



## ITS Basics

ITS - Intelligent Transport Systems and Services - is the integration of information and communications technology with transport infrastructure, vehicles and users.

By sharing vital information, ITS allows people to get more from transport networks, in greater safety and with less impact on the environment.

Only once travellers, vehicles and infrastructure can freely exchange information will the capacity of the transport network be fully utilised.

ERTICO strives for a European network in which roads and vehicles can communicate with one another; in which commuting is more secure, reliable and comfortable; in which businesses know where shipments are and what condition they are in and in which drivers are automatically directed to available parking spaces in urban areas.

In short, a world in which people and goods are connected by the necessary information.

### ITS for safety

More than 40,000 people die on Europe's roads each year.<sup>1</sup> Road accidents cost the European economy around €200 billion each year.<sup>2</sup>

While in-car safety systems have greatly improved the chances of surviving an accident, more attention now needs to be given to systems that can actually prevent accidents from happening. The ITS systems being developed within the ERTICO membership have the potential to save lives and reduce the congestion caused by accidents.

ERTICO's work envisages a world in which ITS systems can detect hazards on the road ahead and inform drivers of them even before they are visible; in which ITS keeps vehicles at a safe distance from one another and in which ITS informs drivers of the local conditions by constant communication and information exchange between vehicles and the infrastructure.

Find out more about ERTICO's [safety-related activities and initiatives](#)

### ITS for efficiency

Congestion costs the EU 1% of its GDP - around €100 billion - each year.<sup>3</sup> There are around 300 million drivers in the EU today, while in the past 30 years the distance travelled by road has tripled<sup>4</sup> and is set to increase further.

With funding and space for large-scale road building becoming increasingly scarce, governments, infrastructure operators and public authorities are turning to ITS solutions to ease congestion. Ramp metering, traffic and incident detection and variable message sign systems are already being used across Europe.

The next generation of ITS solutions will:

- Give public transport users real-time service information, as well as smart and seamless ticketing solutions.
- Enable freight operators and customs authorities to share information about consignments and keep track of their position and status, as well as provide information on the most efficient, economical and secure routes for freight.
- Allow vehicles to communicate directly with the infrastructure around them and with one another - enabling drivers to make better decisions about their route and respond to warnings of congestion and accidents.

### ITS for the environment

Transport accounts for 30% of total energy consumption in the EU.<sup>5</sup> Despite increasing air travel, the vast majority of this energy is still consumed by road transport.

ITS systems which can improve the efficiency of passenger and goods transport and ease congestion on the network will obviously have secondary benefits for the environment and in terms of use of space.

However, in future there may also be opportunities for ITS systems to provide traffic and topographical information to vehicle management systems. This will enable drivers and vehicles to operate more efficiently.

Find out more about ERTICO's [efficiency and environment-related activities and initiatives](#)

### ITS for security

Recent events have shown that the transport system is under threat from terrorism, whether as a target in itself or a means of attacking other targets.



### WHAT IS ITS?

#### ■ ITS Basics

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The need to protect travellers, transport facilities and transport workers against security risks has never been greater. However, this must be balanced with the need to make sure transport continues to operate effectively and efficiently.

ITS systems are key to striking this balance. Intelligent Vision Systems can automatically spot suspicious behaviour at transport hubs, while automatic tracking and alarm systems can speed the response to threats. The evolution of real-time tracking systems, such as those being used in modern sea containers, can also play an important role in detecting a threat.

The remaining major challenge in this area will be to reconcile the need for individual private data protection with public security requirements.

Find out more about ERTICO's [security-related activities and initiatives](#)

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<sup>1</sup>Commission Communication on European Road Safety Action Programme - "Saving 20,000 Lives On Our Roads", COM(2003)311 final, 22/02/2006

<sup>2</sup>Communication from the Commission on the Intelligent Car Initiative - "Raising Awareness of ICT for Smarter, Safer and Cleaner Vehicles", COM(2006)59 final, 15 February 2006

<sup>3</sup>Communication from the Commission: "Keep Europe moving - Sustainable mobility for our continent." (Mid-term review of the European Commission's 2001 Transport White Paper), COM(2006)314 final, 22 June 2006

<sup>4</sup>Communication from the Commission on the Intelligent Car Initiative - "Raising Awareness of ICT for Smarter, Safer and Cleaner Vehicles." COM(2006)59 final, 15 February 2006

<sup>5</sup>Communication from the Commission: "Keep Europe moving - Sustainable mobility for our continent." (Mid-term review of the European Commission's 2001 Transport White Paper), COM(2006)314 final, 22 June 2006

