

# **Appendices and Glossary**

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**Glossary**

## **Appendix A: Terms of reference**

1. In exercise of its duty under section 33(1) of the Enterprise Act 2002 (the **Act**) the Competition and Markets Authority (**CMA**) believes that it is or may be the case that:
  - (a) arrangements are in progress or in contemplation which, if carried into effect, will result in the creation of a relevant merger situation, in that:
    - (i) enterprises carried on by Hitachi Rail, Ltd, a wholly owned subsidiary of Hitachi, Ltd, will cease to be distinct from the enterprise consisting of the Ground Transportation Systems business carried on by Thales SA; and
    - (ii) the condition specified in section 23(1)(b) of the Act is satisfied.
  - (b) the creation of that situation may be expected to result in a substantial lessening of competition within a market or markets in the United Kingdom for goods or services, including in the supply of:
    - (i) European Train Control System Automatic Train Protection wayside resignalling projects;
    - (ii) operation and control systems projects; and
    - (iii) communication-based train control signalling projects for metros.
2. Therefore, in exercise of its duty under section 33(1) of the Act, the CMA hereby makes a reference to its chair for the constitution of a group under Schedule 4 to the Enterprise and Regulatory Reform Act 2013 in order that the group may investigate and report, within a period ending on 8 June 2023, on the following questions in accordance with section 36(1) of the Act:
  - (a) whether arrangements are in progress or in contemplation which, if carried into effect, will result in the creation of a relevant merger situation; and
  - (b) if so, whether the creation of that situation may be expected to result in a substantial lessening of competition within any market or markets in the United Kingdom for goods or services.

**Colin Raftery**  
**Senior Director, Mergers**  
**Competition and Markets Authority**



## Appendix B: Conduct of the inquiry

1. On 23 December 2022, the CMA [referred](#) the anticipated acquisition by Hitachi of the Ground Transportation Business of Thales for an in-depth Phase 2 inquiry.
2. Biographies of members of the Inquiry Group conducting the phase 2 inquiry were published on the inquiry [webpage](#) on 23 December 2022.
3. The original administrative timetable for the inquiry was published on the inquiry [webpage](#) on 6 January 2023. At commencement of the inquiry, the statutory deadline was 8 June 2023, but this was subsequently extended to 11 August 2023 as a result of the delay by both Hitachi and Thales to comply with the requirements of notices under section 109 of the Enterprise Act to provide certain documents and information issued on 23 December 2022 (**Notices**). The deadline to respond to these Notices was 6 January 2023 in relation to some data requests and 11 January 2023 for the other requests, including requests to produce internal documents. The statutory timetable was stopped between 9 January 2023 and 14 March 2023, as a result of repeated delays by both Parties in responding to the Notices. Notices of extension were published on the inquiry [webpage](#) on 9 and 13 January 2023. Following receipt of the outstanding documents and information, we re-started the statutory timetable on 14 March 2023 and termination of extension notices were published on the inquiry [webpage](#) on the same day. A revised administrative timetable was also published on the inquiry [webpage](#) on 14 March 2023.
4. These delays disrupted the course of the inquiry. The CMA's substantive decisions in merger investigations are subject to strict statutory deadlines and a duty of expedition. The Parties' delay in responding to the Notices caused uncertainty and 'potentially prejudiced the CMA's ability to plan and efficiently manage its resources.
5. We invited a wide range of interested parties to comment on the Merger. We sent detailed requests for information to the Parties' customers, competitors and other third parties. A number of third parties also provided us with evidence by video conference calls as well as by responding to supplementary written questions. We also received a submission from the Office for Rail and Road (**ORR**), a [non-confidential version](#) of which was published on the inquiry webpage on 6 April 2023. Evidence submitted during the CMA's phase 1 investigation was also considered in phase 2.

6. We received written evidence from the Parties in form of submissions and responses to information requests, including a substantial volume of internal documents.
7. On 17 January 2023, we published an [issues statement](#) on the inquiry webpage setting out areas on which the phase 2 inquiry would focus.
8. On 6 February 2023, we published a non-confidential version of the Parties' [initial submission](#) on what they considered should be key points for consideration by the phase 2 Inquiry Group. The Parties made voluntary submissions on various competition issues being investigated in the inquiry, and non-confidential versions of these were published on the inquiry [webpage](#) on 6 and 19 April 2023. The Parties also made observations on ORR's submissions, and a non-confidential version of the Parties' submission was published on the inquiry [webpage](#) on 18 May 2023.
9. On 9 February 2023, members of the Inquiry Group, accompanied by CMA staff, attended site visits with the Parties (and their advisers) at their offices.
10. We held separate hearings with each of the Parties on 26 April 2023 and 2 May 2023.
11. Prior to the hearings, we sent the Parties a number of working papers for comment. We also provided the Parties and third parties with extracts from our working papers for comments on accuracy and confidentiality. The Parties were also sent an annotated issues statement (**AIS**), which outlined our thinking prior to their respective hearings. The Parties provided comments on our AIS and working papers on 2 May 2023.
12. A non-confidential version of our provisional findings report has been published on the inquiry [webpage](#). As we have provisionally concluded that it is or may be the case that the Merger consists of arrangements that are in progress or in contemplation which, if carried into effect, will result in the creation of a relevant merger situation, and that this may be expected to result in a substantial lessening of competition (**SLC**) by reference to both markets for the supply of mainline signalling in GB and the supply of urban signalling in GB, a notice of possible remedies (**Remedies Notice**) has also been published on the inquiry [webpage](#). Interested parties are invited to comment on both of these documents.
13. We would like to thank all those who have assisted in our inquiry so far.

## Appendix C: Summary of third-party evidence

### Introduction

1. This Appendix outlines our approach to gathering evidence from third parties in relation to the supply of digital mainline signalling systems in GB and CBTC signalling systems in the UK respectively.
2. The CMA has gathered evidence and views from the Parties' customers, competitors<sup>1</sup> both in and outside the UK in relation to the nature of competition, the competitive conditions and effects of the Merger in the supply of digital mainline signalling systems and CBTC signalling systems.
3. The CMA engaged with the sector regulator (**ORR**) and the Railway industry association (**RIA**), in relation to our assessment of the Merger in the supply of digital mainline signalling. The CMA also sought evidence from the Department for Transport in relation to plans and funding for the digitalisation of the GB railway, and well as expected CBTC signalling systems in the London Underground.
4. We engaged with these third parties primarily through written requests for information. With many of them we also scheduled virtual or in-person meetings (**meetings**).<sup>2</sup>
5. The main focus of the CMA's requests for information and meetings with third parties in relation to the supply of mainline signalling systems was to understand:
  - (a) the importance of suppliers having access to technology, to be able to compete for the digital lot of the TCSF;
  - (b) the process, costs and challenges involved with homologating mainline signalling technology in GB and Europe;
  - (c) the competitive strength of each potential supplier of digital mainline signalling in GB, in particular in the context of the TCSF, and whether these suppliers were likely to be credible rivals to the Parties in the TCSF tender;

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<sup>1</sup> For the purposes of this Appendix, by competitors in relation to the supply of digital mainline signalling we refer to integrators and original equipment manufacturers (**OEMs**).

<sup>2</sup> We had in-person meetings with the ORR and Network Rail.

- (d) the importance of management experience and technical expertise in undertaking digital mainline signalling projects in the UK and Europe in bidding for the TCSF, including interacting with Network Rail; and
  - (e) their views on the Merger.
- 6. The main focus of the CMA's requests for information and meetings with third parties in relation to the supply of CBTC signalling systems was to understand:
  - (a) the relative strengths of the Parties in bidding for projects on the London Underground;
  - (b) the extent of barriers to entry and expansion and any incumbency advantages of the incumbent suppliers in the London Underground;
  - (c) the competitive strength of each potential supplier of CBTC systems in the UK and whether these suppliers were likely to be credible rivals to the Parties in relation to future projects in the London Underground;
  - (d) the role and importance of management experience, technical expertise and local capacity in bidding for CBTC projects, and in particular for the London Underground; and
  - (e) their views on the Merger.
- 7. In general, we have interpreted the evidence from third parties qualitatively.

### **Third-party engagement**

- 8. We provide below details about our engagement with third parties in relation to each of the relevant markets we considered in our competition assessment.

### ***Supply of digital mainline signalling projects***

#### *Customers*

- 9. We sent tailored requests for information to the UK customers that were likely to organise tenders for the supply of mainline signalling projects in the near future or had launched a tender which is currently ongoing. All the customers that we reached out to (ie Network Rail, HS2, Translink and Nexus) responded to our written requests. Further, we had three virtual meetings with Network Rail. Our engagement with customers is outlined in more detail below.

10. To date, we have been in regular contact with Network Rail throughout our investigation. While we asked Network Rail to provide information in relation to past purchases of mainline signalling projects, our questions overall focused on the design and scope of the TCSF and on the assessment of the potential bidders for the supply of digital mainline signalling projects under the TCSF with a particular focus on the criteria that Network Rail would consider when selecting the successful bidders.
11. We asked HS2 to provide information in relation to past purchases of mainline signalling projects and the ongoing tender, particularly regarding the pre-qualification phase of the tender. Our engagement with Nexus and Translink focused on past and future tenders for the supply of digital mainline signalling projects.

### *Competitors*

12. We sent initial requests for information covering the supply of mainline signalling in GB to 18 OEMs, 18 integrators and we received seven responses from OEMs and eight from integrators.<sup>3,4</sup> In addition, we had virtual meetings with five OEMs and six integrators.<sup>5</sup> We sent additional requests for information to these stakeholders throughout our investigation.

### *Other stakeholders*

13. As set out in paragraph 3, the CMA discussed the Merger with RIA, ORR and the Department for Transport.
14. We have engaged with ORR regularly during our investigation, both by organising virtual/in-person meetings and sending requests for information. The ORR has also provided the CMA with a submission on the effects of the Merger in the delivery of mainline signalling in GB.
15. Further, we sent a request for information to RIA and organised a virtual meeting with the Department for Transport.

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<sup>3</sup> OEMs: Alstom, Siemens, CAF, Mermec, Progress Rail, Resonate, Stadler. Integrators: Amey, Atkins, Colas Rail, Costain, Linbrooke, Mipro, Terna and VolkerRail.

<sup>4</sup> Some of these competitors did not respond to our request for information, but set out their views of the Merger and provided a description of their business.

<sup>5</sup> Siemens, Alstom, Indra, Mermec, Resonate, Amey, Atkins, Colas, Costain, Linbrooke and VolkerRail.

## ***Supply of CBTC signalling systems***

### *Customers*

16. We sent tailored requests for information to seven customers (both in the UK and outside the UK)<sup>6</sup> among other things to get an overview of the Parties' capabilities in supplying CBTC signalling systems and received four written responses.<sup>7</sup> We had virtual meetings with two customers.<sup>8</sup>

### *Competitors*

17. We sent questionnaires covering the supply of CBTC signalling systems to six competitors and we received five responses.<sup>9</sup> In addition, we had virtual meetings with five competitors.<sup>10</sup> We sent additional requests for information to these stakeholders throughout our investigation.

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<sup>6</sup> TfL, Strathclyde Partnership for London Transport, Transport Authorities from Brussels, Oslo, Paris, San Francisco and New York.

<sup>7</sup> TfL, Strathclyde Partnership for London Transport, Brussels Transport Authority, Oslo Transport Authority.

<sup>8</sup> TfL and San Francisco Infrastructure Manager.

<sup>9</sup> We sent questionnaires to Siemens, Alstom, CAF, Stadler, Mitsubishi and Nippon. Only Nippon did not reply.

<sup>10</sup> Siemens, Alstom, CAF, Stadler and Mitsubishi.

## Glossary

Term	Definition
<b>4LM</b>	Four Line Modernisation
<b>the Act</b>	Enterprise Act 2002
<b>AIS</b>	Annotated Issues Statement
<b>Ansaldo</b>	Ansaldo Signalling and Transportation Systems
<b>ATP</b>	Automatic Train Protection
<b>BART</b>	Bay Area Rapid Transport
<b>BEIS</b>	Department for Business, Energy and Industrial Strategy
<b>CBTC</b>	Communication-based Train Control
<b>CMA</b>	Competition and Markets Authority
<b>CP</b>	Control Period
<b>DfT</b>	Department for Transport
<b>DTUP</b>	Deep Tube Upgrade Programme
<b>ECDP</b>	East Coast Development Programme
<b>ERTMS</b>	European Rail Traffic Management System
<b>EULYNX</b>	European Initiative to Linking Interlocking Systems
<b>ETCS</b>	European Train Control Systems
<b>FMN</b>	Final Merger Notice
<b>GB</b>	Great Britain
<b>GTS</b>	Ground Transportation Systems
<b>Hitachi</b>	Hitachi Rail, Ltd. References to Hitachi also include references to Ansaldo STS prior to its acquisition by Hitachi unless indicated otherwise

<b>Hitachi Group</b>	Hitachi, Ltd, parent company of Hitachi
<b>HS1</b>	High Speed One Ltd
<b>HS2</b>	High Speed Two Ltd
<b>Inquiry Group</b>	Group of CMA Panel Members conducting the phase 2 investigation
<b>ITT</b>	Invitation to Tender
<b>LRT</b>	Light Rail and Tram
<b>Mainline signalling projects</b>	Projects involving the installation of signalling systems for mainline (eg National Rail) trains
<b>Management Experience</b>	Management Experience and Technical Expertise
<b>MaSREF</b>	Major Signalling Renewals and Enhancements Framework
<b>Merger</b>	Anticipated acquisition by Hitachi of Thales
<b>Merger Assessment Guidelines or CMA129</b>	<a href="#">CMA's Merger Assessment Guidelines</a> , (CMA129), March 2021
<b>Merged Entity</b>	Hitachi and Thales in statements referring to the future
<b>OBU</b>	On-board Unit
<b>OCS</b>	Operation Control System
<b>OEMs</b>	Original Equipment Manufacturers
<b>ORR</b>	Office for Rail and Road
<b>ORR market study</b>	ORR signalling market study, Final report, 9 September 2021
<b>Parties</b>	Hitachi and Thales in statements not referring to the future
<b>RBC</b>	Radio Block Centre

<b>RMS</b>	Relevant merger situation
<b>SEU</b>	Signalling Equivalent Unit
<b>SLC</b>	Substantial lessening of competition
<b>SPA</b>	Sale and Purchase Agreement
<b>SPT</b>	Strathclyde Partnership for Transport
<b>SSI</b>	Solid State Interlockings
<b>SSR</b>	Sub Surface Rail
<b>TCSF</b>	Train Control Systems Framework
<b>TfL</b>	Transport for London
<b>Thales</b>	Thales SA's Ground Transportation Systems business
<b>TMS</b>	Traffic Management System
<b>TPS</b>	Train Protection Systems
<b>TPWS</b>	Train Protection & Warning Systems
<b>UK</b>	United Kingdom
<b>Urban signalling projects</b>	Urban signalling projects involve the installation of signalling systems for urban (local passenger rail transit), encompassing metro networks, such as the London Underground, and LRT networks
<b>WP</b>	Working papers