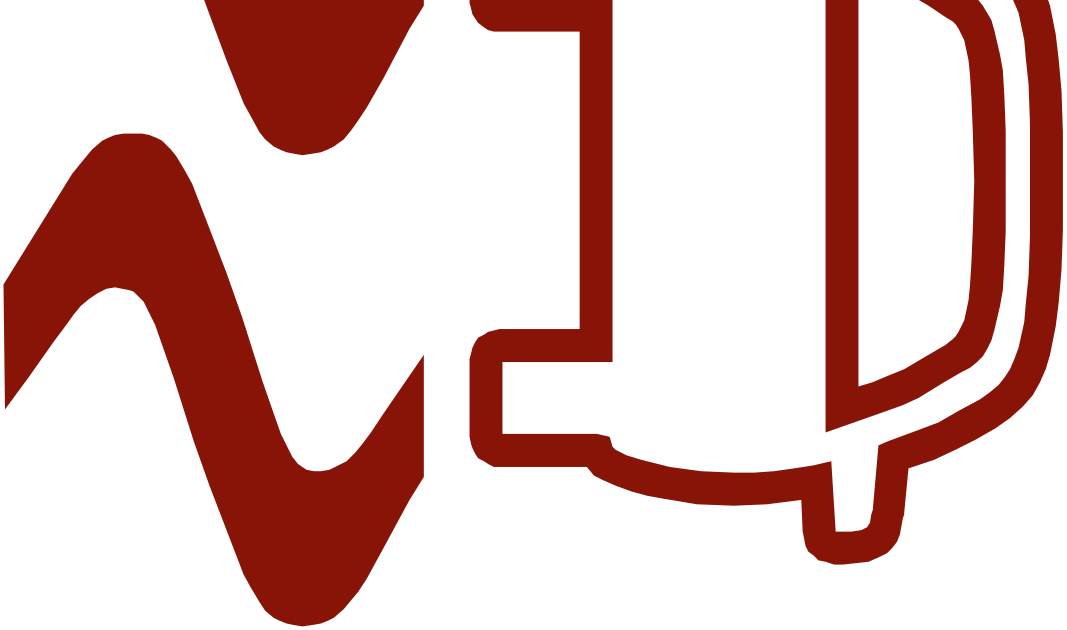


ISO and road vehicles

Great things happen **when the world agrees.**

We are ISO, the International Organization for Standardization

We are an independent, non-governmental organization.

We are a global network of national standards bodies with one member per country.

Our job is to make International Standards.

We are coordinated by a Central Secretariat in Geneva, Switzerland.

We are not for profit : selling our standards allows us to finance their development in a neutral environment, to maintain them and to make new ones.

ISO provides a platform for developing practical tools through common understanding and cooperation with all stakeholders.

163* members

21350* International Standards

100 new standards each month

238* technical committees

ἴσος

Notice that our acronym doesn't match our name? It's not meant to. "ISO" is derived from the Greek word *isos* (equal), so that it's the same in all languages.

* September 2016

Why do we need ISO standards for road vehicles?

ISO standards share state-of-the-art technology and good practice within the automotive sector worldwide.

ISO standards provide benefits for manufacturers and supply-chain partners, regulators and health authorities, vehicle owners and drivers, and road users including pedestrians.

ISO standards ensure the safety, quality, efficiency, effectiveness and environmental friendliness of road vehicles.

ISO standards improve mobility by integrating road vehicles with information and communication technology infrastructures.

ISO standards facilitate innovation and the roll-out of new vehicle technologies by providing globally harmonized terminology and consensus on health, safety, environmental issues and other aspects.

ISO worldwide

Anyone who has driven a road vehicle of almost any make, almost anywhere in the world, will have directly benefitted from ISO 2575, which specifies the familiar symbols for controls and indicators we are accustomed to seeing on the dashboard.

Who benefits from ISO standards for road vehicles?

Consumers

ISO standards make driving a vehicle simpler and safer, while protecting passengers (especially children) and pedestrians, and lower the cost of buying vehicles.

Regulators

ISO standards provide the technical basis – regularly reviewed and improved – for legislation on aspects such as safety and pollution.

Manufacturers

ISO standards provide specifications for safety, quality, performance and environmental impact. They set out harmonized requirements enabling outsourcing, fair competition, the participation of suppliers from developing countries, and drive down costs by facilitating competitive tendering.

What do ISO standards for road vehicles cover?

- **Safety**
- **Test methods**
- **Ergonomics**
- **Environment issues**
- **Performance**
- **New technologies**

Much of the work in these areas is the focus of ISO technical committee ISO/TC 22, *Road vehicles*, which has so far developed more than **820 standards and updates**. These range from basics such as wheels, braking systems and road holding ability, to crash protection, child restraint systems and ergonomics.

Many of these standards aim to:

- improve compatibility, interchangeability and safety, or
- specify the requirements for harmonized test procedures for evaluating performance.

They cover all road vehicles from motorcycles to cars, to articulated goods vehicles.

The committee consists of around **75 different participating and observing national standards bodies**, as well as automotive-sector associations and international bodies such as the World Health Organization.

Electric vehicles

- **ISO/TC 22**, *Road vehicles*,

has also developed a range of standards specifically for electric, hybrid and fuel-cell road vehicles. A number of these provide requirements for functional safety, test methods, on-board energy storage systems and measuring fuel consumption.

Examples :

- **ISO 17409**, *Electrically propelled road vehicles – Connection to an external electric power supply – Safety requirements*
- **ISO 23274-1**, *Hybrid-electric road vehicles – Exhaust emissions and fuel consumption measurements – Part 1: Non-externally chargeable vehicles*

Intelligent transport systems

Increasingly, road vehicles are being equipped with systems and networks based on information and communication technologies intended to improve safety, traffic control, navigation, fee collection and identification. Today's communication capabilities give vehicles the potential to anticipate and avoid collisions, transmit their position to emergency services in case of an accident, navigate the quickest route to their destination, take advantage of up-to-the-minute traffic reports, identify the nearest available parking space, minimize their carbon emissions and provide multimedia communications.

- **ISO/TC 204**, *Intelligent transport systems*, focuses mainly on this area and has developed more than **220 standards***.

* These include the ISO 15638 series on telematics applications for regulated commercial freight vehicles (TARV) and ISO 11067, which gives performance requirements and test procedures for curve speed warning systems (CSWS).

Tyres and other components

- **ISO/TC 31**, *Tyres, rims and valves*, has developed **78 standards**, including the ISO 4000 series on passenger car tyres and rims and the ISO 4249 series on motorcycle tyres and rims.

Road safety

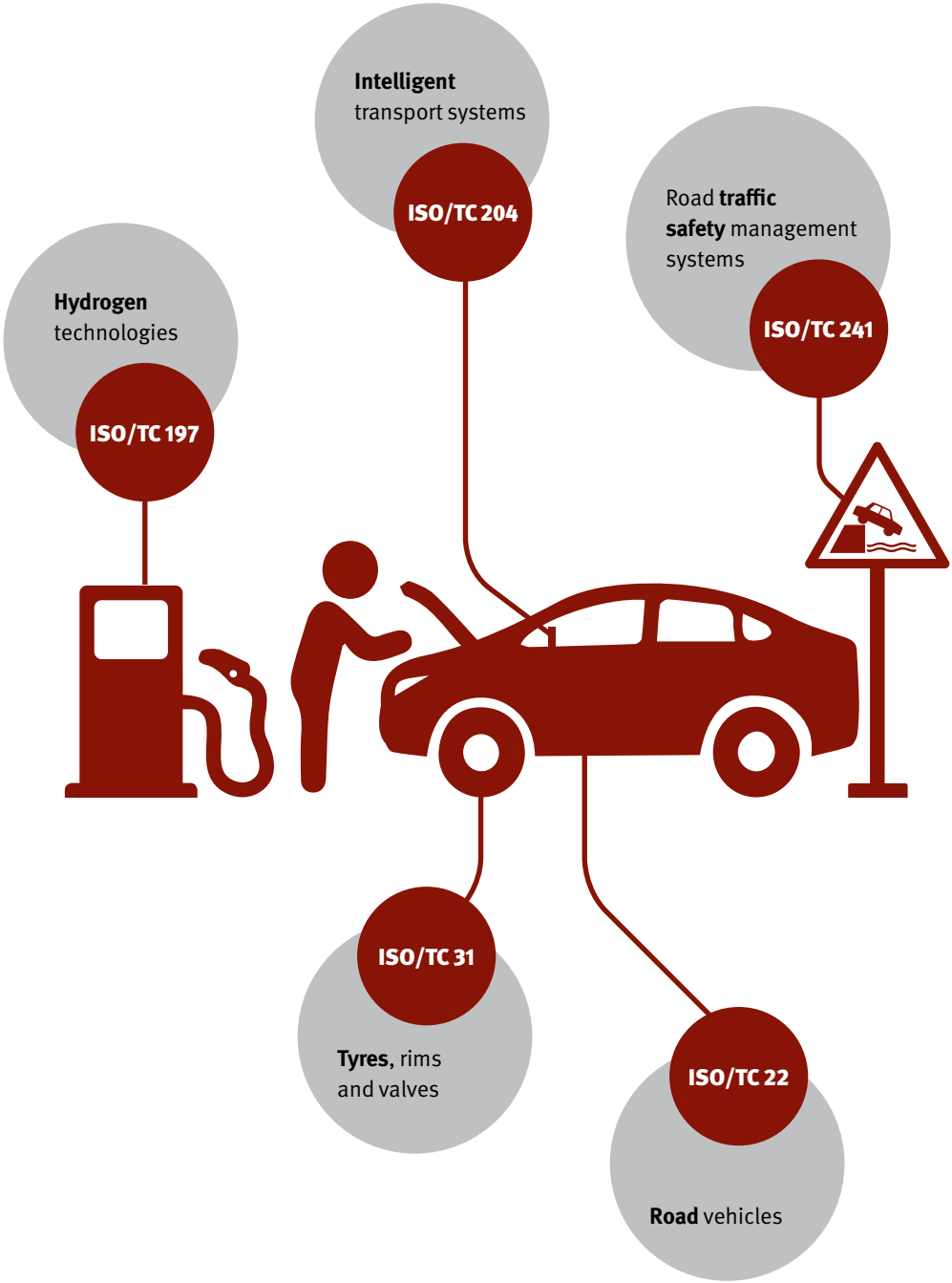
- **ISO 39001**, *Road traffic safety (RTS) management systems – Requirements with guidance for use*, developed by **ISO/TC 241**, *Road traffic safety management*, is widely regarded as a major contribution to the United Nations' Decade of Action for Road Safety 2011-2020.
- Future **ISO 39002**, *Good practices for implementing commuting safety management*, aims to reduce the number of fatalities and the severity of injuries caused by road accidents, by providing solutions and recommending measures that organizations can use to protect their staff.

Road-safety-related standards are also developed by **other ISO technical committees**, for example to make crossing the street safer for disabled persons.

Vehicle safety

With the latest technological progress bringing us everything from advanced navigation systems to driverless cars, putting measures in place to spot potential risks across the whole vehicle lifespan is more important than ever.

- **ISO 26262** (series), *Road vehicles – Functional safety*, outlines an automotive-specific risk-based approach to help avoid any potential system failures.


Intelligent transport systems
ISO/TC 204
Road **traffic safety** management systems
ISO/TC 241
Hydrogen technologies
ISO/TC 197
ISO/TC 31
Tyres, rims and valves
ISO/TC 22
Road vehicles

Looking forward

Cyber security

A quick look at your dashboard will give you an idea of how connected vehicles are – and it is only increasing. From your GPS to other gauges and sensors telling you when your tyre pressure is low, there is constant interaction between in-vehicle embedded systems that communicate wirelessly. As this interconnectivity grows, so does the risk of cyber-attacks, threatening not only our safety but our personal information. Work has recently started on standards to address these issues by providing recommendations and solutions for building cyber security into vehicles.

Hydrogen vehicle stations

If fuel-cell, electric and alternative-fuel vehicles are the future, there need to be adequate stations for refuelling them.

A new technical specification,

- **ISO/TS 19880-1**, *Gaseous hydrogen – Fuelling stations – Part 1: General requirements*, will contribute to the proliferation of hydrogen fuelling stations by providing important guidelines on their safety and performance. It covers everything from hydrogen production and delivery, to compression, storage and fuelling of a hydrogen vehicle, and provides a useful stepping stone to an International Standard in this area, due to be published in 2017.

More information ?

ISO Website
www.iso.org

ISO Website section on transport
www.iso.org/iso/cars

ISOfocus magazine
www.iso.org/isofocus

ISO videos
www.iso.org/youtube

Follow us on Twitter
www.iso.org/twitter

Join us on Facebook
www.iso.org/facebook

Join us on GooglePlus
www.iso.org/gplus

International Organization for Standardization

ISO Central Secretariat
Chemin de Blandonnet 8
CP 401
1214 Vernier, Geneva
Switzerland

iso.org

ISBN 978-92-67-10691-5

The symbol on the cover comes from the International Standard **ISO 7000, *Graphical symbols for use on equipment – Registered symbols***. It is used to identify the control that activates the road vehicle stability-control system and indicate its operational status.

Available on our Online Browsing Platform at: **gotoi.so/isosymbols**.