



**ITS provides you with
support on your journey**
- the whole way, the whole time

INTELLIGENT TRANSPORT SYSTEMS



TRAFIKVERKET
SWEDISH TRANSPORT ADMINISTRATION

Important for growth

Fast, safe and climate-smart travel and transport are important prerequisites for good and sustainable regional and national growth.

The Swedish Transport Administration is working for effective and sustainable transport provision for citizens and trade and industry throughout the country.

The goal is to create an accessible and equal transport system that focuses on safety, the environment and health.

ITS an effective tool

Society invests large resources into expanding and improving roads and transport systems. New roads, bridges and tunnels are not, however, a solution to all problems; in some cases they can actually contribute to an increase in traffic.

That is why solutions and systems are also required that enable us to utilize existing road networks as optimally as possible.

ITS, Intelligent Transport Systems, is an effective tool for creating good accessibility with faster, safer and more environmentally friendly travel and transports.

World-class traffic information

In many aspects Sweden is a role model in terms of developing, quality assuring and presenting traffic information and developing IT based solutions and systems for information and traffic management.

This brochure tells you more about what ITS is and how you as a private or professional road-user can use ITS solutions in order to travel faster and safer on the roads – and about the opportunities that new technology and new services open for more effective and more environmentally friendly travel and transports.

With up to date and quality-assured traffic information you can plan your journey in your mobile phone or computer in the morning – and then receive updated information via digital signs along the road or directly in your car via the radio, mobile phone or satellite navigation system.

Development is heading in the direction of more customized and individualized services that offer optimal benefits just for you, here and now.





Why ITS?

Increased pressure on the roads

More and more people are travelling more frequently and further afield. At the same time there is an increasing amount of goods transported on or ways.

That means that congestion on the roads, particularly in urban areas and along national and European highways, is increasing. And more congestion leads to increased risks of queues, accidents and unnecessary environmental impact.

Better utilization of the roads

With the intelligent transport system, ITS, we can contribute to better utilization of our roads and traffic systems. Quite simply, ITS makes it possible to monitor and direct the traffic more effectively.

Local, regional and national ITS solutions give you access to up to date and reliable traffic information both before and during your journey, which leads to safer and more effective commuting options and the transport of goods with less impact on health and the environment.

What is ITS?

But what is ITS? And why does The Swedish Transport Administration focus on maintaining and developing systems for traffic information and traffic management?

Ultimately ITS deals with different ways of providing you, as a road-user, with up to date traffic information. With access to updated and reliable traffic information you can find the safest, most effective and environmentally friendly ways of travelling and transporting goods.

One of The Swedish Transport Administration's most important tasks is to gather, quality-assure and process traffic information that can then be used in different local, regional or national ITS solutions. The more up to date and detailed the information is, the greater the chances of designing and customizing different ITS solutions for increasing accessibility and safety in the traffic.

Up to date and reliable traffic information

Top class traffic safety

Sweden is a world leader when it comes to traffic safety. An important part of the successful safety work is the consistent and systematic usage of ITS in traffic.

By supplying up to date and quality-assured traffic information via a long succession of different channels which can be used in both internal and external ITS solutions, The Swedish Transport Administration contributes to increasing accessibility within the transport system at the same time as particular focus is placed on issues such as safety, the environment and health.

The Swedish Transport Administration collaborates with universities, the automobile industry and other players within transport to create cross-frontier solutions for surveillance, control and information within the area of traffic. The ambition is to create effective and sustainable options for commuting and transport of goods where different types of transports can be compared and balanced.

The Swedish Transport Administration's focus on ITS contributes to the development of safer and more effective transport systems and vehicles and in the long term also contributes to making transport systems more equal and accessible.

Quality-assured traffic information

The Swedish Transport Administration gathers information in a national traffic database. The information can come from different types of fixed surveillance systems, but also from different actors like police, rescue services and SOS Alarm.

The traffic information is quality-assured and is then passed on via internal and external channels so that you as a road-user can find the safest and most reliable transport solutions for your requirements.

An overall view leads to cost-efficiency

The Swedish Transport Administration works with an overall view of the transport system where all measures are tested in accordance with a four-stage principle, where reconstruction and new construction are the final stage.

Using ITS, The Swedish Transport Administration can contribute in creating cost-effective public solutions within the area of transport. ITS is an important tool for reaching the transport policy goals and creating accessible, cost-effective and sustainable long-term transport solutions.



Plan your journey

Start your journey at the breakfast table

ITS makes it easier to lead, manage and monitor the traffic. With better-informed road-users the transport system can be utilized in a smarter and safer way.

As a private or professional road-user you can get an overall view of the traffic situation before you set out by using the Internet service Läget på vägarna on The Swedish Transport Administration's website (www.vv.se). In urban regions you can get an overall view of the traffic situation on the roads as well as on public transport via Trafiken.nu (www.trafiken.nu), which is run by The Swedish Transport Administration and the Swedish Rail Administration together with local and regional traffic operators.

Plan on the Internet or in your satellite navigation system



You can also plan your journey using the travel planners on search engines like Hitta.se (www.hitta.se) and Eniro.se (www.eniro.se) and get up to date traffic information via local and national radio stations and via Teletext.

Many channels

Examples of ITS solutions which are designed to simplify and streamline travel and transport are:

- Traffic information via radio, satellite navigation systems, mobile phones, the Internet and Teletext, which target both private travellers and goods transporters.
- Weather warnings via the Internet, radio and Teletext and adjustable road signs which adapt speed to road surfaces.
- Travel time information for alternative routes via the Internet, satellite navigation systems, mobile phones and/or via roadside message boards.
- Road database with up to date information on accessibility and load bearing capacity which can have an impact on your possibility to transport heavy goods.



Knowing what's going on on the roads

Updated information during your journey

When you are actually on your way there are many options for keeping yourself updated about the state of the roads and any emergency situations that can have an affect on travel times and route choices.

Using satellite navigation systems with RDS-TMC, where you obtain traffic information directly in your satellite navigation system, you can receive information for the whole of Europe in your own language. The information primarily concerns larger roads and road networks in urban areas.

You can receive comparable information today via navigation engines in mobile phones and via local and national radio in the case of emergency situations.

Smart signs

Along the roads, particularly in urban areas, there are smart signs and signals providing up to date information on everything from travel times to possible queues. Examples of systems for roadside traffic information are:

- Variable message boards where the message can be modified to the traffic situation, for example through variable speed limits, traffic diversions and travel times for alternative routes.
- Smart traffic signals which can be adapted to the flow of traffic and can control the traffic in order to minimize queues.
- Automatic traffic cameras which contribute to reducing average speeds and thereby minimizing the risk of serious accidents.

IT in the car

Customized solutions

Development is heading in the direction of more individualized and customized traffic information. And the trend is that increasingly more information is accessible directly out in the traffic, not just via local and national radio and navigation systems, but also via embedded systems in the vehicle.

The Swedish Transport Administration, together with the automobile industry and others, works to develop new ITS applications where traffic information can be shaped in interaction between the vehicle and the surroundings.

Examples of such solutions are systems for automatic speed warnings/speed adjustments and for queue warning/automatic braking, where systems in the car interact with measuring points and facilities along the road.



Fast development

More and more vehicle manufacturers are now developing different types of systems in cars in order to use up to date traffic data to create optimal prerequisites for arriving as quickly and as safely as possible.

The information can be gathered both from individual vehicles and from different measuring points out in the traffic and can then be customized to the route and road you are using.

An increasing number of proactive services

The Swedish Transport Administration's traffic control centres work as centres for gathering and quality-assuring information, whilst external service suppliers and channels for traffic information package and present the information based on the requirements of the road-user.

One trend is that we are heading towards an increasing number of pro-active services, which can contribute to preventing queues and accidents. One example is the system with so-called congestion charges, where, with the help of different charges at different times of the day, the flow of traffic in urban areas can be evened out along the large approach and exit roads in cities.

Joint ventures lead to new possibilities

The Swedish Transport Administration is participating in a number of national and international joint ventures in order to create ITS solutions that contribute to improved accessibility and traffic safety – and in the long term even a reduction in environmental impact.

Examples of areas where comprehensive research and active national/international joint ventures are being carried out are:

- FFI – a program for vehicle research with focus on environmental and safety issues led by The Swedish Transport Administration, The Swedish Energy Agency and VINNOVA (The Swedish Governmental Agency for Innovation Systems)
- IVSS – Intelligent Vehicle Safety System. A project focused on active systems for car safety.
- Alcohols locks and sleep warning systems – effective inbuilt systems in vehicles for quality assuring transport and preventing accidents.
- Traffic surveillance cameras, ATK – have proven to have a positive concrete effect on traffic safety and offer a better and more even flow of traffic with less environmental impact.
- System for variable speeds. With adjustable road markings the speed along different road sections can be modified to road surfaces, weather and traffic intensity.
- Cross-frontier solutions the idea of which are to create seamless overlapping between different forms of transport.



**Would you like more information
on ITS in traffic?**

On The Swedish Transport Administration's website, www.trafikverket.se/its you can read more about the use of IT in traffic.



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