A LEADING PLAYER

SWARCO specializes in the development of smart solutions in transport and infrastructure, and is a leading player in the market for intelligent transportation systems. Our solutions are based on a wide range of products, systems and services.

SWARCO offers effective traffic solutions that improve traffic flow and road safety and reduce the impact of traffic on the environment!

SWARCO FIRST IN TRAFFIC SOLUTIONS.

SWARCO is one of Europe’s leading and fastest growing suppliers of ITS. Our proven and innovative traffic management solutions is used in road, rail and car park across the Nordic region.

SMART ROADS
Solutions that regulate highway, tunnels - utilizes the road network and increases road safety through traffic control, traffic guidance and incident detection.

MODERN CITIES
Intelligent traffic signals and prioritization of public transport are examples of how our solutions make the urban road network & transport system more efficient.

PUBLIC TRANSPORT
Good systems informs in real time, optimize travel time, avoid unnecessary stops and make the traffic flow smoothly.

CAR ACCESS & PAYMENT SOLUTIONS
Parking should be convenient, safe and secure. Motorists want to find available parking spaces quickly and they only want to pay for the actual parking time.

EFFECTIVE LIGHTING
Our product portfolio includes dynamic road information including VMS, lanterns, signal control of intersections, railway signals and LED-based street lights.

RELIABLE SERVICES
Continuous preventive maintenance as well as an efficient organization will ensure that the technical systems remain effective for as long as possible.

www.swarco.no
www.swarco.se
www.swarco.dk
www.swarco.fi
SMART HIGHWAYS AND TUNNELS

The volume of freight transport on our roads is continually growing, journeys are taking generally longer, deadlines are getting harder to meet. At the same time more and more people commute to work over increasingly longer distances. This means that traffic is increasing, particularly in metropolitan areas and along major national and international roads.

ITS makes it possible to increase the efficiency of the transport system. This means that the road system can be utilized better – and that the environmental impact can be minimized. ITS is also used to increase road safety through traffic control, traffic guidance and incident detection.

SAFETY
- ITS system can be a cost-effective alternative to infrastructure modifications and contribute to increased road safety.

INFORMATION
- A good flow of information also provides a more comfortable journey. Research shows that up to 30% of motorists change their route when they receive travel information about obstacles on the road.

MOTION
- ITS makes it possible to increase the efficiency of the transport system and allows the road authority to utilize its road network in a very efficient manner.

ENVIRONMENT
- Create a sustainable traffic solution with alternative traffic control, public transport, and environmentally friendly solutions.

SERVICES
- Keep your technical systems in shape with an effective service organization and modern engineered solutions to retain its efficiency for the whole lifetime.

SMART ROADS

Traffic information
Variable message signs
Motorway systems
Tunnel systems
Safe lighting
Data logging

SWARCO I First in Traffic Solutions.
SAFETY

Protecting our dear and loved ones, regardless if they are travelling by car, bike or on foot, making sure they arrive safely at their destination is the top priority of all our traffic solutions. Reliable high quality products, excellent optical performance signalization and powerful monitoring systems combined with quick service provides safe and reliable solutions for years to come.

MONITORING SYSTEMS

To ensure a high operational value for investments made in the traffic system, SWARCO offers a variety of monitoring systems tailored for your specific needs. A monitoring system provides immediate information of faults and errors that occur in the traffic systems, ensuring a fast response time for the maintenance crews and a high service to the public.

The central systems is also used to gather operational data and traffic information from the Motorway Outstation and distribute this to databases, web-information or VMS signs.

SAFE LIGHTING SYSTEMS

SWARCO has extensive experience in optical signalling. Our product portfolio includes dynamic road information including VMS, lane lights, signal control of intersections, railway signals and LED-based street lights.

MOTORWAY & TUNNEL CONTROL SYSTEM

SWARCO Traffic Management System for Motorway and Tunnels collects and processes the data of different sensors and data sources from different areas. The scope of delivery includes an extensive data management with collection, archiving and multiple possibilities of evaluation as well as a graphical user interface (GUI) with consistent operating concept. The modular design guarantees flexible adaptation to various requirements and environmental conditions. The different software components are based on a data distribution system with various services. The client-server architecture is consequently implemented.

• Determining the traffic situation
• Corridor control with harmonization, congestion war-
ning, warning of wet roads, limited visibility, black ice
• Temporarily use of hard shoulder
• Junction control
• Ramp metering
• Tunnel control and barrier systems
• Travel times
• Automatic brightness control
• Weather data forecast
• Automatic Incident Detection systems
• Adaptive speed control

SCC MOTORWAY OUTSTATION

The motorway outstation is the key component of a modern motorway or VMS system. Using modern technology the SCC is not just a controller of VMS, but also for improving traffic flow by adaptive speed control.

SCC contains advanced queue algorithms, safety interlocking to prevent faulty and dangerous messages on signs for enhanced traffic safety, with direct control of VMS signs. The SWARCO Motorway Controller (SCC) is designed to minimize accident risks by monitoring the traffic flow and automatically closing lanes, reducing speed, and rerouting traffic when an incident is detected.

LOCAL ITS

Local problems need local solutions. Instead of costly road works, which takes long time to actuate, local ITS solutions can solve many of the safety issues faced in an urban and interurban environment. SWARCO’s solutions for local ITS consists of tailor made VMS signs, detection systems and outstations.

VARIABLE MESSAGE SIGNS

SWARCO is the leading European supplier of high quality Variable Message Signs (VMS) for traffic guidance and information purposes. SWARCO’s variable message signs constitute the cutting edge of optical quality in signalisation. Our patented lens technology enables the fitting of the optical lens directly in the matrix plate herefore removing the need for a distorting front screen. SWARCO’s VMS combines attractive design, low maintenance costs and a superb optical quality for optimum visibility and enhanced traffic safety.
By presenting the right information at the right time to public transport passengers and motorists, accessibility and safety can be improved. Research shows that up to 30% of motorists change route when they receive information about travel time or obstacles, which means the road network will be used in a more effective way. A good flow of information also provides a more comfortable ride and reduces stress for both public transport and private traffic.

**TRAFFIC DATA LOGGING**

The SCC is a powerful traffic data logging device. SCC can provide information such as:
- Traffic volumes
- Flow
- Turning percentage
- Classification
- Bicycle count
- Real-time traffic situation

The data is transferred to the central system and stored in a database. The central system contains powerful tools for searching the database, creating reports and exporting the stored traffic information.

**INFOMOBILITY PLATFORM**

The central software collects and processes the data of different sensors and data sources from different areas. The scope of delivery includes an extensive data management with collection, archiving and multiple possibilities of evaluation as well as a graphical user interface (GUI) with consistent operating concept.

SWARCO’s infomobility platform can:
- Calculate the optimal distribution of traffic within the network
- Estimate and updates the traffic demand O/D model
- Establishes the actual network availability
- Forecast the traffic distribution and performance on the whole controlled area.
- Provide weather data such as road weather information systems (RWIS), wind warning systems, black ice warning, weather forecasts, etc.

**PUBLIC INFORMATION**

SWARCO delivers a variety of systems for traffic monitoring, incident detection, data collection and presentation on the web or via apps and traffic displays.

The traffic information gathered from the traffic systems, can be presented on:
- LED Variable message sign boards placed on the road side to give direct and live information to the drivers during their journey, for information and guidance, such as automatic traffic alerts and re-routing via text signs.
- Plan your journey in advance by getting traffic information on WEB. Both information about the actual traffic situation, and prognosis for further traffic development.
- Get traffic information while travelling. SWARCO mobile solution makes life easier by providing up-to-date and accurate information before and during a trip.

**TRAFFIC CENTRES**

For traffic operators, SWARCO’s system gives an easy overview of the current traffic situation, with several administrative benefits, such as:
- Live traffic information with remote access
- Traffic management
- Proposed actions
- System and Traffic warnings
- Statistics & Reports

**STATISTICS & REPORTS**

The central system stores and provides valuable information, such as traffic data logging, operational status, program changes and down time. The information can be accessed by built in reports or exported to other systems.
Along with requirements of improved accessibility, environmental improvements and traffic safety, follows the need for smarter transportation systems, where several types of transportation shares the road space. Dynamic rerouting systems, ramp metering, variable speed limits and traffic guidance are some examples of making the transport system more effective, and environmental friendly.

SWARCO’s ITS-solutions can be the difference between keeping the traffic flowing or congested.

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SWARCO’s ITS-solutions can be the difference between keeping the traffic flowing or congested.

SWARCO rerouting system can also be used for smaller applications at for example a shopping mall area. Here the system will be a very cost effective solution if it is built up as a stand alone system with web-interface and “cloud” solution.

Our customers see the need to adapt the valid speed limits based on the actual traffic situations and rapidly changing weather conditions.

SWARCO can deliver complete systems for the control of variable speed limits. The SWARCO Outstation gives the customer a flexible and reliable solution for the control of speed based on inputs from weather sensors and traffic detectors.

SWARCO’s traffic information platform with a wide range of real time traffic management applications supports the implementation of Traffic Control and Information Centres by interfacing the different traffic control, transport management and information systems operational in the site.

SWARCO provides solutions for automated access control on motorways and in tunnels. Our robust barrier systems were designed to withstand the harsh environmental conditions on motorways and tunnels.

SWARCO offers a large range of traffic detectors suitable for the specific application. Our detection systems are based on inductive loops, radar and videodetection, tailored for the specific application.
Creating a sustainable traffic solution is a challenge for all modern cities. Main goal is to reduce emissions on both short and long range. By investing in smart and adaptive traffic solutions traffic flow will be improved, public transport made more attractive by prioritization and bike commuters spend less energy on unnecessary stops making the bike an attractive alternative.

**Environment**

Information about actual air quality can be gathered and presented in OMNIA’s user friendly interface. By connecting weather stations and air quality sensors valuable information such as CO, NO, NO2 temperature, humidity and even sound levels can be stored in OMNIA’s database, presented on the web or saved for future use.

The environmental information can also be integrated with traffic management system, to reduce traffic in certain area and speed reductions on variable speed signs.

Traffic volumes is not the only way to control traffic. From a strategically point of view sometimes there is a wish for reducing traffic in certain areas due to high levels of emissions.

SWARCO offers system for gathering meteorological and air pollutant information, which is put together in a emission prognosis for up to 36 hours in advance. This prognosis is used for reducing the traffic in designated areas by adapting the traffic signals to these conditions.

Adaptive speed limit control, effective rerouting and information about travel times and public transport alternatives are all solutions that lead to improved traffic flow. And smoother traffic means less pollution.

The technical progress in the luminous intensity of LEDs combined with SWARCO’s expertise in optics and LED applications make our light sources for traffic signals, VMS signs and street lighting an interesting alternative to conventional illumination techniques, allowing significantly reduced power.
Technical systems in all its glory, but without an effective maintenance a good investment soon can be lost. Controlled by a professional support center, a continuous preventive maintenance and an effective service organization for quick fault correction, guarantees that the technical systems retain their efficiency for its whole lifetime. Our highly skilled engineers designs modern and effective systems and hosts your IT-solutions. After all, who could be taking care of the system better than the one that actually developed and installed it?

Need help? SWARCO's support is there at your convenience. The support center will help you get in contact with specialists, provide information and manuals, and book service and maintenance for your traffic systems. We also monitor your systems, and contact you or your maintenance crew in case service is needed.

Fast and reliable service and maintenance is a key feature for a well working system. SWARCO provides a 24/7 support and service on site to handle all types of service in your interurban traffic systems, tailored to your specific needs.

By letting SWARCO host your central systems, you can spend more time on what is really important. Your traffic.

Our hosted and “cloud” solutions and services provides a easy accessible online platform for your traffic systems over the internet.

Our hosted services include:
- Communication
- Server monitoring and backup
- Server Maintenance
- Configuration

To maximize the efficiency of new and installed equipment SWARCO offers a range of services such as:
- Detailed design of Motorway and Variable speed control systems
- Traffic technical maintenance
- Simulations
- Inventory of existing systems
- Investment plans
- Consultancy