

Thales on the Transportation market



Thales is a global player with a record of success in the field of ground transportation systems, both in the freight and passenger transport markets, and expertise that ranges from greenfield projects to upgrades and modernisation of existing infrastructure. No other company in the world is able to offer such an extensive portfolio of electronic and IT systems to national railways and urban transport operators: signalling, traffic supervision, communications, security and revenue collection.



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The steady increase in passenger volumes around the world makes transport networks more and more complex to manage. Several mega trends impact the transportation business:

- Growing urbanisation, with more than 50% of the world's population living in urban areas
- Ageing rail infrastructure that no longer meets citizens' mobility needs
- Pressure to optimise financial performance
- Growing demand for interconnection across different means of transport (rail, metro, tram, bus, bike and car)
- A growing need to reduce the carbon footprint of urban transportation systems

THE THALES RESPONSE

With Thales systems, operators can offer their passengers a smooth, safe and well-connected travel experience.

Thales integrates all rail systems to ensure maximum operational efficiency and optimise operating costs. These systems include signalling, traffic supervision, communications, security and fare collection for metros and mainline rail networks.

KEY FIGURES

- > N° 3 worldwide in signalling systems for mainline rail and N°1 in urban rail signalling with the CBTC solution
- > Unique experience in nationwide ticketing and fare collection solutions
- > 7,700 employees and over 100 customers worldwide

THALES ADDED VALUE

Thales is supporting the on-going digital transformation of the rail sector, drawing on Big Data technologies and artificial intelligence to maximise operational efficiency and developing the cybersecurity solutions that are critical to data protection and rail transport safety.

Thales systems are equipment agnostic. They are designed to operate on all rolling stock platforms in service on any kind of high-speed and intercity train, metro and light rail system. This unique positioning ensures that rail operators have complete freedom to select the systems providers of their choice.

Innovation is a way of life at Thales. A number of innovative solutions and disruptive technologies developed by Thales have had a profound and enduring effect on the ground transportation sector:

- CBTC (Communications-Based Train Control) signalling systems for metros
- ETCS (European Train Control System) signalling systems for mainline rail
- Nationwide multi-modal, multi-operator fare collection systems
- Integrated supervision systems



THALES SOLUTIONS

Signalling systems

- Urban transport: The SelTrac™ CBTC communications-based train control system, developed by Thales 25 years ago, is the technology of reference used by metro operators for the construction of new lines and the upgrade of existing networks. It is in service on over 85 lines in 40 major cities worldwide and used by more than 3 billion passengers per year.
- Mainline rail: ETCS is the European train control standard initiated by Thales to enable trains to cross national borders without needing to change systems or drivers. It is operational in numerous countries both inside and outside Europe.

Communication and supervision

Thales provides a range of integrated communication and supervision systems to help operators tailor their services to changing usage patterns with optimum safety.

Intelligent mobility solutions from Thales help operators to ensure passenger safety and manage stations more efficiently. Passengers can optimise travel times under any circumstances thanks to updated passenger information displayed in stations or personalised for smartphone users.

The role of telecommunications systems is continuing to expand as transport operators and regulators step up to the challenges of digitisation and onboard connectivity.

Ticketing systems

Thales ticketing systems are in service on the metros of some of the world's largest cities. They range from systems designed for a single metro line to interoperable, multi-modal, multi-operator solutions for an entire country.

These systems improve the passenger experience in stations, and provide operators with a reliable data collection and revenue distribution capability.



Road tolling

Thales is a recognised player in road tolling, offering a line of interoperable, secure, multi-operator solutions. Thales also provides car park management systems.

SELECTED REFERENCES

Urban transport

Complete solution for Dubai metro



Inaugurated in 2009, the Dubai Metro is one of the longest driverless metro systems in the world. Thales provided a comprehensive solution including CBTC signalling, ticketing, telecommunications and supervision.

London Underground signalling



After the modernisation of the Jubilee and Northern lines, which was successfully completed for the London Olympics, Thales is now working on the Circle, District, Metropolitan and Hammersmith & City lines. This is the oldest part of the London Underground and accounts for 40% of the entire network. The resignalling project will increase capacity by 30%.

Onboard video protection in Paris



Thales has supplied its onboard video surveillance solution for Paris buses and the commuter train network in the Ile de France region.

Nationwide ticketing in the Netherlands and Denmark

Travellers in the Netherlands and Denmark can now go anywhere in the country on any mode of public transport (train, bus, tram and metro) using a single smart card. The systems deployed by Thales are the only nationwide ticketing systems in the world.

MARKET DATA SHEET

Mainline rail

Complete solution in Saudi Arabia

Thales provided a turnkey solution for the North-South Railway in Saudi Arabia, including signalling, supervision and communications, security, fare collection and associated services. This project is the world's largest single implementation of ERTMS (European Rail Traffic Management System) for a new network.

Lötschberg and Gotthard tunnels in Switzerland



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Thales's ETCS signalling solution is in service with high-speed trains using the Lötschberg Base Tunnel and the new Gotthard tunnel inaugurated in May 2016, which runs for 57 km under the Alps and is the world's longest rail tunnel.

Signalling for high-speed lines in Spain

Thales has deployed its ETCS signalling and rail telecommunications solutions on more than two-thirds of the high-speed network in Spain. Thales also provides

specialised maintenance services to help ensure the long-term safety and comfort of high-speed train passengers.

Roads

Brisbane free-flow tolling in Australia

With Thales's free-flow electronic tolling systems, motorists do not have to stop to pay. Benefits include shorter travel times, lower emissions, fewer accidents and more efficient revenue collection.



Car park management

As a French market leader in public car park management systems, Thales has equipped close to 600 car parks in city centres, at Paris Charles de Gaulle and Orly airports, park-and-ride facilities for the TGV East high-speed rail line, and intermodal car parks in Turin, Dubai and South Africa.

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