



12 FULLY AUTOMATED, DRIVERLESS 3-CAR METRO TRAINS

# Sydney Metro – Western Sydney Airport

Turnkey metro system for the Sydney Metro – Western Sydney Airport

In 2022, Siemens Mobility concluded a contract to deliver the turnkey solution for the Sydney Metro – Western Sydney International Airport project as a member of the Parklife Metro consortium, which brings together Plenary Group, Webuild, Siemens and RATP Dev. The project includes the construction of stations, the delivery of trains and systems, and operation and maintenance.

Siemens Mobility will supply 12 fully automated, driverless 3-car metro trains and digital rail infrastructure, including signaling, electrification, telecoms, platform screen doors and a depot. Siemens will also provide maintenance for the trains and rail infrastructure for 15 years, including digital fleet management enabled by Railigent X.

The 23-kilometer new railway, including 6 new stations between St Marys, the new Western Sydney International Airport and the Bradfield City Center, will become the transport spine for the region. The project is a significant milestone, being the first turnkey rail project and the first public-private partnership for Siemens Mobility in Australia.

The trains are part of Siemens Mobility's Inspiro family. Their state-of-the-art Inspiro High Capacity Platform-based concept ensures maximum efficiency.

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The Sydney Metro Western Sydney International Airport is built with sustainability and passenger experience in mind. It is the first rail project in Australia committed to being certified carbon neutral from the start of construction work through to operations. The vehicles are being developed with a high focus on meeting user preference: The design and concept enable flexible interior solutions that put the passenger first and optimally meet the requirements of an airport connection.

## Highlights

- Advanced digital technology
- Fully automated, driverless train operation and application of Railigent X ensure optimized system performance and up to 100% system availability through predictive maintenance.
- Inclusive, barrier-free concept: the train has step-free access, integrated wheelchair areas, and inductive hearing loops. Multifunctional areas with tip-up seats offer space for prams.

- Customer-focused design: The interior was developed with passenger input using mixed reality simulations. Key features include under-seat luggage storage, large screens for real-time passenger information, passenger emergency intercoms, CCTV surveillance, headrests at transversal seats and wide, open gangways for a clear line of sight. The main focus on the interior development was the incorporation of human factors ergonomics.
- A flexible seating arrangement meets the needs of both operators and passengers. Longitudinal and transversal seats and flexi-bay areas with tip-up seats maximize comfort and capacity. Dedicated multifunctional areas ensure the safe transport of luggage.
- Enjoyable passenger comfort for pleasant rides: The train features two redundant air-conditioning units per car and floor heating for a pleasantly cosy interior. The train concept was engineered to minimize noise emission, enhancing travel experience.

## Technical data

Train configuration	3-car train (M-T-M)
Carbody material	Stainless steel
Track gauge	1,435 mm
Train length (over couplers)	67,630 mm
Car width	3,190 mm
Floor height (above top of rail)	1,150 mm
Passenger capacity per train (4 passengers/m <sup>2</sup> )	645 persons (194 seats)
Passenger doors per car	2 x 3 exterior sliding doors
Maximum operating speed	100 km/h
Power supply	AC 25 kV / pantograph

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