

Industry briefing

NOVEMBER 2017



SYDNEY METRO – AUSTRALIA’S BIGGEST PUBLIC TRANSPORT PROJECT

A new stand-alone railway, this 21st century network will revolutionise the way Sydney travels.

Services start in 2019, using Sydney’s new generation of fully-automated metro trains.

From Sydney’s booming North West region, metro rail will run under Sydney Harbour, through new underground stations in the central business district (CBD) and beyond to the South West by 2024

Customers won’t need a timetable when Sydney Metro opens – they’ll just turn up and go.

When Sydney Metro is extended into the CBD, there will be ultimate capacity for a metro train every two minutes in each direction under the city – a level of service never before seen in Sydney.

Sydney Metro, together with signalling and infrastructure upgrades across the existing Sydney rail network, will increase the capacity of train services entering the Sydney CBD – from about 120 an hour today to up to 200 services beyond 2024. That’s an increase of up to 60 per cent capacity across the network to meet demand.

Sydney Metro is made up of:

Sydney Metro Northwest – formerly the 36-kilometre North West Rail Link. This \$8.3 billion project is now under construction and will open in the first half of 2019 with a metro train every four minutes in the peak. Construction is progressing rapidly, with Australia’s first fully-automated train arriving for testing in October 2017.

Sydney Metro City & Southwest – a new 30-kilometre metro line extending metro rail from the end of Sydney Metro Northwest at Chatswood under Sydney Harbour, through new CBD stations and south west to Bankstown. It is due to open in 2024 with the ultimate capacity to run a metro train every two minutes each way through the centre of Sydney.

Sydney Metro West – Sydney’s next big railway infrastructure investment proposed to be delivered by the second half of the 2020s. This world-scale city-shaping project would link the CBDs of Parramatta and Sydney and communities along the way.





Sydney Metro alignment

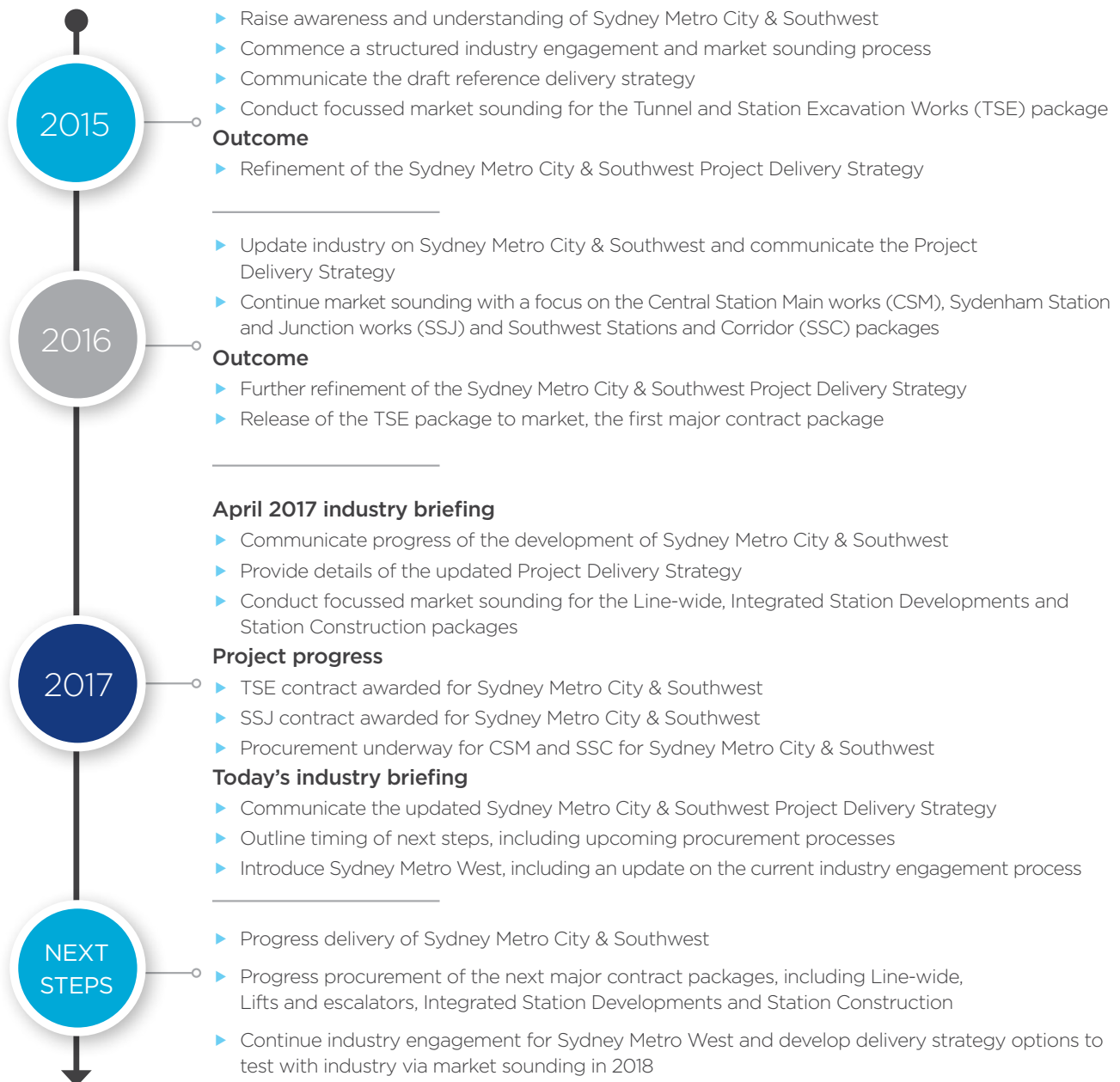
WORKING WITH INDUSTRY

Industry engagement has tested, refined and optimised both Sydney Metro Northwest and Sydney Metro City & Southwest by harnessing industry expertise and world best practice.

We're looking forward to strengthening relationships with our industry partners as Sydney Metro West is further developed.

Industry engagement has taken place in parallel with the community consultation process. It has included industry briefings and market sounding with organisations from Australia and overseas.

Industry engagement timeline



SYDNEY METRO CITY & SOUTHWEST UPDATED PROJECT DELIVERY STRATEGY

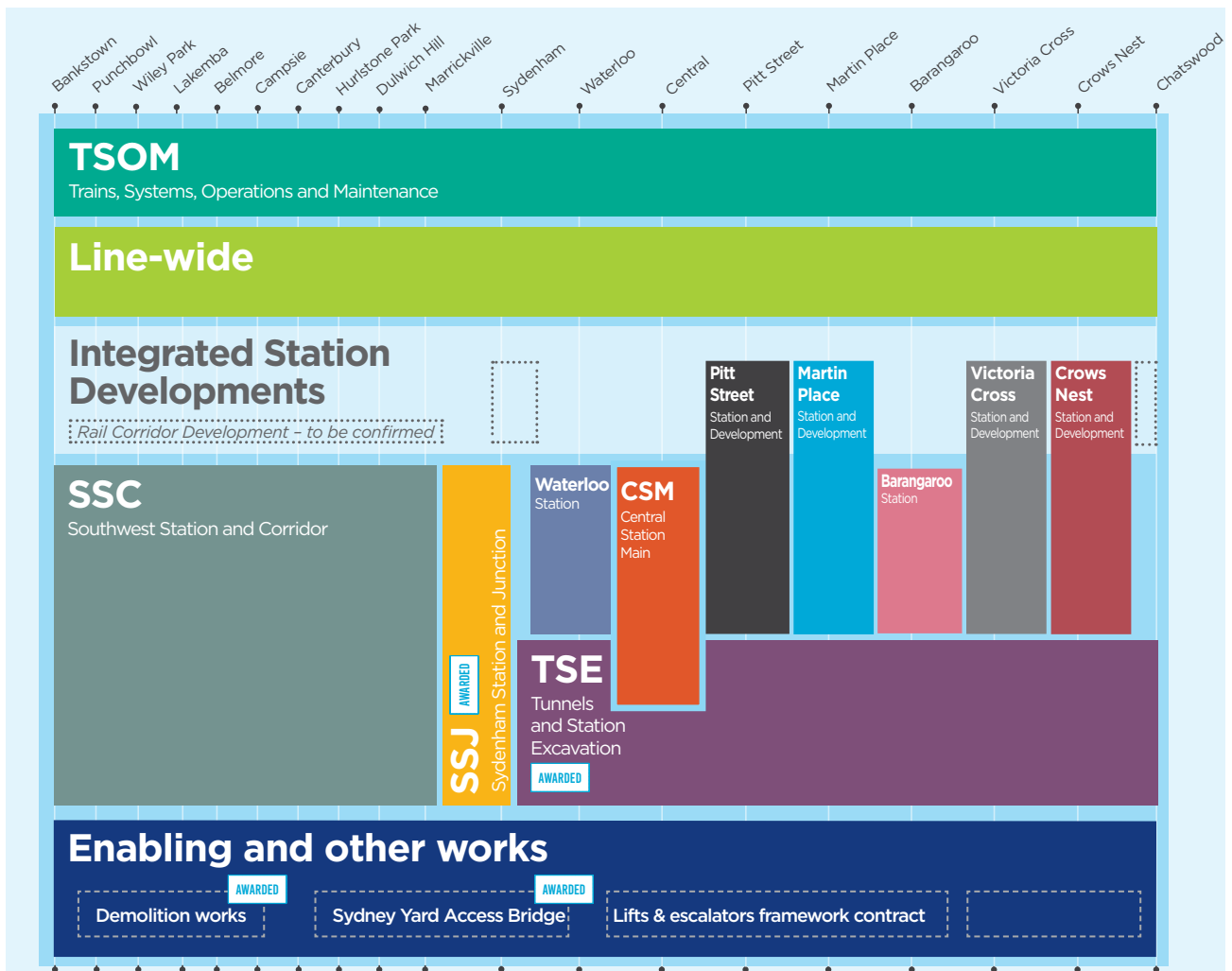
Following further work by the project team and taking into account feedback from industry engagement, the Project Delivery Strategy has been updated.

The Project Delivery Strategy outlines how the Project will be taken to market including sequencing, timing, duration, funding and risk.

Under the previous strategy, the construction of the underground stations and the buildings above them were to be delivered as separate contract packages. Under the new Project Delivery Strategy they will be combined, with Integrated Station Development packages to go to market at Pitt Street, Martin Place, Victoria Cross and Crows Nest stations.

This means as the new metro stations are built underground, new buildings will be able to be built above them at the same time.

This will help reduce community impacts and the length of time required to deliver the outcomes of integrated station developments.



PROJECT CONTRACT PACKAGING APPROACH

Package	Overview of scope
TSOM: Trains, Systems, Operations and Maintenance	<ul style="list-style-type: none"> ▶ Rolling stock ▶ Signalling system ▶ Central control ▶ Communications and other systems ▶ Radio systems ▶ Platform screen doors and mechanical gap fillers ▶ Depot (including stabling) and operations control centre systems integration, testing and commissioning ▶ Operations and maintenance
Line-wide	<ul style="list-style-type: none"> ▶ Tunnel ventilation ▶ Track and tunnel services (drainage, lighting, fire systems, low voltage supplies), combined services ▶ Stabling ▶ High voltage power supply ▶ Overhead line and traction supply
Integrated Station Developments: (Crows Nest, Victoria Cross, Martin Place and Pitt Street)	<ul style="list-style-type: none"> ▶ Excavation of remaining station shafts (to extent not undertaken by TSE contractor) ▶ Station structure ▶ Station fit-out, including mechanical and electrical ▶ Development structure ▶ Development fit-out, including mechanical and electrical
Station Construction: (Waterloo and Barangaroo)	<ul style="list-style-type: none"> ▶ Excavation of remaining station shafts (to extent not undertaken by TSE contractor) ▶ Station structure up to podium level (Waterloo) ▶ Station fit-out, including mechanical and electrical
TSE: Tunnels and Station Excavation works	<ul style="list-style-type: none"> ▶ Demolition and site preparation (via novation of demolition contractors) ▶ Tunnel boring and lining ▶ Cavern mining and lining ▶ Excavation of station shafts (extent varies at different station locations) ▶ Station structure at Barangaroo only
CSM: Central Station Main works	<ul style="list-style-type: none"> ▶ Customer continuity works ▶ Temporary decommissioning of platforms and reinstatement ▶ Metro box excavation ▶ Central Walk eastern concourse and entry ▶ Station structure and fit-out, including mechanical and electrical ▶ Services relocation
SSC: Southwest Station and Corridor works	<ul style="list-style-type: none"> ▶ Station works (including demolition, upgrades) ▶ Bridge and non-station civil works ▶ Services buildings and facilities ▶ Electrical works (low voltage) ▶ Cable and services routing ▶ Track and other rail infrastructure
SSJ: Sydenham Station and Junction works	<ul style="list-style-type: none"> ▶ Station works ▶ Services buildings and facilities ▶ Services adjustments and relocations (rail and non-rail) ▶ Signalling ▶ Track and other rail infrastructure (including stageworks)

SYDNEY METRO CITY & SOUTHWEST

PROJECT TIMELINE MILESTONE	COMMENCING
Early consultation	Q1 2015 ✓
Project scope consultation	Q2 2015 ✓
Industry engagement	Q2 2015 ✓
Lodgement of State Significant Infrastructure Application Report (SSIAR)	Q4 2015 ✓
Reference delivery strategy	Q4 2015 ✓
Start major contract procurement	Q2 2016 ✓
Chatswood to Sydenham EIS exhibition	Q2 2016 ✓
Sydenham to Bankstown planning commenced	Q3 2016 ✓
Augmentation proposal request	Q4 2016 ✓
Chatswood to Sydenham EIS approval	Q1 2017 ✓
Procurement of independent certifiers and delivery partners	2016-2018 ✓
Start construction	2017 ✓
Sydenham to Bankstown EIS exhibition	Q3 2017 ✓
First tunnel boring machine	2018
Operations	2024

Major contract packages – indicative timing

PACKAGE	INDICATIVE START DATE
Tunnel and Station Excavation works (TSE)	Q2 2016 ✓
Early and enabling works	2016-2017 ✓
Trains, Systems, Operations & Maintenance (TSOM)	Q4 2016 ✓
Central Station Main works (CSM)	Q1 2017 ✓
Sydenham Station and Junction works (SSJ)	Q1 2017 ✓
Southwest Station and Corridor works (SSC)	Q2 2017 ✓
Integrated Station Developments and Station Construction	Q4 2017 ✓
Line-wide	Q4 2017 ✓

Project Delivery Strategy



Enabling works



TSE Tunnels and Station Excavation works



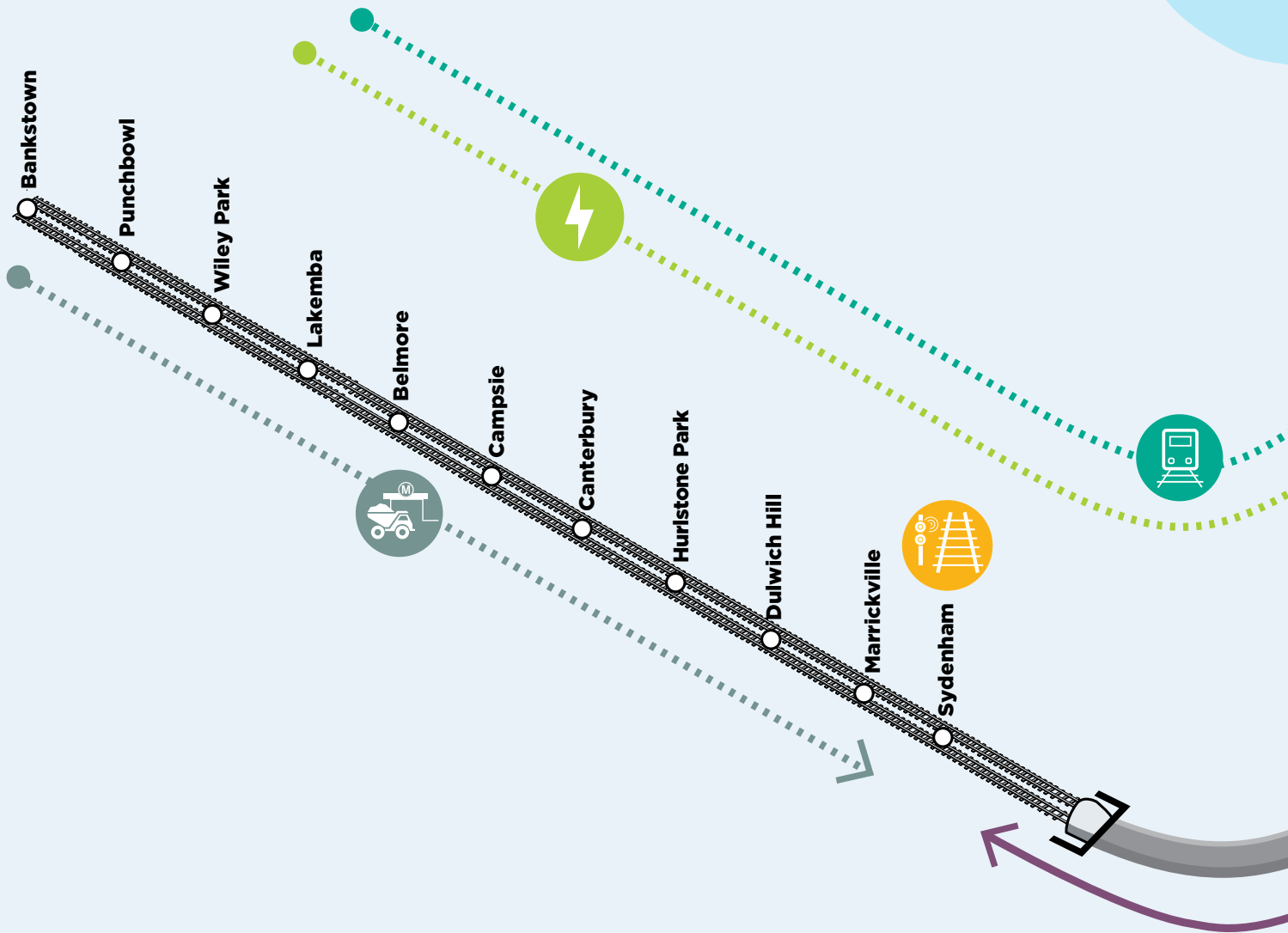
SSJ Sydenham Station and Junction works



CSM Central Station Main works



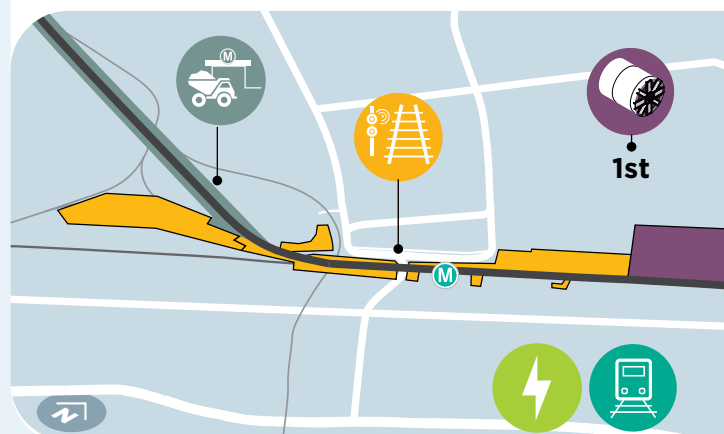
SSC Southwest Station and Corridor works



Other contracts (not shown) include:

- Enabling works:
 - Demolition
 - Investigation
 - Epping turnback
 - High voltage construction power
 - Utility relocations and protection
 - Mobile phone tower relocations
 - Northern Corridor works
- Lifts and escalators framework contract

Sydenham area - detail





Line-wide



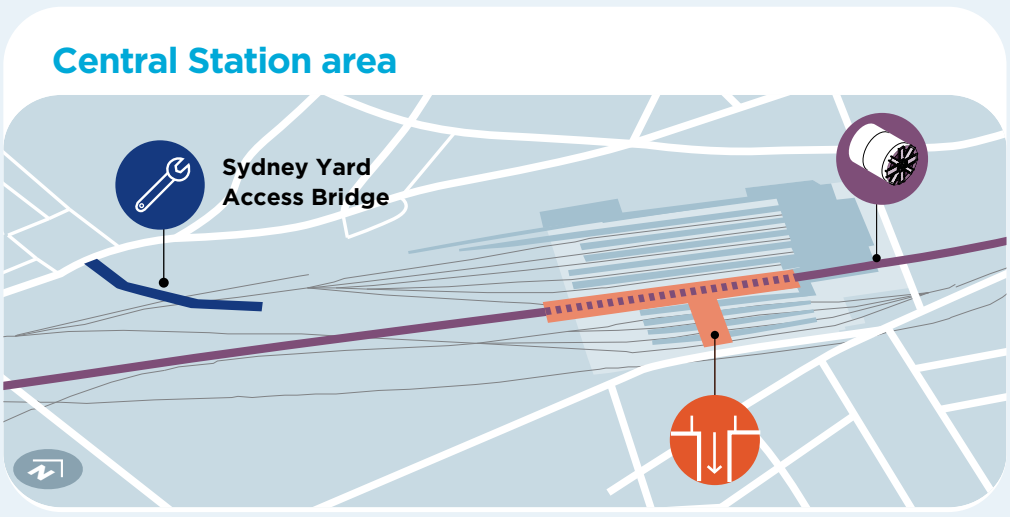
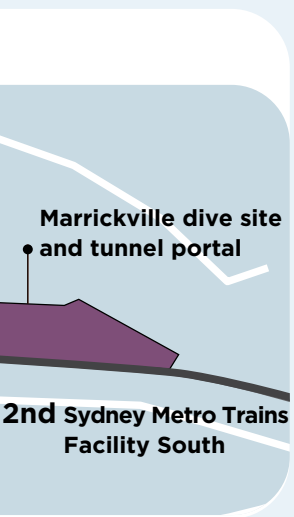
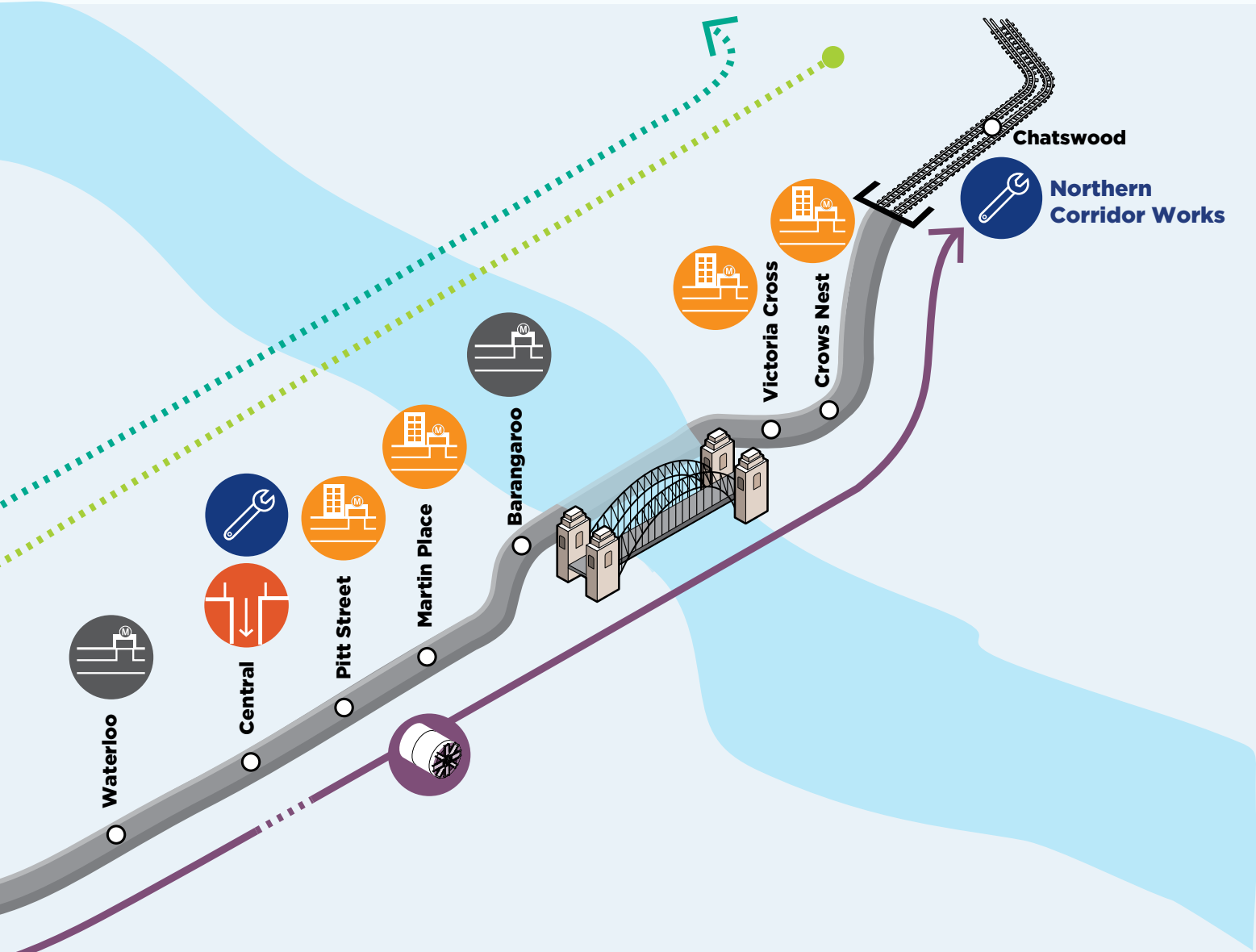
Integrated Station Developments
(Four contracts)



Station Construction
(Two contracts)



TSOM
Trains, Systems,
Operations and Maintenance



SYDNEY METRO WEST

New metro rail will become the fastest, easiest and most reliable journey between the Sydney and Parramatta CBDs. This means Sydney Trains and inter-city services will be freed up for customers in the city's outer west in areas like Blacktown, Penrith and the Blue Mountains. In turn, these services will become more reliable, with increased capacity, reduced crowding and faster travel times.

The NSW Government will integrate transport and land use planning along the corridor, with the new metro railway line expected to be built largely underground.

Sydney Metro West will support existing and planned urban renewal across the corridor. It will support growth in housing and jobs, providing

access to multiple destinations and facilitate active transport and liveable urban centres around high capacity public transport.

Sydney Metro West also offers opportunities to explore innovative Metro product solutions and lessons learned from across the globe to develop this globally significant infrastructure project.



INDUSTRY ENGAGEMENT AND MARKET SOUNDING STAGES

Transport for NSW is undertaking the first stage of community, stakeholder and industry consultation, which will help shape Sydney Metro West’s development, including determining the alignment and potential station locations.

Transport for NSW is currently engaging industry to provide feedback and help define Sydney Metro West’s transport and land use objectives.

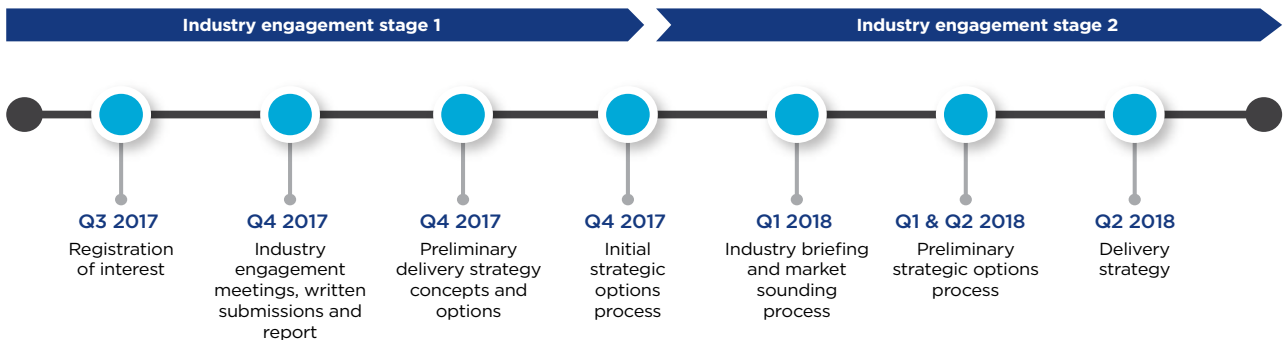
The expertise and knowledge from industry, both locally and internationally, will inform the definition of the Project, and ensure a market led and innovative approach to the development of Sydney Metro West.

Stage 1 of the industry engagement process is currently underway to inform the project definition report and preliminary delivery strategy concepts and options.

Stage 2 of the industry engagement process will occur in 2018 and includes a series of one-on-one meetings with industry participants.

Market sounding in 2018 will focus on how Sydney Metro West could be packaged, procured and delivered to inform the delivery strategy and the final business case.

The assessment of strategic options for additional station locations and precinct development within the Sydney Metro West study area will also occur as part of market sounding in 2018.



Further information

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[Facebook.com/sydneymetro](https://www.facebook.com/sydneymetro)

Information in this document has been prepared in good faith and is correct at the time of printing, November 17.

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This document provides a general overview of Sydney Metro, including Sydney Metro Northwest, Sydney Metro City & Southwest and Sydney Metro West. It also outlines the proposed approach to precinct and property development opportunities associated with Sydney Metro.

The document outlines progress made to date and the timeline for the next stages. As further environmental assessments and detailed engineering studies are completed, and additional input from industry is received and considered, actual construction methodologies and procurement timeframes will be confirmed.



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