Communications-Based Train Control (CBTC), using moving-block signalling technology, is at the heart of safe, high-performance operations on modern metro networks.

By shrinking the headway under 60 seconds, SelTrac® CBTC boosts the frequency of passenger services, doubling and even trebling line capacity.

Thales pioneered CBTC technology and made it the global standard for urban train control. Today, Thales SelTrac® is the world’s most widely adopted and trusted CBTC system.

3 billion passengers carried annually by Thales SelTrac® CBTC

Proven in service with more than 10 million train hours in revenue operation

33 UTO/DTO driverless metro lines

34 radio CBTC deployments
Boosting urban mobility

World’s longest driverless metro

World’s longest driverless metro

 references focus

Upgrading metro performance

Boosting urban mobility

Supporting China’s urbanisation

People movers and Light Rail

World’s longest driverless metro

London

The London Underground – the world’s first metro – handles more than 1.2 billion passenger journeys every year. Thales’ CBTC is playing a major role in the transformation of the network with enhanced train frequency, increased capacity and a better regulated service. Re-signalling of the Jubilee Line was delivered in time for the London 2012 Olympic Games.

Istanbul

Thales’ CBTC moving-block technology is transforming passenger mobility, with safe, reliable journeys and minimum headways to optimise capacity on the city’s new 22 km metro line on the Anatolian (Asian) side of Istanbul. Thales provided turnkey delivery of integrated signalling and communications for the new line, which is playing a vital part in supporting sustainable urban growth and alleviating high levels of traffic congestion.

Singapore

Passenger numbers on Singapore’s metro have doubled in less than a decade and daily ridership now exceeds 2.5 million. Re-signalling of the NorthSouth and EastWest lines – two of Singapore’s busiest metro routes – will play a vital part in meeting the needs of a growing population and supporting new development along rail corridors. Thales delivered SelTrac® CBTC, a state-of-the-art fully-automatic train control system, for both Red and Green Lines which together total 72 km.

Dubai

To cut road congestion, reduce air pollution and improve the quality of life for its 8 million citizens, the city of Hyderabad is building a modern mass transit system using state-of-the-art automated transportation technologies. Thales’ SelTrac® CBTC will be deployed across Hyderabad Metro Rail’s three new lines, allowing headways of up to 90 seconds across the 72 km network.

Hyderabad

With a population of more than 11 million, São Paulo is the biggest city in the southern hemisphere and its metro handles more than 4 million passengers daily. Expansion of the network holds the key to combating growing road congestion. A new monorail, with trains travelling above the roads on overhead lines, will mean easier journeys for an estimated 230,000 passengers per day. The new line connects the city’s Congonhas airport with the existing metro network.

São Paulo

The world’s most advanced urban signalling technology – SelTrac® CBTC – is answering the needs of the world’s largest city, Shanghai, which has 24 million citizens. As well as delivering smarter signalling, interoperable across new lines, Thales supports its customers with smarter delivery. Thales brought three lines, 10, 11 and 12, into revenue service simultaneously – a world first – and equipped Lines 7 and 11 to give a total of more than 227 km on the Shanghai metro network. Line 11 is China’s first metro route to cross a provincial border. Thales also provides CBTC for metros in Beijing, Guangzhou, Helens, Nanjing, Nanchang and Wuhan.

Shanghai

VCBTC is being deployed during non-passenger hours to avoid inconvenience to commuters.

Supporting China’s urbanisation

With a population of more than 11 million, São Paulo is the biggest city in the southern hemisphere and its metro handles more than 4 million passengers daily. Expansion of the network holds the key to combating growing road congestion. A new monorail, with trains travelling above the roads on overhead lines, will mean easier journeys for an estimated 230,000 passengers per day. The new line connects the city’s Congonhas airport with the existing metro network.

São Paulo

Washington

Passengers using Washington Dulles International Airport benefit from AeroTrain®, an automated people mover that runs between the main terminal and concourse buildings. The driverless system uses Thales’ SelTrac® CBTC – a solution that provides 99.99% automatic train control at speeds of up to 130 km/h. Thales also supports CBTC across new lines, with trains travelling above the roads on overhead lines, will mean easier journeys for an estimated 230,000 passengers per day. The new line connects the city’s Congonhas airport with the existing metro network.

Hong Kong

Disneyland Resort Line: travelling on a fully-automatic metro train is all part of the adventure for visitors to the iconic Hong Kong Disneyland. Ma On Shan Line: the new town of Ma On Shan is expected to grow dramatically in coming years. With punctuality at 99.92% and significant energy savings, SelTrac® CBTC is playing a decisive role in meeting Hong Kong’s mobility challenges.

Hong Kong

People movers and Light Rail

Easier commuter journeys

South Korea

Thales’ SelTrac® CBTC is deployed on three key commuter routes in South Korea, including the line from Bundang to Seoul that carries 450,000 passengers every day. Rail users benefit from regular and frequent train services thanks to the 2-minute headways and 110 km/h speeds permitted by CBTC.
Thales - the world’s No.1 supplier of CBTC solutions

Thales has an unbeaten track record with over 60 CBTC projects delivered or on-going in more than 30 cities around the world.

THALES WORLDWIDE MARKET FIRSTS:
- 1st fully-automated CBTC in revenue service (Vancouver SkyTrain, 1986)
- 1st CBTC re-signalling (London Docklands Light Railway, 1995)
- 1st radio CBTC (Las Vegas, 2004)
- 1st with three lines into simultaneous revenue service (Shanghai, Lines 6, 8 and 9, 2007)
- 1st automated depot including driverless coupling/uncoupling (Vancouver SkyTrain)

SelTrac® CBTC references (in service and underway):

Brazil
- Manaus Monorail – UTO
- Salvador Lines 1 and 2 – UTO
- São Paulo Line 17 – UTO

Canada
- Edmonton LRT – ATP
- Ottawa Confederation Line – STO
- Toronto Scarborough RT Line – STO
- Vancouver – UTO (SkyTrain Expo Line, SkyTrain Millenium Line, Evergreen Line, Canada Line)

Chile
- Santiago metro Lines 3 and 6 – UTO

China
- Beijing Line 4 and Daxing South Extension – STO
- Guangzhou Lines 3 and 9 – STO
- Hefei Line 1 – STO
- Hong Kong – STO (West Rail, Ma On Shan Line, Kowloon Southern Link, East West Line)
- Hong Kong – UTO (Disney Resort Line, Airport APM)
- Nanjing Line 51 – STO
- Nanchang – STO
- Shanghai Metro, Lines 6, 8, 9, 7 and 11 – STO
- Shenzhen – STO
- Wuhan LRT Line 1 and Extension – DTO
- Wuhan LRT Line 3 – STO

France
- Paris Metro Line 13 – DTO

India
- Hyderabad Lines 1, 2 and 3 – STO

Malaysia
- Kuala Lumpur (Kelana Jaya Line and Extension – UTO, Airport APM – DTO)

Saudi Arabia
- Mecca Metro – UTO

Singapore
- Singapore North-South East-West Line – DTO

South Korea
- Sin Bundang and Extension – UTO
- Busan Gimhae – UTO
- Incheon Line 2 – UTO

Turkey
- Istanbul Kadiköy-Kartal Line – STO

UAE
- Dubai Red and Green Lines – UTO

UK
- London Docklands Light Railway – DTO
- London Underground – STO (Jubilee Line, Northern Line)

USA
- Detroit, Downtown People Mover – UTO
- Los Angeles – UTO
- JFK International Airport APM – UTO
- Las Vegas Monorail – UTO
- Newark International Airport APM and Northeast Corridor Extension – UTO
- New York City Transit STO (Canarsie and Flushing Line)
- San Francisco MUNI – DTO
- Tampa International Airport APM – DTO
- Walt Disney World Monorail – UTO
- Washington Dulles Airport APM – DTO
- West Virginia University PRT – UTO

UTO = Unattended Train Operation
DTO = Driverless Train Operation
STO = Semi-automated Train Operation
ATP = Automated Train Protection