



## FACT SHEET

# CAPABILITY: METRO

Global pioneer of driverless metro



### Definition

**Metro is the next step for large growing cities**

**Global experience, world-class capacity**

A metro is a passenger railway in an urban area with high capacity and frequency. The most famous metros, those in New York, Paris and London have given rise to others in all parts of the world. In China for example, metros are being developed in almost all of its megacities with 21 in operation and a further 15 planned in the next few years. They can be attended or unattended, ie: controlled remotely.

The evidence shows that metro provides the highest capacity transport solution enabling greater population density. From the customer perspective, the speed, efficiency and amenity of a modern metro system, ensures a highly reliable and efficient service.

Keolis operates metros in France and the UK and is building others in India and China. Keolis is a global pioneer of Unattended Train Operation (UTO) (GoA4) metro. Keolis introduced the world's first UTO metro to Lille in 1983. Keolis now operates 12 lines in 6 cities, with new projects planned and under construction.

The Keolis Group is the most experienced operator of automated metro in the world. Our knowledge extends across the project lifecycle, from planning to life extension and renewal. Key projects are listed here with the key outcomes sought by the various cities and communities:

- Keolis Lille Metro: was the first UTO in the world. The maturity of the network gives us deep understanding of methodology to enhance efficiency, environmental outcomes and renewal, including energy savings and a major renewal program which is underway. Lille is an example of the highest of the four levels of automation in that it has neither drivers nor staff on board (similar to Rennes and line D in Lyon)
- Keolis Lyon: Keolis managed the design and delivery of the conversion from a manual to automated network. We are now managing the introduction of new rolling stock and the refurbishment of others, as well as the introduction of an automatic signaling system
- Keolis Rennes: the success of the first line will be replicated with a second line due for completion in 2018
- Docklands Light Railway: with its six integrated lines, the DLR is one of the most well-known driverless metros
- Keolis Hyderabad Metro is an example of a metro mega project of a similar scale to Sydney Metro. The delivery model included the early engagement of Keolis to guide the design and development of the network, mobilisation of the new operation and eventually, operations.



Lyon Metro - France



Hyderabad Metro - India



Lille Metro - France



Govia Thameslink Railway - UK



### Introducing Metro to Australia

Keolis Downer  
has the capacity  
to deliver

Five key areas that are critical for the successful deployment of metro in any location are:

- **Efficient and effective network design** – a number of standalone lines with integrated interchange and multimodal capacity will reduce delivery and operational risk, deliver better competitiveness/contestability outcomes and improve customer outcomes. Complexity adds unnecessary risk to the project delivery, reduces operational resilience and may reduce customer service.
- **Think Like a Passenger** - This philosophy places the customer experience at the centre of network design and operation, with the objective of delivering a first choice transport option, rather than transport of last resort. This means fastest end-to-end journey, most reliable, most comfortable and best value-for-money option.
- **Intermodality** - Integrated intermodal transport service provision is the future of transport provision in large, complex urban environments. An integrated view of transport services delivers a door-to-door customer experience, with seamless interchange and coordinated provision of information across modes.
- **Early operator engagement** – experience reminds us that customer focus can be redirected where an operator is not involved early enough in the life of a complex metro project. Keolis Downer is supported by the Downer Group, Keolis Group and SNCF, the French National rail operator, and can bring this pedigree to any discussions re metros particularly to help plan the network and scope its delivery. This will ultimately reduce cost and risk, while increasing the focus on the customer.
- **Service and network design** - Keolis Downer's approach to network design draws together experience from over 100 years of operations. We now have operations in 15 countries and serve more than 3 billion customers each year. Keolis Group has institutionalized this knowledge and work with public transport authorities to deploy it in local settings to promote customer outcomes and operational efficiency.

We are a global pioneer and one of the world's most experienced operators of metro.

Our experience includes both greenfields and brownfields sites; ie: we can support the delivery and operation of new railways or enhance the operation of existing networks. In Hyderabad, we are engaged in delivering one of the most significant metro projects currently underway.

The Group's metro operations include a mix of capabilities from airport services to high capacity urban rail lines. Our understanding of network capacity as well as the role of automation in optimising capacity and improving efficiency, helps to ensure we can deliver a service best matched to the needs of the customer.



Docklands Metro - UK

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