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Shaping the Future of Mobility



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October 2026

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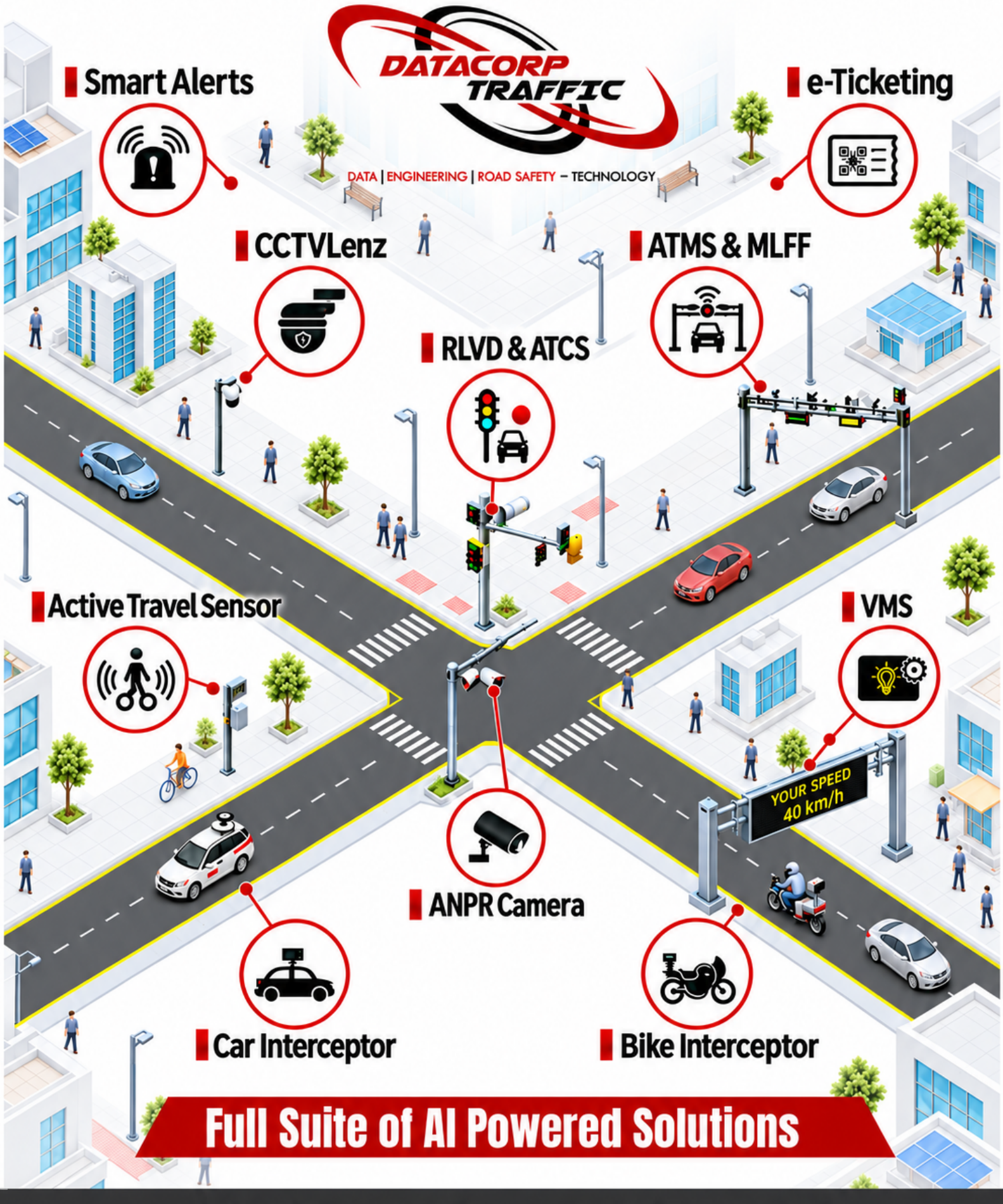

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MESSAGE FROM THE PRESIDENT

Akhilesh Srivastava President, ITS India Forum



Dear Members and Partners,

October 2026 was a defining month for ITS India Forum, marked by milestone events and meaningful international engagements, all anchored in a single mission: road safety through technology.

The month opened with the second edition of **ITS India Congress** (7–8 October, at Bharat Mandapam, New Delhi), themed ***Connected, Integrated and Intelligent Mobility for Viksit Bharat 2047***. The Congress brought together policymakers, transport authorities, industry, academia and international ITS bodies. It saw the launch of the **ITS India Yearbook 2026**, the recognition of deployable road safety solutions through the **Road Safety Technology Awards** from NRSTC 2026, and the articulation of five strategic roadmaps for the sector. Our message throughout was clear: **technology is no longer optional for India's mobility future.**

ITS World Congress 2026, Gangneung: India in the Global Spotlight

India's ITS industry and policy direction drew wide attention at this year's ITS World Congress in Gangneung, South Korea. **Delegates from across the world welcomed India's push for Vehicle-to-Vehicle (V2V) communication to improve road safety.** Many saw it as a timely and ambitious step towards connected, safer mobility at the scale India needs.

ITS India Forum took an active part in the technical programme. We contributed to six technical sessions, sharing India's experience in deploying intelligent transport systems, digital tolling, and road safety solutions, and learning from peers working on similar challenges.

The Congress also moved our international engagements forward:

- **New partnerships:** We signed MoUs with ITS Canada and ITS New Zealand. These set up frameworks for sharing knowledge, collaborating on technology, and exchanging expertise.
- **Bilateral dialogue:** We met ITS Australia to look at shared priorities and areas where we can work together.
- **Multilateral and industry engagement:** We held discussions with the Asian Development Bank (ADB) and the Car 2 Car Communication Consortium. The Car 2 Car talks matter especially for India's V2V plans.

These partnerships will help us bring global best practices to India and share India's experience with the world. They strengthen our shared goal of safer, smarter, and more sustainable roads.

CII National Conference, New Delhi: *Highways of India's Future*

On **27 October,** ITS India Forum partnered with the **Confederation of Indian Industry (CII)** to host the national conference ***Highways of India's Future: Smart, Safe and Sustainable*** in New Delhi. The keynote was given by Hon'ble Union Minister for Road Transport & Highways, **Shri Nitin Gadkari.** He noted that highway construction has risen from **9 km/day before 2014 to 37 km/day** and that logistics costs have fallen from **16% to 9% of GDP.** He added that the national highway network has grown to **1,46,572 km** and that high-speed corridors have grown nearly **12 times, to 6,788 km.** For the ITS community, the most important announcement was MoRTH's faster rollout of

AI-based Advanced Traffic Management Systems (ATMS) on national highways. The **first phase will cover about 10,000 km** and use **AI cameras to monitor lane discipline,** and the Minister asked industry to support it. He also said there would be ***zero tolerance for poor-quality construction,*** with **Network Surveillance Vehicles** tracking road defects. ITS India Forum took part in panel discussions on **smart highways and connected mobility,** where we stressed that ***saving lives is the true measure of success for any technology.***

5GAA Global Meeting Week, New Delhi: Connected Mobility Comes to India

The month ended with the 5G Automotive Association (5GAA) Global Meeting Week, held at Hotel The Lalit, New Delhi, from 26 to 29 October 2026. This was the first time a global meeting of this scale on connected vehicles had been held in India. It brought together automakers, telecom operators, technology providers and policymakers from around the world. V2V communication was one of the main topics, which fits well with India's push for connected-vehicle technology to improve road safety. On 29 October, ITS India Forum organised a dedicated session as part of the week. It opened with keynote addresses by Shri Mahmood Ahmed, Additional Secretary, MoRTH, and Shri Sanjay Bandopadhyay, IAS (Retd), Member, Hon'ble Supreme Court Committee on Road Safety. Panel discussions and round-table discussions followed, with Shri R. S. Singh, DDG, DoT, and participants from MeitY, CRRI, ARAI and industry, among others. Hosting these discussions in New Delhi showed that India is becoming an important voice in shaping the future of cellular V2X and intelligent mobility. It also opens new ways for Indian industry to take part in global standards and deployment.

We also continue to invest in people. Under our **100 Minds, 10,000 Hands programme,** the Executive PhD and Global MS pathway in ITS have commenced with their first cohort, strengthening the talent pipeline the sector needs.

I thank our members, partners and team for their continued commitment. Together, we will keep working towards our goal: **Smart Roads. Connected Vehicles. Zero Fatalities.**

Warm regards,
AKhilesh Srivastava
President, ITS India Forum

EDITOR'S NOTE: OCTOBER AT A GLANCE



A month of convening, connecting and committing to safer, smarter mobility.

Debasish Debsikdar Editor, ITS India Digest

October 2026 was a month of big rooms and bigger conversations for ITS India Forum. It opened at Bharat Mandapam, New Delhi, where the second edition of **ITS India Congress** (7–8 October) brought policymakers, industry, academia and international ITS bodies together around one mission: road safety through technology. The ITS India Yearbook 2026 was launched, five strategic roadmaps for Viksit Bharat 2047 were articulated, and the Road Safety Technology Awards recognised deployable solutions from NRSTC 2026.

Mid-month, the Forum took India's story to the world stage at the **ITS World Congress in Gangneung, South Korea,** where it strengthened ties with partner ITS bodies, including MoUs with ITS Canada and ITS New Zealand, a bilateral meeting with ITS Australia, and engagements with ADB and Car 2 Car, before visiting Seoul on 22 October.

The month closed in New Delhi on 27 October at the CII conference **"Highways of India's Future: Smart, Safe and Sustainable",** where Union Minister Shri Nitin Gadkari addressed the gathering and the Forum's President contributed to the Ministerial and ATMS-V2V sessions.

October at a glance

Date	Event	Where
7–8 Oct	ITS India Congress 2026 (2nd edition)	Bharat Mandapam, New Delhi
19–23 Oct	ITS World Congress 2026: MoUs, bilateral meetings and sessions	Gangneung, South Korea
27 Oct	CII: Highways of India's Future	Hotel Taj Mansingh, New Delhi
29 Oct	5GAA Global Meeting Week: ITS India Forum session	The LaLiT, New Delhi



EVENTS & CONFERENCES

Every event, delegation and engagement of the month, in one place.

This section covers the events ITS India Forum hosted or took part in during October 2026. All four have dedicated sections that follow.

Event	Date
ITS India Congress 2026	7–8 October
ITS World Congress 2026, Gangneung	19–23 October
CII: Highways of India's Future	27 October
5GAA	26–29 October



ITS INDIA CONGRESS 2026

Two days, one mission: road safety through technology. The second edition of the Congress put intelligent mobility at the heart of India's journey to *Viksit Bharat 2047*.

10 Sessions	54 Exhibitors	45 National Roadmaps	5+ Nations

The second edition of ITS India Congress 2026 was held on **7–8 October 2026** at Hall No. 1, Bharat Mandapam, New Delhi, under the theme **"Connected, Integrated and Intelligent Mobility for Viksit Bharat 2047."** Organised by ITS India Forum with Messe Frankfurt Trade Fairs India and Virtual Info Systems, it brought together senior government officials, policymakers, transport authorities, industry leaders, researchers and international ITS experts.

Discussions covered AI-driven mobility, V2X, electronic enforcement, barrierless tolling, multimodal integration and capacity building. National and state stakeholders from the Ministry of Road Transport and Highways (MoRTH), the Ministry of Electronics and Information Technology (MeitY), the Department of Telecommunications (DoT), the Supreme Court Committee on Road Safety (SCCoRS), state police and transport departments joined delegates from New Zealand, Australia, Singapore, the United Kingdom and Taiwan to exchange global best practices.

At a glance	
Event	ITS India Congress 2026 (2nd Edition)
Dates	7–8 October 2026
Venue	Hall No. 1, Bharat Mandapam, New Delhi
Format	Inaugural session | 1 plenary | 4 technical sessions | closed-door leadership roundtable | valedictory and award ceremony
Co-located	Traffic Infratech exhibition
Signature launch	ITS India Yearbook 2026

Day 1 · Inaugural Session: India's Roadmap to 2047

Day 1 opened with a joint lamp-lighting for the Traffic Infratech exhibition and the Congress. The inaugural session, **"India's Roadmap to 2047 — Intelligent Transportation as a Catalyst,"** was opened by Dr. Shiv Kumar, Director General, ITS India Forum. Mr. Akhilesh Srivastava, President, ITS India Forum, set the tone with a clear message: technology is no longer optional for India's mobility.

> ***"We are moving from reactive safety to predictive safety. The vehicle is becoming intelligent, the road is becoming intelligent, now they must talk to each other."***
>
> **— Mr. K. K. Kapila, *President, IRF***

Voices from the inaugural

Speaker	Key message
Mr. Akhilesh Srivastava *President, ITS India Forum*	Called for stronger collaboration among policymakers, industry, academia and technology providers to build a safer, smarter and more integrated mobility ecosystem.
Ms. Lee McKenzie *Vice Chair & International Lead, ITS New Zealand*	International keynote: the world should be watching India's journey to Viksit Bharat 2047. Invited delegates to the ITS Asia-Pacific Forum, Auckland, 5–7 May 2027.
Mr. Debashish Debsikdar *SVP & Business Head – TTT, Jio Platforms*	Framed 5G-to-6G connectivity as the "digital nervous system" of mobility and presented SAMP 2047, a five-pillar framework for India's mobility platform.
Smt. Malini Aggarwal, IPS *DGP, Rajasthan Police*	Highlighted AI and digital enforcement, including predictive hotspot mapping to identify accident-prone areas early.
Shri Mahmood Ahmed *Additional Secretary, MoRTH*	Electronic enforcement is instrumental to road safety; MLFF and e-enforcement must leverage technology with clear SOPs.
Prof. K. K. Aggarwal *President, South Asian University*	Emphasised developing India's ITS talent for 2047.
Shri Sanjay Bandopadhyaya , IAS (Retd) *Member, SCCoRS*	Road safety must never be compromised: the four Es are Enforcement, Education, Engineering and Emergency Care.

ITS India Yearbook 2026 launched

The ITS India Yearbook was officially launched during the Congress, documenting the growth, achievements and evolving landscape of Intelligent Transportation Systems in India. It brings together developments, initiatives, innovations and stakeholder contributions across the ITS ecosystem, and serves as a reference for policymakers, industry leaders, researchers and technology providers.



Dignitaries at the launch of the ITS India Yearbook 2026.

Technical Session 1 · Citizen-Centric Intelligent Transportation Systems

How can AI, digital enforcement, data analytics, digital twins, MaaS platforms and Integrated Command & Control Centres make mobility safer, greener and more citizen-centric? The session explored AI-enabled traffic management, predictive safety analytics and Vision Zero, and the ANPR / e-challan ecosystem.

Speaker	Organisation	Topic
Dr. Amit Kumar Jain *Director – Ops & Services*	DMRC	AI for Seamless Citizen Mobility
Mr. Senturan Karthikeyan *Director – Innovations*	Datacorp Traffic	Enforcement That Follows the Risk
Mr. Vijay Khuspe *Director*	SenSen Networks	Video Analytics for Smarter Enforcement
Dr. Jaya Shankar Pathmasuntharam *Councillor*	ITS Singapore	CRUISE: Next-Generation AI-Based Traffic Control

Highlights

- **Delhi Metro Sarthi app:** a "metro-to-doorstep" Mobility-as-a-Service vision, used by 19.2 lakh commuters a month with over 1 crore downloads, powered by the multilingual AI assistant CHETNA (about 10,000 queries a day).
- **Enforcement that follows the risk:** on the Bengaluru–Mysuru Expressway, ANPR/AI cameras and an ATMS cut road deaths from 188 in 2023 to 50 in 2024 (down 73%), pointing to the need for portable, unpredictable enforcement and a stronger e-challan recovery system.
- **Institutional adoption is the bottleneck:** the law now permits electronic enforcement; the question is who owns, runs, validates, audits and appeals the system. Pune's AI traffic sentinel was showcased.
- **CRUISE (ITS Singapore):** flexible sensing and distributed, adaptive junction control to improve journey reliability and reduce delays.

Panel: moderated by Mr. Akhilesh Srivastava, the panel stressed moving from historical crash records to risk-based prevention, treating commissioning as the beginning of operational delivery, making vehicles and infrastructure V2X-ready, being transparent about AI performance, and building multilingual, field-friendly tools suited to Indian conditions.

Roadmap outcome: ITS Roadmap for Citizen-Centric Mobility and Viksit Bharat 2047: combine risk-based AI enforcement, continuous post-deployment monitoring and transparent systems with V2X-ready infrastructure, multilingual tools and citizen trust.



Speakers and panellists of Technical Session 1

Technical Session 2 · Barrierless Tolling and Road User Charging

Building on the success of FASTag, the session discussed Multi-Lane Free Flow (MLFF), GNSS-based tolling, congestion pricing and road-user charging, covering technology readiness, enforcement, privacy and the roadmap for nationwide rollout. **Chair:** Shri A. R. Chitranshi, COO, IHMCL. **Co-Chair:** Smt. Malini Aggarwal, IPS, DGP, Rajasthan Police.

Speaker	Organisation	Topic
Ms. Susan Harris *CEO*	ITS Australia	Road User Charging Down Under: Lessons for India's MLFF Journey
Mr. Dilip Kumar *Head – ITS Business Unit*	e-con Systems	Road User Charging: Lessons for India
Mr. Richard Wu *Vice President & CTO*	Far Eastern Electronic Toll Collection (FETC), Taiwan	Global Experience on MLFF

Highlights

- **Australia:** national interoperability in tolling and the case for fair, sustainable road funding as EV adoption grows.
- **Protecting toll revenue:** spoofed number plates defeat conventional ANPR; multi-spectral imaging combined with AI and vehicle "fingerprinting" was presented as the answer, using India-built AI ANPR cameras.
- **Taiwan:** 341 gantries, 100% ETC usage and 99.98% detection accuracy across 17–22 million daily transactions, and the newly established Asia-Pacific Road User Charging Alliance.

> ***"ITS India Forum has united stakeholders behind the mission of road safety, and ITS Australia looks forward to collaborating with the Forum."***
>
> **— Ms. Susan Harris, *CEO, ITS Australia***

Roadmap outcome: India Road User Charging and MLFF Roadmap 2047: nationwide interoperability, secure and accurate vehicle identification, phased barrierless tolling, and fair, legally sound road-user charging.



Technical Session 2: panel on barrierless tolling and road user charging

Technical Session 3 · Connected Mobility Ecosystem (V2X)

The session explored India's roadmap for V2V, V2I, V2N, V2P and V2X, including 5G and C-V2X, cybersecurity, spectrum, standards, connected corridors, smart highways and emergency-vehicle prioritisation. **Chair:** Dr. Reji Mathai, Director, ARAI. **Special Address:** Dr. N. Subramanian, ED, SETS. **Moderator:** Mr. Titas Roy, Geospatial World.

Speaker	Organisation	Topic
Mr. Rojer Kavin Ram S. R. *Technical Director*	Danlaw Technologies India	Making C-V2X Real on Indian Roads
Shri Soundra Pandian Kaliappan *Scientist E & Additional Director*	MeitY	Digital Technologies for Connected Mobility in Viksit Bharat 2047

Highlights

- **Safety first:** with nearly 1.8 lakh road deaths and around 80,000 two-wheeler fatalities, V2X can help detect hazards beyond a sensor's line of sight.
- **Prevent, don't just record:** infrastructure-to-vehicle (I2V) alerts can deliver more immediate benefits than post-incident data.
- **Trust by design:** PKI and digital certificates to secure V2X, aligned with global standards while protecting national sovereignty.
- **Skills and standards:** a government-led multi-stakeholder skills council to strengthen India's talent pipeline.

In closing, Mr. Akhilesh Srivastava underlined that connected-mobility solutions are not a distant prospect but an urgent need, given India's high share of global road fatalities.

Roadmap outcome: India Connected Mobility Roadmap 2047: V2X deployment, safety, interoperability, cybersecurity, privacy and trusted data sharing.



Technical Session 3: Connected Mobility Ecosystem (V2X)

Day 2 · Plenary: Smart Transport Integration through PM Gati Shakti

Day 2 opened with a plenary on integrating roads, railways, ports, airports, logistics parks, inland waterways and urban transport under PM Gati Shakti, and on how digital technologies, geospatial intelligence and AI-powered logistics can cut logistics costs. **Chair:** Mr. Harish Sabharwal, President, AIMTC.

Speaker	Organisation	Topic
Mr. Pankaj Bhatia *Managing Director*	Hitachi Rail	Digital Rail at the Heart of Multimodal India
Mr. Abhijeet Sinha *Program Director – EoDB & NHEV*	NHEV	Electric Highways for Greener Freight
Mr. Alagappan Ramanathan *Director – Global Design Centre*	Datacorp Traffic	Smart Systems for Seamless Logistics
Mr. Jitender Kaushik *Founder & CEO*	Onnyx Electronisys	Intelligent Mobility for Viksit Bharat

Highlights

- **One Nation, One Journey:** India has integrated its infrastructure; the next step is to integrate the journey, with a single QR or NCMC card across rail, metro, RRTS and bus.
- **One Nation, One Network:** 13.3 city buses per lakh people against a benchmark of 44; PM Gati Shakti can plan, connect and pay across modes.
- **Electric highways:** NHEV's Intelligent Roadside Assistance network combines EV charging, RSA vehicles and connectivity roughly every 50 km.
- **Intelligent signals:** an ambulance-priority system that can start today to cut avoidable fatalities.

The panel, moderated by Shri Anil Chikkara, connected multimodal integration with highway safety, enforcement, solutions for hilly regions, ADAS retrofitment pathways, road-safety education from school age, and the cybersecurity risks of integrated systems.

Roadmap outcome: National Multimodal Mobility and Logistics Roadmap 2047: seamless multimodal connectivity, safer highways, stronger ITS and enforcement, practical ADAS retrofitment, road-safety education and cybersecurity.



Day 2 plenary on PM Gati Shakti



Plenary panel discussion

Global ITS Leadership Dialogue Roundtable - From Innovation to Implementation

This closed-door roundtable, moderated by Mr. Akhilesh Srivastava, asked why promising ITS technologies are delayed between development and deployment. International and Indian leaders discussed procurement, technical evaluation, interoperability and financing.

Highlights

- **Technical qualification before commercial bidding:** define and freeze requirements, assess capability against a common checklist, then invite only qualified bidders to submit commercial offers.
- **Outcome-based contracts and proof of concept:** managed-service models, deliver-operate-maintain contracts and pilots, since detailed specifications can become outdated quickly.
- **Common evaluation and standards:** a central evaluation and accreditation mechanism to avoid repeated demonstrations across cities.
- **Room for startups:** hackathons, challenge-based problem statements, small pilots and proportionate eligibility criteria.
- **Measure outcomes, not equipment:** reduced travel time and fatalities, backed by sustainable financing including revenue-sharing, multilateral soft loans and CSR.

Roadmap outcome: An agile, transparent and outcome-oriented ITS procurement framework that combines technical rigour with innovation, common standards, measurable performance and sustainable financing.



Participants at the Global ITS Leadership Dialogue Roundtable



Roundtable discussion



Roundtable discussion

Technical Session 4 · Capacity Building for a Future-Ready ITS Ecosystem

The session addressed human capital, standards, quality assurance and interoperability for scalable ITS deployment. **Chair:** Prof. Manoranjan Parida, IIT Roorkee. **Co-Chair:** Dr. Chalumuri Ravi Sekhar, Director, CSIR-CRRI.

Speaker	Organisation	Topic
Prof. Pooran Pandey *Director – Centre for Climate Change*	South Asian University	Climate-Smart ITS and the Skills to Deliver It
Mr. Akhilesh Srivastava *President*	ITS India Forum	100 Minds, 10,000 Hands: Building India's ITS Talent Pipeline
Mr. Umang Saraf *Founder*	TraffiCure by Lepton Software	Analytics for Smarter Cities

Highlights

- **100 Minds, 10,000 Hands:** the Forum's Capacity Building Programme is under way. The Executive PhD and the international Global MS pathway in ITS have launched with the first cohort enrolled, aiming for 100 ITS thought leaders and 10,000 skilled ITS professionals.
- **Certification gap:** Dr. Rajesh Krishnan noted India has no equivalent to PTOE or IMSA and urged a structured traffic-operations certification pathway.
- **Standards, quality and security by design:** quality assurance across devices, firmware, communications, back-end systems and processes.

> ***"India has a road network of 6.3 million kilometres, and deploying intelligent transportation technologies across such an extensive network requires significant human resources and sustained capacity building."***
>
> **— Prof. Manoranjan Parida, *IIT Roorkee***

Roadmap outcome: A future-ready ITS workforce through industry–academia partnerships, practical certification, MS / dual-degree / PhD pathways and centres of excellence, with interoperability, cybersecurity, accessibility and quality assurance built in.



Technical Session 4 on capacity building



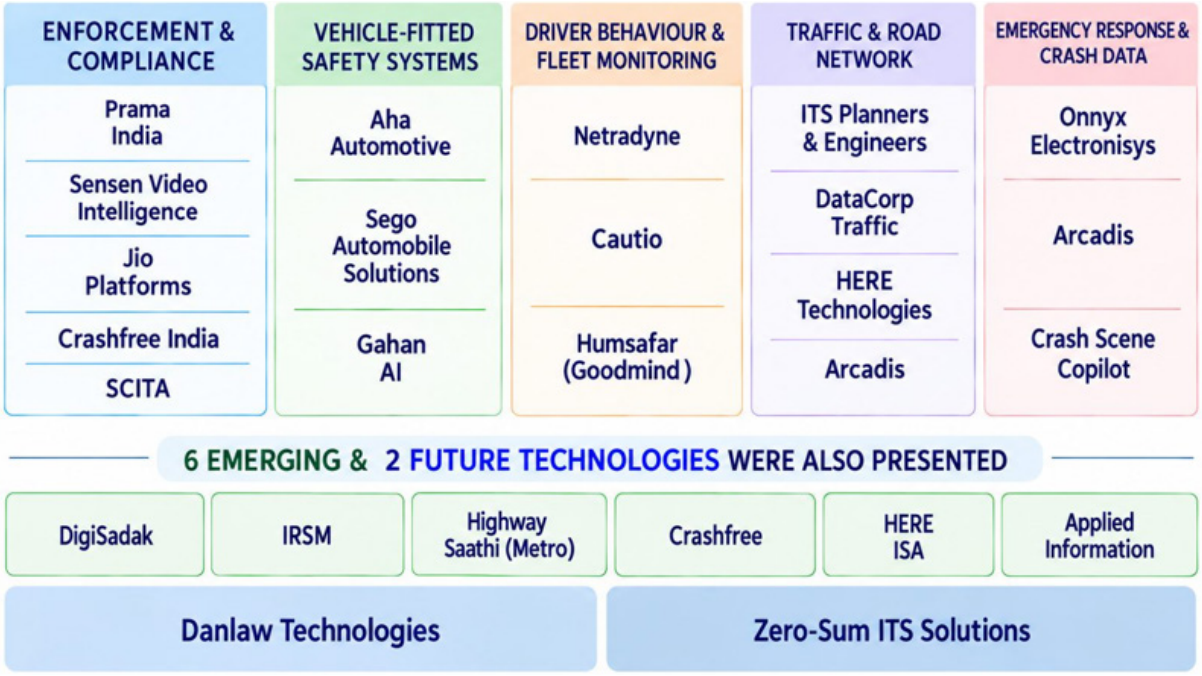
Panel discussion

Valedictory Session and Road Safety Technology Awards

Mr. Akhilesh Srivastava presented a summary of the two-day Congress, and Dr. Shiv Kumar delivered the vote of thanks. The session was followed by the **Road Safety Technology Awards,** recognising innovative and deployable solutions presented at the National Road Safety Technology Conclave (NRSTC) 2026, jointly organised by ITS India Forum and IIT Bombay on 25–26 August 2026.

> ***"The second edition of ITS India Congress has been scaled to a new level. Road safety is an urgent national priority, and ITS must play a central role in addressing it."***
>
> **— Mr. Akhilesh Srivastava, *President, ITS India Forum***

> ***"We have recognised technologies rather than ranking anyone as winners and runners-up, because we believe the real winner is every human who is able to reach home safe."***
>
> **— Prof. Archak Mittal, *IIT Bombay***



Technologies recognised at the Road Safety Technology Awards, by category.

Valedictory addresses

- **Justice Abhay Manohar Sapre (Retd), Chairman, Supreme Court Committee on Road Safety (message read by Dr. Shiv Kumar):** technology must become a force multiplier for road safety, with anticipatory policy, interoperability and practical training for police, officials, engineers and emergency responders.
- **Mr. Andy Hamer, Simplifai Systems:** commended India's vision and investment, urging that public transport remain central to mobility policy.
- **Shri Gaurav Upadhyay, IPS, Secretary, Transport Department, Government of Assam:** praised ITS India Forum for creating a practical interface between government, industry and academia.



Valedictory session and Road Safety Technology Awards

Five Roadmaps for Viksit Bharat 2047

#	Session	Roadmap outcome
1	Citizen-Centric ITS	ITS Roadmap for Citizen-Centric Mobility: AI deployment, digital enforcement, citizen services, interoperability and governance
2	Barrierless Tolling	India Road User Charging and MLFF Roadmap 2047
3	Connected Mobility	India Connected Mobility Roadmap 2047 (V2X, 5G/C-V2X, standards)
4	PM Gati Shakti Plenary	National Multimodal Mobility and Logistics Roadmap 2047
5	Capacity Building	Workforce and institutional-readiness strategy for a future-ready ITS ecosystem

The way forward

The Congress reaffirmed that Viksit Bharat 2047 requires more than physical infrastructure: roads, vehicles, communications, digital platforms and transport services must work as one integrated ecosystem that delivers measurable benefits. The next step is to turn these strategic directions into an implementation agenda: identify priority use cases and pilot corridors, agree on interoperable standards and procurement pathways, define outcome indicators, strengthen cybersecurity and institutional capability, and scale proven solutions through coordinated action by government, industry, academia and ITS India Forum.

Success will be judged by fewer crashes and fatalities, safer roads, more reliable journeys, lower congestion, efficient logistics and systems that work seamlessly across regions and modes.

Smart Roads. Connected Vehicles. Zero Fatalities.

ITS WORLD CONGRESS 2026, GANGNEUNG

ITS India Forum took its message to the world stage, building partnerships, earning international recognition for India's V2V road-safety push, and sharing India's mobility vision with the global ITS community.

The **32nd ITS World Congress** took place in **Gangneung, South Korea, from 19 to 23 October 2026.** Policymakers, transport authorities, technology leaders, researchers and mobility practitioners from every continent came together to shape the future of intelligent transport. For India, this Congress was a moment of real pride. ***India's ITS industry and policies were in the spotlight,*** and the country's bold move to bring **Vehicle-to-Vehicle (V2V) communication** into mainstream road safety was ***widely appreciated.***

ITS India Forum's delegation spoke in technical sessions, held bilateral meetings with international ITS partners, signed MoUs, and saw firsthand some of the world's most advanced connected-mobility demonstrations and urban traffic management systems.



India in the Spotlight: Global Appreciation for India's V2V Push

Across sessions, pavilions and side meetings in Gangneung, one Indian story came up again and again: ***India's decision to make connected-vehicle safety a national priority.***

International delegates recognised the significance of the timing. A few months before the Congress, the Ministry of Road Transport and Highways (MoRTH) issued a draft notification proposing amendments to the Central Motor Vehicles Rules, 1989, for the phased implementation of V2V communication systems in motor vehicles. Under the draft, from 1 October 2027, vehicles fitted with V2V communication systems must comply with the AIS-230 standard, and from 1 October 2028, all newly manufactured vehicles in these categories must be equipped with V2V communication systems conforming to AIS-230. The mandate is broad in scope. It will apply to L-, M- and N-category vehicles, which include two-wheelers, passenger vehicles and commercial vehicles, and the system will use On-Board Units operating between 5.875 GHz and 5.925 GHz.

Global experts found the inclusion of **two-wheelers** especially notable. In most countries, V2X has so far been limited to premium cars, pilot corridors or long-running policy debates. By contrast, India's proposal ***moves V2V from an optional feature to a baseline safety requirement*** in one of the world's largest and most diverse vehicle markets.

Many delegates also saw the strong safety case for V2V in Indian conditions. Unlike conventional safety technologies that rely mainly on cameras, radars and driver response, V2V communication extends beyond the driver's line of sight. On roads with mixed traffic, blind curves, sudden stops and many vulnerable road users, that ability to "see" beyond the line of sight can mean the ***difference between a near-miss and a fatality.***

Our message in Gangneung was clear: ***scale and safety can go together.*** The Forum's engagement throughout the week helped present India not just as a large market for ITS, but as ***a country setting direction*** in connected-vehicle policy.

Building Partnerships with International ITS Partners

A major focus of the Gangneung visit was **strengthening India's ties with ITS organisations around the world.** The Forum signed **MoUs with ITS Canada and ITS New Zealand,** held a **bilateral meeting with ITS Australia,** and met the **Asian Development Bank (ADB)** and the **Car 2 Car Communication Consortium.** The Car 2 Car discussions were especially relevant given India's V2V plans, because the Consortium has long experience in cooperative connected-vehicle systems in Europe.

These partnerships will help bring ***global best practices to India.*** They will also give India's experience, including its scale, frugal innovation and policy ambition, a place in international discussions.

CA ITS Canada – ITS India Forum MoU

On **20 October,** ITS India Forum and ITS Canada signed a **Memorandum of Understanding** at the **ITS Asia-Pacific Pavilion.** The MoU formalises cooperation between the two ITS bodies and sets up a framework for exchanging knowledge, sharing technical expertise, joint learning, and working together on intelligent and connected mobility.



NZ ITS New Zealand – ITS India Forum MoU

On **19 October,** the Forum signed an **MoU with ITS New Zealand.** The partnership grows out of engagement that began at **ITS India Congress 2026.** There, **Ms. Lee McKenzie, Vice Chair & International Lead, ITS New Zealand,** gave the international keynote and invited Indian delegates to the ***ITS Asia-Pacific Forum in Auckland (5–7 May 2027).*** The MoU now gives that relationship a formal footing and opens the way for stronger Indian participation at Auckland next year.



AU Bilateral Meeting with ITS Australia



ITS India Forum held a **bilateral meeting with ITS Australia** at the **Gangneung Convention Center on 19 October.** The two bodies had already started working together. At **ITS India Congress 2026 in Delhi, Ms. Susan Harris, CEO, ITS Australia,** shared Australia's experience of ***interoperable tolling and road-user charging,*** which are areas of great relevance to India as it moves to next-generation tolling. She also said ITS Australia was keen to collaborate with the Forum. The Gangneung meeting took that intent forward into concrete discussions.

Asia-Pacific Road User Charging Alliance



Australia's entry into the **Asia-Pacific Road User Charging Alliance (RUC Alliance)** was another important development at the Congress. It strengthens regional cooperation on **road-user charging, tolling and congestion management.** The Alliance gives member countries a platform to exchange experiences, share best practices and explore ***new approaches to the future of road-user charging and sustainable mobility.*** These conversations matter directly to India, where barrier-free tolling and distance-based charging are shaping the next phase of highway management.

India's Voice in the Technical Programme

Mr. Akhilesh Srivastava, President, ITS India Forum, spoke in key sessions at the Congress. He presented India's perspective on scaling connected mobility, deploying V2X, attracting investment through smart mobility, and putting safety at the centre of ITS. Each session gave a chance to explain ***India's journey from pilots to nationwide platforms*** and to place the country's V2V push within a wider global conversation.

Date	Session
20 Oct	ES001: From Pilots to Platforms: Scaling Nationwide Connected & Automated Mobility in the 5G/6G Era
20 Oct	SIS019: Driving economic growth through smart mobility: how regions worldwide attract investment, innovation and talent
21 Oct	SIS041: The Journey to Direct V2X Deployment: International Perspectives from Diverse Stakeholders
21 Oct	SP023: Safety in ITS



Demonstrations: V2X Safety in Action

LIG Accuver Showcases Advanced V2X Safety Demonstrations

At the ITS World Congress 2026 in Gangneung, South Korea, LIG Accuver showcased advanced Vehicle-to-Everything (V2X) technologies through live demonstrations, highlighting the role of connected vehicle communication in enhancing road safety.



The demonstrations featured three key applications: **V2V Cut-Out**, enabling vehicles to exchange safety information when a stationary vehicle is hidden from the driver's view; **Intersection Collision Warning,** using roadside infrastructure and cooperative perception to identify potential hazards and vulnerable road users beyond the driver's line of sight; and

Connected Safety in GNSS-Denied Tunnels, demonstrating LTE-V2X communication for sharing roadwork information and emergency vehicle approach warnings, even in environments where satellite signals are unavailable.

These demonstrations highlighted how real-time communication between vehicles, road infrastructure and other road users can improve situational awareness, strengthen preventive safety measures and support the development of connected and intelligent mobility systems. (V2V Intersection)

Seoul · Visit to TOPIS

On 22 October, the ITS India Forum delegation visited Seoul TOPIS (Seoul Transport Operation and Information Service). During the ITS World Congress 2026 in Gangneung, the ITS India delegation visited Seoul TOPIS (Seoul Transport Operation and Information Service) in South Korea. The visit provided an opportunity to gain insights into Seoul's advanced urban traffic management systems and its integrated approach to intelligent transportation. The delegation explored how real-time traffic monitoring, data-driven decision-making, intelligent transport technologies, and coordinated traffic operations contribute to efficient urban mobility. The interaction also offered valuable exposure to South Korea's ITS initiatives and smart mobility practices, encouraging knowledge exchange and strengthening international cooperation between the ITS ecosystems of India and South Korea.



The Way Forward

Gangneung was a milestone for ITS India Forum and for Indian ITS. The Forum came away with **new MoUs with ITS Canada and ITS New Zealand, deeper partnerships across the Asia-Pacific, productive conversations with ADB and Car 2 Car, and wide international appreciation for India's V2V road-safety agenda.**

India is building one of the world's largest highway networks and preparing to make connected-vehicle safety standard on new vehicles. These global partnerships will help make India's roads ***not just bigger, but smarter and safer.*** ITS India Forum will keep acting as ***India's bridge to the global ITS community,*** bringing the best of the world to India and showing India's best to the world.

CII: HIGHWAYS OF INDIA'S FUTURE

A day-long national dialogue on building highways that are not only faster and bigger, but smarter, safer and greener, with Intelligent Transport Systems and connected mobility at its heart.

The **Confederation of Indian Industry (CII),** in partnership with **ITS India Forum,** held a day-long national conference on the future of India's highways. It brought together policymakers, highway authorities, technology leaders, material innovators and mobility experts. Sessions covered **next-generation highway materials, decarbonising freight, how roads shape cities,** and ***smart highways and connected mobility.*** That last theme, led by ITS India Forum, featured the ***ATMS-V2V revolution*** now taking shape on Indian roads.

Session	Theme
I	The Highway Materials Revolution: Building for Durability, Sustainability and Resource Efficiency
II	Special Ministerial Session: Imagining Highways of India's Future
III	Decarbonising the Drive: Building Future-Ready Roads, Sustainable Electric Logistics Ecosystem
IV	How Roads Shape Cities: Lessons from Noida and the NCR
V	Smart Highways, Connected Mobility: The ATMS-V2V Revolution

Programme at a glance



Special Ministerial Session at the CII conference, 27 October 2026

Special Ministerial Session: Imagining Highways of India's Future

The session opened with the felicitation of the Hon'ble Minister by CII and welcome remarks by Mr. M.V. Satish, Chair, CII National Committee on Roads and Highways. **Shri Nitin Gadkari, Hon'ble Minister for Road Transport & Highways, Government of India,** addressed the gathering as Chief Guest. **Mr. Akhilesh Srivastava,** Co-Chair, CII National Taskforce on Road Safety and President, ITS India Forum, delivered the concluding remarks.



Shri Nitin Gadkari on the dais with Mr. Akhilesh Srivastava



Address at the conference Mr. Akhilesh Srivastava

Shri Nitin Gadkari, Hon'ble Minister for Road Transport & Highways, Government of India, set out a broad vision for India's highways.

Infrastructure as the Engine of a $5 Trillion Economy

The Minister said robust infrastructure is essential for India to become a $5 trillion economy and the world's third-largest economy. He described how quickly the sector has changed:

- **Construction speed:** national highway construction has accelerated from 9 km per day before 2014 to 37 km per day. *reporterstoday*
- **Logistics costs:** logistics costs have declined from 16% to 9% of GDP, while the national highway network expanded from 91,287 km in 2014 to 1,46,572 km in 2026. *reporterstoday*
- **Capacity:** four-lane highways grew from 18,278 km to 49,160 km, while high-speed corridors increased nearly 12-fold, from 557 km to 6,788 km.
- **Travel times:** the Delhi–Dehradun Expressway has cut travel time from seven hours to two, and a Delhi–Haridwar highway is expected to be completed within a few months.

ATMS: AI Comes to India's Highways

For the ITS community, the most important announcement was the government's push for **intelligent traffic management.** The Minister said the government was accelerating the rollout of AI-based Advanced Traffic Management Systems (ATMS), with the first phase expected to cover around 10,000 km of highways. The new system will use AI cameras and systems to monitor lane discipline. He also called on industry to support the ATMS rollout to strengthen highway monitoring and improve traffic enforcement. This was ***a clear invitation to India's ITS ecosystem*** to work with the government.

NSVs and Zero Tolerance on Quality

The Minister was firm on quality. He said companies, contractors, consultants, and officials compromising on highway construction quality will face blacklisting and stringent penalties, with every pothole set to be tracked through Network Surveillance Vehicles. He added that several manufacturers of bearings and expansion joints had already been blacklisted for failing to meet prescribed quality standards. He also urged citizens to flag quality problems on social media. This turns technology-led monitoring and public participation into tools for accountability.

Session V: Smart Highways, Connected Mobility: The ATMS-V2V Revolution

The last session of the day was led by **ITS India Forum** and turned the Minister's ATMS announcement into a detailed discussion about how it can be delivered. **Mr. Akhilesh Srivastava** gave the **opening remarks and moderated the session.**

- **Guest of Honour: Shri Vishal Chauhan,** Chairman, IHMCL, and Member (Admin), NHAI
- **Keynote: Shri R.S. Singh,** DDG, Department of Telecommunications (DoT)

The panel brought together leading voices from across the connected-mobility value chain:

- **Mr. Anoop G. Prabhu,** Vehant Technologies
- **Mr. Suman Sehra,** HARMAN Automotive
- **Mr. Simranjit Singh,** EFKON STRABAG
- **Mr. Arindam Das,** Qualcomm

The session came at a key moment for Indian ITS. Two developments are moving together: the **AI-based ATMS rollout on national highways and MoRTH's draft notification on V2V communication.** Under that draft, V2V communication systems would become mandatory on all newly manufactured vehicles from 1 October 2028, covering two-wheelers, passenger cars and commercial vehicles. Together, these mean India's highways are set to become ***intelligent corridors where the road watches and the vehicles talk.*** *autocarindia*

The session brought together highway operators, the telecom regulator, and companies working in vision analytics, in-vehicle connectivity, tolling and ITS integration, and chipsets. It showed that delivering this vision needs ***the whole ecosystem working together:*** roads, vehicles, spectrum and silicon.

Key Takeaways

- ***ATMS is coming at scale,*** with **~10,000 km in the first phase** using AI cameras for lane discipline and enforcement, and the Minister has invited industry to partner.
- ***Quality will be enforced through technology:*** **Network Surveillance Vehicles** will track defects, with blacklisting for those who compromise on quality.
- ***V2V and ATMS together*** mark the start of connected highways in India.
- ***Saving lives is the true measure of success*** for every technology deployed on Indian roads.



5GAA GLOBAL MEETING WEEK 2026

29 October 2026 - The LaLiT, New Delhi

Organised by: 5G Automotive Association (5GAA) - in association with *ITS India Forum*

The final day of 5GAA's IndiaGlobal Meeting Week, the first gathering of its scale in India, brought government, industry and technology leaders together to plan how India will deploy V2X, so that vehicles, roads and people can communicate to save lives.

A Landmark Week for Connected Mobility in India

From **26 to 29 October 2026,** the **5G Automotive Association (5GAA),** the global alliance of automakers, telecom operators and technology companies working on connected-vehicle solutions, held its **Global Meeting Week at The LaLiT, New Delhi.** It was ***the first time a 5GAA gathering of this scale had been held in India*.** Holding it in New Delhi reflected India's growing importance in the global connected-mobility landscape.

The timing was apt. A few months earlier, MoRTH had issued a draft notification proposing amendments to the Central Motor Vehicles Rules, 1989, for the phased implementation of V2V communication systems in motor vehicles. Just days before, at the **ITS World Congress in Gangneung,** ***India's V2V push had been widely praised by the global ITS community.*** **V2V and V2X communication** were naturally the main focus of the week.

The week ended on **29 October** with the conference ***"Connecting India for Safer Roads: Advancing Mobility for All."*** Policymakers, regulators, telecom operators, automotive suppliers, testing agencies and researchers came together to discuss one question: ***how should India move from policy intent to V2X deployment on the ground?***

Why V2X Matters for India

Unlike conventional safety technologies that rely mainly on cameras, radars and driver response, V2V communication extends beyond the driver's line of sight. Vehicles warn each other about hazards the driver cannot yet see: a stalled truck around a bend, a vehicle braking hard ahead, or a two-wheeler approaching a blind junction.

India's draft framework sets a clear path:

- **From 1 October 2027:** Vehicles fitted with V2V communication systems must comply with the AIS-230 standard.
- **From 1 October 2028:** All newly manufactured vehicles in these categories must be equipped with V2V communication systems conforming to AIS-230.
- **Coverage:** L-, M- and N-category vehicles, which include two-wheelers, passenger vehicles and commercial vehicles.
- **Spectrum:** On-Board Units operating between 5.875–5.925 GHz.

Including **two-wheelers,** which make up the largest share of India's vehicles and of its road-crash victims, makes India's approach unusually ambitious by global standards.

Key Highlights of the Day

Opening Address

Mr. Tim Leinmüller, Vice Chair, 5GAA, and Mr. Maxime Flament, CTO, 5GAA, opened the conference. They brought a global view of how cellular V2X is moving from trials to deployment around the world.

Keynote Addresses

The keynotes, organised by **ITS India Forum,** set the policy and safety context for the day:

- **Shri Mahmood Ahmed, Additional Secretary, MoRTH,** spoke on the government's vision for intelligent and connected mobility in India.
- **Shri Sanjay Bandopadhyay, IAS (Retd), Member, Hon'ble Supreme Court Committee on Road Safety,** spoke from the road-safety perspective.
- **Mr. Suman Sehra, Senior Vice President, HARMAN,** gave an industry view of connected-vehicle technology in India.

Industry Readiness for V2X

Leaders from **Vodafone Idea, Jio Platforms, Bosch and Qualcomm** assessed ***India's readiness for V2X deployment.*** The discussion covered telecom networks, in-vehicle hardware, chipsets and the ecosystem needed to support connected vehicles at national scale.

Policy & Regulatory Landscape

Mr. Akhilesh Srivastava, President, ITS India Forum, joined the panel ***"Shaping Future Policy & Regulatory Landscape for V2X Deployment,"*** with representatives from **Qualcomm, IHMCL/NHAI and ARAI.** The panel discussed **enabling policies, standards, spectrum and industry collaboration** needed to speed up V2X adoption. It focused on turning India's draft V2V framework into ***safety outcomes that can be deployed and measured.***

Panels and Round Tables

ITS India Forum also held **panel discussions and round-table discussions** with **Shri R.S. Singh, DDG, Department of Telecommunications (DoT),** along with representatives of **MeitY, CRRI, ARAI** and **industry leaders,** among others. These sessions brought together the key parts of India's V2X ecosystem: ***roads, vehicles, spectrum, standards and testing.***



Discussion on Connecting India for Safer Roads: Advancing Mobility for All
L to R: Maxime Flament, CTO, 5GAA; Shri Mahmood Ahmed, Additional Secretary, Ministry of Road Transport and Highways (MoRTH)

Key Focus Areas

- V2X Communication and Connected Vehicles
- Intelligent Mobility and Road Safety
- Industry Readiness and Technology Deployment
- Policy and Regulatory Framework

The conference provided a valuable platform for collaboration between government and industry stakeholders, reinforcing the collective vision of safer, smarter and more connected roads in India.





Group photograph of delegates at the 5GAA 39th Meeting Week

Distinguished Address by Sanjay Bandopadhyaya, Member of the Supreme Court Committee on Road



(L to R): Arindam Das, Director – Government Affairs, Qualcomm; Joby James, HARMAN Automotive (Moderator); Akhilesh Srivastava, President, ITS India; and Ujjwala Karle, Senior Deputy Director & Head – Technology Group & Digital Twin, ARAI



(L to R): Bhushan Sethi, Vice President – Products & Solutions, IoT, Vodafone Idea; Punit Rathod, PhD, Technical Standards and Spectrum Engineering Lead, Qualcomm; Ashok Krishna, Senior Product System Architect, Volvo Cars; Andreas Schaller, Head – V2X Technology Strategy, Bosch; Alok Jaitley, Technical Committee Co-chair, Society of Indian Automobile Manufacturers (SIAM) and Puneet Aggarwal, VP & Head – Smart Mobility, Sustainable IoT, Jio Platforms

POLICY & REGULATORY UPDATES

Government policies, notifications, guidelines and announcements on transport, highways, road safety and intelligent mobility.

1. NHAI Upgrades ATMS Standards for Enhanced Road Safety and Digital Enforcement

MINISTRY OF ROAD TRANSPORT & HIGHWAYS I OCTOBER 2026

The National Highways Authority of India (NHAI) has upgraded the Advanced Traffic Management System (ATMS) Standards and Specifications 2023 to strengthen road safety, improve incident response and enhance digital traffic enforcement across National Highways and Expressways.

The upgraded framework incorporates advanced technologies, including Artificial Intelligence (AI), Video Incident Detection and Enforcement System (VIDES), Automatic Number Plate Recognition (ANPR) and Vehicle Speed Detection System (VSDS), to enable more effective monitoring and enforcement of traffic regulations.

Key Highlights of the Upgraded ATMS Framework

- Advanced Digital Enforcement: Introduction of VIDES cameras to identify 14 types of traffic incidents and violations, including triple riding, helmet and seatbelt violations, wrong-side driving, animal presence and pedestrian crossings.
- Automated Incident Response: Depending on the detected incident, the system can alert route patrol vehicles and ambulances, generate e-challans, relay alerts to Variable Messaging Boards and notify nearby travellers through the Rajmargyatra mobile application.
- Enhanced Highway Surveillance: VIDES cameras are planned every 10 km along National Highways, supported by Command and Control Centres at every 100 km.
- Integrated Traffic Monitoring: The Traffic Monitoring Camera System (TMCS) will be upgraded with cameras positioned every 1 km, equipped with automated accident and stalled-vehicle detection capabilities.
- Improved Inter-Agency Coordination: Dedicated workstations for traffic police representatives at Command and Control Centres will facilitate real-time coordination and information sharing.
- Digital Highway Infrastructure: Development of integrated utility corridors and Optical Fibre Cable (OFC) infrastructure will support communication between ATMS equipment and Command and Control Centres, with provisions for future 5G-based communication.

2. NHAI Introduces Annual Concessional Local Pass for Eligible National Highway Users

MINISTRY OF ROAD TRANSPORT & HIGHWAYS I 31 OCTOBER 2026

The National Highways Authority of India (NHAI) has issued Policy Circular No. 17.3.8/2026, dated 31 October 2026, regarding the implementation of the Annual Concessional Local Pass for eligible National Highway users.

The provision follows the Ministry of Road Transport and Highways' notification G.S.R. 917(E), dated 26 October 2026, amending the National Highways Fee (Determination of Rates and Collection) Rules, 2008. The new provisions will come into effect from 1 November 2026.

Under the revised framework, eligible owners of non-commercial vehicles residing within 20 kilometres of a fee plaza can opt for an Annual Concessional Local Pass, subject to prescribed conditions and payment of the applicable fee.

Key Provisions of the Annual Local Pass

- Eligibility: Applicable to owners of non-commercial mechanical vehicles with a valid functional FASTag registered for non-commercial purposes and residing within 20 km of a fee plaza.
- Fee (rural plaza): ₹1,500 per year for fee plazas located outside municipal or local town limits.
- Fee (urban plaza): ₹3,000 per year for fee plazas situated within municipal or local town limits.
- Validity: The pass will be valid only for the specific fee plaza for which it has been issued.
- Annual Revision: The Central Government may revise the prescribed rates annually, with effect from 1 April.
- Migration Facility: Existing monthly local pass holders with functional FASTags can migrate to the Annual Local Pass through the existing renewal process from 1 December 2026.

COMMITTEES & WORKING GROUPS

Bringing together domain experts, industry, academia and public-sector stakeholders to advance India's intelligent transportation ecosystem.

A collaborative platform for progress across India's mobility sector

India's mobility landscape is changing fast. Vehicles are starting to communicate with each other, highways are getting AI-based traffic management, tolling is moving towards barrier-free systems, and road safety has become a national priority. Turning these changes into results on the ground needs more than technology. It needs ***structured collaboration between everyone who shapes how India moves.***

ITS India Forum's committees and working groups provide this platform. They give experts from **government, industry, research institutions and academia** a structured space for **focused discussion, knowledge exchange and joint action** on India's most important mobility priorities. Each committee works to **identify emerging challenges, develop practical recommendations,** and **support the adoption of intelligent transportation solutions** across the country.

Led by Experience

The committees are chaired mainly by ***distinguished former policymakers, senior civil servants and industry leaders,*** together with leading academics. Their **decades of experience in government, regulation, industry and research** help make sure the committees' recommendations are ***practical, policy-aware and ready to implement.*** Each committee is led by a **Chairperson,** supported by a **Co-chair,** and draws members from across the ITS ecosystem.

Term

The current committees will serve until **30 June 2027.** During this term, each committee will focus on producing ***clear, actionable outcomes*** for the sector.

The Thematic Committees

The Forum has set up **14 thematic committees,** grouped below into five priority areas.

A. Connected & Intelligent Vehicles

1. V2X & Connected Mobility

This committee works on building connected-vehicle ecosystems through **Vehicle-to-Vehicle (V2V), Vehicle-to-Infrastructure (V2I), Vehicle-to-Pedestrian (V2P) and Vehicle-to-Network (V2N)** communication. It will support dialogue on **interoperability, deployment frameworks, cooperative safety applications and connected-mobility pilots.** Its work is especially timely with ***MoRTH's draft notification on V2V communication*** now setting the direction for India.

Chairperson: Mr. Jitendra Singh, Head – Government Affairs, Qualcomm India Pvt. Ltd. | **Co-chair:** TBD
Interested in leading this committee? Nominations are invited.

2. ADAS Implementation

This committee promotes awareness and dialogue on **Advanced Driver Assistance Systems (ADAS),** including **deployment considerations, safety benefits, standards** and the wider ecosystem needed for ADAS to work in Indian traffic conditions.
Chairperson: TBD | **Co-chair:** TBD
Interested in leading this committee? Nominations are invited.

3. Artificial Intelligence in Mobility

This committee explores how **AI can be applied to transport operations, road safety, traffic management and decongestion.** It looks at how ***data-driven tools can improve system performance and support better decisions.***
Chairperson: TBD | **Co-chair:** TBD
Interested in leading this committee? Nominations are invited.

4. Cybersecurity & Data Privacy in Mobility

As vehicles and infrastructure become more connected, trust becomes essential. This committee addresses **cyber resilience, data protection and trust** across **connected vehicles, transport infrastructure and digital mobility services.** It aims to identify security priorities, encourage good practices and raise awareness of risks across the mobility value chain.

Chairperson: Mr. N. Subramanian | **Co-chair:** Dr. N. Sarat Chandra Babu

B. Traffic Management, Enforcement & Safety

5. Advanced Traffic Management Systems (ATMS)

This committee focuses on **technology-enabled traffic monitoring, incident management, traffic control and integrated operations** to improve network efficiency and road safety. Its work directly supports the ***national rollout of AI-based ATMS on highways*** announced by MoRTH.

Chairperson: TBD | **Co-chair:** TBD
Interested in leading this committee? Nominations are invited.

6. Electronic Enforcement Implementation

This committee reviews **how electronic enforcement is being implemented in India** and identifies ways to strengthen **technology-enabled traffic enforcement, compliance and road safety.**

Chairperson: TBD | **Co-chair:** TBD
Interested in leading this committee? Nominations are invited.

7. Safe Driving Score

This committee examines **data-led approaches to assessing driver behaviour.** Such approaches can support **road-safety awareness, risk identification and responsible driving,** helping move the focus ***from penalising unsafe driving to rewarding safe driving.***

Chairperson: Akhilesh Srivastava, President, ITS India Forum | **Co-chair:** Dr Jafar Khan, Joint CEO, Vertis Infrastructure Trust
Interested in leading this committee? Nominations are invited.

C. Tolling & Mobility Financing

8. Multi-Lane Free Flow (MLFF) Implementation

This committee supports dialogue on **barrier-free tolling,** covering t**echnology, interoperability, payment systems and operational considerations,** so that highway users can have a ***seamless, stop-free tolling experience.***
Chairperson: TBD | **Co-chair:** TBD
Interested in leading this committee? Nominations are invited.

9. Developing a Road User Charging (RUC) Framework

This committee looks at **next-generation tolling, dynamic pricing, congestion pricing and GNSS-enabled road-user charging.** Its aim is to support **efficient, transparent and sustainable financing of mobility,** in line with the regional collaboration under the ***Asia-Pacific RUC Alliance.***
Chairperson: TBD | **Co-chair:** TBD
Interested in leading this committee? Nominations are invited.

D. People-Centric & Inclusive Mobility

10. Inclusive Women-Centric Mobility

This committee promotes **safer, more accessible and inclusive transport,** with particular attention to **the mobility needs and experiences of women.** Its scope covers **safety, accessibility, public-realm design and stakeholder-led recommendations** for more inclusive mobility planning.
Chairperson: Ms. Veena Ish, IAS (Retd.) | **Co-chair:** TBD
Interested in the Co-chair role? Nominations are invited.

11. Active Mobility (Walking & Cycling)

This committee focuses on **safer environments for walking and cycling,** better **non-motorised transport infrastructure,** and stronger **integration of active mobility with public transport** and urban mobility systems. Pedestrians and cyclists are among India's most vulnerable road users, which makes this ***a road-safety priority as much as a sustainability goal.***

Chairperson: Dr. Ashish Srivastava | **Co-chair:** TBD
Interested in leading this committee? Nominations are invited.

12. Intelligent Public Transport & Mobility-as-a-Service (MaaS)

This committee works on making public transport **smarter, more reliable and easier to use,** through **real-time passenger information, intelligent bus and fleet management, integrated ticketing and common mobility cards,** and **multimodal journey planning.** It will support dialogue on **Mobility-as-a-Service platforms** that bring metro, bus, para-transit and last-mile options into ***one seamless, citizen-friendly experience.***

Chairperson: TBD | **Co-chair:** TBD
Interested in leading this committee? Nominations are invited.

E. Knowledge, Research & Capacity

13. Capacity Building & R&D

This committee works to strengthen **skills, research and institutional capacity** in intelligent transportation. It will encourage **collaboration between academia, research organisations and industry,** and identify **capacity gaps, training priorities and opportunities for applied research and innovation.**

Chairperson: Prof. Manoranjan Parida, Department of Civil Engineering, IIT Roorkee | **Co-chair:** Dr. Rajesh Krishnan

14. Market Research

This committee is building an **evidence base on ITS and mobility markets,** covering **emerging technologies, deployment trends and sector requirements.** The aim is to inform ***strategic planning, policy dialogue and industry engagement.***

Chairperson: Shri Venkata Chunduru, Head Arcadis | **Co-chair:** TBD
Interested in leading this committee? Nominations are invited.

Get Involved: Nominations Open

The strength of these committees comes from the diversity of their members. ITS India Forum invites **professionals from government, industry, academia and research** to contribute their expertise and help shape ***safer, smarter and more inclusive mobility for India.***

Several Chairperson and Co-chair positions are still open. If you have relevant experience and would like to **lead or join a committee,** please send your nomination with:

- **the committee(s) you are interested in**
- **a short profile** covering your experience and areas of expertise
- **the role you're applying for:** Chairperson, Co-chair or Member

Send nominations to: dg@itsindiaforum.com· | **Last date:** 30 November 2026

Join us in shaping the future of intelligent mobility in India.

MEMBER SPOTLIGHT (ARTICLES)

VIKSIT MOBILITY: THE CATALYST FOR VIKSIT BHARAT 2047

How intelligent transportation, logistics and connected digital infrastructure can reshape India's economic future



Debasish Debsikdar

Senior Vice President & BU Head – Transportation, Traffic & Tolling, Jio Platforms Ltd

Honorary Vice President, ITS India Forum

"A developed India needs more than world-class infrastructure. It needs world-class movement of people, goods and services."

India's Viksit Bharat 2047 ambition is built around prosperity, social progress, sustainability and global competitiveness. Transportation and logistics are not simply supporting services in this journey: they determine how reliably workers reach opportunity, farmers access markets, manufacturers connect to ports, and businesses compete across regions and borders.

The next leap will come from making transport networks intelligent, interoperable and predictive. Intelligent Transportation Systems (ITS) can turn physical roads, railways, transit, freight gateways and vehicles into a coordinated mobility ecosystem. The proposition is straightforward: Viksit Mobility enables Viksit Bharat.

01 | Mobility is a national productivity engine

Infrastructure expansion is necessary, but the value of infrastructure is realised only when journeys become safer, freight more predictable, and multimodal transfers less burdensome. Congestion, fragmented operations, avoidable dwell times and weak first–last mile connectivity impose costs on citizens and commerce.

India already has important enabling foundations: PM Gati Shakti for integrated planning, the National Logistics Policy and ULIP for logistics coordination, FASTag for electronic tolling, and growing investments in traffic management and digital infrastructure. The strategic challenge is to connect these programmes operationally, while respecting their distinct institutional mandates.

The proposed five-pillar mobility architecture

The five pillars are connected infrastructure; competitive logistics; safe and seamless mobility; green and sustainable mobility; and intelligent and digital transportation. Each must be evaluated by outcomes, not merely assets commissioned or devices installed.

02 | ITS can be the disruptive intelligence layer

ITS connects sensing, communications, analytics and action. Cameras, ANPR, RFID, GNSS, IoT devices and connected vehicles generate signals. Fibre, 5G and edge/cloud platforms transmit and process information. AI, GIS and digital twins help anticipate disruptions. Traffic control centres, adaptive signals, traveller information, incident response and tolling systems convert insights into interventions.

The shift is from reactive operations to predictive, adaptive network management. For tolling, MLFF can reduce stopping and improve corridor flow when backed by dependable identification, enforcement, payment settlement and grievance redressal. For freight, integrated visibility can support reliable ETAs and coordinated transfers. For safety, timely detection and response can be as important as infrastructure design.

Two mobility systems, one national ambition

Urban mobility: The primary objective should be accessible movement of people, goods and services—not simply higher vehicle throughput. ITS priorities include adaptive traffic signals, transit priority, integrated metro/bus/rail information, automated fare collection and interoperable payments, smart parking and kerbside management, safe walking and cycling, and emergency response.



Figure 1. Five pillars of Viksit Bharat mobility and the ITS digital-intelligence layer. Reproduced from the supplied ITS India Congress 2026 presentation, slide 2.

Intercity and highway mobility: Priorities shift toward safe free-flow corridors, predictable freight travel times, ATMS, incident and weather alerts, MLFF tolling, connected-corridor services, multimodal gateways and predictive asset maintenance. Integration with rail, ports and inland waterways can improve network-wide logistics efficiency.

5G today; 6G-ready architecture tomorrow

Reliable coverage, cybersecurity, resilience and low-latency connectivity can link vehicles, infrastructure and command centres. 5G and edge computing offer immediate pathways; 6G remains a forward-looking opportunity whose applications depend on standards and deployment maturity. The goal is not connectivity for its own sake, but faster, safer and more coordinated decisions.

03 | JUMP: an illustrative platform for Bharat-scale mobility

Jio Unified Mobility Platform (JUMP), as presented at ITS India Congress 2026, illustrates how connectivity, cloud infrastructure, IoT and analytics can be brought together around mobility use cases. Its conceptual scope spans connected automobiles, vehicle intelligence, location intelligence, smart fleet management, traffic and tolling, EV charging, battery management and battery swapping.

To meet Bharat's diverse needs, such a model could evolve toward open and federated interoperability with government and private platforms; multimodal transit and automated fare collection; vernacular, accessible and low-bandwidth services; rural and tier-2/3 city use cases; MSME fleet digitisation; and privacy-by-design data exchange.

The opportunity is an ecosystem approach, not a single proprietary national system: interoperable platforms, accountable public institutions, local innovators and multiple technology partners working toward common mobility outcomes.

04 | SAMP 2047: from vision to governed outcomes

A proposed Strategic Architecture for India's Mobility Platform (SAMP) could help connect policies, programmes and investments

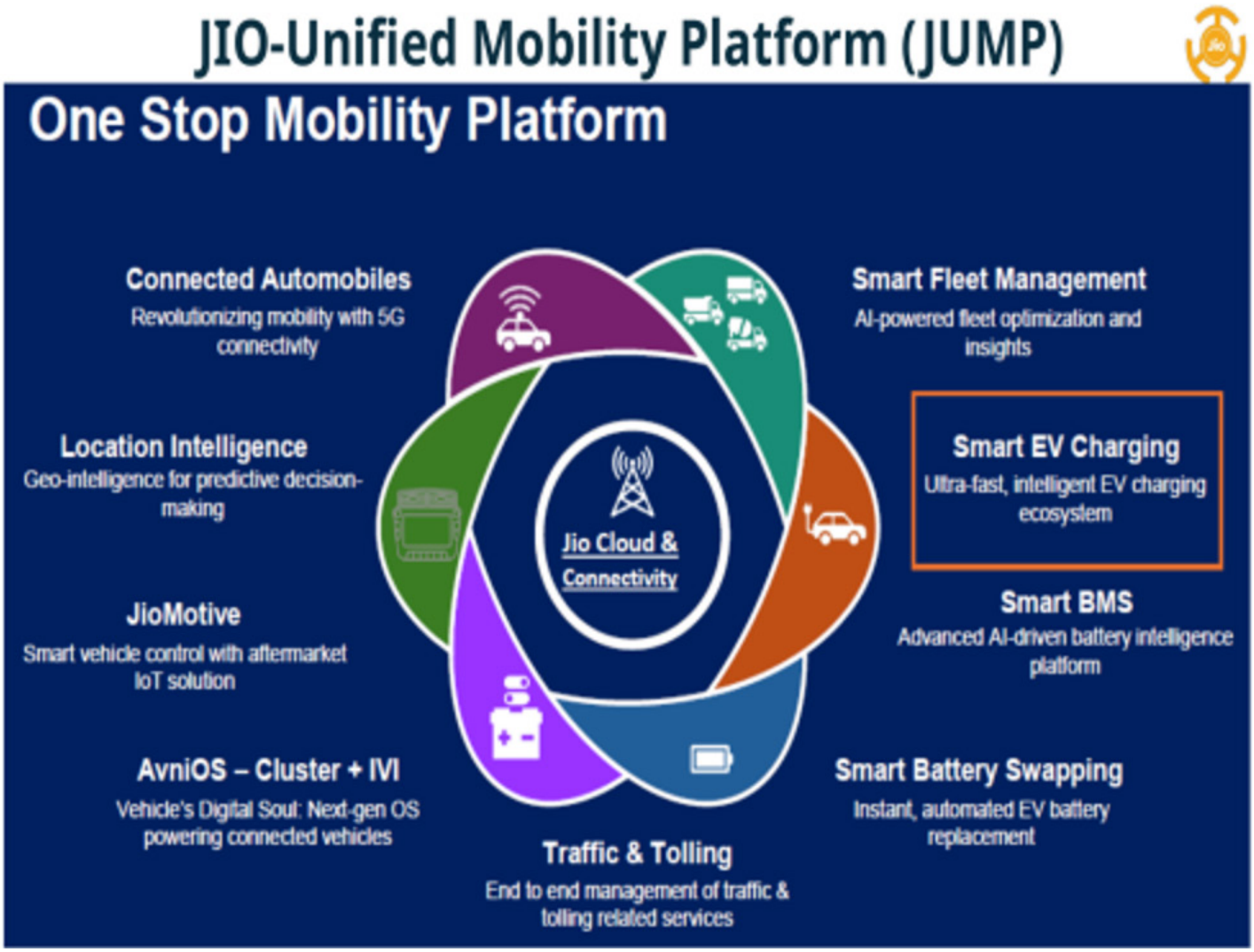


Figure 2. Jio Unified Mobility Platform (JUMP) ecosystem, reproduced from the supplied presentation, slide 9. This illustrates the platform vision; it is not an independently verified deployment inventory.

to measurable national outcomes. In the presentation, a possible governance model places national progress oversight at the PMO, strategic stewardship and periodic course correction at NITI Aayog, and implementation across ministries, states, urban authorities, operators, industry and academia. These are recommendations, not an existing approved reporting structure.

A phased transformation pathway

2026–2030: Establish standards, baselines and priority corridor/city pilots. 2030–2035: Integrate cross-mode data and operations at scale. 2035–2040: Advance AI-led prediction, digital twins and connected mobility. 2040–2047: Mature adaptive, human-supervised and outcome-led operations.

05 | What India should measure—and what industry must do

A national mobility scorecard should measure freight reliability and cost, travel-time variability, road fatalities and response times, public transport access, multimodal share, emissions intensity, ITS operational coverage, cybersecurity readiness and citizen experience. Baselines and targets should be developed transparently with central and state agencies.

The ITS India Forum and wider industry ecosystem can act as a neutral bridge among policymakers, transport authorities, OEMs, system integrators, telecom and cloud providers, start-ups, academia and global ITS organisations. Shared standards, interoperable pilots, independent evaluation and professional capacity building can accelerate adoption while avoiding fragmented investments.

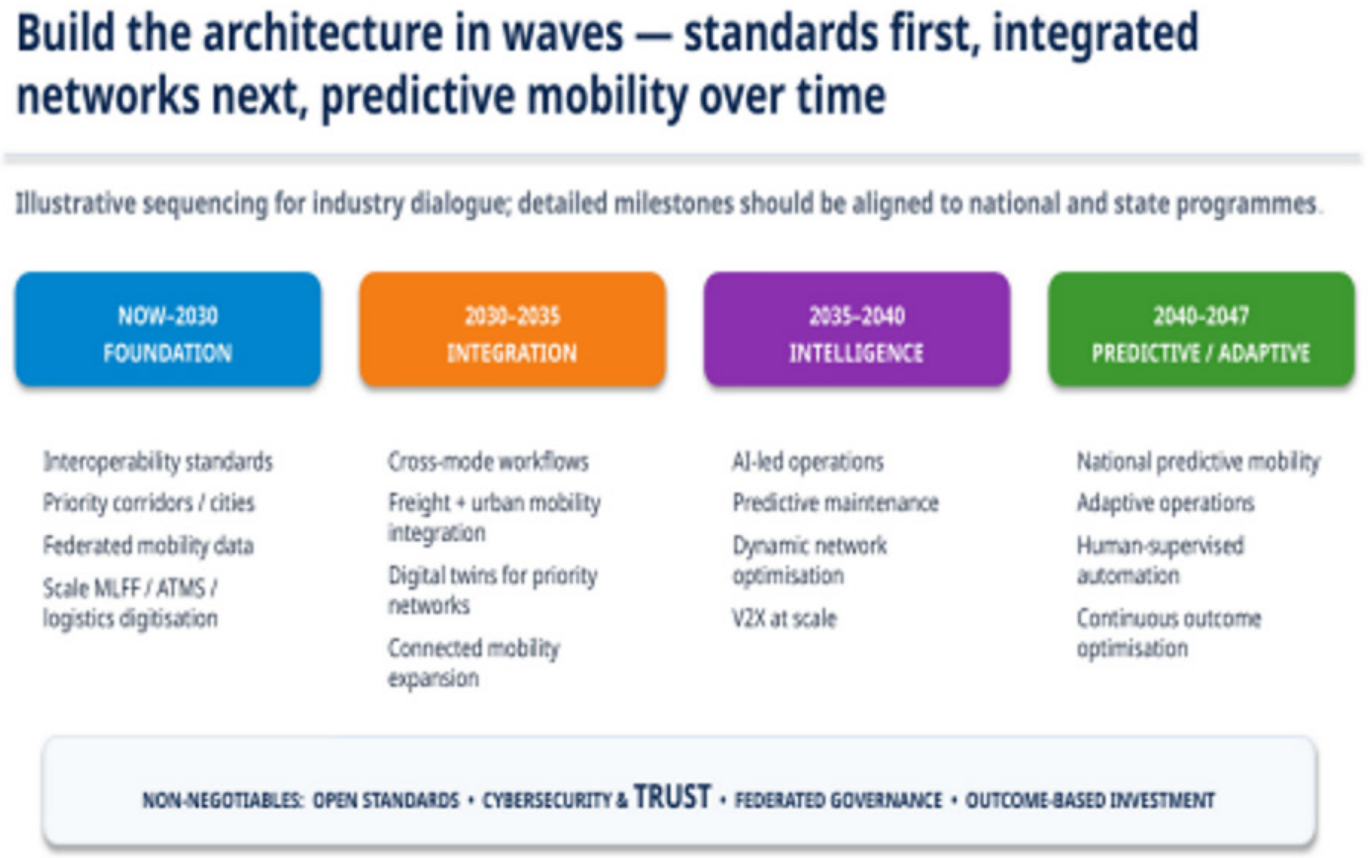


Figure 3. Illustrative SAMP 2047 roadmap from the supplied presentation, slide 7. The phases are proposals and require stakeholder consultation.

Five priorities for the next decade

First: Move from isolated ITS procurements to corridor and city-region operating outcomes. Second: Adopt common data, interface, security and interoperability standards. Third: Integrate urban transit, freight, highways and digital payments without excluding smaller operators.

Fourth: Scale evidence-based pilots, with independent safety, inclusion and productivity assessment. Fifth: Institutionalise annual outcome dashboards, three-year reviews and periodic strategy resets.

The 2047 imperative

Viksit Bharat will depend on how efficiently its people reach opportunity, its goods reach markets, and its services reach every community. ITS is a catalyst because it connects physical infrastructure with real-time intelligence, enabling networks to learn, predict and respond. Platforms such as JUMP demonstrate one industry pathway; a broader interoperable national architecture could make that intelligence available across Bharat.

The ambition must now evolve from building more transport infrastructure to delivering better mobility outcomes. Viksit Mobility is not a side agenda of Viksit Bharat 2047—it is one of its essential enablers.

Road Safety in the Digital Age: The Role of Intelligent Transport Systems

Priya Prasad
DataCorp Traffic



All causes of death are equal insofar as they end a life. But some are more overlooked than others, more taken for granted, more readily accepted as a normal part of life. Road crashes belong in that group.

According to the World Health Organization's Global Status Report on Road Safety 2023, an estimated 1.19 million people died in road traffic crashes in 2021, a rate of about **15 deaths per 1,00,000** population. Road traffic injuries are a leading cause of death and disability, and they cost societies between 1 and 3 percent of GDP, and as much as 6 percent in some cases.[1]

As per the Ministry of Road Transport and Highways (MoRTH), Road Accidents in India 2024 report, India reported 4,87,707 road accidents in calendar year 2024, which killed **1,77,175** people and injured another 4,71,441.[2] That is nearly **485 deaths a day, or about 20 every hour.**

Recognising road safety as a critical sustainable development priority, the United Nations has set an ambitious global target under **SDG Target 3.6** and the **Decade of Action for Road Safety 2021–2030** to reduce road traffic fatalities and injuries by at least **50% by 2030, compared with the 2021 baseline .**[3]

Achieving this target will require sustained efforts, particularly in countries like India, where expanding road networks, increasing vehicle ownership and rapid urbanisation are adding to existing road safety challenges. Traditional measures such as improving road infrastructure, conducting safety audits, enforcing traffic rules and educating drivers remain important. Alongside these conventional measures, technology offers additional ways to monitor road conditions and address safety risks. Intelligent Transport Systems (ITS) can play a significant role by improving traffic monitoring, enabling quicker responses to incidents and making road safety management more effective.

Role of Intelligent Transport Systems in Road Safety

ITS brings together communication networks, sensors, cameras, data platforms and automated control systems to improve the operation and safety of transport networks. Its role extends beyond congestion management. When properly planned and implemented, ITS can support crash prevention, traffic enforcement, incident management and evidence-based road safety interventions.

Connectivity is an important part of this development. Vehicle-to-Vehicle (V2V) and Vehicle-to-Infrastructure (V2I) communication allow vehicles to exchange information about speed, position, sudden braking, road conditions and approaching hazards. This can provide drivers with warnings about risks that may not be immediately visible. India is also moving towards connected vehicle technology. In August 2026, MoRTH issued a draft notification proposing amendments to the Central Motor Vehicles Rules, 1989, for the phased introduction of V2V communication systems. Proposed safety applications include emergency braking alerts, forward-collision warnings, wrong-way driving alerts and emergency vehicle alerts.[4]

These technologies complement the **Safe System Approach,** which recognises that people can make mistakes, but the transport system should be designed so that those mistakes do not result in death or serious injury. Technology can support this approach by improving awareness and response; it cannot replace safe roads, safer vehicles or appropriate operating speeds.

Preventing Crashes Through Real-Time Monitoring

One of the most direct applications of ITS is the continuous monitoring of traffic conditions and road-user behaviour. Speed cameras, red-light violation detection systems, helmet and seat-belt monitoring systems and Automatic Number Plate Recognition (ANPR) cameras can help identify violations and support consistent enforcement.

Speed management deserves particular attention. The severity of a crash is strongly influenced by the speed at which a vehicle strikes another road user or object. This is especially important where pedestrians and cyclists share space with motorised traffic. Enforcement alone may not be sufficient where road geometry encourages high speeds. Measures such as traffic calming, appropriate carriageway widths and safer junction layouts should support speed enforcement, particularly in areas with pedestrian and cyclist activity.

Variable Message Signs (VMS) can alert motorists to congestion, road closures, adverse weather and incidents ahead. At signalised intersections, pedestrian detection can help identify crossing demand and support more responsive signal timings. Video analytics can also flag wrong-way movements, unsafe lane changes and potential conflicts between vehicles and pedestrians. These systems are particularly useful at locations where recurring conflicts may not be evident from crash records alone.

Improving Emergency Response and Incident Management

The minutes following a road crash can have a significant bearing on its outcome. A delay in detecting an incident, locating the affected vehicle or dispatching medical assistance can worsen its consequences. ITS-enabled surveillance and automatic incident detection systems can identify collisions, stopped vehicles and obstructions on the carriageway. Alerts can be shared with Integrated Traffic Management Centres, allowing traffic police, ambulance services and highway patrol teams to coordinate their response. Real-time traffic information can help emergency vehicles select less congested routes, while VMS can warn approaching drivers and reduce the risk of secondary crashes.

Supporting Data-Driven and Predictive Road Safety

ITS can generate information on traffic volumes, vehicle speeds, travel patterns and road-user behaviour. When this information is combined with crash data, road geometry, road conditions and land-use characteristics, it becomes a useful resource for identifying high-risk locations and understanding the factors contributing to unsafe conditions.

Kerala's Safe Kerala project uses AI-enabled cameras to support traffic enforcement, including monitoring helmet and seat-belt compliance.[5] Along the Bengaluru–Mysuru Expressway, AI-enabled ANPR cameras have been used to detect violations and support enforcement.[6]

The next step is to use this information not only to record violations or analyse past crashes, but also to anticipate risk. By analysing speed patterns, traffic conditions and recurring conflict locations, AI-based tools can help identify situations that require closer investigation. For example, repeated speeding near a pedestrian crossing may indicate a need for improved speed management, while frequent sudden braking at a junction may point to a visibility or geometric design issue.

However, technology should support engineering judgement rather than replace it. ITS interventions need to be evaluated against clear indicators, such as changes in operating speeds, violation rates, pedestrian conflicts, crash frequency and emergency response times. Where possible, before-and-after assessments should be used to establish whether an intervention has delivered a measurable safety benefit.

Challenges and the Way Forward

ITS implementation faces challenges such as high initial costs, inadequate communication infrastructure, data quality, equipment maintenance and coordination between agencies. Systems also require regular calibration, reliable verification of violations and appropriate data privacy and cybersecurity safeguards.

More importantly, technology cannot compensate for unsafe road design, missing footpaths, poorly planned junctions or inappropriate speed limits. A camera may detect speeding, but it cannot correct a road layout that encourages excessive speeds. Similarly, pedestrian detection cannot replace safe crossings and continuous footpaths.

ITS should therefore be treated as part of an integrated road safety strategy, not as a standalone solution. When combined with safer infrastructure, effective enforcement, appropriate speed management and timely post-crash care, it can help shift road safety management from reacting to crashes towards preventing them.

Ultimately, the success of ITS should be measured by fewer crashes, serious injuries and fatalities. The objective is not merely to improve traffic movement, but to ensure that every road user reaches their destination safely.

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[1] Global Status Report on Road Safety, WHO
[2] Road Accidents in India 2024
[3] UN Sustainable Development Goals
[4] https://www.pib.gov.in/PressReleasePage.aspx?PRID=2293692&reg=48&lang=1
[5] Safe Kerala Project
[6] ANPR cams, enforcement halve accidents on Mandya NH stretch | Mysuru News - The Times of India





DELHI TRAFFIC MANAGEMENT SYSTEM

Impartial expert recommendations for a safe, resilient and future-ready ITMS

Dhaval Desai

Dhaval Desai is a globally travelled ITS professional recognised as an ITS expert by the International Road Federation (IRF), Geneva. He has managed complex projects and large ITMS systems in India and overseas, spanning technology, integration, deployment and operations.



1. Executive summary

Delhi's proposed ITMS is mission-critical public infrastructure, not a procurement of disconnected devices. The test is whether the complete system operates safely, securely and reliably under real Delhi conditions throughout its lifecycle.

RECOMMENDED DECISION PRINCIPLE

Select the safest demonstrably suitable integrated solution using independent evidence, transparent competition, measurable acceptance tests and enforceable lifecycle obligations—not brand familiarity, headline AI claims, installed quantities alone or lowest price alone.

Eight core recommendations

- **Safety:** require product-level evidence for controllers and signal equipment, including fault behaviour.
- **Accountability:** assess the MSI separately from the technology principal's design authority, product maturity and support.
- **Proof:** require verified references, representative pilots, pre-declared scenarios and independent acceptance.
- **Sensing:** combine LiDAR, cameras, radar, loops or other sensors by site conditions and use case.
- **AI governance:** validate inputs, bound control logic, retain human authority, audit decisions and define fallback.
- **Openness:** document APIs, data models, interface ownership, cybersecurity and data portability.
- **Lifecycle value:** include maintenance, spares, updates, cyber support, training and obsolescence.
- **Phased scale-up:** baseline, pilot, integrate corridors and expand only after critical deficiencies close.

2. Programme context and neutrality

The supplied paper reports an indicative programme of **₹ 1,789.52 crore** including taxes: **42 corridors, 1,092 adaptive-control locations** and **1,029 enforcement locations.** It describes three phases over 24 months, followed by five years of O&M; C-DAC is described as technical support/PMC.

These are announcement-level facts from the source paper; the issued RFP, schedules, corrigenda and clarifications govern procurement. This paper recommends outcomes, evidence and governance. It does not endorse a supplier or replace engineering, legal review or independent safety assessment.

AUTHOR'S DISCLOSURE & SOURCE VALIDATION

Disclosure: This is an industry perspective, not an official government publication, tender document, independent audit or public-authority endorsement.

Source / validation: The supplied paper cites the Government of India, PIB / Ministry of Home Affairs announcement dated 30 September 2026. Verify the official announcement, Delhi Police tender listing, e-Procurement portal, final RFP, schedules, corrigenda and clarifications before circulation. Technical recommendations and standards require engineering, safety, cybersecurity, legal and procurement review. Verify certificates, laboratory reports and deployment claims directly. Statistics require authoritative, dated sources.

3. Operating context and target architecture

Delhi must manage mixed traffic, pedestrians, emergency access, high-security movements, national events, road works and incidents. The citywide system should operate as one tested environment:

- **Field sensing:** LiDAR, video, radar and signal status.
- **Edge/network:** time synchronisation, secure links, health monitoring and local failover.
- **Central platform:** data fusion, GIS, incident views and citywide operational picture.
- **Operations:** authorised operators and agencies under defined procedures.

- **Control/intelligence:** validated adaptive plans, bounded AI optimisation and prediction.
- **Simulation/digital twin:** calibrated models to compare interventions and scenarios.
- **Governance:** cybersecurity, privacy, audit, resilience and lifecycle management.

4. Procurement: delivery plus technology accountability

Civil execution capacity alone does not prove traffic technology is safe, mature or supportable. The RFP should allocate:

- **MSI / delivery lead:** multi-location delivery, civil/electrical/telecom coordination, live-traffic installation and programme control.
- **Technology principal:** design authority for controllers, signals, detection and adaptive logic; product roadmap, safety evidence and lifecycle support.
- **Integration owner:** end-to-end design, interface ownership and cross-vendor defect resolution.
- **Lifecycle support:** spares, diagnostics, updates, cyber patches, training and obsolescence.
- **Delivery resilience:** working capital, supply-chain contingencies and realistic schedule-risk analysis.

Qualification: evidence before numbers

The source paper gives possible benchmarks such as a 100–200-person traffic-domain team or a 5,000-intersection installed base for a controller family. These are market-testing examples, not universal requirements. Numeric thresholds need risk rationale, equivalence rules and market-capacity assessment.

5. Safety-critical controllers and field equipment

Controllers directly influence vehicle and pedestrian movements. Safety must be demonstrated at product and integrated-system level.

- Independent safety monitoring, or an equivalent validated architecture, to prevent conflicting signal indications.
- Defined safe-state behaviour for processor, output, power and communication faults, with controlled recovery.
- Critical-output monitoring, fault logs, diagnostics, event records and remote reporting.
- Redundancy only where the complete design proves safe automatic takeover.
- Trace evidence to the exact model, hardware revision, firmware/software and safety functions; reassess after safety-relevant changes.

Independent product assurance

Verify certificate issuer, scope, validity, tested configuration and laboratory competence. Specify applicable Indian requirements and relevant standards—including EN 12675 and EN 50556 where applicable—after engineering review. Signal heads and roadside equipment should evidence optical performance, chromaticity, visibility, uniformity, environmental protection, EMC, ingress/surge protection, earthing and maintainability.

NON-NEGOTIABLE

A company quality certificate, brochure claim or certificate for another model cannot replace independently verifiable product-level evidence for the offered configuration.

6. Detection: choose sensors by use case

Define outputs: vehicle counts/classification; speed/direction; turning movements; lane use; headways; density; queue length/growth; pedestrian/cyclist presence where relevant; and incident indicators.

- **LiDAR / 3D:** spatial trajectories, turning movements and queue geometry; validate rain, dust, occlusion and site conditions.
- **Camera analytics:** visual classification and context; assess lighting, glare, rain, occlusion, placement and image quality.
- **Radar:** speed and movement measurement; validate classification and trajectory performance.
- **Loops / point detectors:** economical presence/count measurement in suitable installations; consider civil works and maintenance.
- **Sensor fusion:** combine complementary sensors; define synchronisation, calibration, health and degraded-mode behaviour.

BALANCED POSITION ON LiDAR

LiDAR-based 3D perception is a strong candidate at complex intersections where spatial trajectories and road-user interactions matter. Do not mandate it as universally superior. Compare designs using common scenarios, metrics, environmental conditions and lifecycle costs.

7. AI, adaptive control, prediction and digital twin

Do not procure an "AI-enabled" label. Demonstrate reliable measurement, appropriate recommendations and operational improvement without bypassing safety constraints.

- **Adaptive control:** optimise timing using reliable measurements and approved constraints; compare with a baseline under matched demand, queues, flows, coordination and faults.
- **Prediction:** estimate queues, travel times, congestion and bottlenecks; validate against observed data and report accuracy and limits.
- **Simulation:** assess diversions, network interaction, incidents and special events; calibrate to observed conditions.
- **Explainability:** let authorised engineers review/override recommendations; audit inputs, decisions and configurations.
- **Model governance:** monitor drift, degraded sensors and software updates; version, approve, roll back and revalidate.
- **Digital twin:** combine road geometry, observations, signal states, history and traffic models; prove calibration and operational use.

SAFETY BOUNDARY

AI may support engineers and authorised operators, but safety-critical signal functions must remain constrained by validated controller logic and approved procedures. No recommendation should bypass command authority, emergency protocols or signal-safety constraints.

8. Interoperability, cybersecurity, privacy and resilience

- Document APIs, data models, interface-control documents, message formats, versioning, time sync and conformance tests.
- Define ownership/access for operational data, configuration, logs, maps, documentation and derived analytics.
- Test cross-supplier data consistency, fault handling, recovery and component replacement; provide protected data/configuration export.
- **Identity/access:** role-based access, least privilege, MFA for privileged users and controlled remote access.
- **Network/device:** segmentation, secure configuration, controlled updates, vulnerability management and asset inventory.
- **Monitoring/response:** audit logs, security monitoring, independent testing and incident exercises.
- **Continuity/privacy:** tested backups, disaster recovery, manual modes, data minimisation, purpose limitation and retention.

Point clouds and movement traces can remain sensitive even where identifiable imagery is reduced; apply privacy and security controls to all data modalities.

9. National-capital operations

Support routine traffic and exceptional events with clear authority, pre-approved procedures and auditable changes.

- Emergency corridors: authorised signal strategies, monitoring, activation/deactivation rules and audit trails.
- VIP movements/national events: priority plans, inter-agency coordination, diversions and contingencies.
- Incidents/road works: reliable detection, operator decisions and contractor coordination.
- Central outage: safe local signal operation and tested degraded modes for link loss, sensor failure, power interruption and recovery.

Define a responsibility matrix for police, project owner, MSI, technology principal, telecom providers, maintenance teams and agencies. Specify authority for signal-plan changes, special modes, software changes and restoration; escalation/SLAs where required; and training/competency checks.

10. Independent testing, acceptance and performance

Accept complete-system behaviour—not merely delivery, installation, a demonstration or equipment count.

- **1 Design review:** architecture, safety, cyber, interfaces and governance; approve baseline and traceability.
- **2 Factory acceptance:** verify configuration, functions, documentation, assurance evidence, diagnostics and fault handling.
- **3 Representative pilot:** test sensors, adaptive control, platform, simulation and special-event use cases.
- **4 Site acceptance:** verify installation, signal operation, connectivity, time sync, data integrity, safety and recovery.
- **5 Operational acceptance:** demonstrate baseline comparison, training, support, spares, documentation and procedures.
- **6 Phase gate:** assess live performance, defects, cyber posture and reliability; independently approve expansion.

Auditable measures

Availability; fault response/restoration; detection quality; traffic outcomes (travel time, queue length and network reliability against a baseline); safety/fallback; cybersecurity; and lifecycle support. Define measurement windows, exclusions and reporting sources for each KPI.

11. Implementation roadmap and principal risks

Baseline: confirm scope, assets, architecture, existing conditions, data/privacy, safety, cyber, KPIs and risks; approve design and acceptance plan.

Pilot: test sensor combinations, adaptive control, AI, simulation, central operations and fallback under real traffic; independently verify scenarios and close critical defects.

Corridor integration: validate junction coordination, central operations, diversions, communications and inter-agency procedures; demonstrate corridor outcomes.

Scale-up/O&M: expand in controlled waves, repeat acceptance tests and apply lessons; sustain maintenance, security, spares, updates, reporting, training and controlled upgrades.

Key risks to control

- Product evidence: verify model-specific certificates, reports and fault tests for the offered configuration.
- Sensor performance: test at night and under mixed traffic, occlusion, glare, rain and degraded conditions.
- Lock-in/incompatibility: document interfaces, conformance, data access, configuration, upgrades and replacement.
- Cyber/central outage: segmentation, secure remote access, monitoring, exercises and safe local fallback.
- Schedule/civil disruption: utility/agency coordination, staged works, traffic management and contingency.
- O&M underfunding: whole-life costs, working capital, spares, staffing, escalation and enforceable SLAs.
- Uncompetitive qualification: publish rationale, test market capacity, accept equivalent proof and separate safety from scored enhancements.

12. RFP benchmarking and priority actions

Establish mandatory safety, security, legal and essential functional compliance first. Score operational maturity, engineering, integration, support and performance using published rules. Compare whole-life price—including O&M, upgrades, spares, energy, training and end-of-life costs. Optional features or low price must never offset failure of a mandatory safety requirement. Record evidence decisions and maintain an audit trail.

- Publish measurable outcomes for traffic performance, safety, availability, incident handling, interoperability and lifecycle support.
- Make the technology principal accountable for design authority, safety evidence, software lifecycle and support.
- Require independent product evidence traceable to the offered configuration; use proportionate thresholds and equivalent proof.
- Use independent pilot tests across mixed traffic, night operation, environmental variation, sensor degradation and communications loss.
- Evaluate LiDAR at complex sites alongside camera, radar, loops and fusion; contract for cyber/privacy controls, acceptance gates, baseline KPIs, data portability and lifecycle service levels.

13. Conclusion

A FUTURE-READY PLATFORM FOR DELHI

Delhi should procure a platform that is safe, interoperable, secure, maintainable and proven in operation. Require independent safety evidence, verified deployments, proportionate qualification, open integration, controlled AI, robust cybersecurity, representative pilots, transparent acceptance and enforceable lifecycle obligations. Evaluate LiDAR where comparative testing demonstrates value, retaining complementary sensors where they improve coverage, resilience or accuracy.

Making Roads Safer Through Innovation: Glance® and TravelSafely Take the Spotlight at ITS India Congress

Mr. Vijay Kumar

Director, Applied Information



Applied Information's India team recently showcased the Glance® platform and TravelSafely app to India's intelligent transportation community, combining a technical presentation, product demonstrations and industry engagement.

A key highlight was the Emerging Technologies recognition for Glance. The platform was selected as one of the most impactful ITS technologies at NRSTC 2026, held at IIT Bombay in August. This recognition was celebrated at the ITS India Congress in New Delhi in October.

Participating as a Silver Partner at ITS India Congress 2026, the October ITS event, Applied Information presented Glance's capabilities through a technical speaker session led by Vijay Kumar, Director of Applied Information India. At the booth, the team shared video demonstrations of Glance and TravelSafely, focusing on the emergency vehicle "green corridor" use case.

The showcase illustrated how giving emergency vehicles priority at signalised intersections can support faster, safer journeys. It provided a practical starting point for conversations about connected infrastructure and emergency response in India. The company's participation brought technical expertise into discussions with attendees and helped introduce the company's solutions to the wider ITS community.

Through its engagement with ITS India Forum, Applied Information looks forward to exchanging knowledge and exploring opportunities to support safer, smarter and more connected transportation networks.



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ITS INDIA CAPACITY BUILDING UPDATES

Knowledge initiative: 100 Minds, 10,000 Hands

Announced at ITS India Congress 2026, the Forum's Capacity Building Programme is already under way. The **Executive PhD** and the international **Global MS pathway in ITS** have launched with their first cohort enrolled, in collaboration with South Asian University. The programme aims to build **100 ITS thought leaders** (PhD / Global MS) and **10,000 skilled ITS professionals,** spanning field engineers, supervisors and middle management. The programme has already enrolled 15 candidates across the Global MS and Executive PhD pathways in the monsoon semester.

Publications

The ITS India Yearbook 2026 was launched at ITS India Congress 2026.
Link : Click Here

UPCOMING EVENTS & IMPORTANT DATES

Mark your calendar.

Date	Event	Venue
20 November (12:00- 13:00) PM IST	Webinar – Towards Flawless Electronic Enforcement: AI-Driven ATMS, Automated Violation Detection and End-to-End E-Challan	Online Mode
3 December	ADAS Show	Pune
3 – 5 December	IFSEC (International Fire and Security Exhibition and Conference)	Bharat Mandapam (Pragati Maidan), New Delhi
17 – 18 December	The Asia AEC Forum 2026	Bharat Mandapam, New Delhi

MESSAGE FROM THE DIRECTOR GENERAL

Building momentum through collaboration, innovation and purposeful action.



Dear Members, Partners and Colleagues,

October 2026 was an important period of progress for ITS India Forum, reflecting the growing role of intelligent transportation systems in addressing India's evolving mobility challenges. As the country moves towards a more connected, technology-driven transport ecosystem, our responsibility extends beyond promoting innovation to ensuring that these solutions translate into meaningful outcomes on the ground.

One of our key priorities continues to be bridging the gap between technological innovation and practical implementation. With emerging developments in Artificial Intelligence, connected vehicle technologies, digital infrastructure and intelligent traffic management, India has an opportunity to develop mobility solutions that are scalable, efficient and responsive to its unique requirements. This calls for coordinated efforts, shared technical understanding and active participation from all stakeholders.

Our engagements during October have further strengthened our institutional and international outreach. Interactions with global ITS organisations and industry representatives provide valuable opportunities to understand evolving technologies, exchange experiences and identify areas of cooperation. Equally important is ensuring that Indian expertise and deployment experiences contribute to international conversations on the future of mobility.

We are also placing considerable emphasis on knowledge development and capacity building. Through our academic and professional initiatives, including the **100 Minds, 10,000 Hands programme,** we aim to encourage specialised learning, nurture emerging talent and build the skilled workforce required to support the next phase of India’s intelligent transportation journey. Developing capable professionals is as important as developing advanced technologies.

Going forward, ITS India Forum will continue to strengthen its engagement with government and industry, support the adoption of emerging mobility technologies, facilitate technical knowledge sharing and create platforms for constructive industry participation. We also look forward to expanding our membership network and building stronger partnerships that can contribute to the development of a safe, sustainable and future-ready transportation ecosystem.

I would like to acknowledge the continued support of our members, institutional partners, government representatives, academic community and industry colleagues. Their engagement and contributions remain central to the Forum’s work and its ability to advance the ITS ecosystem in India.

As we move ahead, our focus will remain on turning ideas into action, fostering collaboration and supporting solutions that make transportation safer, smarter and more accessible. Together, we can contribute meaningfully to India’s mobility ambitions and help shape a transportation ecosystem prepared for the future.

Warm regards,
Dr. Shiv Kumar
Director General, ITS India Forum



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