

**Date: 24 February 2016**

**Item: New Tube for London Signalling and Train Control  
Procurement**

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**This paper will be considered in public**

**1 Summary**

- 1.1 The New Tube for London Programme was established to complete the train systems upgrade of the Bakerloo, Central, Piccadilly and Waterloo & City lines.
- 1.2 It is proposed to release an OJEU notice and Pre-Qualification Questionnaire (PQQ) for Signalling and Train Control system for these lines in March 2016.
- 1.3 The accompanying presentation, attached as Appendix 1 describes:
  - (a) NTfL business context;
  - (b) Principles of the Signalling and Train Control Procurement Strategy;
  - (c) Scope of the Signalling and Train Control Contract;
- 1.4 A paper on the procurement approach is included on Part 2 of the agenda which contains exempt supplementary information on Signalling and Train Control Procurement Process and PQQ readiness and Signalling and Train Control Procurement Programme and Alignment with Rolling Stock. The information is exempt by virtue of paragraph 3 of Schedule 12A of the Local Government Act 1972 in that it contains information relating to the business affairs of TfL. Any discussion of that exempt information must take place after the press and public have been excluded from this meeting.

**2 Recommendation**

- 2.1 **The Panel is asked note the paper.**

**List of Appendices:**

Appendix 1: Presentation on signalling and train procurement.

**List of Background Papers**

None

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# New Tube for London: Signalling and Train Control

## RUP – February 2016



### Appendix I



MAYOR  
OF LONDON

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## Executive Summary

1. NTfL business context
2. Principles of the Signalling & Train Control Procurement Strategy
3. Scope of the Signalling & Train Control Contract
4. Signalling & Train Control Procurement Process and PQQ readiness
5. Signalling & Train Control Procurement Programme and Alignment with Rolling Stock

# Executive Summary

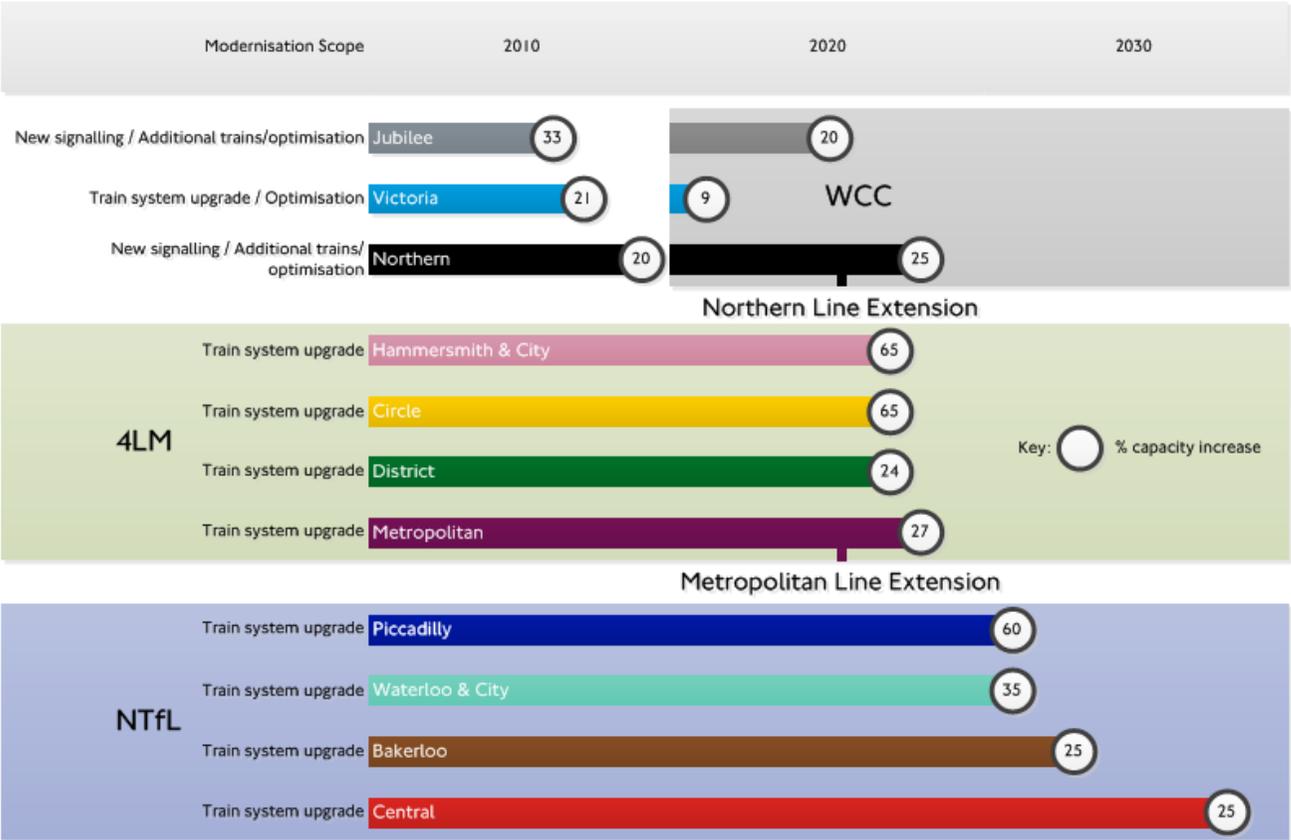
- NTfL is ready to commence the procurement of the new Signalling & Train Control contract for the Piccadilly line.
- The Piccadilly Line rolling stock ITN was issued on 18 January, the signalling procurement is now on the critical path for delivering an overall 60% increase in capacity.
- The procurement processes for the NTfL rolling stock and signalling are closely linked:
  - The scheduling of the two procurements has aligned the key design, manufacture and testing of the new rolling stock and trainborne signalling equipment;
  - Delay in commencing the procurement of the signalling will impact on the alignment of rolling stock and signalling schedules.
- This pack provides a briefing to RUP members on the procurement approach for signalling & train control, commencing with the release of an OJEU Notice and Pre-Qualification Questionnaire on 18 March 2016.

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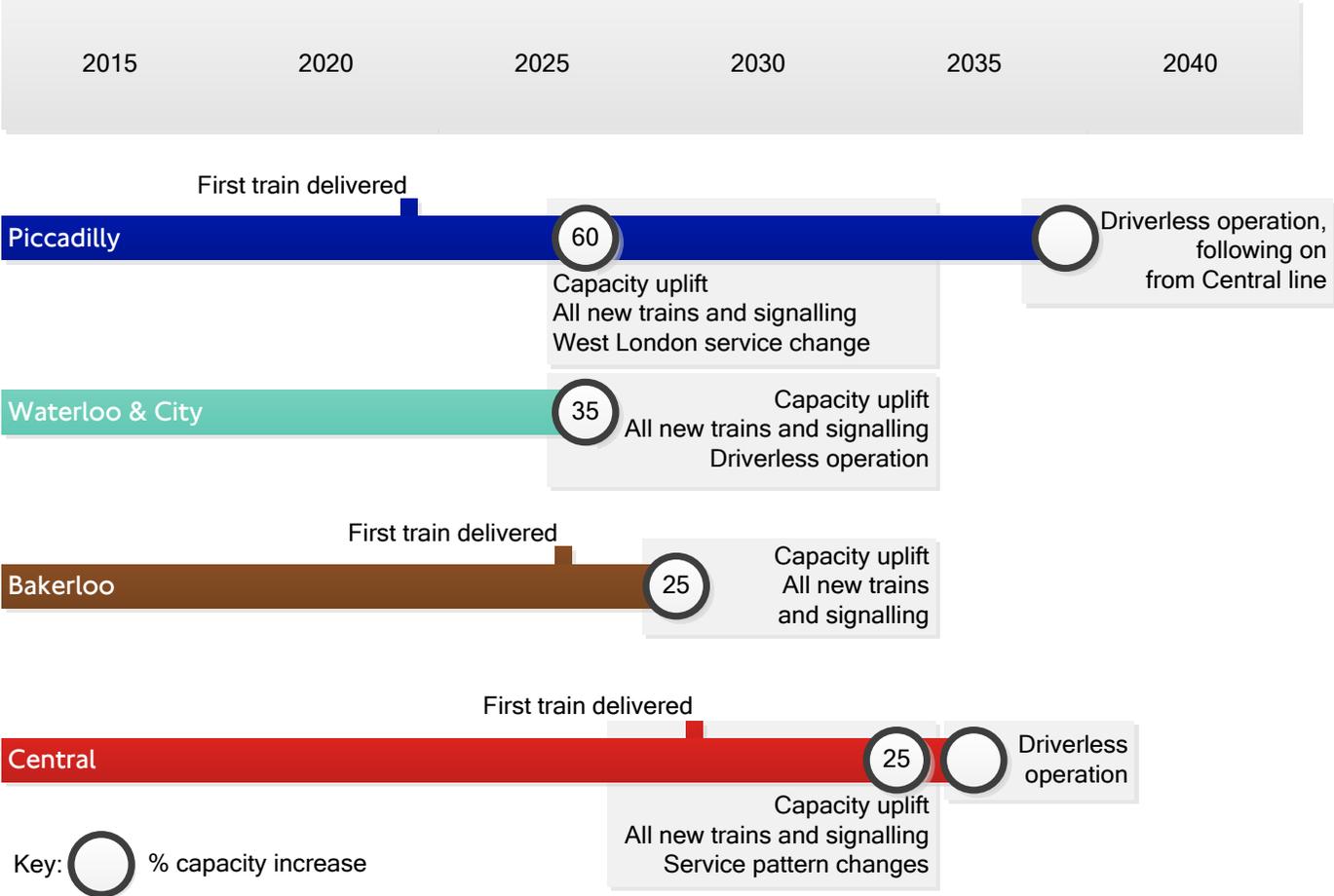
# NTfL Business Context



- Network wide programme of Underground capacity uplift and modernisation:
  - Main driver is to grow capacity on existing network to cater for an extra 1.4m people living in London by 2030
  - Rolling programme of systems asset renewal (e.g. rolling stock, signalling and enabling works)
- Two thirds of network upgraded or in delivery

# NTfL Deliverables

- 36% capacity increase (60% on Piccadilly line)
- 30,000 more jobs in London
- Renewal of trains, signalling and supporting systems
- Encompasses 4 “deep tube” lines which were initially planned for upgrade under the PPP (2014 to 2020)
- Delivery planned during 2020s and 2030s, commencing with the Piccadilly line



# NTfL Programme Status

- In February 2014 the Board approved a £36.2m increase in Project Authority, to a total of £59.1m, to undertake design and specification activities including preparation and issue of an Invitation to Negotiate (ITN) for procurement of new rolling stock.
- During this period, the NTfL programme has continued to develop the infrastructure scope and business requirements for the Piccadilly line modernisation. This has resulted in the generation of a detailed technical specification and contract documentation necessary for the NTfL Rolling Stock tendering process which commenced on 18 January 2016 with the release of the ITN.
- Work has continued on the definition of the overall NTfL programme scope and requirements with infrastructure analysis and research conducted to further the development of the later Bakerloo, Central and Waterloo & City lines upgrade schemes.
- A high level of supplier engagement has been maintained over the last three years to test the appetite of the signalling market for NTfL's requirements and refine the approach to packaging and procurement. This has been to ensure the approach adopted maximises competition and will deliver the business benefits LU is seeking.
- Following the release of the rolling stock ITN, the signalling and train control procurement is now on the critical path for delivering an overall 60% increase in capacity on the Piccadilly line.
- On 26 January 2016 the Rail & Underground Board approved a paper requesting additional Project Authority to deliver a base programme of work to progress the delivery of the NTfL programme to the point of award of the rolling stock contract in late-2017. Commencing the procurement of the NTL Signalling and Train Control system is a key part of the scope of work. The overall scope of activities have a total cost of £104.3m.
- The funding paper is due to be presented to the TfL Board on 17 March 2016 via routing to the Finance and Policy Committee on 2 March 2016 and Chairman's Briefing Meeting on 16 February 2016

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# Principles of the Signalling & Train Control Procurement Strategy

- To establish an end-to-end, competitive process by which LU will award a contract that:
  - Sets a scope which the market can deliver;
  - Delivers the business case benefits required from the S&TC package;
  - Contributes to the wider NTfL railway system business benefits (for example by interfacing with rolling stock);
  - Establishes a long term relationship contractually with a supplier for the delivery and support for the S&TC system at the point at which LU has the maximum commercial leverage;
  - Secures a supplier in which LU has high levels of confidence in their product, delivery capacity and capability, and organisational commitment;
  - Is procured on a whole life cost basis recognising capital (first cost), and long term operating and maintenance costs.
  - Addresses the lessons learnt from the SUP ATC contract.

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# Scope of NTfL Signalling and Train Control: NTfL Programme Packaging

- The NTfL Programme has identified three key categories of assets required for the programme which need to be integrated with operations/maintenance and the existing LU environment:
  - Train Systems - rolling stock
  - **Railway Control System (RCS)**
  - Infrastructure including depots, power and cooling
- LU is the Prime Systems Integrator, supported by a specialist advisor embedded within the NTfL programme.
- Following extensive market engagement and analysis of technical interfaces, the RCS asset category has been divided into three packages of work to be procured from the market: Signalling & Train Control; Operational Control System; and GoA4 Communications.
- The three RCS packages provide a good alignment with market capabilities; encourage competition; allow procurements to be timed to facilitate LU gaining the opportunity to purchase emerging technologies; and provide flexibility in the deployment of specific systems to support GoA4 operations.
- This briefing on the planned procurement process for the first of the RCS packages: Signalling & Train control is provided in the Part 2 paper to this agenda item and, subject to the decision of the Panel, is exempt and is therefore not for publication to the public or press by virtue of paragraph 3 of Schedule 12a of the Local Government Act 1972 in that it contains information relating to the business affairs of TfL.

