Appendices and glossary

Appendices

A: Terms of references and conduct of inquiry

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Glossary

Appendix A: Terms of reference and conduct of the inquiry

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 Cargotec Corporation will cease to be distinct from enterprises carried on by Konecranes Plc; and

      (ii) the conditions specified in section 23(1)(b) of the Act are satisfied; and

   (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 reach stackers, straddle carriers and rubber-tyred gantry cranes.

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 December 27, 2021, 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.

Joel Bamford
Senior Director, Mergers
Competition and Markets Authority
13 July 2021

Conduct of the inquiry

3. We published the biographies of the members of the Inquiry Group conducting the inquiry and the administrative timetable for the investigation on the inquiry webpage on 14 July 2021.

4. On 6 August 2021, we published an issues statement on our webpage,[1] setting out the areas on which the inquiry would focus.

5. On 20 August 2021, members of the Inquiry Group and staff attended virtual 'site visits' with the Parties and their advisers held via MS Teams. These arrangements were made because of Coronavirus (COVID-19) and the Government's associated guidelines.

6. We invited a wide range of interested parties to comment on the Merger. We conducted 15 interviews with customers, competitors, manufacturers and distributors of the Parties via MS Teams. Evidence was also obtained from third parties using written requests. Our approach to third party evidence and description of the third-party evidence we considered is set out in Appendix. We also used evidence from the CMA's phase 1 investigation into the Merger.

7. We received written evidence from the Parties in the form of submissions and responses to information requests (non-confidential versions of their responses to the Phase 1 Decision and the issues statement are published on the inquiry webpage). We also received a large number of internal documents from the Parties, as set out in Chapter 6 of the provisional findings report.

8. The CMA received confidentiality waivers from the Parties to share information with the EC. We received the Parties submissions to the EC requests for information and considered these responses in our analysis. Throughout the inquiry the CMA has cooperated with the other authorities investigating this inquiry, in particular the EC.

9. Due to Cargotec and Konecranes failures to comply with the requirements of their respective section 109 notices requesting information, we paused the statutory timetable on 11 August 2021, pending receipt of the information sought. Notice of extension was published on the inquiry webpage. Following receipt of the outstanding information, we restarted the statutory timetable on 20 September 2021 and notices of termination of extension were published on the inquiry webpage. The timetable was stopped for a total of 39 days, extending the statutory deadline to 4 February 2021. An updated administrative timetable was published on the inquiry webpage on

[1] Issues Statement.

22 September 2021 to reflect this extension. On the same date of the announcement of the provisional findings report, we have extended the statutory timetable for 8 weeks. The deadline for the CMA's final decision following this extension is 1 April 2021.

10. In the course of our inquiry we sent the Parties a number of working papers for comment. We also provided 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, which outlined our emerging thinking at the time prior to the main party hearings. The Parties provided comments on those papers on 22 October 2021.

11. We held main party hearings with the Parties on 20 October 2021. Both of these hearings were held via MS Teams.

12. A non-confidential version of the provisional findings report has been published on the inquiry webpage. As we have provisionally concluded that the anticipated merger has resulted in the creation of a relevant merger situation, and that the creation of that situation has resulted, or may be expected to result, in an SLC, a notice of possible remedies 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 those who have assisted us in our inquiry to date.

Appendix B: Shares of Supply

Introduction

1. In this appendix, we explain our approach to shares of supply for Gantry Cranes, Mobile Equipment, and other products (SC, ShC, TT, Crane spreaders, Mobile spreaders, and MHC).

2. For all relevant products, the Parties submitted their own sales data as well as their estimates of their competitors' sales. For Mobile Equipment and Gantry Cranes, we also received sales data from some third-party competitors. For these products, as set out below, we constructed our shares of supply (on a volume and revenue basis) using the best available data for each product and geography.

3. Where we present shares of supply based on volumes, these are based on delivery volumes rather than order volumes.

4. Where we present shares of supply based on revenue, these are based on nominal revenue figures (ie, not adjusted for inflation) in Euros.[1] This is consistent with the data and estimates provided by the Parties.

5. We note that we typically assign more weight to shares of supply based on revenue rather than volume. However, in this case we assign slightly more weight to shares of supply based on volume because we consider that the data that we have received on volumes is more accurate than the data that we have received on revenue.[2] As noted in the competitive assessments, the differences in shares of supply based on volume and revenue are not material.

Gantry Cranes

6. Our shares of supply for Gantry Cranes use a combination of the data submitted by the Parties and the data submitted by competitors. Where these figures were available, we have used the sales data submitted by competitors. Where we have not received data from a competitor, or where we have

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[1] The majority of suppliers provided data in Euros, but two suppliers provided data in GBP. We converted this data into Euros using the exchange rates provided by each supplier.

[2] We consider that both the data that the Parties provided regarding their own sales and the sales data that we received from third parties are accurate in terms of both volume and revenue figures. However, we consider that the Parties' estimates of their competitors' sales (which we use when third-party sales data is not available) are more accurate for sales volumes than for revenues. This is because, as explained below, the Parties' estimates of their competitors' revenues are based on estimates of approximate price differences between the Parties and their competitors, whereas estimates of competitors' sales volumes are based on internal intelligence and information from industry bodies.

incomplete data from a competitor, we have used the Parties' estimates of the competitors' sales instead.

Parties' data

7. The Parties provided sales figures for themselves and their competitors covering the years 2009–20 on three different geographic bases: UK, Europe, and worldwide (excluding China).[3]

8. For their own sales of Gantry Cranes, the Parties provided the actual number of deliveries that they made in each year and region. The Parties also provided the actual revenues associated with these deliveries for Konecranes' RTG sales, and both Parties' ASC sales. For Cargotec's RTG sales, Cargotec provided estimated revenues because actual revenues associated with each of its RTG deliveries were unavailable.[4]

9. The Parties estimated competitors' delivery volumes using data obtained from World Cargo News reports.

10. The Parties do not have visibility of competitors' actual revenues, so they estimated these based on relative price levels, as follows.

    a) The Parties calculated their own average prices in the periods 2009–11, 2012–14, 2015–17 and 2018–20.[5]

    b) For each competitor, the Parties estimated the approximate difference between their own prices and those of the competitor, in increments of 2.5% (for example, 2.5% higher, or 5% lower). This difference was applied to the Parties' average prices from above to obtain an average price for each competitor.

    c) Competitors' revenues in each year were then estimated by multiplying the estimated delivery volumes by the relevant estimated average prices.

Third-party data

11. We sought sales data covering revenues (in Euros) and delivery volumes from the Parties' competitors in RTG and ASC for the period 2011–20 on

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[3] The Parties defined Europe as the UK, the EEA, Switzerland, Ukraine, and Turkey.
[4] Cargotec calculated its estimated revenues by multiplying its actual number of deliveries of RTG in each year by its average price for RTG over a three-year period. Cargotec calculated four average prices for four three-year periods (2009–11, 2012–14, 2015–17, 2018–20) and used the relevant price according to the year in which the deliveries were made (eg, the average price from 2018–20 was used to estimate the three annual revenues associated with RTG deliveries in 2018, 2019 and 2020).
[5] These are not adjusted for inflation.

three geographic bases: UK, Europe, and worldwide (excl. China).[6] We received data from ZPMC[7] and Kuenz[8] for both RTG and ASC, and from Liebherr for RTG.

12. The data from ZPMC, Liebherr and Kuenz cover a large proportion of third-party RTG and ASC sales, particularly on a European basis. According to the Parties' estimates of delivery volumes, the competitors for which we did not receive sales data accounted for:

    a) [5–10%] of European RTG sales over 2011–20;

    b) [0–5%] of European ASC sales over 2011–20;

    c) [20–30%] of worldwide (excl. China) RTG sales over 2011–20; and

    d) [0–5%] of worldwide (excl. China) ASC sales over 2011–20.

Our approach

13. As noted above, where we did not receive data from competitors, or where we received incomplete data, we relied on the Parties' estimates of their competitors' sales. This applies in the following cases:

    a) RTG sales for Mitsui, Paceco Espana, Sany, CSSC, Mitsubishi, Mi-Jack, Baltkran, Doosan, HDHM, Hyundai, Rainbow-Cargotec, and Trans Gulf Port Cranes;

    b) ASC sales for CSSC and HDHM; and

    c) RTG and ASC sales for ZPMC in 2011.

14. We summed the volumes (or revenue) for all suppliers to obtain our estimates of the total market sizes. We then calculated shares of supply as each supplier's volume (or revenue) divided by the total market size.

15. We have presented ten-year aggregated shares of supply (ie, the total share of supply over 2011–20 for each supplier) in in our competitive assessments of horizontal unilateral effects in RTG and ASC. We have focused on ten-year aggregated shares in order to smooth out lumpiness, which limits the extent to which we can interpret annual shares of supply (or shares of supply aggregated over shorter time periods).

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[6] We defined Europe as the whole continent, including both the EEA and UK.
[7] As noted below, ZPMC did not provide data for 2011.
[8] Kuenz had converted the revenue data that it provided from Euros to GBP. We converted this data back into Euros using the exchange rate provided by Kuenz.

16. The Parties submitted in their response to the working papers that this long time period conceals more dynamic market trends in the Parties' and competitors' shares in Gantry Cranes, including the impact of recent entry and expansion. We note that we take account of any dynamic trends, including relevant entry and expansion, in the assessment of other evidence, such as from third parties and internal documents. Nevertheless, we have now also presented shares of supply covering two five-year periods (2011–15 and 2016–20) in order to identify any broad trends in the shares.

17. As discussed in Chapter 6, we place weight on the ten-year aggregated shares of supply that we have calculated for RTG and ASC. However, even when aggregated over ten years, the shares of supply in the UK can still be affected by lumpiness, so require careful interpretation.

Mobile Equipment

18. Our shares of supply for Mobile Equipment use a combination of the data submitted by the Parties and the data submitted by competitors. Where available, we have used the sales data submitted by competitors. Where we have not received data from a competitor, or where we have incomplete data from a competitor, we have used the Parties' estimates of the competitors' sales instead.

19. Where we obtained data from both a manufacturer and that manufacturer's distributor, we gave preference to data from the manufacturer. This is because volume data supplied by distributors may count the same equipment multiple times, where it is leased out more than once during a year.

Parties' data

20. The Parties provided sales figures for themselves and their competitors covering the years 2016–20 on three different geographic bases: UK, Europe, and worldwide (excluding China).[9]

21. For their own sales of Mobile Equipment, the Parties provided their actual sales volumes in each year and region along with the associated nominal sales revenue (in Euros).

22. The Parties estimated competitors' sales volumes as follows:

[9] The Parties defined Europe as the UK, the EEA, Switzerland, Ukraine, and Turkey.

a) Sales volumes between 2017 and 2019 were estimated based on internal intelligence and information from third-party sources, in particular industry associations.[10]

b) Estimated sales volumes for 2016 and 2020 were extrapolated from the 2017–19 estimates using the market-wide growth trends in those years (sourced from industry bodies).

23. The Parties do not have visibility of competitors' revenues, so they estimated these based on relative price levels, as follows.

a) The Parties calculated their own average prices in the periods 2016–17 and 2018–20.[11]

b) For each competitor, the Parties estimated the approximate difference between their own prices and those of the competitor, in increments of 2.5% (for example, 2.5% higher, or 5% lower). This difference was applied to the Parties' average prices from above to obtain an average price for each competitor.

c) Competitors' revenues in each year were then estimated by multiplying the estimated sales volumes by the relevant estimated average prices.[12]

Third-party data

24. We requested sales data covering revenues and volumes from the Parties' competitors in Mobile Equipment for the period 2016–20 on three geographic bases: UK, Europe, and worldwide (excluding China).[13] Where relevant, we sought this data from competitors' UK distributors as well.

25. We received sales data from Cooper (UK distributor for Sany in RS and ECH, and for Svetruck in HDFLT), CVS Ferrari, Hyster,[14] Hyundai, Liebherr, Linde, Sany, and ZPMC. This data covers a large proportion of third-party Mobile Equipment sales. According to the Parties' estimates of delivery volumes, the competitors for which we did not receive sales data accounted for:

a) [0–5%] of UK RS sales and [5–10%] of European RS sales over 2016–20;

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[10] Each of the Parties produced independent estimates for a set of competitors; when these estimates overlapped and differed the average of the estimates was used.
[11] These are not adjusted for inflation.
[12] For example, the sales volumes in 2016 and 2017 would both be multiplied by the average price for 2016–17.
[13] We defined Europe as the whole continent, including both the EEA and UK.
[14] Hyster had converted the revenue data that it provided from Euros to GBP. We converted this data back into Euros using the exchange rate provided by Hyster.

b) [0–5%] of UK ECH sales and [20–30%] of European ECH sales over 2016–20; and

c) [30–40%] of UK HDFLT sales and [30–40%] of European HDFLT sales over 2016–20.[15]

Our approach

26. Table 1 summarises the data that we used for each competitor in our shares of supply for Mobile Equipment. As noted above, we used manufacturers' own data on sales volumes and revenues where this was available. Where this data was not available, either because we did not receive any data or we received incomplete data, we used data from the manufacturer's UK distributor. If this was not available, we used the Parties' estimates.

Table 1: Sales data used in our shares of supply

Competitor	*RS*	*HDFLT*	*ECH*
CVS	Own data	Own data	Own data
FTMH	-	-	Parties' estimates
Hyster	Own data	Own data	Own data
Hyundai	-	Own data	-
Liebherr	Own data	-	-
Linde	-	Own data†	-
Sany	Distributor data for UK, own data for 2019–20 in Europe, Parties' estimates otherwise	Own data for 2019–20 in UK and Europe, Parties' estimates otherwise	Distributor data for UK, Parties' estimates otherwise‡
Svetruck	-	Distributor data for UK, Parties' estimates otherwise	Parties' estimates
Taylor	Parties' estimates	Parties' estimates	Parties' estimates
ZPMC	Own data	-	Own data

Source: CMA analysis.
Notes:
† We did not receive data on Linde's worldwide sales and the Parties did not provide an estimate for these sales; therefore, we have assumed that Linde's worldwide sales are the same as its European sales.
‡ The Parties' estimate of the total volume of ECH sold by Sany in Europe was less than the volume of ECH sold in the UK, according to Sany's UK distributor, Cooper; therefore, we have assumed that Sany's sales of ECH in Europe are the same as its UK sales.

27. The Parties' estimates for sales of Mobile Equipment include 'others' categories that include all remaining sales that have not been attributed to a specific competitor. We include these estimated sales in our shares of supply calculations.[16]

28. For RS and HDFLT we received data from some competitors for which the Parties had not provided estimates and thus whose sales had been implicitly captured in the 'others' categories in the Parties' estimates. To avoid double counting the sales of these competitors, we reduced the size of the 'others'

[15] The proportions for HDFLT overstate the proportion of sales that are not accounted for because we received data from three competitors for which the Parties had not provided estimated sales volumes.
[16] For HDFLT, the Parties split the 'others' category into multiple categories according to the industry body from which the data came (FEM for Europe, ITA for the USA, JIVA for Japan, and KOCEMA for South Korea). We combined these estimates into a single 'others' category.

categories by an amount equal to the sales of these competitors.[17] The relevant adjustments for each product are as follows.

a) **RS**—we subtracted sales for Liebherr and ZPMC from the 'others' category.

b) **HDFLT**—we subtracted sales for CVS, Hyundai, and Linde from the 'others' category.[18]

29. We summed the volumes (or revenue) for all suppliers (including 'others') to obtain our estimates of the total market sizes.[19] We then calculated shares of supply as each supplier's volume (or revenue) divided by the total market size.

30. We have presented five-year aggregated shares of supply (ie, the total share of supply over 2016–20 for each supplier) in our competitive assessments of horizontal unilateral effects in RS, HDFLT and ECH. Sales of Mobile Equipment occur more frequently than sales in Gantry Cranes but are nonetheless lumpy. Therefore, we focus on five-year aggregated shares in Mobile Equipment in order to smooth out lumpiness.

31. The Parties submitted in their response to the working papers that the use of five-year aggregated shares obscures the growth and current market position of Chinese suppliers, and Sany in particular, which only announced its relationship with Cooper in 2015. We note that we take account of any dynamic trends in the assessment of other evidence, such as from third parties and internal documents. Nevertheless, we have now also inspected annual sales figures in the Mobile Equipment markets in order to identify any broad trends in the shares of Chinese suppliers, and Sany in particular.

32. As discussed in Chapter 6, we place weight on the five-year aggregated shares of supply that we have calculated for Mobile Equipment. We also consider that the shares of supply for the UK are more relevant for Mobile Equipment than for other products because there are UK-specific elements to Mobile Equipment competition (see Chapter 5).

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[17] If this subtraction led to a negative sales figure for an 'others' category, we assumed that the sales for the 'others' category was 0.
[18] As noted above, the Parties provided estimates for several different 'others' categories. We subtracted the total sales for CVS, Hyundai, and Linde from the 'others FEM' and 'others KOCEMA' categories as we understand that these are the industry bodies to which these competitors report (see [✂]).
[19] As such, where the sales figure from a competitor differs from the Parties' estimate, the market size used in our shares of supply will also differ. We note that the Parties typically under-estimated the sales of their competitors (as compared with the data that we gathered from third parties), such that our market size estimates are typically larger than those submitted by the Parties.

Other products

33. The shares of supply that we present for other products (SC and ShC, TT, Crane spreaders, Mobile spreaders, and MHC) are based solely on data and estimates provided by the Parties.[20]

    a) For SC and ShC, the Parties provided sales volumes for themselves and their competitors covering the years 2017 to 2021 (up to 31 July) on four different geographic bases: UK, Europe, worldwide (excluding China), and worldwide.

    b) For TT, Crane and Mobile spreaders, and MHC, the Parties provided aggregate sales volumes for themselves and their competitors covering the years 2017 to 2019 on four different geographic bases: UK, Europe, worldwide (excluding China), and worldwide.

34. For their own sales of the products listed above, the Parties provided their actual numbers of deliveries. The Parties estimated competitors' delivery volumes for the products listed above based on internal market intelligence and publicly available data, including a DS Research market report entitled 'Container Terminal Foresight 2024, Section 2: Container Handling Equipment'. The total market sizes are the sum of the Parties' volumes and the estimated volumes of their competitors.

[20] As with Cranes and Mobile Equipment, for these other products the Parties defined Europe as the UK, the EEA, Switzerland, Ukraine, and Turkey.

Appendix C: Bidding analysis

Introduction

1. In this appendix, we explain our approach to analysing the Parties' bidding data for Mobile Equipment and RTG and ASC.

2. As set our below, we made some adjustments to the raw data, and then calculated the following statistics:

   (a) Loss ratios: Tenders lost to each competitor, as a percentage of all tenders that were participated in and not won. We calculate loss ratios on three different measures: number of tenders lost, total number of units lost, and total value (revenue) lost.

   (b) Overlap analysis: The number of bids the Parties won, separated into bids where they faced each other and bids in which they did not.

3. We set out, and interpret, the results of our bidding analysis in Chapter 7 and Chapter 9.

4. In the remainder of this annex, we:

   (a) Provide an overview of the Parties' data.

   (b) Set out the Parties' views on the data and how it should be interpreted.

   (c) Set out our assessment of the data and how we have used it.

   (d) Provide additional detail on the adjustments that we made to the raw data.

Overview of Parties' data

5. The Parties submitted bidding data for Mobile Equipment, RTG and ASC covering the sales opportunities that they won and lost over the period 2016-21. This data covers the UK, EEA, and the rest of the World. The Parties' data on sales opportunities included the following information:

   (a) Tender name.

   (b) Segment (ie the type of CHE being tendered).

   (c) Customer and delivery region.

   (d) Date of opportunity.

(e) Order intake by volume (ie the number of units to be supplied).

(f) Order intake by value (ie the revenue associated with the opportunity).

(g) The winner of the bid.

(h) Product/solution offered to customer.

(i) Other variables, such as unique identifiers and columns identifying competitors other than the winning bidder (i.e. runner-up competitors) where known.

6. The Parties sourced this information from internal databases:

(a) Cargotec provided Salesforce CRM data covering both RTG, ASC and Mobile Equipment.

(b) Konecranes provided Seibel CRM data covering RTG and ASC. In addition to the Siebel data, Konecranes also provided data from Rush reports, a Liftman database and a database listing all lift truck orders won by Konecranes combined into a single database.

7. Konecranes submitted that the sales opportunities contained in their response were limited to only those either won or lost by the Parties, excluding cancelled opportunities and those that are still ongoing. Konecranes explained that, in cases where information on key variables were not populated in the original data, attempts were made to infer the data from other populated variables.

Parties' views on their bidding data

8. The Parties submitted that there were several limitations and key considerations that must be taken into account when analysing the data they provided.

9. The Parties submitted that Cargotec's Salesforce data has a number of limitations in relation to recorded bidding activities. In particular:

(a) Firstly, Salesforce records sales opportunities in the context of tenders, but it is not always possible to identify whether a sale is the result of a tender or a bilateral negotiation with a customer. Furthermore, the Salesforce system does not have any fields for tender-specific information, such as whether the tender was open to other manufacturers, or the process for selecting the winner.

(b) Second, key fields such as the identity of competitors, delivery country or customer name, are often empty for many opportunities recorded in the system. The name of the winner of the sales opportunity is recorded fairly consistently for opportunities lost by Cargotec, but the names of other competitors are recorded in only a small number of cases.

(c) Third, information on expected margins is not reliable, as it is filled in automatically by the system or estimated by users and does not reflect the true expected economic margins associated with the opportunity.

(d) Fourth, when equipment is sold via an independent dealer, the identity of the end customer is usually not recorded. Sales via independent dealers are very common for Mobile Equipment, such as empty container handlers, forklift trucks, and reach stackers.

(e) Fifth, there was a lack of consistency over time in the way information was recorded in Salesforce which impacts the quality of the data, in particular historical data. This is because the guidelines provided to sales staff evolved over time and modified the way some information was reported.

(f) Finally, Salesforce records are subject to human errors and small mistakes in the entries. For example, the status of some old opportunities has not been updated and these are still recorded as ongoing sales opportunities.

10. The Parties also submitted that Konecranes' bidding data has a number of limitations in relation to recorded bidding activities. In particular the parties submit:

(a) First, sales made via tenders are not systematically identified as such by sales staff. Furthermore, it does not contain any fields for tender-specific information, such as whether the tender was open or not to other manufacturers, whether there were several rounds or whether it was organised a first- or second-price auction.

(b) Second, many key fields, such as the identity of competitors and their prices are not recorded systematically in the system. By construction, Siebel CRM allows only one entry in the field reporting competitors, and this field is only filled in [✂] of cases. As information on competitors is rarely public, the competitor's name identified by Konecranes' sales staff would represent their best estimate, and therefore might be inaccurate.

(c) Third, Siebel CRM does not record sales made via independent dealers (who sell on their own account), and as such would exclude a large majority of sales of Mobile Equipment, such as empty and full container

handlers, forklift trucks, and reach stackers. For Port Services, larger sales like modernisation and retrofits are recorded but a significant amount of transactional business like the sale of spare parts, and smaller service jobs and repairs, are not recorded and are handled directly with an order in ERP systems. Sales of software provided by Konecranes' majority owned company TBA Group B.V. and its subsidiaries (under business unit "Software"), are not recorded in the Siebel CRM.

(d) Siebel CRM records are subject to human errors and small mistakes in the entries can exist. For example, some sales opportunities reported as cancelled may in fact be cases lost by Konecranes but mislabelled as cancelled.

11. The Parties stated that analysis of the available bidding data will result in 'a significantly reduced sample' which feature a number of caveats, as such, they submit that reliance on the data will result in 'biased or wrong results'. They said this is because we do 'not know whether there is a systematic reason why such information is incomplete precisely because one cannot observe it'.

12. The Parties stated that any loss ratio analysis based on their bidding data is 'likely to be flawed because the Parties do not record all of their lost opportunities'. They said this 'is particularly the case for Konecranes' Mobile Equipment data, as sales are made [✂] via a distributor in the UK as [are a] large proportion of sales in the rest of Europe. As a result, Konecranes has very limited visibility as to its wins and especially its losses'.

13. Additionally, the Parties stated 'the Parties' data does not record information on competitors in a vast majority of cases'.

14. Cargotec and Konecranes also submitted tables providing a quantitative overview of their bidding data, including the proportion of entries containing information regarding competitors. The results were broken down based on equipment type, and whether the bid was won or lost. These are shown below in tables 1, 2, and 3.

Table 1 Sales opportunities recorded in Cargotec's data, over 2016 to May 2021

[✂]

Table 2 Bids recorded in Konecranes data for Mobile Equipment, over 2016 to 2020

[✂]

Table 3 Bids recorded in Konecranes data for cranes, over 2016 to 2020

[✂]

Our assessment of the bidding data and its suitability for analysis

15. First, we note that certain variables highlighted by the Parties as being incomplete (including data on runners-up) are not used in our loss ratio and overlap analysis. Rather, the main variables that we use are the identity of the winning bidder and information on the tender size and value.[1]

16. We recognise that the Parties' bidding data does not capture these variables for all of the opportunities bid on by the Parties (and their distributors), with Konecranes' data in particular appearing to be less complete than that of Cargotec. However, as shown by the Parties' analysis at paragraph 14 above, the Parties' bidding data does contain information on competitors faced in relation to most lost opportunities. Further, as discussed from paragraph 19 below, the bidding data covers a significant number of bids (which together account for a significant proportion of total sales in the market), and we have not seen evidence to suggest that any omissions would bias our results (for example, by systematically over or under stating the true competitive constraint imposed by particular players).

17. Further, as discussed at paragraph 25 we carried out a number of adjustments in order to correct erroneous data.

18. Therefore, overall, we consider that our quantitative bidding analysis (which includes loss ratios and some overlap analysis) provides useful evidence regarding closeness of competition between the Parties and the third-party constraints that they face.

Additional detail on data checks

19. In order to check the extensiveness of the bidding data, we compared total wins and losses (as captured by the bidding data) to total units supplied in the market as a whole (as captured in the shares of supply data).[2] In the tables below, we report these figures for both the UK and Europe as a whole for each of RTG, ASC, RS, HDFLT and ECH over the period 2016-20[3]. We also calculated the ratio of total wins and losses in the bidding data to total units supplied in the shares of supply data.

20. Table 4 shows that, [✂].

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[1] For Mobile Equipment opportunities that Konecranes participated in, the volume field was often not populated. Therefore for Konecranes' Mobile Equipment, we present loss ratios based on number and value of opportunities only.
[2] As set out in appendix B, our shares of supply data comprises the Parties' own estimates of their total sales and third-party sales and, where available, data from third-parties on their own sales.
[3] We made this comparison for the period 2016-2020 as both datasets contain data for this period.

Table 4 Comparison of bidding data and shares of supply data, UK, 2016 to 2020

[✂]

Source: CMA analysis of Parties' data, and third parties' data.

21. Table 5 shows [✂].

Table 5 Comparison of bidding data and shares of supply data, UK + EEA, 2016 to 2020

[✂]

Source: CMA analysis of Parties' data, and third parties' data.

22. Overall, Tables 1 and 2 show that the Parties' bidding data covers a significant proportion of the total sales in the market. We note that the proportion of the market covered in the bidding data is somewhat lower for Konecranes' mobile data. This suggests that Konecranes' mobile bidding data may be less complete than that of Cargotec.

23. We note that a ratio of less than 100% does not necessarily reflect omissions in the bidding data due to incomplete record-keeping by a Party or its distributor. The Parties choosing not to bid on some opportunities could also explain, in part, why some ratios are less than 100%, as could timing mismatches between the bidding data and the shares data[4]. Share of supply data captures units supplied based on when the equipment was delivered, whilst bidding data captures wins and losses based on when the opportunity or tender took place. This means that, for example, if a tender took place in 2015 and the equipment was delivered in 2016, the units would show up in the 2016-20 shares data but not in the 2016-20 tender data.

24. We have also considered the data submitted by the parties above in Tables 1, 2 and 3. This data shows that a significant proportion of competitors' details are present for both Cargotec and Konecranes when the bid was lost. We therefore consider that the data supplied by the parties provides a reasonable basis for analysis of the sample of bids lost to competitors.

Additional detail on data adjustments

25. We made a number of adjustments to the raw bidding data that we received from the Parties.

[4] Share of supply data captures units supplied based on when the equipment was delivered, whilst bidding data captures wins and losses based on when the opportunity or tender took place. This means that, for example, if a tender took place in 2015 and the equipment was delivered in 2016, the units would show up in the 2016-20 shares data but not in the 2016-20 tender data.

26. First, we deduplicated the data, where we found that the same opportunity was included more than once in the same dataset.

27. Second, we made a number of adjustments where information gathered in our wider analysis showed an inaccuracy in the bidding data.

28. In relation to Cargotec's data:

    (a) We adjusted the value of a 2017 RTG opportunity that was lost by Cargotec to [✂]. The opportunity included [✂]. We therefore capped the value of the 2017 opportunity so that it equalled the total revenue of [✂] over 2011 to 2020. We consider that this is a conservative approach in that the true value of the [✂] opportunity lost [✂] is likely to be lower still.

    (b) We removed a Mobile Equipment opportunity that was lost by Cargotec to [✂]. We consider this bid had been misclassified, [✂].

29. In relation to Konecranes' data:

    (a) We removed an RTG opportunity relating to a customer based in [✂]. Cargotec informed us that this bid was cancelled and so this observation is removed from the dataset.

30. Third, we identified opportunities where the implied unit price[5] was particularly high relative to other observations, and subjected these data points to additional checks and adjustments. Our rationale was that the value recorded against these opportunities may have been artificially inflated by equipment other than the product at hand.

31. For Mobile Equipment, where the number of opportunities was relatively high, we identified outlier observations as those where the implied unit price was more than three standard deviations away from the average for that product.[6] For these observations, we then sought to identify the same opportunity in the other Party's data. Where there was an inconsistency between the two (for example, in relation to the value of an opportunity), we made an adjustment so that the value that we judged to be more reliable was used in both data sets. For outlier observations where it was not possible to find a match, we replaced the opportunity value that we had doubts over with the average unit price for losses to that competitor, as calculated based on other observations in that dataset.

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[5] Calculated as revenue divided by number of units.
[6] The rule used was that any observation three standard deviations away from the mean for that product was identified as an outlier. This rule identified 16 outliers, making up less than 1% of all mobile equipment bids in the UK and EEA combined.

32. For Gantry Cranes, the number of opportunities in the data was much lower than for Mobile Equipment, and therefore we manually checked the data for any opportunities where the implied unit price was high and where a match could be made between the respective datasets of the two Parties. Where there was an inconsistency between the two, we made an adjustment based on the winning bidder's data (which we judged to be the more reliable of the two data points).

Appendix D: Third-party evidence

Introduction

1. In this appendix we outline our approach to gathering evidence from third parties in relation to Gantry Cranes, SC and ShC, Mobile Equipment, ATT, and the vertical theories of harm. As part of this, we discuss the number of responses that we received for different types of equipment.

2. We have gathered evidence and views on the nature of competition and the competitive conditions faced by the Parties from their customers and competitors. We primarily did so through written questionnaires.[1] We have included the specific questions asked in our questionnaires as footnotes when referring to third-party evidence in relevant chapters. We supplemented this information with virtual meetings with a number of third parties.[2] Some third parties also provided additional evidence that was relevant to our inquiry.

3. In total, we gathered evidence from 20 customers, 13 competitors, two distributors and one further third party (Impact, the UK distributor for Konecranes).

4. In general, we have interpreted the evidence from third parties qualitatively and have assessed it alongside other evidence.

5. We recognise that some third parties have an interest in the outcome of our inquiry. Therefore, as in any inquiry, when using third-party views as evidence, we have given due regard to a range of factors including: the incentives of the party giving that view; the extent to which the party had knowledge that was relevant to the subject areas being explored as part of our assessment, and the extent to which the view was corroborated by other evidence available to us.

Gantry Cranes

Customers

6. We asked the Parties to provide contact details for their customers of Gantry Cranes in the UK. We sent questionnaires to all of the customers for which we

[1] We have primarily relied on the evidence provided in response to the questionnaires sent during phase 2 of the inquiry but have relied on evidence provided in response to the questionnaires sent during phase 1 where appropriate.
[2] We rely on evidence from virtual meetings conducted during both phase 1 and phase 2 of our inquiry.

received contact details, covering all relevant products that the customer had purchased from the Parties.

7. For each of RTG and ASC, we asked customers, among other things, a series of questions in relation to their most recent purchase of that equipment type from the relevant Party. Where a customer had purchased products from both Parties, we only asked the customer about their recent purchase from one Party. We also asked all relevant customers a forward-looking question about which suppliers they would expect to consider, supposing that they were planning to purchase that equipment in the UK within the next year.

8. Through our discussions with the Parties' customers for other CHE, we discovered that some of these had purchased Gantry Cranes within the past ten years, but not from either of the Parties. Given the small number of customers for Gantry Cranes in the UK, we also sent questionnaires to these customers in order to widen the response base for Gantry Cranes.

9. In total, we received substantive responses from seven customers of Gantry Cranes. We also had virtual meetings with five of these respondents. The response rates for each type of Gantry Crane are as follows.

   (a) **RTG**—five responses from five questionnaires (ie, 100% response rate);[3] and

   (b) **ASC**—two responses from two questionnaires.

10. Respondents included the operators of the five major container ports in the UK, as identified by the Parties—HPH (Felixstowe), DP World (London Gateway and Southampton), ABP (Immingham) and Peel Ports (Liverpool)—as well as BHC. According to data provided by the Parties, these respondents accounted for 100% of Cargotec's RTG sales in the UK over 2017–20. We further note that these respondents include the customer for Konecranes' only sale of RTG in the UK during 2011–20, a customer that had recently purchased RTG but not from the Parties, and all known purchasers of ASC in the UK over the past ten years.

11. The Parties submitted that, even if the CMA was to conclude that the market is Europe-wide, the small number of responses (four) from UK customers of Gantry Cranes does not present a consistent picture of competition between the Parties and is not representative of the wider European market.

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[3] One of the five respondents noted that it did not have anything to add to the responses that it had already provided during phase 1 of the inquiry. For this customer, we relied on its response to the phase 1 questionnaire.

12. As noted above, we have gathered evidence from all purchasers of Cargotec RTG in the UK since 2017 (according to data from the Parties) and all recent purchasers of ASC in the UK. Therefore, while this is a small number of customers, it is a large proportion of the relevant customers in the UK. Given that the CMA is concerned with the effects of mergers in the UK, it is reasonable for us to focus our customer outreach on UK customers.

Competitors

13. We asked the Parties to provide contact details for their main competitors in Gantry Cranes. We sent questionnaires covering the relevant products to the four largest third-party suppliers of Gantry Cranes in Europe—ZPMC, Liebherr, Kuenz, and Mitsui.

14. Liebherr and Kuenz provided responses; we had a detailed virtual meeting with ZPMC in lieu of its response to the questionnaire. Mitsui (which has a share of supply of [0–5%] in RTG in Europe over 2011–20 and has not sold ASC in Europe over this period) did not respond.

15. We issued mandatory requests for information to ZPMC and Sany regarding their respective expansion plans.

SC and ShC

16. For customers using SC and ShC, we relied on the responses to our written questionnaire from phase 1 of the investigation. We also gathered further evidence from virtual meetings with both customers and competitors of the Parties that took place in both phase 1 and phase 2 of the investigation.

17. At phase 1, we sent questionnaires to the four customers identified by the Parties as using SC in the UK (DP World, Forth Ports, Maritime Transport, Peel Ports), one of which (DP World) also uses ShC.[4] We received responses from all of these customers and also had virtual meetings with three of them.

18. We had virtual meetings with two competitors of the Parties: Liebherr and ZPMC. We did not speak to Mobicon or Combilift; we note that these suppliers have made very few deliveries to European customers.

19. The Parties submitted that engagement with only four customers does not give a sufficient view of the whole market, even if the CMA was to conclude that the market is Europe-wide, nor provide a sufficiently detailed view of market dynamics. As noted above, we have gathered evidence from all known

[4] We are not aware of any other customers in the UK that use ShC.

purchasers of SC and ShC in the UK, and two of the main competitors to the Parties. Therefore, while this is a small number of third parties, it is a large proportion of the relevant third parties in the UK.

Mobile Equipment

Customers

20. We asked the Parties to provide contact details for their customers of Mobile Equipment in the UK. We sent questionnaires to all 33 customers for which we received contact details, covering all relevant products that the customer had purchased from the Parties.

21. For each of type of Mobile Equipment we asked customers, among other things, a series of questions in relation to their most recent purchase of that equipment type from the relevant Party. Where a customer had purchased products from both Parties, we only asked the customer about their recent purchase from one Party. The Parties identified eight industrial customers as being customers of Mobile Equipment for both Parties. We asked four of these customers about their purchases from Cargotec, and four about their purchases from Konecranes.[5]

22. We also asked all relevant customers a forward-looking question about which suppliers they would expect to consider, supposing that they were planning to purchase that equipment in the UK within the next year.

23. In total, we received responses from 16 customers of Mobile Equipment, of which 9 were port and intermodal terminal operators and 7 were industrial customers. The response rates for each type of Mobile Equipment are as follows:[6]

    (a) **RS**—eight responses from 22 questionnaires;

    (b) **HDFLT**—13 responses from 25 questionnaires; and

    (c) **ECH**—eight responses from 17 questionnaires.[7]

[5] In order to assign each customer a Party, we first split the eight customers into two groups of four: steel manufacturers and other manufacturers. We arranged each group in alphabetical order (based on the customer name) and then assigned each customer a Party on an alternating basis, starting with Cargotec (ie, the first steel manufacturer alphabetically was assigned Cargotec, and the second steel manufacturer was assigned Konecranes, and so on).
[6] Not all respondents answered the questionnaire in full.
[7] One customer provided details about a recent purchase it had made in lieu of filling in the questionnaire.

24. The respondents included the operators of the five major container ports in the UK, as identified by the Parties (see paragraph 10).

25. According to data provided by the Parties, the respondents accounted for at least 62% of Cargotec's RS sales in the UK over 2017–20, at least 32% of Cargotec's HDFLT sales in the UK over 2017–20, and at least 89% of Cargotec's ECH sales in the UK over 2017–20.

26. We do not have the requisite data in order to determine the coverage of Konecranes' customers because it uses Impact as a distributor in the UK. We note, however, that the Parties have end users in common and that tender data collected from Impact suggests that its recent port customers for Konecranes' Mobile Equipment are all covered by our evidence gathering.[8]

27. In summary, we have gathered evidence from a significant proportion of the Parties' customers for Mobile Equipment in the UK. We have lower coverage of the Parties' HDFLT customers because the customer base is more fragmented and we did not receive many responses from industrial customers, which are common purchasers of HDFLT. For all Mobile Equipment, we consider the responses with other evidence in the round.

Competitors

28. We asked the Parties to provide contact details for their main competitors in Mobile Equipment. We sent questionnaires to 11 of the 13 manufacturers listed, covering the relevant products that they produced.[9] We also sent questionnaires to an additional manufacturer of HDFLT (Hyundai), the UK distributors of the Parties' main competitors,[10] and four other UK distributors (including Konecranes' current distributor in the UK, Impact).[11]

29. We received responses from most major suppliers of Mobile Equipment in Europe and their distributors in the UK.[12] In particular, we received responses from CVS, Hyster (and its distributor, Briggs), Hyundai, Impact, Liebherr, and Sany (and its distributor, Cooper). We had a virtual meeting with Linde in lieu of its response to the questionnaire and, as noted above, the same applies to ZPMC. Aside from Briggs, Cooper, and Impact, the other three distributors that we contacted either did not respond or responded that the questionnaire

[8] Impact tender data.
[9] We sent questionnaires to the manufacturers that we considered relevant to our assessment of the competitive effects of the Merger. These were: CVS, Dalian, FTMH, Heli, Hyster, Liebherr, Linde, Maximal Forklift, Sany, Svetruck, and ZPMC.
[10] Briggs (distributor for Hyster) and Cooper (distributor for Sany).
[11] The other three distributors were Grant Handling, Premier Lift Trucks, and Shad Group.
[12] Not all respondents answered the questionnaire in full.

was not applicable to their business. In addition to their responses, we had virtual meetings with Briggs, Cooper, and Impact.

30. We issued a mandatory request for information to Sany regarding its expansion plans.

31. In summary, we have gathered evidence from all of the Parties' major competitors in Mobile Equipment. We consider these responses with other evidence in the round.

ATT

32. As the ATT market has not yet been established, we included some questions related to ATT in the questionnaires sent to customers that buy other CHE from the Parties in the UK.

33. Of 27 questionnaires sent, 13 customers responded to at least one of our questions regarding ATT. Given the nascent nature of ATT, in our assessment of customers' views of ATT suppliers, we only relied on responses from the four customers that considered themselves to be well-informed on this topic (see Chapter 10).[13]

34. The Parties submitted that the number of customers responding to the questionnaire that felt well-informed was very small (four). They further noted that the weight given to these four responses should reflect that these customers indicated that they either have not considered buying ATT or do not plan to do so in the next five years (or both), which means that it is unclear to what extent these customers would have reviewed or even considered potential options.

35. As above, we have focussed on the views of customers that indicated that they felt well-informed about the ATT market as these are most likely to accurately reflect the nature of competition. Even if a customer does not intend to purchase ATT in the near future, we consider that it can still provide relevant views on the suppliers that it would consider. We also note that we considered these responses with other evidence in the round in reaching our preliminary findings.

36. We also sent questionnaires to two current competitors of the Parties in manual TT (Terberg and Tico) and 13 other companies that the Parties had indicated were involved in the development of ATT. We received a response from one of the current competitors (Tico) and had a virtual meeting with the

[13] However, we relied on all responses in our assessment of the importance of various purchasing criteria.

other in lieu of a response (Terberg). We received full responses from four of the 13 companies that the Parties indicated were involved in the development of ATT (Hyster-Yale, Westwell Labs, Waymo, and Microsoft).[14] We also had a virtual meeting with Westwell Labs.

Vertical theories of harm

37. We gathered evidence from a range of third parties that were relevant to our assessment of the input foreclosure and customer foreclosure theories of harm.

38. We sent requests for information to the three main competitors to Cargotec (Bromma) in the supply of spreaders (both crane spreaders and Mobile spreaders): Elme, RAM and Stinis. We also requested information from Liebherr, which is the only large manufacturer of MHC other than Konecranes. We received some information from all of these third parties and had virtual meetings with Elme and Liebherr.

39. We also included questions related to crane spreaders and/or Mobile spreaders in some of the questionnaires sent to third parties during both phase 1 and phase 2 of our inquiry. We gathered further evidence in some of the virtual meetings that we had with third parties.

[14] We also received responses from [✂] and [✂] indicating that they were not in a position to be able to respond to the questionnaire.

Glossary

ABP	Associated British Ports
AGV	Automated guided vehicles.
APD	Automation and project delivery.
ARMG	Automated rail-mounted gantry cranes.
A-RTG	Automated **RTG.**
A-RTG	Automated **RTG.**
ASC	Automated stacking cranes.
ATT	Automated terminal tractors. Sometimes referred to as **A-TT.**
BHC	Belfast Harbour Commissioners, statutory corporation established to operate, maintain and improve Belfast Harbour.
CAGR	Compound annual growth rate.
Cargotec	Cargotec Corporation and all its' subsidiaries.
CHE	Container handling equipment.
CCH	Cargotec's Counterbalanced Container Handlers business line (including **RS** and **ECH**),
CMA	Competition and Markets Authority.
CMA2	Mergers: Guidance on the CMA's jurisdiction and procedure (2020 – revised guidance).
CMA129	Merger Assessment Guidelines (2021 – revised guidance)
EBIT	Earnings before interest and tax.
EC	European Commission.
ECH	Empty container handlers.
ECS	Equipment Control Systems.

EEA	European Economic Area
EMEA	Europe, Middle East and Africa
Europe	The whole continent, including both the EEA and UK.
FLT	Forklift trucks.
Gantry Cranes (or yard cranes)	**RTG**, **ASC**, and **RMG** are collectively referred to as Gantry Cranes.
GTO	Global terminal operator, GTOs are defined as in the Drewry annual report 2020/21: "A stevedore, carrier or hybrid that operates significant container terminal facilities in at least two different world regions." Furthermore, we also considered as port to be a GTO if a GTO owns at least 50% of that port or if a port has the same parent company as a GTO.
HPH	Hutchison Port Holdings Limited
HPH UK	Hutchison Ports (UK) Limited
HDFLT	**FLT** with a lifting capacity of at least 10 tonnes.
Horizontal Transport Equipment	Refers to **SC**, **ShC**, **TT** and **AGV**
Hyster	Hyster-Yale Group.
Inquiry Group	The Group of CMA panel members constituted to investigate and report on whether the Merger will lead to an **SLC.**
Konecranes	Konecranes Plc and all its subsidiaries.
Lo-Lo	Lift-on/Lift-off.
Merged Entity	Refers to the a post-Merger entity of the merged **Cargotec** and **Konecranes** collectively.
Merger	The proposed merger between **Cargotec** and **Konecranes.**
MHC	Mobile harbour cranes.
Mobile Equipment	Refers to **RS**, **ECH** and **FLT**.

MoU	Memorandum of Understanding.
OEM	Original Equipment Manufacturer.
Parties	**Cargotec** and **Konecranes** collectively, for statements referring to the future, the **Merged Entity.**
Phase 1 Decision	The CMA's phase 1 Reference Decision.
Quay Cranes	Refers to **STS** and **MHC**.
RMG	Rail-mounted gantry cranes.
RMS	Relevant merger situation.
RS	Reach stackers.
RTG	Rubber-tired gantry cranes.
SC	Straddle carriers.
Share of supply test	That merged enterprises both supply or acquire goods or services of a particular description and will after the merger supply or acquire 25% or more of those goods or services in the UK (or a substantial part of the UK).
ShC	Shuttle carriers.
SLC	Substantial lessening of competition.
Spreaders	Spreaders are the piece of **CHE** used to grip containers
STS	Ship-to-shore cranes.
TEU	Twenty-foot equivalent unit: The standardised measure for containers in the industry where one 40ft container equals two **TEU**.
The Act	The Enterprise Act 2002.
The CFT Market Report	A market report by Container Terminal Foresight dated January 2020 (Container Terminal Foresight, January 2020).
TOS	Terminal Operating System.
TT	Terminal tractors.

Turnover test	The value of the turnover in the UK of the enterprise being taken over exceeds GBP 70 million.
UK	United Kingdom.