

KEOLIS, A LEADING ASSET MANAGEMENT PARTNER TO PUBLIC TRANSPORT AUTHORITIES

Regional authorities and their public transport operators face mounting pressure as they seek to address numerous challenges, from the increase in urbanisation and traffic congestion to ageing infrastructure, rising demand for public transport and heightened public expectations regarding environmental protection and climate change.

Against this backdrop, efficient management of network assets – rolling stock, infrastructure, systems, facilities and stations – is crucial to achieving operational excellence in public transport services and delivering on local government transport policies. This is what enables public transport authorities (PTAs) to maintain performance throughout the lifecycle of their assets as well as effectively manage all risks involved and optimise investment and operating costs. It is also key to offering passengers high-quality, safe and reliable transport services.

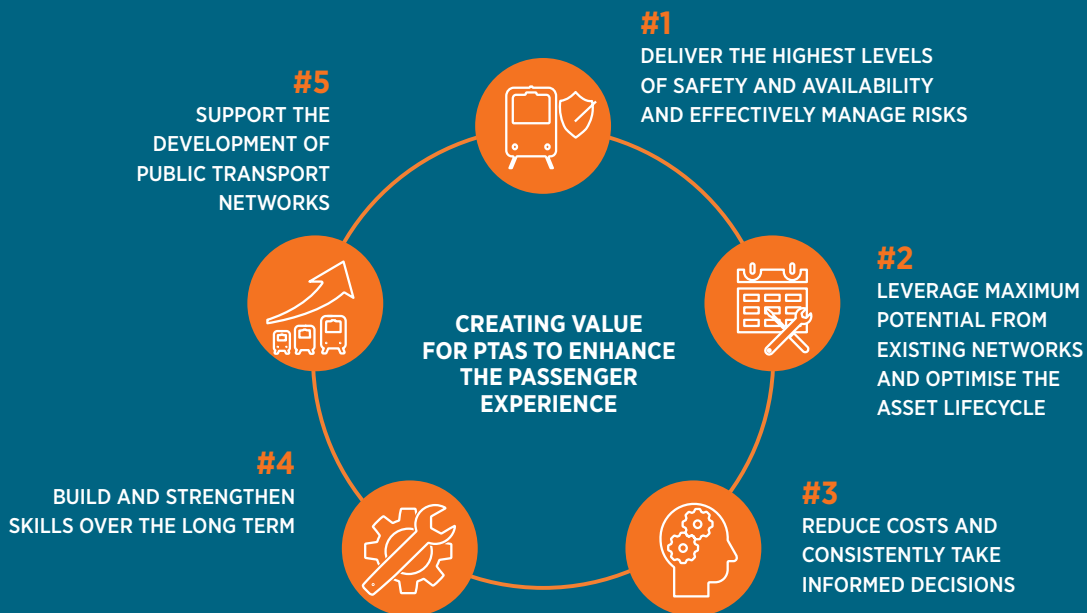
Keolis offers unrivalled expertise in transport system asset management, acquired through more than 40 years of working hand-in-hand with over 300 PTAs in 14 countries. Our expert teams use innovative digital tools to enhance their understanding of networks and develop tailored continuous improvement initiatives for each transport authority. This allows PTAs to optimise network



availability and performance over the long term so as to fulfil their commitments as part of regional transport strategies.

Our teams provide consultancy for transport authorities spanning the entire asset lifecycle – from design to operation, upgrading and replacement. Our focus remains on ensuring the highest level of availability at optimal cost over the long term, while meeting growing passenger expectations and rising to the challenges of the energy transition against a backdrop of financial pressure.

OUR FIVE COMMITMENTS FOR ASSET MANAGEMENT



€50+ bn

worth of assets

40+ years

of experience in transport system asset management

10 000+ employees

dedicated to asset management and maintenance

10

different modes of transport, including:

METRO

10 networks

750+
vehicles

TRAINS

8 regional train networks

1,100 trains

TRAMS

27 networks

≈ 1,500
trams

BUSES & COACHES

23,200+
vehicles



UNRIVALLED ASSET MANAGEMENT EXPERTISE

OPERATIONAL EXCELLENCE

KEOLIS

OUR STRENGTHS AND DRIVERS FOR IMPROVING THE PERFORMANCE OF CUSTOMERS' ASSETS

- **Long-term 360°** vision of transport systems informed by our day-to-day experience of operating transport networks on behalf of our customers.
- **Extensive expertise in all modes** of transport and multimodal networks.
- **Recognised energy** transition expertise for bus fleets.
- **Dedicated asset management centres** of excellence to support our subsidiaries (spanning methods, processes and tools).
- **A Group-wide maintenance operational excellence** process to promote standardised practices* and drive continuous improvement in maintenance performance by all subsidiaries of all sizes and for all modes of transport.
- **A Maintenance & Asset Management system** embedded in a common reference system used across the Keolis Group, tailored by subsidiaries to local requirements and the mobility challenges facing public transport authorities.
- **A Maintenance & Asset Management system** certified to ISO 55001, the most exacting international standard for asset management.
- **A Group-wide Maintenance 4.0 policy** based on the most advanced technologies, such as IoT, big data, artificial intelligence and remote diagnostics, enabling us to hone our understanding of customers' assets, perform predictive maintenance, anticipate asset ageing and issue real-time security alerts.
- **Some 10,000 dedicated** maintenance staff across all networks, including digital technology maintenance 4.0 experts (e.g. data scientists and data analysts).
- **Asset Management & Maintenance** enabling subsidiaries to share and draw on knowledge, experience and best practices across the Group.

* KIHM: Keolis Industrialises and Harmonises its Maintenance



YARRA TRAMS MELBOURNE (AUSTRALIA)

Melbourne's Yarra Trams network is the biggest and oldest in the world, covering 250 km of track and with more than 1,750 stops. Keolis manages all maintenance and upgrades for the network's assets, which include track system, points, signals, power distribution, tram stops, facilities, installations, the fleet management system and the passenger information system, together with a fleet of more than 500 trams across nine classes. The average age of the trams is 30 years (the oldest is over 40 and the most recent was introduced in 2013). Yarra Trams obtained ISO 55001 accreditation in August 2019.



TCL, LYON'S MULTIMODAL NETWORK (FRANCE)

With four metro lines, seven tram lines, two funicular railway lines and a fleet of 940 buses and trolleybuses, the TCL network actively contributes to the appeal and the development of Greater Lyon. Supported by Keolis Lyon, the local transport authority SYTRAL Mobilités has invested significantly in maintenance and upgrades across all networks. Several trials are underway to develop predictive maintenance, including IoT connected devices on rolling stock and drones to inspect sites, civil engineering structures and buildings along networks.



MBTA, THE BOSTON COMMUTER RAIL NETWORK (UNITED STATES)

Since July 2014, Keolis has been operating and maintaining MBTA's Boston commuter rail system (640km). Assets include 82 locomotives, 420 coaches (aged between 7 and 50), track, signalling, 138 stations and three maintenance facilities. In addition, Keolis manages and supports asset renewal and upgrades to maintain optimal network condition and performance. Fleet availability and reliability have improved since 2018. This has materialized in an increased service levels and a record on-time-performance of 93%.



DUBAI METRO **(UNITED ARAB EMIRATES)**

The Keolis-MHI joint venture has operated and maintained the RTA (Roads & Transport Authority) Dubai metro since September 2021. We are committed to developing a world-class asset management system (AMS) for the network – the world's longest driverless metro – aiming for ISO 55001 certification by 2023. As part of this commitment, digitally-powered solutions have been rolled out to deliver smart and sustainable asset management. Projects already underway include an augmented reality mobile application that speeds up incident response time.

DOCKLANDS LIGHT RAILWAY **LONDON (UNITED KINGDOM)**

London's Docklands Light Railway (DLR), which comprises 40 km of tracks, 149 light rail vehicles and 45 stations, is the busiest light railway in the UK. Keolis Consulting & Projects (KCP) and KeolisAmey Docklands (KAD) teams joined strengths in 2019 and 2020 to develop an Asset Management System in line with the ISO 55001 standard. Thanks to improved cost and risk management, coupled with greater overall reliability, ISO 55001 accreditation was achieved in December 2020. And in 2021, 99% of journeys were completed on time.

