Vehicular Communication 2026
From Connectivity to Cooperative Mobility

An OICA perspective for the ITU Future Networked Car Symposium 2026

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Vehicular communication is evolving

- From connectivity to data to **cooperative mobility**
- Vehicles becoming part of a **broader system**
- A closer link between **automotive, telecom and infrastructure**

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Vehicular communication is evolving from information exchange to cooperative safety and automated mobility support.

OICA bridging vehicle regulation and the global communication ecosystem

- **OICA** represents the global automotive industry in international regulatory fora.
- **WP.29** has harmonised many areas of vehicle safety and environmental performance.
- **Connected and automated vehicles** extend the discussion beyond the vehicle itself.
- Vehicular communication requires **coordination** across industry, regulators, telecom, infrastructure, standards bodies and ITU / UNECE / WP.29.

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No single community can address vehicular communication alone — it requires coordination across industry, regulators and standards bodies.

From sixth sense to shared intelligence

- From awareness and coordination to **cooperation**
- Beyond **line-of-sight** capability
- Communication as a **system enabler**

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V2X is moving from “vehicles exchange information” to “road users cooperate on safety-relevant decisions.”

Why this topic is accelerating

- Automated driving needs a **predictable environment**
- AI and data increase the **value of connectivity**
- Safety policy extends **beyond the vehicle**

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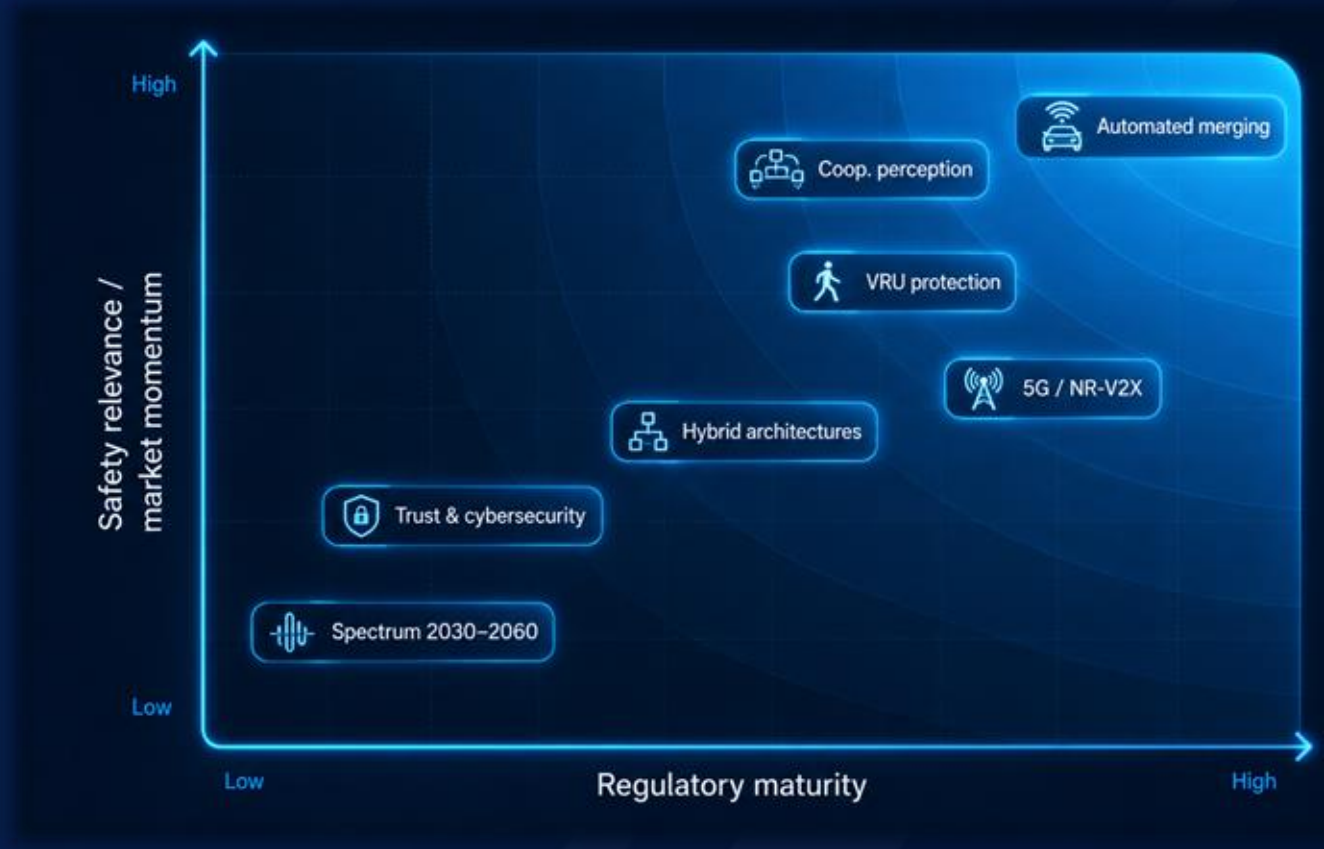
Automation, data and safety policy are converging to push connectivity beyond the vehicle.

Why this topic is accelerating

- **Cooperative perception** and shared object information
- **Vulnerable road-user** protection
- **Automated merging** and cooperative manoeuvres
- **5G-V2X / NR-V2X** and direct communication evolution
- **Hybrid** direct / network / edge / cloud **architectures**
- **Trust, cybersecurity** and **misbehaviour detection**
- Spectrum and communication needs for 2030–2060



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The debate is shifting from “Which technology?” to “Which safety-relevant requirements?”

Protecting vulnerable road users

- A **complement** to sensors and infrastructure
- **Safety-critical** timing and reliability
- A **multi-actor** environment

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Communication-assisted VRU protection can add value — but only if the information is timely, trusted and operationally useful.

Automated merging as cooperative scenario

- Concrete, **safety-relevant** cooperative scenario.
- Relevant for **ADS/DCAS** active vehicles.
- An example of real **cooperative interaction**
- Requires **predictable communication**
- Bridges **automation and connectivity**

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Automated merging helps translate abstract V2X discussions into measurable communication requirements.

Cooperative perception

- **Shared object awareness**
- Reaching **beyond vehicle sensor range**
- Requires **validation and trust**

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Cooperative perception is one of the most promising — and most demanding — V2X growth areas.

Hybrid communication ecosystem

Different use cases need different **communication paths**:

- Ecosystem shall be hybrid
- Technology Neutral
- Multiple layers in the Network

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No single communication path fits all use cases — a hybrid ecosystem is needed.

Trust is the key enabler

- **Authentication**, integrity and reliability
- **Misbehaviour detection**
- **Cross-border** interoperability
- **Governance** challenges

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The next phase of V2X is not only about communication performance — it is about trusted communication.

Towards cooperative mobility

- Start from **use cases**, not technologies
- Define **requirements** before regulation
- Maintain **technology neutrality**
- Ensure **global harmonisation**

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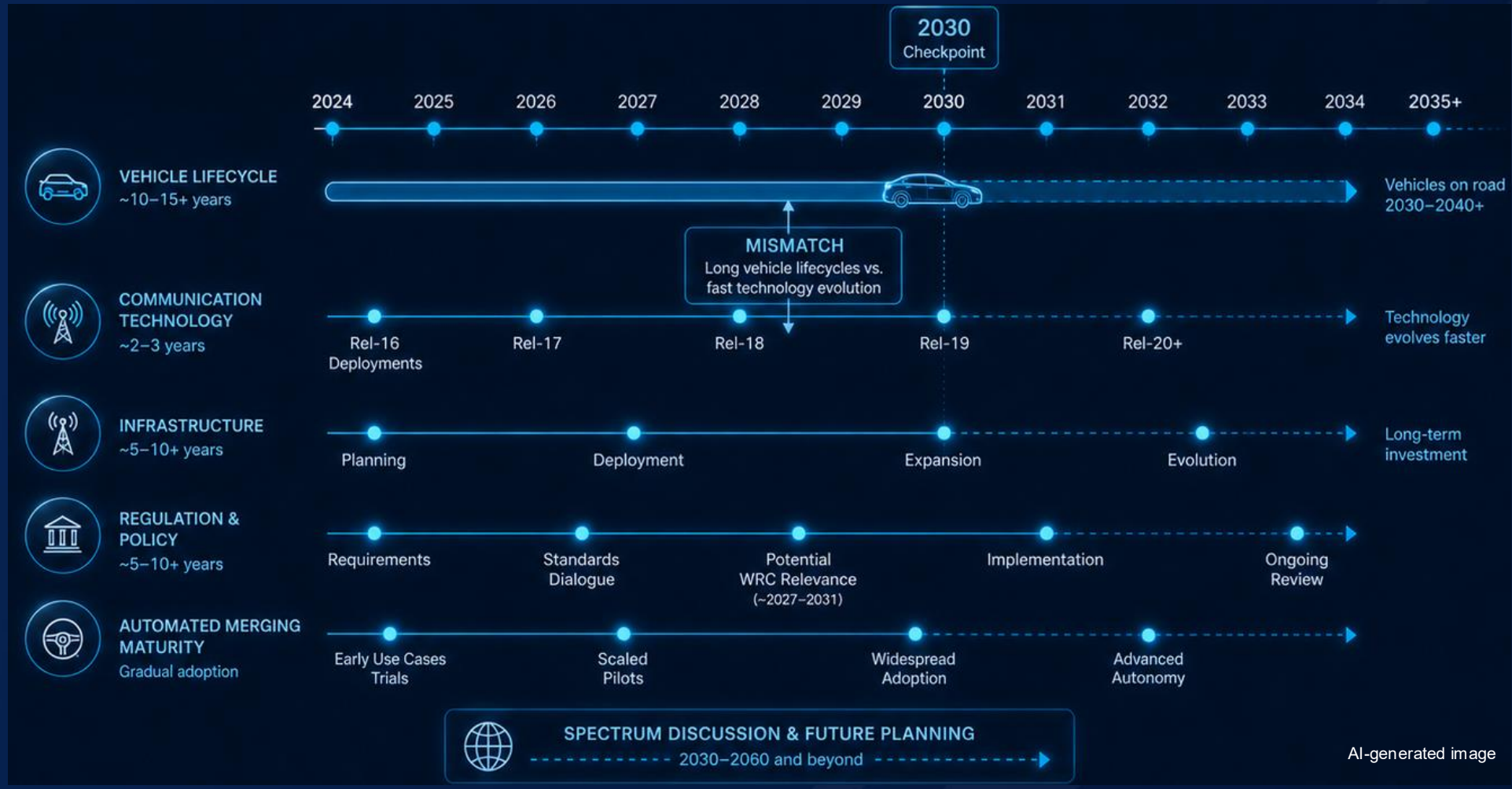
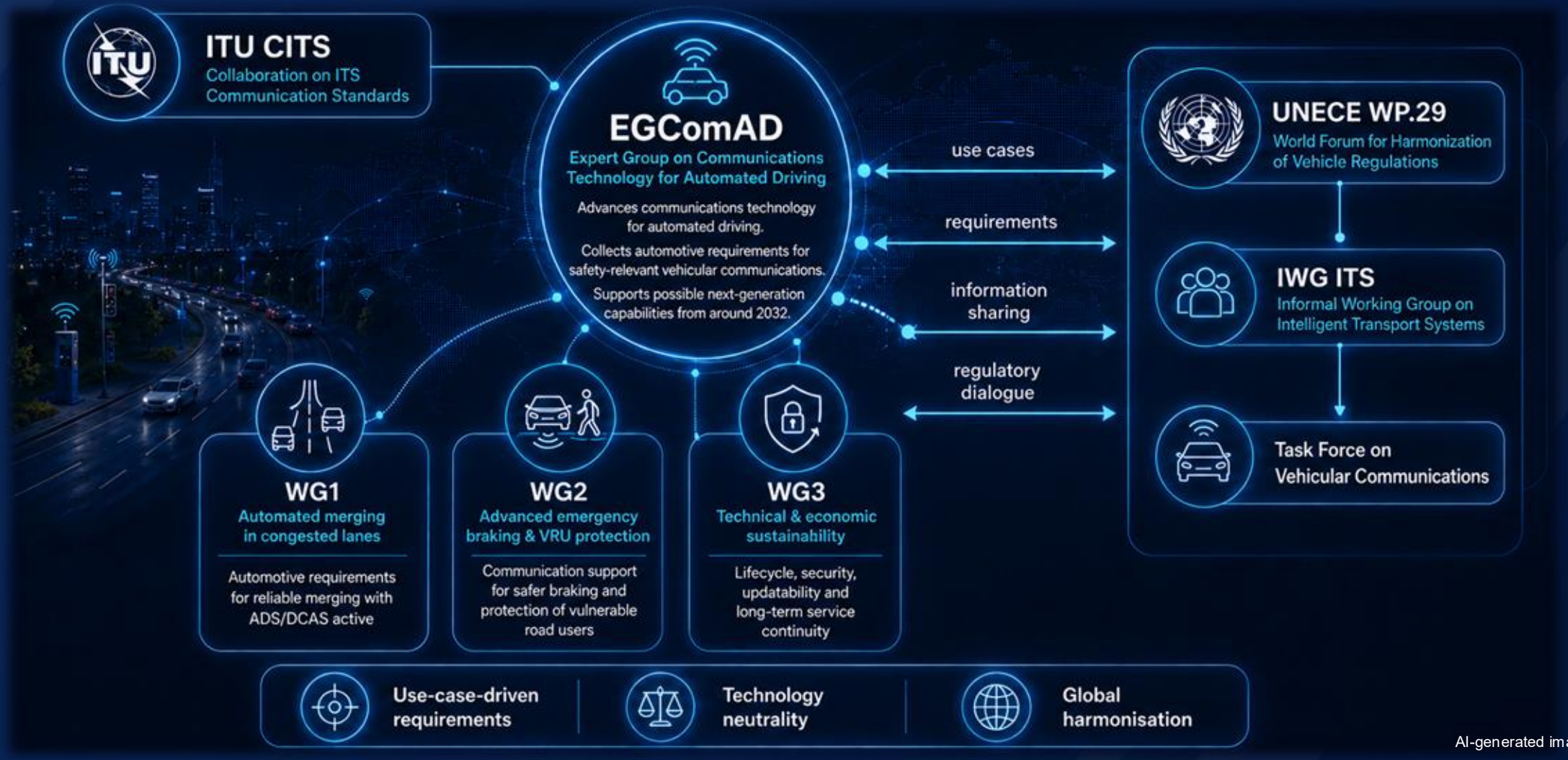
Start from use cases and requirements, maintain technology neutrality, and ensure global harmonisation.

The lifecycle mismatch is becoming a strategic planning issue



If communication may become safety-relevant after 2030, automotive requirements must shape telecom and spectrum discussions today.

ITU EGComAD ecosystem and links to UNECE



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Safer Cleaner Smarter

Organisation Internationale des Constructeurs Automobiles
International Organization of Motor Vehicle Manufacturers

Thank you.

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