cyber-security, trusted data sharing, interoperability, digital infrastructure and the operational approaches that keep transport networks reliable.
- Next-generation ITS will explore scalable solutions enabled by AI, quantum technologies, robotics, intelligent vehicles, connected and automated mobility, and digital twins.
- Connected and Integrated Services will examine digital services and collaborative approaches that make mobility more integrated, from multimodal passenger and freight transport to public transport integration, smart logistics, transport-energy integration and alternative fuels infrastructure.
- Deploying ITS at Scale will focus on the practical challenges of implementation, covering infrastructure, operations, governance, policy, user-centred design, behaviour change and the lessons emerging from real deployments.

The Call for Contributions includes four submission formats, giving contributors different ways to share their knowledge, research and experience:

- Special Interest Sessions (SIS) offer curated, discussion-led formats for industry leaders, authorities, policymakers, researchers and project consortia to explore timely issues and work in progress.
- Technical Papers suit engineers, practitioners, operators, authorities, consultants and technology providers presenting practical, current and original work.
- Research Papers provide a rigorous, peer-reviewed route for academic researchers, research institutes, R&D teams and doctoral researchers.
- Posters, new for 2027, will offer highly visual presentations of ideas, projects, pilots and early-stage results, creating space for direct discussion and feedback.

Join the exhibition

The exhibition will be a major Congress highlight. Across 25,000 square metres of exhibition space, more than 350 exhibitors and co-exhibitors will showcase real-world solutions, launch new products and demonstrate technologies that are changing how people and goods travel. The exhibition will provide a broad view of the sector, from connected and automated mobility to digital infrastructure, clean transport and logistics. Exhibitors will present innovation and expertise directly to industry leaders, transport professionals and public authorities, creating opportunities to build relationships across markets and sectors.

The exhibition will offer an opportunity to see how technologies are developed, tested and brought to market. It will also provide a platform to identify potential technology partners, explore solutions for upcoming projects and deployments, and initiate partnerships that can lead to new business opportunities.

Organisations that book exhibition space by 2 November 2026 will secure standard rates and gain valuable extra time to plan product launches and meetings and build their participation into their 2027 marketing and communications plans. From 3 November, exhibition space will cost an additional £50 per square metre, excluding VAT.

Demonstrate your solutions

For organisations looking to bring their solutions to life in Birmingham, the Congress also offers opportunities to demonstrate them in action. Live demonstrations are one of the most exciting parts of every ITS Congress, giving participants the chance to experience the latest mobility innovations first-hand.

The Call for Demonstrations opens on 22 October, inviting established businesses, start-ups and academic institutions to showcase their innovations in action. Demonstrations can feature physical vehicles or other technologies, with applications ranging from automated mobility and cleaner transport to logistics, digital traffic management and enforcement.

Connect with the global ITS community

Networking will be woven through the event. Receptions in the Congress halls, the ITS Dinner and the VIP Dinner will create opportunities for the ITS community to exchange ideas and build partnerships. Sessions, demonstrations and the exhibition will also provide spaces for practical conversations across markets and disciplines.

The journey from Gangneung to Birmingham reflects the international and collaborative nature of the ITS World Congress. That same spirit of collaboration will be critical in addressing the challenges ahead.

"*The challenges ahead are significant, but so is the potential for progress. Now more than ever, we need ITS solutions to be deployed at a vast scale, supported by strong international cooperation to move from innovation to impact.*" says Joost Vantomme, CEO, ERTICO – ITS Europe.

As the community meets in Korea to exchange knowledge and explore new solutions, the UK and ERTICO – ITS European Pavilion will offer a first look at the next edition of the ITS World Congress.

Visit 2027.itsworldcongress.com to learn more and explore ways to get involved.



Birmingham
ITS World Congress
25-29 October 2027

Join the global ITS community

Put your organisation at the heart of ITS World Congress 2027

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- Meet decision-makers
- Build global connections
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How Transport Works as a System

In mobility, everything is connected, everything influences everything else and nothing operates in isolation

Alistair Gollop looks at how ITS is essential for making modern transport networks operate efficiently

Transport is often described as a system, yet that word can feel abstract until you look closely at how movement behaves. The reality is far more vivid. It is a living, breathing network shaped by physics, psychology, economics, geography, weather, culture and technology, where "*everything is connected, everything influences everything else and nothing operates in isolation*". That truth sits at the heart of Intelligent Transport Systems, because ITS is ultimately the intelligence layer that helps cities understand and manage this complexity.

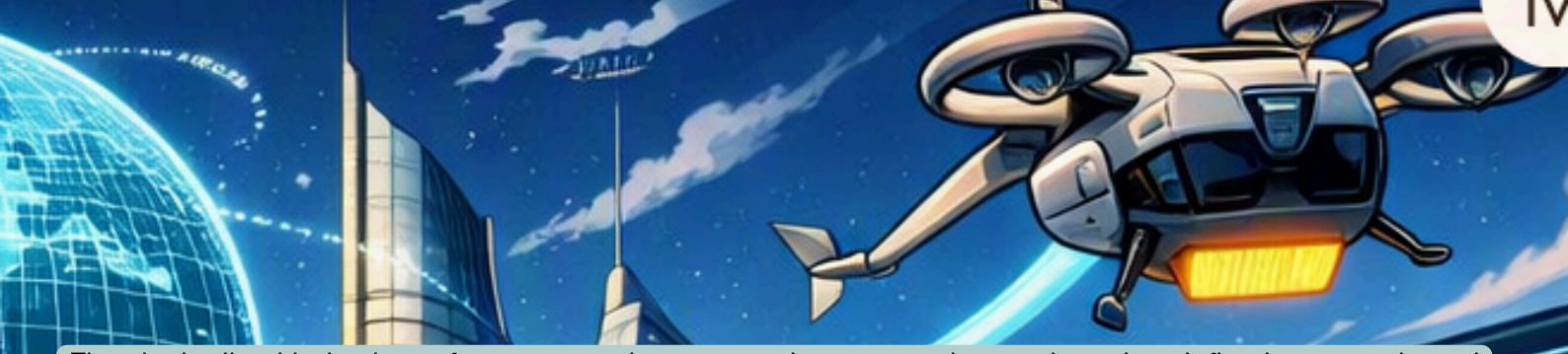
Modern mobility is no longer defined by the physical assets people see on the street. Roads, rails, footways and cycle lanes matter, but they are only the canvas. The real story lies in the flows that move across them. Transport behaves like a dynamic balance between demand, supply and flow, each shaping the other in real time. When that balance holds, cities feel smooth, predictable and confident. When it falters, the consequences ripple far beyond the immediate moment.

Demand is where every journey begins. People travel because life requires it, whether commuting, caring for family, accessing services or simply enjoying time out in the world. Goods move for equally fundamental reasons, keeping economies functioning and supply chains aligned. Demand rises and falls with the rhythms of daily life, shaped by weather, events, culture and technology. It can feel tidal in its predictability, yet it can also shift suddenly. A rail strike, a heavy shower or a football match can transform a network in minutes.

Cities that understand these patterns have a powerful advantage. ITS gives operators the tools to read the pulse of demand, anticipate surges and respond before pressure becomes disruption. Data from sensors, ticketing, connected vehicles and mobile devices reveals how people move, why they move and how those movements change. When interpreted intelligently, that information becomes foresight rather than hindsight.

Supply is the other half of the equation. It defines how much movement a network can support at any moment. Capacity is shaped by infrastructure, but also by how well that infrastructure operates. A road can lose half its capacity because of a single breakdown. A train can lose a significant share of its seats when one carriage is taken out of service. A bus route can appear frequent on paper yet feel unreliable when congestion slows vehicles to a crawl. The difference between theoretical and lived capacity is often substantial.

This is where ITS makes a decisive difference. Traffic management systems smooth flows and reduce friction. Adaptive signals respond to real conditions rather than fixed timetables. Incident detection spots problems early enough for operators to intervene. Public transport optimisation keeps services aligned even when the network is under strain. These tools turn static capacity into dynamic capability, allowing cities to operate closer to their true potential.



Flow is the lived behaviour of movement, the moment-by-moment interactions that define how people and vehicles navigate the network. It is shaped by thousands of tiny decisions, from a driver hesitating before pulling out, to a pedestrian speeding up to catch the green man. Those micro movements can ripple through the network, creating waves of delay that spread far beyond the original moment.
Flow becomes fragile when demand pushes a network close to its limits. Congestion is not simply a case of too many vehicles. It is a physical process that emerges when flow becomes unstable. A motorway can switch from smooth movement to a standstill because of a single driver braking sharply or making an awkward merge. ITS helps prevent these breakdowns by keeping speeds steady, managing merging more safely and providing timely warnings that reduce uncertainty.

Transport is also shaped by psychology. Every journey begins with a decision, and those decisions are influenced by perception, habit, emotion and risk tolerance. People often assume public transport will take longer than it actually does. Drivers sit too close to the vehicle ahead because they feel pressure from behind. Cyclists choose routes based on how safe they feel rather than how direct they are. These choices are rational from the individual's perspective, even when they do not align with the wider system's needs.
ITS helps shape behaviour in positive ways. Clearer information builds confidence. Reliable services reduce anxiety. Better coordination reduces frustration. When people feel informed and supported, they make calmer, safer and more efficient decisions. The system becomes more predictable because the human experience becomes more predictable.

Reliability is the quiet foundation of trust. Travellers can accept a journey that always takes half an hour. What undermines confidence is unpredictability. ITS strengthens reliability by detecting problems early, responding quickly and providing real time updates that help people adjust their plans. It can even anticipate issues before they occur, using modelling and data to stay ahead of disruption.

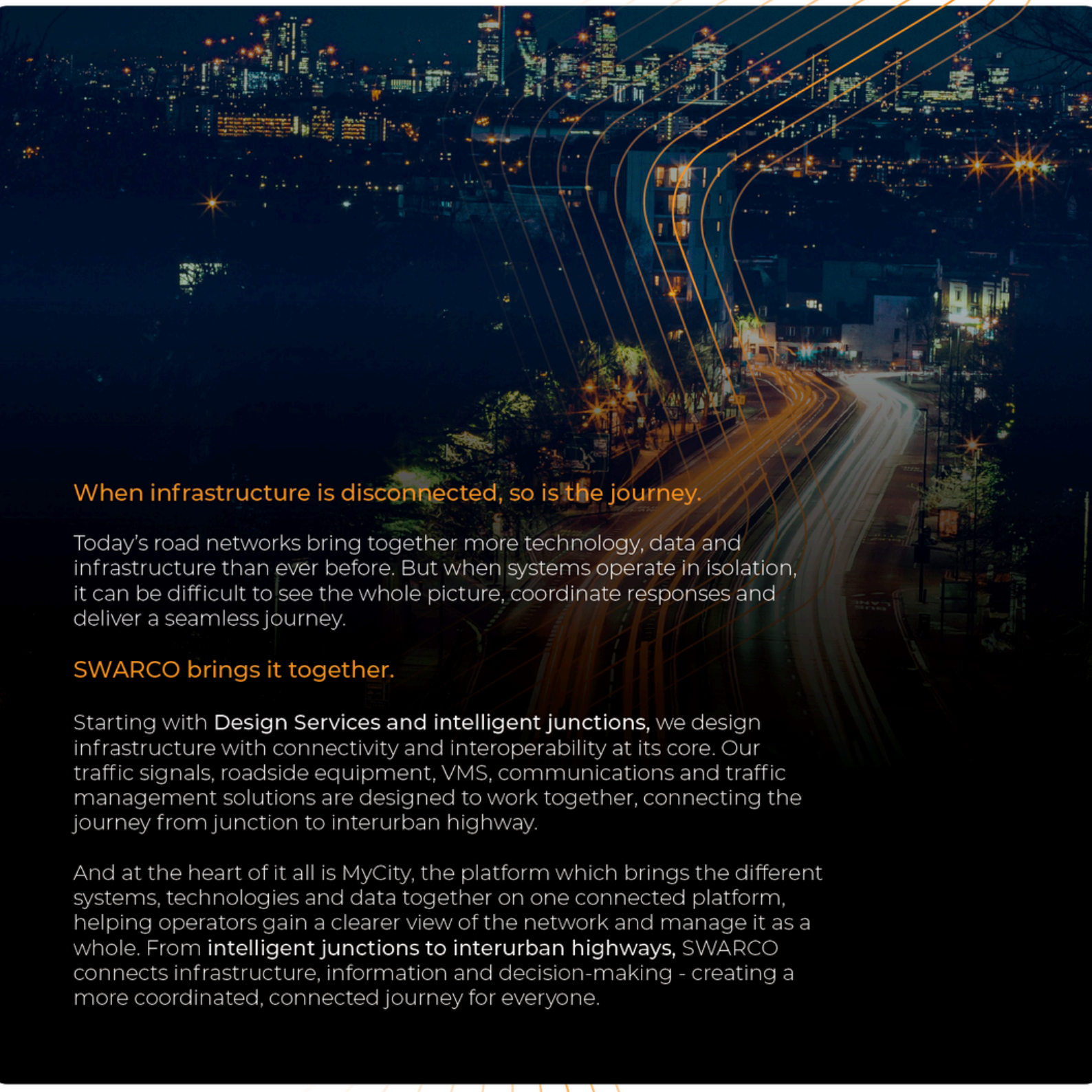
Resilience is equally vital. Transport networks live with disruption every day, from collisions and breakdowns to extreme weather and major events. No city can avoid these shocks entirely. What matters is how the system responds. ITS supports resilience by coordinating operators, emergency services and infrastructure teams, rerouting traffic when roads are blocked, adjusting public transport when services are disrupted and keeping users informed so they can make confident decisions.

Time and space are the two currencies of mobility. ITS helps cities spend both wisely. Predictive arrival times, smoother flows and coordinated services protect time for travellers and operators. Dynamic lane allocation, organised kerbside activity and optimised junctions help cities use limited space more intelligently. Micro mobility parking becomes orderly rather than chaotic. Freight loading becomes efficient rather than obstructive.

Information is the invisible layer that holds everything together. Without it, people feel uncertain and anxious. With it, they feel confident and empowered. ITS gathers, interprets and shares the knowledge that keeps cities moving. It ensures everyone, from commuters to controllers, has the clarity they need.
Transport is also social, economic and environmental. It shapes access to opportunity, influences wellbeing, powers supply chains and affects air quality. ITS helps cities design systems that are more inclusive, more efficient and more sustainable. It reduces emissions by smoothing flow, supports active travel by improving safety and strengthens freight by reducing uncertainty.

Ultimately, transport is a system of systems. Roads, rail, buses, cycling, walking, freight, aviation and maritime all interact in real time. ITS weaves these elements into a coherent whole, allowing cities to manage mobility rather than isolated modes. It turns complexity into clarity and movement into something cities can shape with purpose. ITS is what gives transport its brain, the ability to sense, understand and respond. That intelligence is what allows cities to create transport systems that are safer, smarter and more human.

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Connect the network



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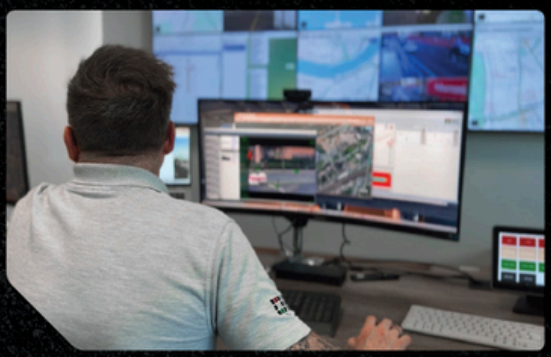
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Introduction to SUMW

Alistair Gollop looks at how The Singapore Urban Mobility Week points the way

Singapore has long stood at the forefront of transport innovation, shaping a reputation for precision, foresight and an almost choreographed approach to urban movement. The city-state's compact geography has never been a constraint; instead, it has become a catalyst for bold experimentation, where technology is woven into the fabric of daily travel and policy decisions are grounded in data rather than instinct. Over several decades, Singapore has demonstrated how a place with limited land can still build one of the world's most efficient, resilient and future-ready transport networks. Its leadership in Intelligent Transport Systems has become a benchmark for cities seeking to understand how digital tools, integrated planning and a culture of continuous improvement can transform mobility. This is the backdrop against which Singapore Urban Mobility Week emerges, offering a platform that reflects the country's ambition and its commitment to shaping the next era of transport.

The conference arrives at a moment when the global mobility sector is navigating a period of rapid change. Technology is evolving at a pace that challenges traditional planning cycles, and cities everywhere are grappling with the implications of automation, electrification, connectivity and the growing expectation that transport should be seamless, sustainable and safe. Singapore Urban Mobility Week positions itself as a space where these themes can be explored with clarity and depth, drawing together international experts who recognise that the future of mobility will be defined not by isolated breakthroughs but by the ability to integrate systems, policies and behaviours. Delegates will find themselves immersed in discussions that move beyond theory, focusing instead on practical pathways for deployment, scaling and long-term resilience.

A central thread running through the event is the recognition that Intelligent Transport Systems are no longer niche tools but essential components of modern mobility. The conference will highlight how data flows, sensor networks and real-time analytics are reshaping the way cities manage congestion, optimise public transport and respond to incidents. Singapore's own experience with adaptive traffic control, multimodal journey planning and integrated fare systems provides a living case study that will be referenced throughout the week. Delegates can expect sessions that explore how these systems evolve when supported by artificial intelligence, machine learning and predictive modelling, offering glimpses into a future where transport networks anticipate demand rather than simply react to it.

Automation will feature prominently, not as a distant aspiration but as an active area of deployment. Singapore's autonomous vehicle trials have already demonstrated how controlled environments, strong regulatory frameworks and a willingness to test new ideas can accelerate progress. The conference will examine how autonomous shuttles, goods vehicles and on-demand services might be integrated into existing networks, with particular attention paid to safety assurance, public acceptance and the operational challenges of mixed-traffic environments. These discussions will be grounded in real-world experience, reflecting Singapore's methodical approach to testing and evaluation.

SINGAPORE URBAN MOBILITY WEEK

To find out more, visit Singapore Urban Mobility Week or scan the QR code>

Electrification will also be a major theme, framed not only as a technological shift but as a systems challenge. Delegates will explore how charging infrastructure can be deployed at scale, how grid capacity can be managed intelligently and how public transport fleets can transition without compromising reliability. Singapore's strategy for electric buses and its exploration of smart charging solutions will provide valuable context for these conversations. The conference will encourage participants to consider electrification as part of a wider ecosystem, where energy management, land use and digital platforms must work together to deliver meaningful benefits.

Public transport will be discussed with the seriousness it deserves, reflecting its role as the backbone of sustainable mobility. Singapore's rail and bus networks are known for their reliability, and the event will delve into the technologies that support this performance. Asset monitoring, predictive maintenance and integrated operations centres will be explored in detail, offering insights into how digital tools can extend asset life, reduce downtime and improve passenger experience. Delegates will also hear about the importance of human factors, recognising that technology alone cannot deliver excellence without skilled teams and well-designed processes.

The conference will place strong emphasis on multimodal integration, acknowledging that the future of mobility depends on the ability to connect services rather than simply improve them in isolation. Singapore's approach to seamless transfers, unified payment systems and coordinated service planning will be examined as part of a broader conversation about how cities can encourage people to shift away from private car use. These discussions will touch on behavioural insights, urban design and the role of digital nudges in shaping travel choices.

Safety and resilience will be recurring themes, reflecting the growing need for transport networks to withstand disruptions, whether caused by weather, technology failures or unexpected surges in demand. Delegates will explore how digital tools can support incident response, how data can improve risk assessment and how infrastructure can be designed to adapt rather than resist. Singapore's experience with integrated command centres and cross-agency coordination will provide a strong foundation for these conversations.

Beyond the technical sessions, Singapore Urban Mobility Week will offer opportunities for delegates to engage with solution providers, innovators and start-ups who are pushing the boundaries of what is possible. Exhibitors will showcase technologies ranging from advanced sensors to fleet management platforms, highlighting how new tools can support cities in achieving their mobility goals. These interactions will allow participants to explore emerging ideas, test prototypes and understand how innovations can be adapted to different contexts.

The event will also encourage reflection on policy, governance and long-term planning. Singapore's transport strategy has always been shaped by clear objectives and a willingness to make difficult decisions when necessary. Delegates will hear how regulatory frameworks can support innovation without compromising safety, how data governance can be managed responsibly and how long-term planning can remain flexible in the face of rapid technological change. These discussions will be particularly valuable for cities seeking to balance ambition with practicality.

Singapore Urban Mobility Week promises to be a rich and engaging experience, offering a blend of technical depth, strategic insight and real-world relevance. It reflects Singapore's ongoing commitment to shaping the future of mobility and provides a platform where global experts can learn from one another, challenge assumptions and explore new ideas. Delegates will leave with a clearer understanding of how Intelligent Transport Systems and mobility technologies can be deployed effectively, supported by strong governance, integrated planning and a culture of innovation.

The Singapore Urban Mobility Week (SUMW) is a premier biennial event, connecting global transport leaders, policymakers, solution providers and industry experts who are passionate about shaping the future of urban mobility. Jointly organised by the Land Transport Authority of Singapore, MSI Global Pte Ltd and MP Singapore, with support from the Ministry of Transport, the inaugural edition will take place from 4–6 November 2026 under the theme Drive the Future – Autonomous Innovation, Smart Infrastructure and Urban Mobility. A key platform for advancing urban transport and a strategic networking hub for the urban mobility sector across the Asia Pacific and beyond, the event will feature a dynamic showcase of cutting-edge technologies and solutions, alongside an expert-driven conference advancing policy, innovation and global best practices.

SINGAPORE URBAN MOBILITY WEEK

Organised by: Land Transport Authority – We Keep Your World Moving; msi GLOBAL; imp

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4 – 6 November 2026 | Suntec Singapore Convention and Exhibition Centre

8,000+	300+	500+	125+	50+
Trade Attendees	Exhibitors	Conference Delegates	Speakers	Countries Represented

Drive the Future – Autonomous Innovation, Smart Infrastructure, and Urban Mobility

Singapore Urban Mobility Week (SUMW) unites the land transport ecosystem through a comprehensive exhibition, the Leaders Summit, and Industry Forums, showcasing the policies, technologies, and partnerships shaping the future of urban mobility.

As a key platform for solution providers, policymakers, and operators, SUMW facilitates business matchmaking, networking, policy dialogue, and high-level discussions on emerging trends and investment priorities across Asia.

Spanning Key Transport Sectors



SUMW 2026 at a Glance

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The Standard in Traffic Signal Controller Specifications

ITS1827E General Specification Forms. As the industry evolves, so does our documentation. Version E has been meticulously revised to reflect the latest technology advancements and modern equipment standards across the UK's road network.

What is ITS1827E?

The ITS1827E is a comprehensive, spreadsheet-based suite of forms designed for Traffic Signal Engineers and Transport Planners. It serves as the definitive blueprint for defining the functional requirements of traffic signal controllers.

Why Version E Matters

- **Technological Alignment:** Updated to support current hardware capabilities and software configurations.
- **Manufacturer Agnostic:** Designed to remain neutral, ensuring full compliance with procurement rules and simplifying future equipment replacements.
- **Life-cycle Support:** A single source of truth used from initial hardware build and installation to long-term maintenance and transport assessments.
- **Future-Proofed:** Streamlines the process of modifying existing sites to respond to changing traffic patterns or adding new facilities.

One Tool, Every Stage

Whether you are designing a new junction or managing a decades-old installation, these forms are the accepted industry standard:

- **Design:** Originating detailed functional requirements.
- **Assembly:** Defining hardware build and software configuration for manufacturers.
- **Maintenance:** Recording updates and tracking site changes over time.
- **Assessments:** Providing data for transport planners and site audits.

"*The ITS1827E specification forms are the essential toolkit for traffic signal practitioners, ensuring documentation remains robust, flexible, and ready for the road ahead.*"

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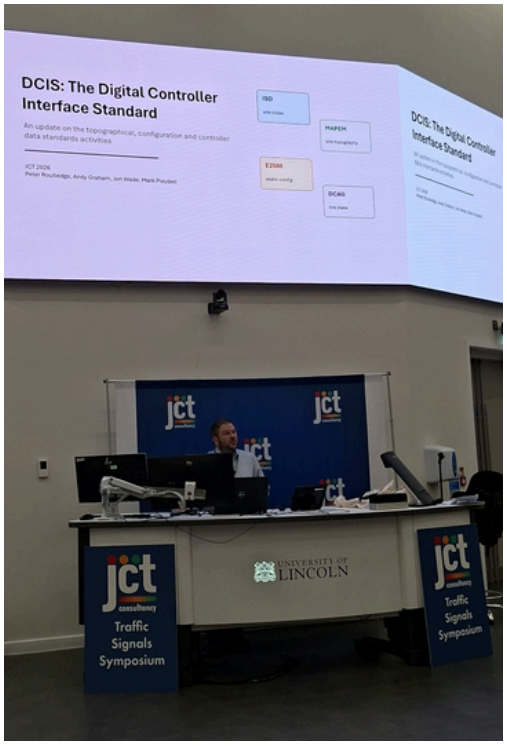
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We are now providing training for the Interpretation and Writing of Traffic Signal Controller Specification forms in association with **JCT Consultancy**.

DCIS Update

From fragmented traffic signal data to a shared digital language

Peter Routledge used the **JCT Symposium 2026** to show how the **Digital Controller Interface Standard** (DCIS) programme is turning established traffic signal information into linked, validated and reusable data, with practical tools now demonstrating what that could mean for modelling, optimisation and connected mobility.



Peter Routledge, Director at IRC Ltd, presenting at the 2026 JCT Traffic Signal Symposium.

DCIS is being developed through the **Transport Technology Forum** (TTF) by a team including Andy Graham, Peter Routledge, Jon Wade and Mark Pleydell, with active involvement from local authorities, suppliers and the Department for Transport.

From schema to working tools

Routledge's presentation became most persuasive when it moved from the schema to the things that structured data can enable. The project team has built a proof-of-concept workbench capable of deriving an E2500 representation from controller configurations used in the UK supply chain. Direct generation by manufacturers' software remains the preferred route because that is closest to the source of truth, but the workbench demonstrates that useful conversion is already possible.

Nobody claimed the conversion was complete. Controllers differ in capability and granularity, while older source material varies greatly in quality. Research undertaken through an Imperial College MSc project has also examined whether existing CAD and PDF drawings can be converted into MAPEM data. The conclusion was familiar, in that extraction can work, but disciplined source content, consistent naming and suitable resolution matter. A flattened or poorly structured drawing makes automation harder, regardless of how sophisticated the extraction tool becomes.

The same data can remove repetitive engineering work. Routledge recalled the laborious task of deriving interstage timings when adding sites to UTC. An E2500 file already contains much of the information required, including phase relationships and clearance data, making it possible to calculate ranges and potentially pass the result into another system through a simple companion file.

The team has gone further by building a controller simulator that consumes E2500 files. Its displays will look familiar to signal engineers, with phase indications, detectors and manual controls. More important is the live data viewer, which exposes details such as current, previous and next stages, time in stage, transition status, detector demands and the reason a stage is being held. This offers a much richer operational picture than conventional system-wide feeds, which often reveal only a small subset of what the controller knows.

A further demonstration linked the simulator to SUMO, the open-source traffic modelling platform. Controller state flowed to the model, while simulated traffic returned detector calls. The exercise was not presented as a finished product, but as evidence that a common representation can bridge controller logic and modelling without rebuilding that logic

To find out more, visit **Transport Technology Forum** or scan the QR code>

and modelling without rebuilding that logic separately for every platform. The browser-based version also showed that the simulation engine can run independently of the original desktop application and feed other interfaces.

Trust, publication and the route to adoption

Useful data must also be trustworthy. Routledge identified several key requirements, including that it has to be valid, legitimate, sufficiently current, published by an authoritative source and accessible to appropriate users. Schema checks can confirm whether required fields exist and whether values have the correct type or range, but they cannot establish every relationship within the data. Semantic checks, curation and a continuing update process will therefore be essential.

Highway authorities sit across much of this landscape because they hold the site records, topographic information and operational requirements. Adoption will fail if it creates another disruptive manual task, so the intended process must fit established workflows. Site lists should be capable of automated conversion into the intersection summary format, mapping tools should combine structured drawings with sources such as OpenStreetMap, and E2500 should ultimately come from supplier configuration software rather than manual authoring.

Questions from the floor exposed the practical tension. Manufacturers wanted to know when they could access the tools and how they could contribute. Routledge said the software is currently held in a private repository, with an intention to use open-source licensing, although no release route has been confirmed. The team still needs to decide which components are mature enough to share and how confidence can be maintained as access widens.

A local authority delegate offered the other side of the problem. Greater Manchester has around 2,500 signal installations, and staff cannot spend days manually transferring basic records into a new system. The response was that unique identifiers must work nationally and comply with the European structure, but existing asset-management data should make automated generation achievable. Funding remains a constraint, yet the aspiration is to have both technical tooling and supporting procedures ready when implementation can move forward.

Connected and autonomous vehicles provide the strategic backdrop, although the near-term case is broader and arguably more compelling. Better data could support stage prediction, optimisation, simulation, interoperability and more efficient network operation. It could also reduce the repeated translation of controller behaviour into bespoke formats for each new application.

Three years ago, the project could show files and ask the industry to imagine their value. This time, Routledge could show those files driving simulators, live viewers and modelling tools. The crucial next step is no longer simply to finish the schemas. It is to build confidence, secure participation and embed the processes that keep the information accurate throughout its life.

For the traffic signals community, the proposition is straightforward. A shared digital language will not remove the complexity of signal control, but it can stop that complexity being rediscovered and re-entered every time someone wants to use the data. If authorities, suppliers and practitioners engage with the next phase, DCIS could turn information already held across the industry into a reusable operational asset.

Routledge also clarified that the E2500 is not another version (or replacement of) the **ITS1827 Traffic Signal Controller, Work Specification and Configuration Forms** (colloquially 141s, 1827s or 2500s). These forms provide the human interface to load new site design information and will continue to be supported and updated by ITS Now and are free to download.

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MAV Systems' AiQ

Clearer intelligence to bring ANPR out of the shadows



Chris Shepherd is the Head of Product & Services at **MAV Systems**, a global leader in Automatic Number Plate Recognition (ANPR) technology. With over 20 years of experience in ANPR and Intelligent Transport Systems, Chris specialises in high-security, law enforcement, smart city and strategic road network applications.

For police forces and local authorities, the challenge is no longer simply capturing a number plate. It is establishing confidence that the registration being captured genuinely represents the vehicle carrying it. MAV Systems' AiQ approach offers a way to enhance existing ANPR infrastructure, identify suspicious plate activity and turn vehicle data into broader intelligence for policing, enforcement and road safety.

ANPR has become an established part of the world's transport and enforcement infrastructure. From roads policing and criminal intelligence to parking, traffic management and moving traffic enforcement, reliable vehicle identification underpins an increasingly wide range of operational activities. But that reliance presents a significant challenge. What happens when the registration mark itself can no longer be trusted?

The use of cloned, obscured, altered or otherwise non-compliant number plates, sometimes referred to as "*ghost plates*", have the potential to undermine vehicle-based enforcement and intelligence. A vehicle may physically pass a camera, but if its displayed registration deliberately conceals its true identity or points investigators towards another vehicle, simply achieving an ANPR read is no longer enough. The next generation of intelligent transport systems therefore needs to go further.

From reading plates to understanding vehicles

MAV Systems' AiQ technology provides an opportunity to evolve ANPR from a capture-focused technology into a richer source of vehicle intelligence. Importantly, this does not necessarily mean replacing established ANPR estates. For policing, AiQ can complement existing infrastructure, adding high-performance ANPR, dual infrared and colour imaging, edge processing and back-office connectivity to existing operational workflows.

This approach is particularly relevant at a time when police resources are under pressure. Rather than creating another stream of information that requires additional manual interpretation, intelligence needs to become easier to identify, assess and act upon.

Tha MAV AiQ can support the automated identification of suspect or potential ghost-plate activity, helping reduce the volume of vehicle observations requiring manual review and allowing officers and analysts to focus attention where it matters most. At the same time, maintaining high-quality imagery provides an important visual record alongside the registration read. The objective is straightforward, to extract more intelligence from every vehicle observation.

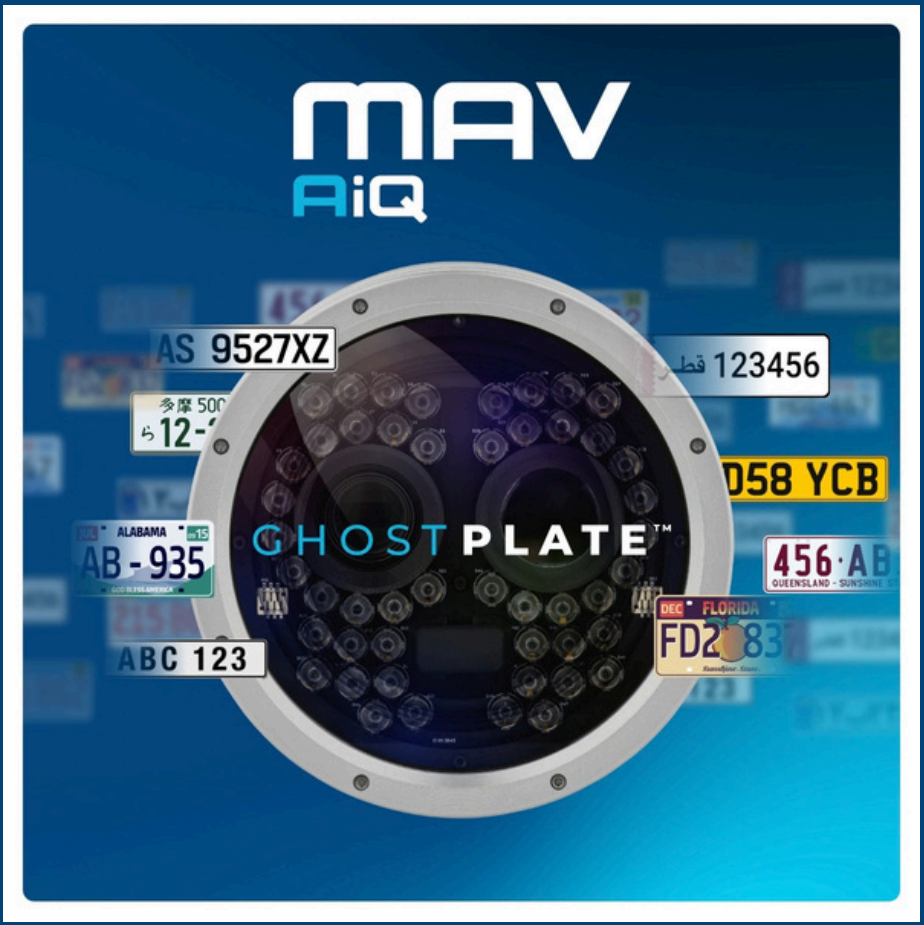
A smarter ANPR infrastructure

ANPR networks already represent significant investment for police forces and road authorities. The strongest argument for intelligent enhancement is therefore not necessarily wholesale replacement, instead, it is about extending what existing infrastructure can achieve. The MAV AiQ can feed richer vehicle information into established back-office environments, allowing forces to retain existing workflows while strengthening the intelligence available within them.

To find out more, visit **MAV Systems** or scan the QR code>

That has several potential operational benefits. It can increase the visibility of vehicles of interest, provide consistent data for analysis and investigation, preserve evidential-quality imagery and improve the information available to support deployment decisions. Edge processing also changes the relationship between the roadside camera and the back office. Intelligence can begin to be generated at the point of capture rather than treating every roadside device simply as a source of images and registration reads.

For police forces managing large numbers of vehicle movements, this becomes particularly important. The ambition is not simply to capture more data, but to identify the observations most deserving of attention.



Understanding the ghost-plate problem

The same technology has a different, but equally valuable, application for local authorities. Before determining how to tackle ghost plates, authorities first need to understand the scale and nature of the issue:

- Where are suspicious or non-compliant registrations appearing?
- Are particular routes, areas or locations experiencing greater levels of activity?
- Are identifiable patterns emerging?

Rather than basing intervention on anecdotal evidence, the MAV AiQ can help create an evidence-led picture of ghost or cloned-plate activity across a road network. This provides authorities with a stronger basis for deciding whether intervention is justified and, importantly, where resources should be concentrated. The principle is significant for ITS, measure the problem first, then design the response. A strategic deployment can consequently become an intelligence exercise rather than simply another enforcement installation.

From ghost plates to wider road-safety intelligence

Once intelligent ANPR infrastructure is present, its value need not stop with plate identification. Where appropriate speed-measurement capability is deployed alongside the MAV AiQ, vehicle observations can be enhanced with speed information. This creates the potential for a broader dataset covering vehicle movement, traffic volumes and speed behaviour.

For a local authority, that turns an initial investigation into ghost-plate activity into something considerably more powerful: a source of network-level transport and road-safety intelligence. Authorities could use that evidence to identify locations requiring closer attention, understand traffic behaviour and support more targeted road-safety activity. This reflects an important direction for intelligent transport systems generally. Infrastructure should ideally solve more than one problem.

Investment prompted by a particular operational challenge can provide a platform capable of delivering additional insight across traffic management, enforcement and road safety.

A more intelligent ANPR ecosystem

The future of ANPR is unlikely to be defined by standard ANPR technology due to the increasing limitations that are found. The greater opportunity is the expansion of intelligence-led ANPR that connects roadside observations with the intelligence systems that police forces and authorities already rely upon.

- For policing, that means helping established ANPR networks work smarter, reducing unnecessary manual review and increasing the visibility of vehicle activity worthy of investigation.
- For local authorities, it means turning roadside capture into evidence that can inform decisions about ghost plates, traffic behaviour, road safety and enforcement.

And critically, it offers a route forward without assuming that existing infrastructure must simply be removed and replaced. As vehicle identification becomes more important to policing, enforcement and intelligent transport, ANPR must evolve beyond what is offered to what is needed.

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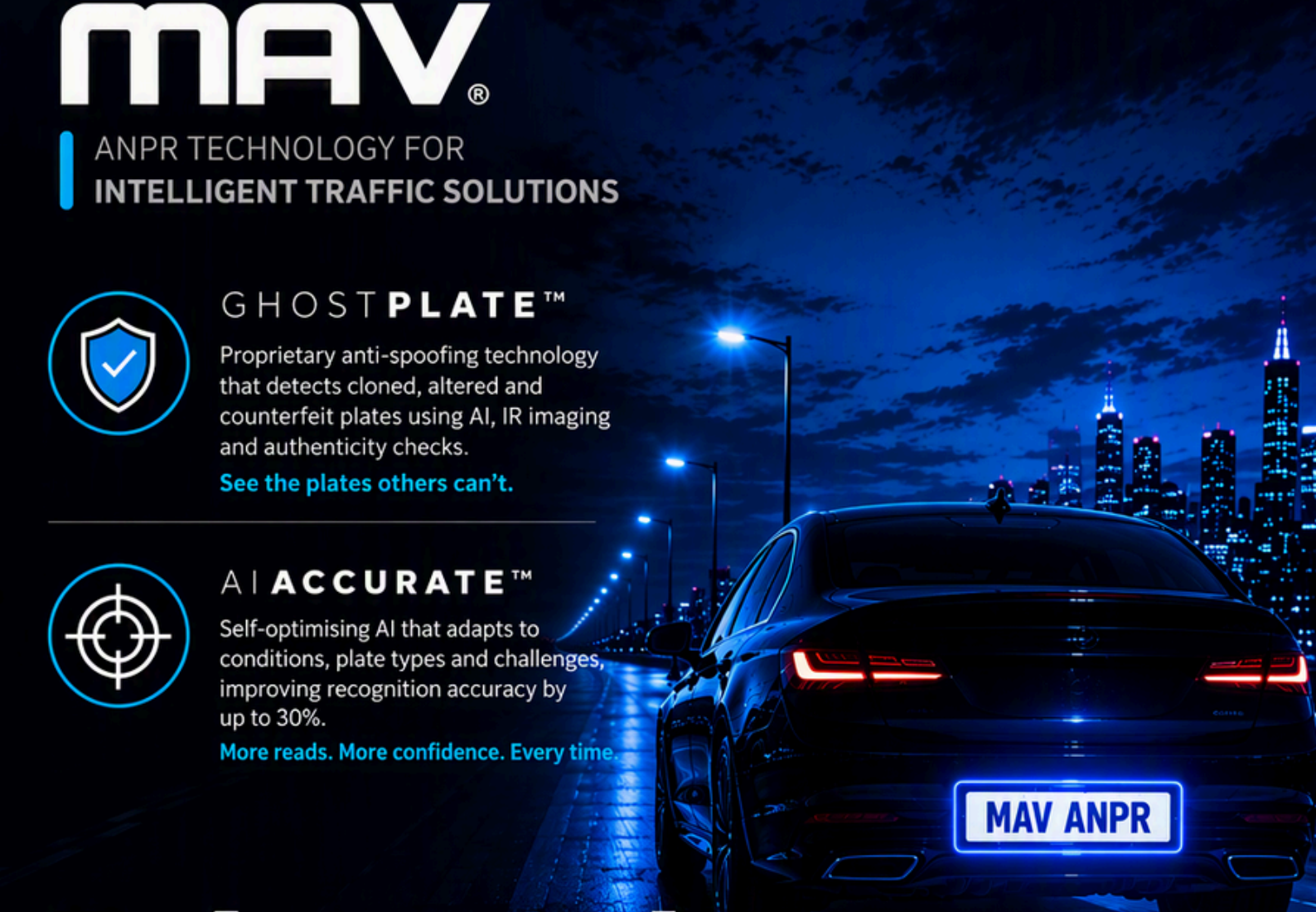
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Your Fractional Intelligent Transport Systems (ITS) Technical Advisory Executive

In today's world, our transport networks are complex ecosystems, undergoing a profound transformation driven by technology. Creating infrastructure that is safer, more efficient and sustainable requires more than just new hardware or software. It demands deep expertise, strategic foresight and a clear understanding of how technology translates into real-world value.

As a highly experienced and respected freelance consultant, I provide a comprehensive range of Intelligent Transport Systems (ITS) and Traffic Signal consultancy services to navigate this complex landscape. My mission is to be the critical link between technological potential and practical implementation, ensuring innovation delivers meaningful outcomes.

I work with a diverse client base, including **highway authorities**, **engineering / management consultancies** and **commercial technology firms** to deliver expert guidance, innovative solutions and tangible results for transport infrastructure projects. The common thread in my work is bridging the critical gap that often exists between different stakeholders. Public authorities need to procure effective, future-proof solutions; technology companies need to align their products with genuine market needs; and engineering consultancies require specialist knowledge to deliver robust project designs. I operate at the nexus of these requirements, speaking the language of public policy, commercial strategy and technical engineering with equal fluency.

For my **public sector clients**, I provide independent, expert advice on everything from strategy development and systems specification to procurement support and project assurance. My guidance ensures that investments in new technology are sound, deliver maximum public benefit and avoid costly pitfalls. When partnering with other **consultancies**, I act as a specialist extension of their team, bringing niche expertise in advanced traffic signal control, ITS architecture and emerging mobility trends to enhance their project delivery capabilities.

For commercial **technology firms**, both established players and market entrants, I provide the strategic insight needed to succeed. This includes critical guidance on product localisation for the UK market, identifying the most appropriate applications for new solutions, facilitating strategic introductions to key industry players and providing technical business development support. By aligning your innovative technology with the specific challenges and procurement frameworks of the transport sector, I help accelerate your path to commercial success and impactful deployment.

Ultimately, my work as a technologist, author and speaker is driven by a passion for creating better transport systems. Whether I'm designing an advanced traffic signal strategy, advising a company on market entry or speaking at an industry conference, my goal remains the same: "*to apply deep technical knowledge and strategic thinking to solve real-world problems*".

I invite you to explore my services and learn how we can work together to shape the future of mobility on my **newly updated website**, I look forward to hearing from you.

Web: AlistairGollop.com
Email: ag@AlistairGollop.com

ITS now .org

ITS Now exists to provide informative and educational resources about Intelligent Transport Systems (ITS), and should be of interest to technology practitioners in highways and mobility, along with people working in other engineering disciplines and for anyone who has an interest in transport generally.

Resources include our website - **ITSNow.org**, YouTube channel **@ITSNow** and **ITS Edge** magazine, along with our original books and articles on a broad range of related topics.

Intelligent Transport Systems - Explained

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