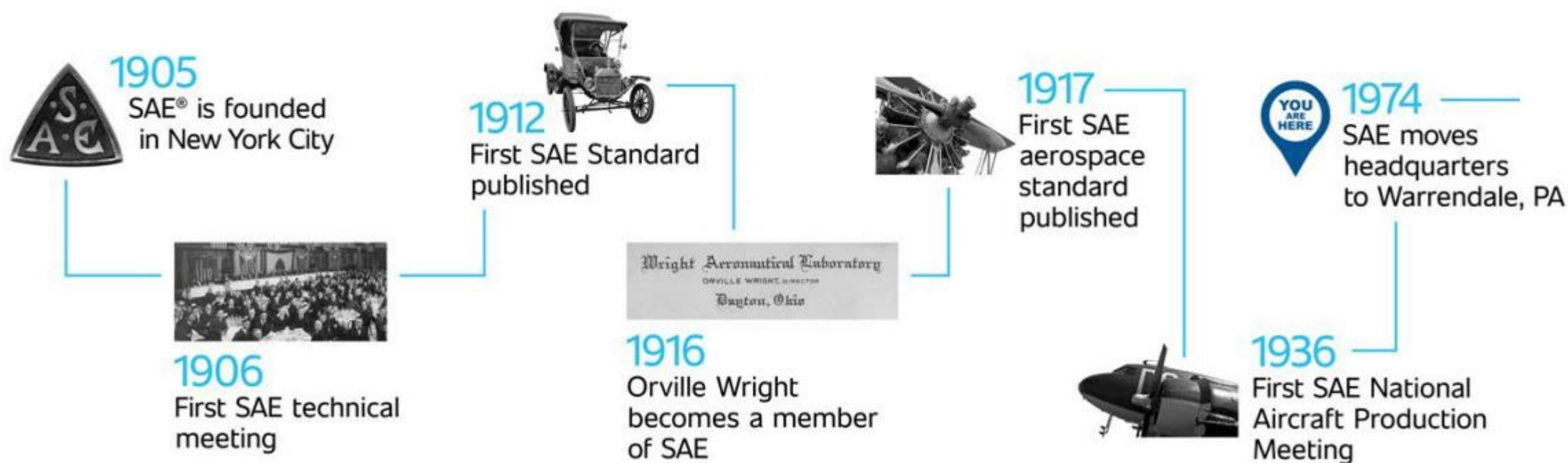




GLOBAL GROUND VEHICLE STANDARDS



OVERVIEW 2026





Our History

Mobility, Advanced f



1976
Collegiate Design Series established with Mini Baja event



1990
A World in Motion® is established as science program for 4th-6th grade students

1986
SAE FoundationSM formed



2014
SAE J3016™ Standard released defining levels of automated driving



2009
SAE J1772™ Standard released defining charging connector for electric vehicles



2018
SAE partners with industry to advance hybrid/electric aircraft propulsion



2019
SAE and industry partners form AVSC™ to address autonomous vehicle safety



2003

Year founded

Not-for-profit

**Aerospace, Land-based,
Multi-sector
Vehicle, and Data-intensive**

**Industries Industry conferences,
consortia program administration.**



1905

Year founded

Not-for-profit

**Land-based and Aerospace
Multi Mobility Sectors
(Vehicle/Commercial/Micro)**

**Develop the highest quality technical
standards and drive innovation through
products, people, and processes.**



1990

Year founded

Not-for-profit

**Aerospace, and
Medical Device Industries**

**Management system auditing
and
certification**

Overview at a Glance

Mobility, Advanced f





121 Years of Advancing Mobility Internationally

Mobility, Advanced f

SAEI 200,000+
members & volunteers

90 Countries
42 Sections
115 Student Chapters





Why SAE?

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SAE International is the world's leading authority in mobility standards development.

SAE standards enable industry to advance technology to meet ambitious environmental targets.

SAE develops voluntary consensus standards, which are standards developed or adopted by voluntary consensus standards bodies, domestic (national), regional, and international.

The Value of Standards

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INDUSTRY ROI

- ✓ Reduce trade barriers
- ✓ Lower purchasing and development costs
- ✓ Accelerate design and engineering cycles
- ✓ Speed new technology to market
- ✓ Promote innovation, competition, and collective industry advancement



Supports public safety and trust

Enables cleaner, more sustainable mobility

Helps innovation scale responsibly

Strengthens global collaboration and trade

Advances quality of life through dependable technology



CONSUMER VALUE

- ✓ Safer and more reliable products
- ✓ Better compatibility across systems
- ✓ Lower lifecycle cost through scale and competition
- ✓ Greater confidence in emerging technology
- ✓ Improved serviceability and performance consistency

Standards turn innovation into trusted, scalable, and beneficial solutions.



1,000+ SAE Standards Currently Cited in Regulations

Mobilicity, Advanced f

Global regulatory footprint

1,000+

SAE standards cited in international regulations



Selected regulatory agency citation counts



232

SAE Standards

National Highway Traffic Safety Administration



87

SAE Standards

Environmental Protection Agency



42

SAE Standards

Mine Safety & Health Administration



40

SAE Standards

Occupational Safety & Health Administration



21

SAE Standards

Federal Motor Carrier Safety Administration



24

SAE Standards

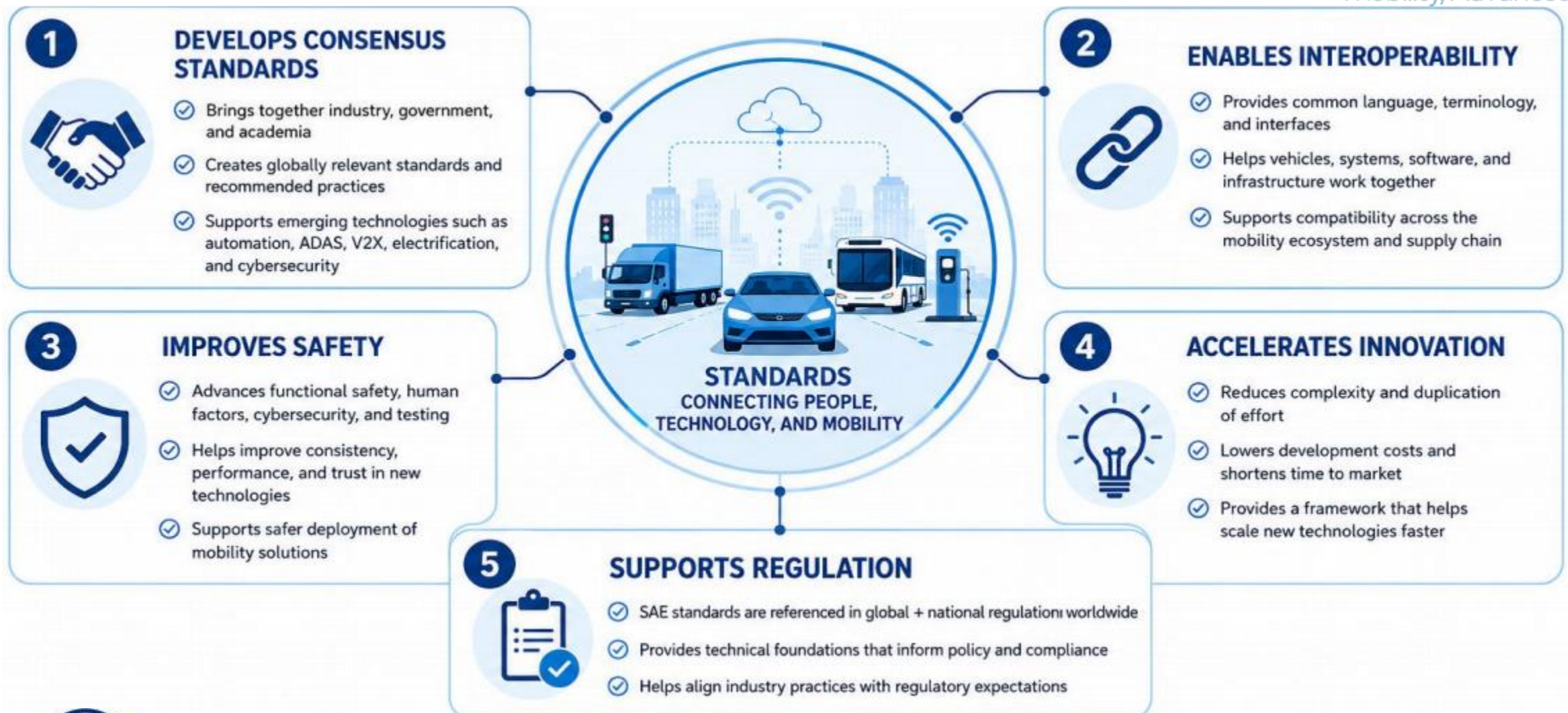
United States Coast Guard

Global Ground Vehicle Standards

Overview

SAE International Helps Drive Trusted Mobility Innovation

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SAE International helps mobility industry align, innovate and deploy solutions with confidence

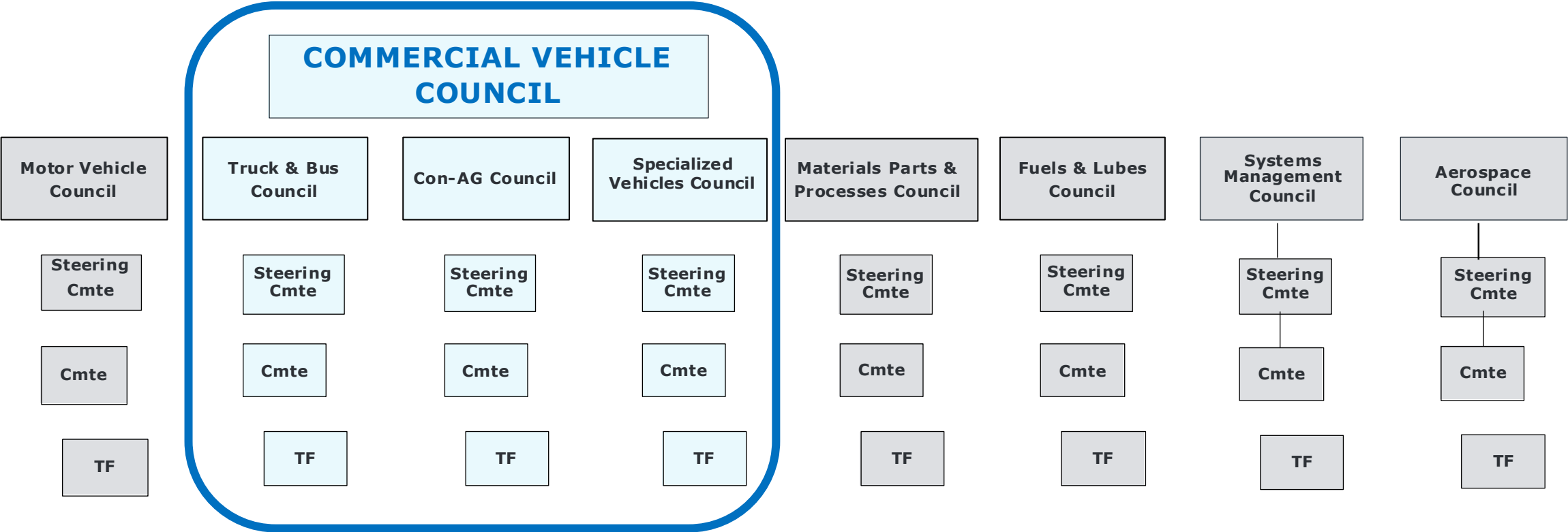


Global Ground Vehicle Standards Structure

Driving Innovation. Advancing Mobility. Improving Lives.™

Mobilicity, Advanced f

Executive Standards Committee



Global Ground Vehicle Standards



SAE International develops a consensus-based standards that enable a safer, connected, automated, and sustainable mobility across the global transportation ecosystem

KEY TECH FOCUS:
AUTOMATED & CONNECTED MOBILITY
COMMERCIAL
(Bus-Truck/Con-Ag/ Specialty)
EV/PROPULSION

MVC: Enabling Safer, Connected, Automated Mobility

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Advancing Commercial, Bus, Con-Ag, and Specialty Vehicle Innovation

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**1. COMMERCIAL & FREIGHT**

- Heavy-duty trucks
- Vocational vehicles
- Fleet systems

**2. BUS & TRANSIT**

- Transit buses
- Vehicle electronics
- Public mobility

**3. CONSTRUCTION / AGRICULTURE**

- Off-road machinery
- Agricultural equipment
- Worksite productivity

**4. SPECIALTY / UTILITY / EMERGENCY**

- Emergency vehicles
- Service fleets
- Municipal & utility

**5. CONNECTED, SECURE & SAFE SYSTEMS**

- Connectivity & V2X
- Cybersecurity
- Functional safety

 **J1939 Vehicle Networks**

 **J2735 V2X**

 **Cybersecurity**

 **Functional Safety**



Representative SAE Standards & Practices

**1. VEHICLE NETWORKS & DATA**

- J1939 — Heavy-duty vehicle communications
- J1587 / J1708 — Legacy communications
- Diagnostics & telematics interfaces
- Data dictionaries & network management

**2. ENVIRONMENTAL / EMC / DURABILITY**

- EMC measurement procedures
- Vibration / shock / thermal guidance
- Corrosion & ingress protection
- Durability test methods & guidelines

**3. CONNECTED / AUTOMATED / DIGITAL**

- J2735 — V2X message set
- J3016 — Levels of driving automation
- Over-the-air updates
- Data management & cybersecurity interfaces

**4. ELECTRIFICATION & CHARGING**

- J3068 — EV charging systems
- J3105 — Commercial charging
- J3217 — Megawatt charging system
- Battery systems & safety practices

**FREIGHT**

**TRANSIT**

**CONSTRUCTION**

**AGRICULTURE**

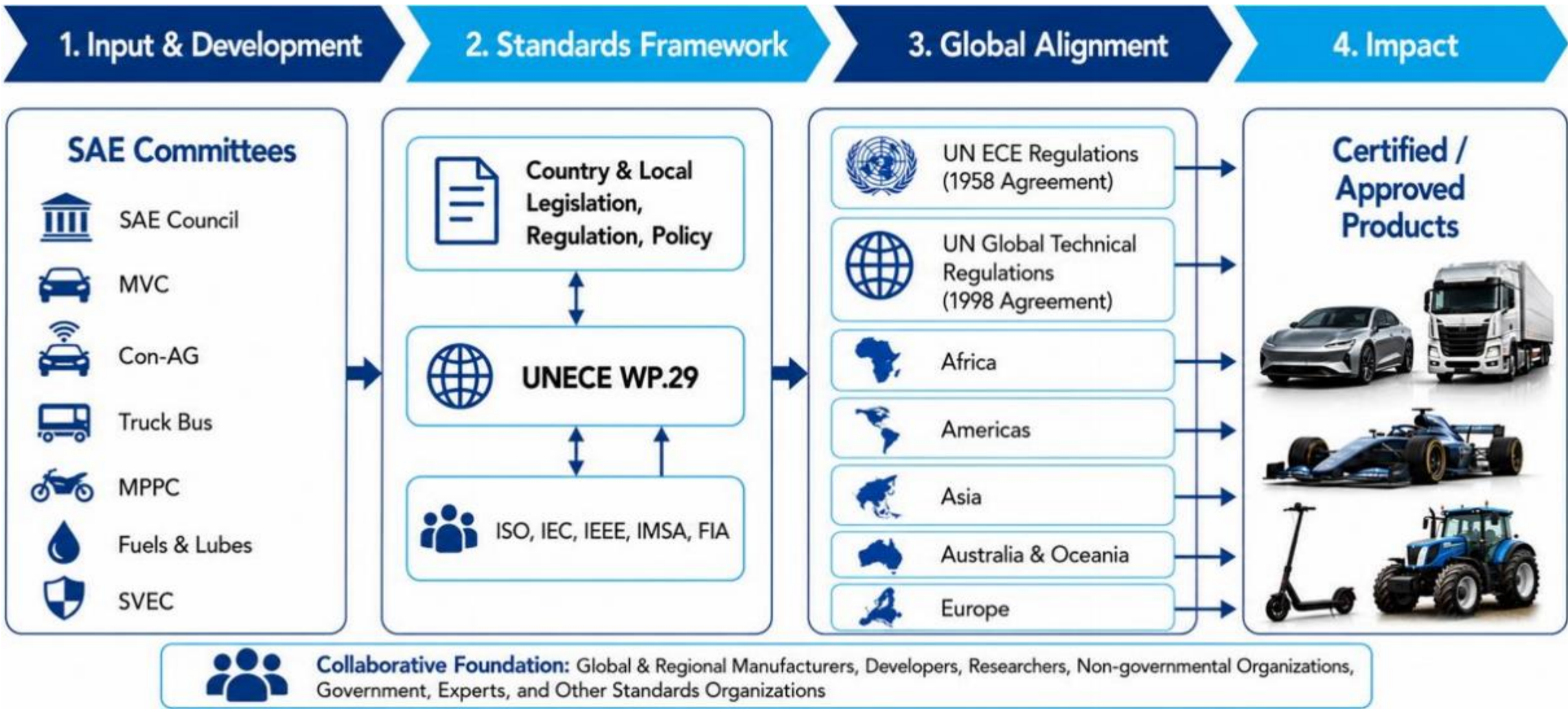
**EMERGENCY / SPECIALTY**

Global Government & Regulatory Engagement

International | UNECE | Regional/National | Regulatory Harmonization

SAE Standards – From Global Standards to Certified Products

Mobility, Advanced"



Groupe de Rapporteurs (GR's) of WP.29

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- Working Party on Automated/Autonomous and Connected Vehicles (GRVA)
- Working Party on General Safety Provisions (GRSG)
- Working Party on Lighting and Light-Signaling (GRE)
- Working Party on Pollution and Energy (GRPE)
- Working Party on Noise and Tyres (GRBP)
- Passive Safety (GRSP)



United Nations
Economic and Social
Council (ECOSOC)

The Five Regional Councils:

- [ECA: Economic Commission for Africa](#)
- [ECE: Economic Commission for Europe](#)
- [ECLAC: Economic Commission for Latin America and the Caribbean](#)
- [ESCAP: Economic and Social Commission for Asia and the Pacific](#)
- [ESCWA: Economic and Social Commission for Western Asia](#)

SAE Global Ground Vehicles Standards Committee Experts:

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- UN Inland Transport Committee:
 - WP.29: World Forum for Harmonization of Vehicle Regulations
 - WP.1: Global Forum for Road Traffic Safety
 - + Others
- International Telecommunications Union
- World Trade Organization





North America

Pittsburgh
Detroit
New York City
Washington, DC
Silicon Valley

Europe

Amsterdam
London

Asia

Shanghai



REFERENCE

[illegible]