With demand for rail travel at record levels, transport operators need solutions to manage capacity and to provide green, secure and attractive journeys for customers.

The need for advanced communications and control

- **Today’s cities never stop.** Huge passenger flows must be managed safely and smoothly. The ability to visualise and control operations, monitor passenger flows and regulate train services in response to demand is crucial.
- **Networks are increasingly complex.** Integrated Operation Control Centres (OCCs) are needed to supervise every subsystem – from traffic management to power supplies, security and communications, including legacy systems.
- **Incident management.** Operators need the ability to detect incidents quickly, with decision support to help recover from a crisis and data logging to provide an auditable record of what happened.
- **Information is power.** Transport users need real-time information on platforms, on trains and via mobile. The ability to provide end-to-end travel information via multiple channels is essential.
- **Urban and main line communications.** Rail customers need an expert technology partner, delivering proven innovation to enhance the performance of communications systems while reducing costs.
- **Counter emerging threats.** Cyber attacks on critical infrastructure are a reality. Transport operators need communications and supervision systems that offer the highest levels of security and resilience.
- **Safe journeys.** Passengers need a secure environment. Video surveillance and emergency call points on trains and on platforms are vital to put travellers at their ease and build confidence. There is also a need for flow management systems to safeguard passengers in today’s increasingly congested systems.

Integrated communications and supervision systems hold the key to meeting these needs and optimising the performance of transport networks.

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**3.5 people/m²**  
Risk threshold for crowds. At densities above 4 people/m², flow rates fall rapidly and movement becomes increasingly unpredictable.

**15%**  
Traction energy savings achieved with optimised train management. Savings from a single metro train are equivalent to the power consumption of more than 100 family homes.

**120 million**  
Metro journeys worldwide every working day.

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Thales is the world’s No. 1 supplier of integrated transport communications and supervision systems. We provide everything our customers need to improve safety, increase capacity and boost business performance, with solutions that include communications and supervision, passenger information and comfort, and security.
Boosting passenger satisfaction and security
Thales’ advanced supervision solutions make complex networks easier to run

Managed through an intuitive user interface, our integrated Operation Control Centre (OCC) platform provides next-generation supervision solution – goes even further, with deep crossfunctional integration to boost capacity, operators with complete visualisation and control of every subsystem to guarantee smooth, continuous operations. Thales Hypervisor – our ease incident management and provide seamless journeys for passengers.

Fixed asset control
Supervision of all subsystems – including 3rd party applications – from traction power and fire detection to lifts and ventilation systems. Up to 500,000 control points supervised from a single OCC.

Power system
Supervision of low-voltage systems, including substations, distribution network optimisation and backup power supply.

Traffic management
(ATS/ATR)
Train tracking, routing and regulation, depot supervision and timetable management.

Passenger information
Remote management of passenger information, public address and time distribution on-station and on-board.

Security management
Access control, intrusion detection, CCTV, biometric security and encrypted communications.

Decision support
Operator assistance including decision support, training, simulation, reporting and maintenance management.

Security
Complete IT and physical security solutions based on resilient architecture to optimise availability and counter cyber threats. Functions include secure SCADA, access control, perimeter security, intrusion detection, on-board and in-station CCTV with real-time image analysis.

Passenger information and care
Our solutions make public transport safer and easier to use. They include passenger information and entertainment – on-board, in-station and online – with CCTV, passenger flow management and emergency call points to provide customer assurance.

Greener networks
Thales’ smart supervision delivers power energy savings of up to 15%, with train movement and timetable optimisation to eliminate costly power demand spikes and dynamic scheduling to maximise the opportunity for regenerative braking.

Communications
We supply total telecom solutions for metro, main line and high-speed rail, including broadband track-to-train communications, backbone and access networks. Our wireless package includes TETRA, WiFi and innovative GSM-R for long-distance main line operators.
Maximising network performance

Turnkey integration

The Dubai Metro in the United Arab Emirates highlights Thales’ ability to integrate every major global system. Our solution for the customer includes communications, supervision, passenger information system, public address and time distribution. We also provide security, with access control and live streaming video surveillance from any train. All systems, including power management, are fully integrated in a state-of-the-art Operation Control Centre.

Delivering optimised control

For the Los Teques Metro in Venezuela, Thales delivered a complete integration package to support operations on the new line, which links Los Teques with the capital, Caracas. It includes a fully-integrated OCC, traffic control and supervision, with power management and auxiliary systems. Also included are public address and passenger information systems, and a communications package with WAN and radio.

Main line expertise

Our supervision and communications solutions are at the heart of the world’s biggest and most exciting main line projects. The new North-South Railway in Saudi Arabia is an example. Our solution includes the telecoms backbone, voice and data applications, with innovative cost-effective GSMR technology for long-distance operations. Thales also provides a complete passenger information package, CCTV, access control and an integrated OCC.

Mission-critical outsourcing

Thales has the ability not only to supply, but also to maintain and operate critical systems. For example, London’s Underground’s metro communications system – Connect – in the United Kingdom. Thales delivered Connect as part of a 20-year private finance initiative (PFI) contract to renew, maintain and run the underground’s operational radio and transmission systems. The solution covers more than 120 stations on the network, which is the oldest in the world.

Supporting high-speed rail

In Spain, Thales has delivered a telecoms backbone for data transmission, as well as a full security system, including video surveillance, access control and intrusion detection for the nation’s high-speed rail network.

Transforming supervision and control

Thales has renewed the supervision systems for lines 3, 5, 12 and 13 of the Paris Metro in France. Our supervision solutions maximise operational efficiency, with state-of-the-art train regulation and easier, more reliable supervision of equipment.

Why Thales?

Customer focus

Thales has a deep understanding of the transport market and works in partnership with customers to deliver solutions that meet specific operational needs and conform to operators’ business rules.

Complete portfolio

Our systems offer is the largest in the market and includes a consistent suite of solutions, from communications and supervision to passenger information and security – all based on resilient telecoms infrastructure that is designed to meet the challenges of the transport environment.

Advanced supervision

Thales Hypervisor and integrated OCC platforms offer the highest levels of integration and automation, with the ability to provide seamless supervision of every subsystem – including legacy and third-party systems.

Proven integration skills

We offer complex systems integration expertise in both brownfield and greenfield projects, with an unparalleled ability to design, deliver and maintain the world’s largest and most demanding transport communications and supervision solutions.

A trusted partner

Thales is a dependable long-term partner with operations in 56 countries and a heritage that stretches back 75 years. Our worldwide installed base and network of integration and competence centres means Thales is always at your side, with solutions delivered and maintained by expert local teams.

Secured by Thales

Security is at the heart of every Thales’ solution. The systems we build for our customers draw on our expertise and leadership in domains that include aerospace, defence and security.

At your service

Through-life support for communications and supervision systems, including maintenance, upgrades and operations outsourcing.