

Intelligent Transport Systems *and the Future*



Intelligent Transport Systems and the Future

ERTICO (ITS Europe), ITS Asia-Pacific and ITS America, supported by other ITS organisations in the Western Hemisphere, have joined together to present a global view of the future of Intelligent Transport Systems. This view demonstrates how transport in the 21st Century will be safer, cleaner, more efficient, more secure, and more readily available to more people through the effective application of modern computer and communications technology to transport – Intelligent Transport Systems.

Improving Transport for Everyone

Everywhere in the world, the demand for transport is growing.

People need to get to more places for work and to enjoy leisure time. They need to get to their destinations swiftly and safely, reliably and affordably. They need the information that allows them to make good travel choices.

Goods and freight need to move dependably and economically, to provide food, clothing, fuel, papers, materials and equipment for businesses and consumers.

The transport system needs to be kept safe and secure so that it can continue to provide service in both routine and extraordinary conditions.

Meeting these needs requires innovative ways to build, operate and use all modes of the transport system – a blend of imagination and practical reality. This approach is called ITS – Intelligent Transport Systems.



ITS helps the whole transport system to work most effectively and efficiently. ITS integrates users, transport systems, and vehicles through state-of-the-art information and communications

What is ITS?

ITS helps the people who run transport systems provide better service to their customers. ITS helps get the best value from the road and rail systems we already have. ITS helps traffic flow more smoothly, reducing delays, fuel consumption, and air and noise pollution. ITS helps make public transport more convenient and affordable.

ITS often works behind the scenes. When emergency vehicles get to a crash site more rapidly than before, ITS is at work to detect the crash, notify emergency services, and get the nearest response unit rapidly to the site. Technology in a vehicle prevents skidding and helps the vehicle to stop safely; the driver may not even realize that assistance was provided, but ITS is at work.

A Future With ITS

Building on a partnership of government, industry and academia, ITS technologies will help create a future transport system that:

- Moves people and goods safely, efficiently and economically
- Satisfies its customers, both businesses and consumers, and is responsive to their needs
- Is effectively managed, affordable, and universally available
- Is safe and secure
- Respects the environment and supports sustainable mobility





Safety

ITS will help reduce injuries and save lives, time and money by making transport safer:

- ITS will help the drivers of cars, trucks and buses avoid getting into crashes and help keep them from running off the road. ITS will help maintain safe distances between vehicles and safe speeds approaching danger spots. ITS will help improve visibility for drivers, especially at night and in bad weather.
- ITS will provide information about work zones, traffic congestion, road conditions, pedestrian crossings and other potential hazards.
- ITS will help detect the crashes that do occur, determine the severity of the crash and likely injuries, and help emergency management services provide assistance. ITS will help select the closest and most appropriate rescue unit to respond. ITS will adjust traffic signals to clear the way for emergency vehicles.
- ITS will connect responding units to medical care facilities to help provide initial care for the injured and help medical care facilities prepare to deliver more complete treatment when injured people arrive.

The goal is to substantially reduce transport-related fatalities and injuries by reducing the number and severity of crashes and to improve and accelerate care when crashes do occur.

Security

ITS will help prepare for, prevent and respond to disaster situations, whether from natural causes, human error, or attacks:

- ITS will help keep watch over transport facilities.
- ITS will help provide personal security for people using the public transport system.
- ITS will monitor freight, especially hazardous materials, through the entire supply chain.
- ITS will help transport and safety/security agencies coordinate their activities and their information so they can respond more effectively to incidents of all kinds.
- ITS will help identify the best routes for evacuating people at risk and for directing emergency services to incidents and disaster sites.
- ITS will help the transport system, and all the other parts of the economy that depend on transport, to return to normal as rapidly as possible following a crisis, through better management of the transport system, more efficient interagency communications, and better and more timely information to the public.

The goal is to protect our lives and our economies.

Efficiency/Economy

ITS will save time and money for travellers and the freight industry:

- ITS will deliver fast, accurate and complete travel information to help travellers decide whether to make a trip, when to start, and what travel modes to use. ITS will provide his information both prior to a trip and as the trip proceeds.
- ITS will help drivers select and follow safe, efficient routes to their destination. ITS will let drivers pay tolls without having to stop.
- ITS will help freight move swiftly and reliably using the right combination of ship, truck, train and plane.
- ITS will help track freight, enabling its owners to know where it is at all times and when it is due to arrive at its destination, and allowing for better planning and scheduling of critical processes.

- ITS will enable more reliable and timely commercial vehicle management. ITS will automatically keep track of safety-related information about the vehicle, its driver and its cargo. ITS will help communicate this information to the authorities so that, as appropriate, vehicles can be cleared through checkpoints without stopping.
- ITS will help the people who build, manage and maintain the transport system. ITS will help the transport system carry more traffic safely and efficiently by keeping traffic flowing, clearing incidents quickly, and managing construction and maintenance to minimize disruptions. ITS will help schedule road management vehicles and help them work more precisely and efficiently.

The goal is to save significant amounts of time and money each year through better information and better system management.

safely and efficiently by keeping traffic flowing, clearing incidents



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Mobility and Access

ITS provides travel opportunities and additional travel choices for more people in more ways, wherever they live, work and play, regardless of age or disability:

- ITS will help travellers plan and take trips that use the best and most convenient combination of travel modes: private car, public transport, passenger rail – and walking and cycling, too. ITS will open new employment and recreation opportunities and help make travel time more productive.
- ITS will help all travellers get where they need to go regardless of age or disability and regardless of where they live. ITS will provide better information on available services to travellers who cannot or choose not to drive including those who are mobility- or sight-impaired.
- ITS will also help make it easier to pay for transport services. The future will include a single electronic payment mechanism to pay for fuel, tolls, public transport fares, parking, and a variety of other charges that busy travellers encounter every day.
- ITS will help convey the needs and interests of transport system customers to the people who manage the system, helping to ensure a transport system that is responsive to those needs and interests. ITS will help managers of the transport system to make services safer and simultaneously available for motorists, cyclists, pedestrians, and users of public transport.
- ITS will help focus the transport system on meeting the needs of all its customers. Better meeting customer needs means a renewed focus on customer service and effective operations.

The goal is to have universally available information and payment mechanisms that support convenient, affordable, seamless, end-to-end travel choices for all users of the transport system.



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The Environment

ITS helps to make travel faster and smoother, eliminates unnecessary travel, and reduces time caught in traffic congestion:

- ITS will keep traffic flowing on urban freeways, on toll roads, at commercial vehicle check-points and elsewhere. Reducing delays due to congestion and incidents means that energy waste, wear-and-tear, and the pollution caused by stop-and-go driving are also reduced.
- ITS will help vehicles operate more efficiently. ITS will provide location-specific information about weather and road conditions. ITS will help vehicles to anticipate danger spots and hills, and to smoothly adopt appropriate speeds.
- ITS will help to plan efficient routes and guide drivers along these routes. This helps to reduce fuel consumption and emissions.
- ITS will help make public transport more reliable, effective and attractive, thereby accelerating its use. ITS will provide better information on schedules and connections. ITS will help public transport users stay in touch with their employers and their families while in transit.

















The goal is to respect the environment while meeting the needs for transport.

A Transport System for All

ITS affects the way everyone lives, works and plays, and its benefits will increase in the future. ITS is helping to make transport services available and affordable for everyone, getting people and goods to their destinations safely and efficiently. ITS will improve customer satisfaction with transport and help make it more environmentally friendly and more secure. ITS will help the people who manage and operate the transport system to provide better, safer and more responsive service to all its users while helping to safeguard the environment. ITS has been demonstrating its value for over 10 years, and it is now beginning to mature. ITS is meeting its promise to make a real difference to society as a whole.



The following organisations support the development and deployment of Intelligent Transport Systems to improve transport by making it safer, more efficient and better for the environment:

		
 <p>ITS CHINA</p>  <p>ITS HONG KONG</p>  <p>INDONESIA</p>    <p>NEW ZEALAND</p> <p>PHILIPPINES</p>  <p>THAILAND</p> 		    

For further information on this document, please contact:

IN ASIA-PACIFIC



Secretariat of ITS Asia-Pacific

P: +81 (3) 3519 2182
 F: +81 (3) 3592 0091
 E: intl@its-jp.net
 Nishi-Shimbashi Tachikawa Building
 2-11-4, Nishi-Shimbashi, Minato-ku,
 Tokyo, Japan 105-0003
 www.its-jp.net

IN EUROPE



P: +32 (0)2 400 07 26
 F: +32 (0)2 400 07 02
 E: e.saunders@mail.ertico.com
 Avenue Louise 326
 1050 Brussels-Belgium
 www.ertico.com

IN THE WESTERN HEMISPHERE



P: +1 (202) 484-4847
 F: +1 (202) 484-3483
 E: membership@itsa.org
 400 Virginia Avenue, SW
 Suite 800
 Washington D.C. 20024-2730
 www.itsa.org