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Attention: [REDACTED]  
[REDACTED]  
[REDACTED]  
ARTC  
By Email

Our ref ARTC KPI Report 2022-23  
FINAL.docx

Contact [REDACTED]  
[REDACTED]

4 October 2023

Dear [REDACTED]

**Report on the procedures performed over the Interstate Access Undertaking Performance Indicator Reports (the KPI reports) prepared by Management of Australian Rail Track Corporation (ARTC)**

Australian Rail Track Corporation (**ARTC**) have agreed to a voluntary Interstate Access Undertaking dated 15 July 2008 (**Access Undertaking**) with the Australian Competition and Consumer Commission (**ACCC**) in relation to the provision of access to those parts of the Interstate Rail Network for which it is responsible. As part of that undertaking ARTC is required to publish various Performance Indicator Reports (**Key Performance Indicator (KPI) Reports and Unit Cost Reports**) and to have an independent practitioner undertake a review of the Performance Indicator Reports and present their findings on them in order to meet ARTC's reporting obligations under clause 8.2 of the Access Undertaking.

**Summary**

This report contains the following sections:

Summary

- 1 Introduction
- 2 Director's and Management's responsibilities
- 3 Our responsibilities
- 4 Procedures
- 5 Distribution and use of report

Appendix 1 – Factual Findings

Appendix 2 – KPI Reports

Appendix 3 – Unit Costs Reports

## **1 Introduction**

The procedures we have conducted relate to the process through which ARTC calculates the KPIs and Unit Costs from data extracted from ARTC's core business systems. We have not performed any procedures in relation to the accuracy or completeness of any business systems nor of the data within them.

We have performed the procedures as detailed in the amendment to Contract No. CA-SA-06749-00 with ARTC dated 9 August 2023 and described in Appendix 1.

Our procedures are performed over:

1. The KPI Reports (refer Appendix 2) for the quarters ending:

- September and December 2021
- March, June, September and December 2022, and
- March, June 2023.

Data prior to quarter ending September 2021 is out of scope.

2. The Unit Costs Reports (refer Appendix 3) for the years ended:

- 30 June 2022 and 2023.

Data prior to the year ended 30 June 2022 is out of scope.

## **2 Director's and Management's responsibilities**

The responsibility for determining the adequacy or otherwise of these procedures is that of the Directors of ARTC and Management. This responsibility includes determining whether the findings provided by us, in combination with any other information obtained, provide a reasonable basis for any conclusions which they wish to draw on the subject matter.

Management are responsible for the preparation and fair presentation of the KPI Reports and Unit Costs Reports. They are also responsible for determining the Basis of Preparation, as presented in the KPI Reports and Unit Costs Reports, are appropriate to meet their requirements. Management's responsibility also includes such internal controls as they determine necessary to enable the preparation, fair presentation and publication of the KPI Reports and Unit Costs Reports that are free from material misstatement whether due to fraud or error.

## **3 Our responsibilities**

Our responsibility is to report the findings obtained from conducting these procedures. We have only performed the procedures set out in Section 3 to this letter and no additional procedures have been performed. We have not assessed whether the metrics used to derive the KPIs are appropriate, sufficient or complete, nor have we evaluated the accuracy of ARTC's core business systems.

Had we performed additional procedures, or had we performed an audit or review in accordance with Auditing and Assurance Standards Board (AUASB) Standards, other matters might have come to our attention that would have been reported to ARTC.

## 4 Procedures

The procedures were performed solely to assist ARTC in meeting their reporting obligations under the Interstate Access Undertaking. The procedures performed are provided below and the factual findings are detailed in Appendix 1.

### KPI Reports

All KPIs	
<b>1</b>	<b>Chart comparison</b> <p>Obtain the latest Performance Indicator reports (the “KPI Reports”) directly from the ARTC web site (<a href="http://www.artc.com.au/customers/access-interstate/performance-indicators/reporting/">http://www.artc.com.au/customers/access-interstate/performance-indicators/reporting/</a>). Compare each chart on each pdf report to those in the latest “ACCC Report June_yyyy.xls” spreadsheet (referred to hereafter as “the ACCC Report Spreadsheet”) and check that they are the same.</p> <p>Note: The KPI reports consist of a total of 27 charts that illustrate the KPIs since inception of the undertaking in 2008. These procedures relate only to the KPIs for the in scope quarters noted above. All prior KPIs and data are expressly excluded from the scope of these procedures.</p>
KPIs 1 - 15	
<b>2</b>	<b>Chart links traced</b> <p>For the data series in each graph in the ACCC Report Spreadsheet trace the link to the source data contained in the “KPI Data Workbooks” and check that it aligns correctly with the periods in scope and that the data is labelled consistently with the chart.</p>
<b>3</b>	<b>Data subtotalling</b> <p>For each data series used by the Charts in the ACCC Report Spreadsheet and referenced in Procedure. 2 above, check that the data is correctly subtotalled from the relevant “detailed” table in the ACCC Snapshot Database. Tables/Queries with relevant data are:</p> <ul style="list-style-type: none"> <li>• KPI_DW_Data_Detailed</li> <li>• KPI_DW_Delay_Data_Detailed</li> <li>• TSR_Data – via 1_TSR_Qry</li> <li>• TQI_Data – via 1_TQI_Qry</li> <li>• Avail_Mkt_Data – via 1_KPI_Network_AvailMkt_Qry</li> <li>• Dynamis_data – via 1_KPI_Network_Config_Prac_Qry</li> </ul>
<b>4</b>	<b>Data extract queries</b> <p>Check that the queries used to populate each of the tables referenced in Procedure 3 above only limit the data extracted from the KPI Data Warehouse as documented by ARTC. Check that services data is only extracted for trains that are contained within the “Train Inclusions Table”.</p>

<b>KPIs 8, 9 &amp; 10 – Transit Time</b>	
<b>5</b>	<b>Transit time</b> Check that the 'total minutes per hour of transit ' is correctly calculated as the result of dividing the 'sum of minutes delay' by the 'total transit time' for each of the quarters in scope.
<b>KPI 11 – Temporary Speed Restriction</b>	
<b>6</b>	<b>Temporary speed restrictions</b> Check that the totals contained in the "TSR_Data" table in the ACCC Snapshot database agree to the KM restricted and the Percent restricted columns in the 'TSR-QTR_Data.xls' spreadsheet for the quarters in scope.
<b>KPI 12 – Track Condition</b>	
<b>7</b>	<b>Track condition</b> Check that the totals contained in the "TQI_Data" table in the ACCC Snapshot database agree to those in the "TQI_QTR_Data.xls" spreadsheet for the quarters in scope.
<b>KPIs 13 – 14 – Network Availability</b>	
<b>8</b>	<b>Network availability</b> Check that the totals contained in the "Dynamis_Data" table in the ACCC Snapshot database agree to the 'Summary' tab in the "Dynamis_QTR_Data.xls" for the quarters in scope.
<b>IT Access Control Procedures</b>	
<b>9</b>	<b>IT access controls</b> Check that access to make changes to the following database and spreadsheets for the quarters in scope is limited to staff responsible for producing the KPI reports as listed below: <ul style="list-style-type: none"> <li>• "ACCC Snapshot database"</li> <li>• "ACCC Report [month] Quarter [year].xls"</li> <li>• "TSR_ QTR_Data.xls"</li> <li>• "TQI_QTR_Data.xls"</li> <li>• "Dynamis_QTR_Data.xls"</li> </ul> Responsible ARTC Staff: <ul style="list-style-type: none"> <li>• Joni Kua</li> <li>• Vince Tiong</li> <li>• Ian Fox</li> </ul>
<b>Confirmation of a KPI Policy</b>	
<b>10</b>	<b>KPI Policy</b> Check that a policy or procedure for the process of reporting KPIs 1 to 15 has been developed by ARTC.

## **Unit Costs Report**

The procedures noted below are to be applied to each of the periods in scope. The notation “20xx-yy” has been used to refer to either the 2021-2022 and 2022-2023 financial years as appropriate.

<b>11</b>	<p><b>Workbook: 20xx-yy Line Segment GTK and TKM Specification.xlsx</b></p> <ul style="list-style-type: none"> <li>a) Observe the re-running of the IBS Financials Report “Dollars, GTK’s and Train KMs (Commercial)” and compare the results to those in the Data sheet.</li> <li>b) Examine the script used to extract the information in the Data sheet for any unexpected exclusions.</li> <li>c) In the ‘Segments’ sheet, compare the mapping of each line segment to their respective undertaking and UC allocation, to that used in the prior year. Check any changes to the Network Assumptions sheet and confirm with ARTC the reason for the change.</li> <li>d) Check the GTK and TKM figures by Ex Segments in the ‘To Overhead Allocation’ sheet to those in the ‘GTK &amp; TKM’ sheet in the <i>Unit Cost Calculation Summary Model</i>. Note and gain explanation for any differences.</li> </ul>
<b>12</b>	<p><b>Workbook: Unit Cost Calculation Summary Model 20xxyy</b></p> <ul style="list-style-type: none"> <li>a) Compare and reconcile the total KM length entered into the ‘Unit Cost Summary’ sheet from the <i>ACCC TSR Report_Network Track Length 20xxyy.xls</i> workbook, to that used in the Percentage Temporary Speed Restriction KPI calculation.</li> <li>b) Check that the job roles contained within each of the FTE figures used in the Operations Staff breakdown from the ‘<i>Operations FTE’s as at June yyyy</i>’ (where yyyy is the relevant year) workbook (as entered in the Overhead Allocation sheet), accurately represent Network and non-Network control staff.</li> <li>c) In sheet ‘Undertakings lookup’, compare the mapping of segments to undertaking and UC allocation to those used in the prior year. Check any changes to the Network Assumptions sheet (in Workbook: <i>20xx-yy Line Segment GTK and TKM Specification.xlsx</i>) and confirm with ARTC the reason for the change.</li> <li>d) Check that the individual UC calculations in the ‘Unit Cost Summary’ sheet reference the correct denominator and numerator.</li> </ul>



**13 Works Ledger inputs**

- a) Observe the re-running of the Works Ledger report used to populate the 'Works Ledger' sheet and compare results to those in the model.
- b) Check the control totals provided in the Technology One screen shots in the model to those entered in the 'Charges per WK' column (column D) and gain explanation for any differences.
- c) Observe the re-running of the report to produce the "34 - Train Control Communications" costs per the 'Operations Costs yyyy' (where yyyy is the relevant year) sheet and compare the results to those in the model and gain explanation for any differences.
- d) Observe the re-running of the report used to populate the Total Expenditure tables in the Overhead Allocation sheet and compare the results to those in the model and gain explanation for any differences.

## **5 Distribution and use of report**

This report has been prepared as outlined with ARTC in the Scope Section of contract CA-SA-06749-00. The services provided in connection with this engagement comprise an advisory engagement, which is not subject to assurance or other standards issued by the Australian Auditing and Assurance Standards Board and, consequently no opinions or conclusions intended to convey assurance have been expressed.

No warranty of completeness, accuracy or reliability is given in relation to the statements and representations made by, and the information and documentation provided by, ARTC Management and personnel consulted as part of the process.

KPMG have indicated within this report the sources of the information provided. We have not sought to independently verify those sources unless otherwise noted within the report.

KPMG is under no obligation in any circumstance to update this report in either oral or written form, for events occurring after the report has been issued in final form.

This report is solely for the purpose set out in the Scope Section and for ARTC's information and is not to be used for any purpose not contemplated in the contract or to be distributed to any third party without KPMG's prior written consent. Our consent is provided for this report to be posted on the ARTC website together with the web versions of the KPI Reports and Unit Cost reports.

This report is not to be read without the attached KPI Reports and Unit Costs Reports in their entirety (Appendices 2 and 3). ARTC Directors and Management are responsible for the integrity of the ARTC website where our report is attached to the website version of the KPI Reports and Unit Cost reports. We have not been engaged to report on the integrity of the ARTC website.

This report has been prepared at the request of ARTC in accordance with the terms of KPMG's contract CA-SA-06749-00 and its amendment dated 9 August 2023. Other than our responsibility to ARTC, neither KPMG nor any member or employee of KPMG undertakes responsibility arising in any way from reliance placed by a third party on this report. Any reliance placed is that party's sole responsibility.

Yours sincerely



Partner

## Appendix 1 – Factual Findings

Unless otherwise noted, each of the following procedures was applied to each of the quarters in scope as described above. Data prior to quarter ending September 2021 is out of scope.

### KPI Reports

Detailed Procedure		Errors or exceptions identified	ARTC Management Comment
<b>All KPIs</b>			
<b>1</b>	<b>Chart comparison</b>  Obtain the latest Performance Indicator reports (the “KPI Reports”) directly from the ARTC web site ( <a href="http://www.artc.com.au/customers/access-interstate/performance-indicators/reporting/">http://www.artc.com.au/customers/access-interstate/performance-indicators/reporting/</a> ). Compare each chart on each pdf report to those in the latest “ACCC Report Jun 2023_v1.xlsm” spreadsheet (referred to hereafter as “the ACCC Report Spreadsheet”) and check that they are the same.  Note: The KPI reports consist of a total of 27 charts that illustrate the KPIs since inception of the undertaking in 2008. These procedures relate only to the KPIs for the in-scope quarters noted above. All prior KPIs and data are expressly excluded from the scope of these procedures.	No exceptions noted.	None
<b>KPIs 1 - 15</b>			
<b>2</b>	<b>Chart links traced</b>  For the data series in each graph in the ACCC Report Spreadsheet trace the link to the source data contained in the “KPI Data Workbooks” and check that it aligns correctly with the periods in scope and that the data is labelled consistently with the chart.	No exceptions noted.	None



Detailed Procedure		Errors or exceptions identified	ARTC Management Comment
<b>3</b>	<p><b>Data subtotalling</b></p> <p>For each data series used by the Charts in the ACCC Report Spreadsheet and referenced in Procedure. 2 above, check that the data is correctly subtotaled from the relevant “detailed” table in the ACCC Snapshot Database. Tables/Queries with relevant data are:</p> <ul style="list-style-type: none"> <li>• KPI_DW_Data_Detailed</li> <li>• KPI_DW_Delay_Data_Detailed</li> <li>• TSR_Data – via 1_TSR_Qry</li> <li>• TQI_Data – via 1_TQI_Qry</li> <li>• Avail_Mkt_Data – via 1_KPI_Network_AvailMkt_Qry</li> <li>• Dynamis_data – via 1_KPI_Network_Config_Prac_Qry</li> </ul>	No exceptions noted.	None

Detailed Procedure		Errors or exceptions identified	ARTC Management Comment
<b>4</b>	<b>Data extract queries</b> Check that the queries used to populate each of the tables referenced in Procedure 3 above only limit the data extracted from the KPI Data Warehouse as documented by ARTC. Check that services data is only extracted for trains that are contained within the "Train Inclusions Table".	No exceptions noted.	None
<b>KPIs 8, 9 &amp; 10 – Transit Time</b>			
<b>5</b>	<b>Transit time</b> Check that the 'total minutes per hour of transit ' is correctly calculated as the result of dividing the 'sum of minutes delay' by the 'total transit time' for each of the quarters in scope.	No exceptions noted.	None
<b>KPI 11 – Temporary Speed Restriction</b>			
<b>6</b>	<b>Temporary speed restrictions</b> Check that the totals contained in the "TSR_Data" table in the ACCC Snapshot database agree to the KM restricted and the Percent restricted columns in the 'TSR-QTR_Data.xls' spreadsheet for the quarters in scope.	No exceptions noted.	None
<b>KPI 12 – Track Condition</b>			
<b>7</b>	<b>Track condition</b> Check that the totals contained in the "TQI_Data" table in the ACCC Snapshot database agree to those in the "TQI_QTR_Data.xls" spreadsheet for the quarters in scope.	No exceptions noted.	None
<b>KPIs 13 – 14 – Network Availability</b>			
<b>8</b>	<b>Network availability</b> Check that the totals contained in the "Dynamis_Data" table in the ACCC Snapshot database agree to the 'Summary' tab in the "Dynamis_QTR_Data.xls" for the quarters in scope.	No exceptions noted.	None



Detailed Procedure		Errors or exceptions identified	ARTC Management Comment
<b>IT Access Control Procedures</b>			
<b>9</b>	<b>IT access controls</b> Check that access to make changes to the following database and spreadsheets for the quarters in scope is limited to staff responsible for producing the KPI reports as listed below: <ul style="list-style-type: none"> <li>• "ACCC Snapshot database"</li> <li>• "ACCC Report [month] Quarter [year].xls"</li> <li>• "TSR_QTR_Data.xls"</li> <li>• "TQI_QTR_Data.xls"</li> <li>• "Dynamis_QTR_Data.xls"</li> </ul> Responsible ARTC Staff: <ul style="list-style-type: none"> <li>• Joni Kua</li> <li>• Vince Tiong</li> <li>• Ian Fox</li> </ul>	One additional staff member was noted as having access to the folder. ARTC Management confirmed that their role included providing input to the production of the KPI reports and that their access was therefore appropriate.  No exceptions noted.	None
<b>Confirmation of a KPI Policy</b>			
<b>10</b>	<b>KPI Policy</b> Check that a policy or procedure for the process of reporting KPIs 1 to 15 has been developed by ARTC.	No exceptions noted.	None



### **Unit costs**

In scope are the following periods:

- Year ended 30 June 2022, and
- Year ended 30 June 2023.

Detailed Procedure	Errors or exceptions identified	ARTC Management Comment
<p>11 <b>Workbook: 20xx-yy Line Segment GTK and TKM Specification.xlsx</b></p> <p>a) Observe the re-running of the CI Financials Report “Dollars, GTK’s and Train KMs (Commercial)” and compare the results to those in the Data sheet.</p> <p>b) Examine the script used to extract the information in the Data sheet for any unexpected exclusions.</p> <p>c) In the ‘Segments’ sheet, compare the mapping of each line segment to their respective undertaking and UC allocation, to that used in the prior year. Check any changes to the Network Assumptions sheet and confirm with ARTC the reason for the change.</p> <p>d) Check the GTK and TKM figures by Ex Segments in the ‘To Overhead Allocation’ sheet to those in the ‘GTK &amp; TKM’ sheet in the <i>Unit Cost Calculation Summary Model</i>. Note and gain explanation for any differences.</p>	<p>No exceptions noted.</p>	<p>None</p>



Detailed Procedure	Errors or exceptions identified	ARTC Management Comment
<p>12    <b>Workbook: Unit Cost Calculation Summary Model 20xxyy</b></p> <p>a) Compare and reconcile the total KM length entered into the 'Unit Cost Summary' sheet from the <i>ACCC TSR Report_Network Track Length 20xxyy.xls</i> workbook, to that used in the Percentage Temporary Speed Restriction KPI calculation.</p> <p>b) Check that the job roles contained within each of the FTE figures used in the Operations Staff breakdown from the '<i>Operations FTE's as at June yyyy</i>' (where yyyy is the relevant year) workbook (as entered in the Overhead Allocation sheet), accurately represent Network and non-Network control staff.</p> <p>c) In sheet 'Undertakings lookup', compare the mapping of segments to undertaking and UC allocation to those used in the prior year. Check any changes to the Network Assumptions sheet (in Workbook: <i>20xx-yy Line Segment GTK and TKM Specification.xlsx</i>) and confirm with ARTC the reason for the change.</p> <p>d) Check that the individual UC calculations in the 'Unit Cost Summary' sheet reference the correct denominator and numerator.</p>	<p>No exceptions noted.</p>	<p>None</p>



Detailed Procedure		Errors or exceptions identified	ARTC Management Comment
13	<b>Works Ledger inputs</b>  a) Observe the re-running of the Works Ledger report used to populate the 'Works Ledger' sheet and compare results to those in the model.  b) Check the control totals provided in the Technology One screen shots in the model to those entered in the 'Charges per WK' column (column D) and gain explanation for any differences.  c) Observe the re-running of the report to produce the "34 - Train Control Communications" costs per the 'Operations Costs yyyy' (where yyyy is the relevant year) sheet and compare the results to those in the model and gain explanation for any differences.  d) Observe the re-running of the report used to populate the Total Expenditure tables in the Overhead Allocation sheet and compare the results to those in the model and gain explanation for any differences.	d) Due to changes in the modeling process this test was changed to a check of the transfer of the overheads summary from the 'Overheads Reporting FYyy' workbook to the 'Unit Cost Summary Calculation 20xxyy' models for each year.  No exceptions noted.	None

## **Appendix 2 – KPI Reports**

The following performance indicator reports (collectively “the KPI Reports”) were the subject of these procedures:

- Reliability
- Network Availability
- Transit Time
- Temporary Speed Restrictions
- Track Condition, and
- Unit Costs.

See overleaf for the KPI reports that were the subject of our procedures.

## PERFORMANCE INDICATORS ‘NETWORK AVAILABILITY’

In accordance with ARTC's 2007 Interstate Access Undertaking, the following Network Availability Performance Indicators are published:

- **Transit Time – Infrastructure Configuration Capability**

A measure of transit time over the Network, delivered by the infrastructure given its configuration (alignment, grades, curves, and associated permanent speed restrictions). Measured by simulated operation of a reference Indicative Service over the Network (excluding prevailing temporary speed restrictions). Reported on the basis of average speed.

- **Transit Time – Infrastructure Practical Capability**

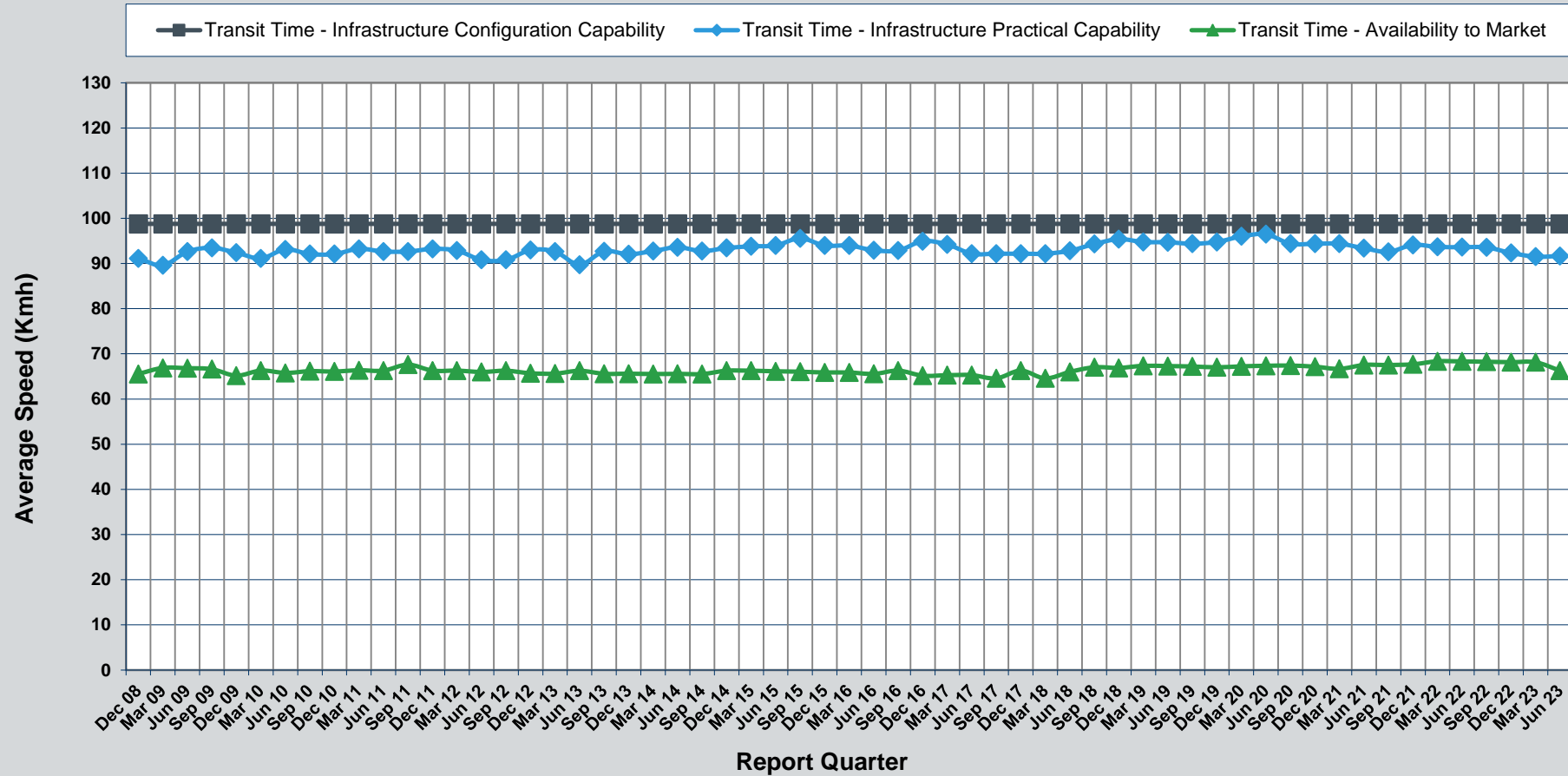
A measure of transit time over the Network, delivered by the infrastructure given its configuration (as measured by Transit Time – Infrastructure Configuration Capability) and maintenance requirements (including the transit time impact of temporary speed restrictions). The transit time impact of temporary speed restrictions is determined by applying the temporary speed restrictions in place on the Network to a simulation model designed to determine the total of time lost by reference Indicative Service subject to each temporary speed restriction. Reported on the basis of average speed.

- **Transit Time – Availability to Market**

A measure of transit time offered to the market, delivered by the infrastructure given its configuration, maintenance requirements and network usage (scheduled delays for path interactions). Measured by average scheduled transit time for Indicative Services adjusted for any Operator requirements (dwells, deviation from offered section run times). Reported on the basis of average speed.

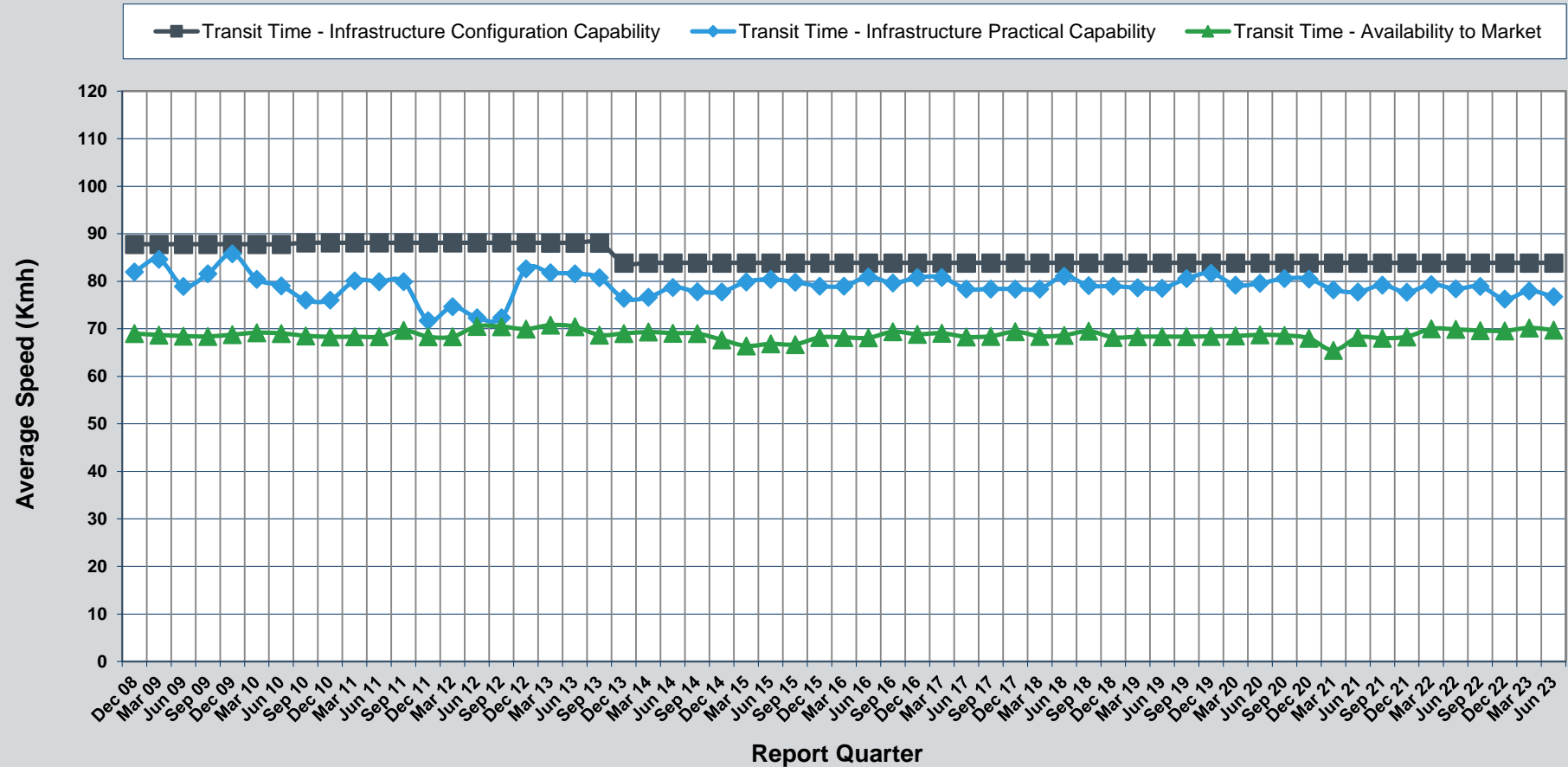
# Network Availability

## Melbourne to Parkeston



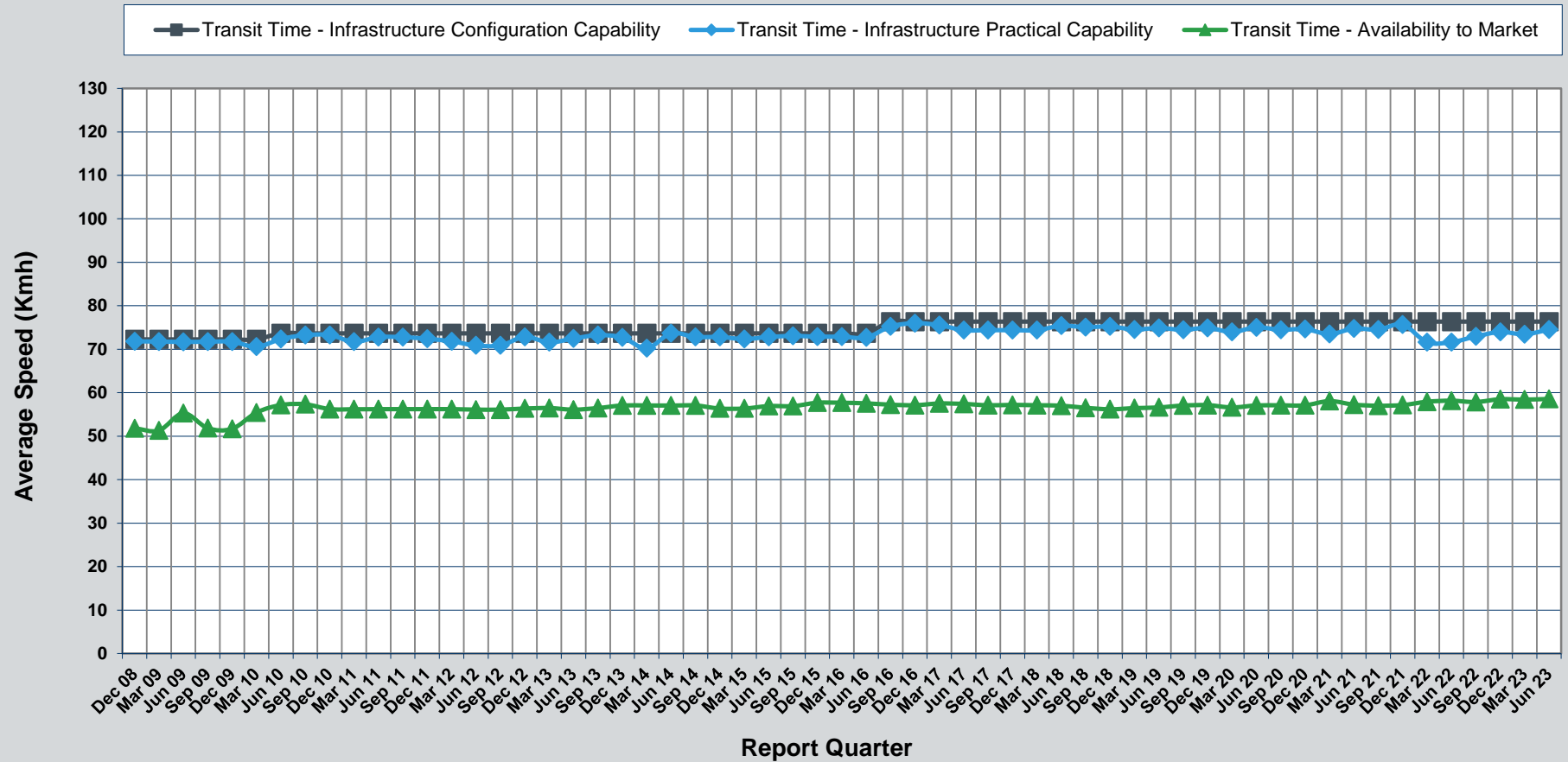
# Network Availability

## Melbourne to Sefton Park Jct



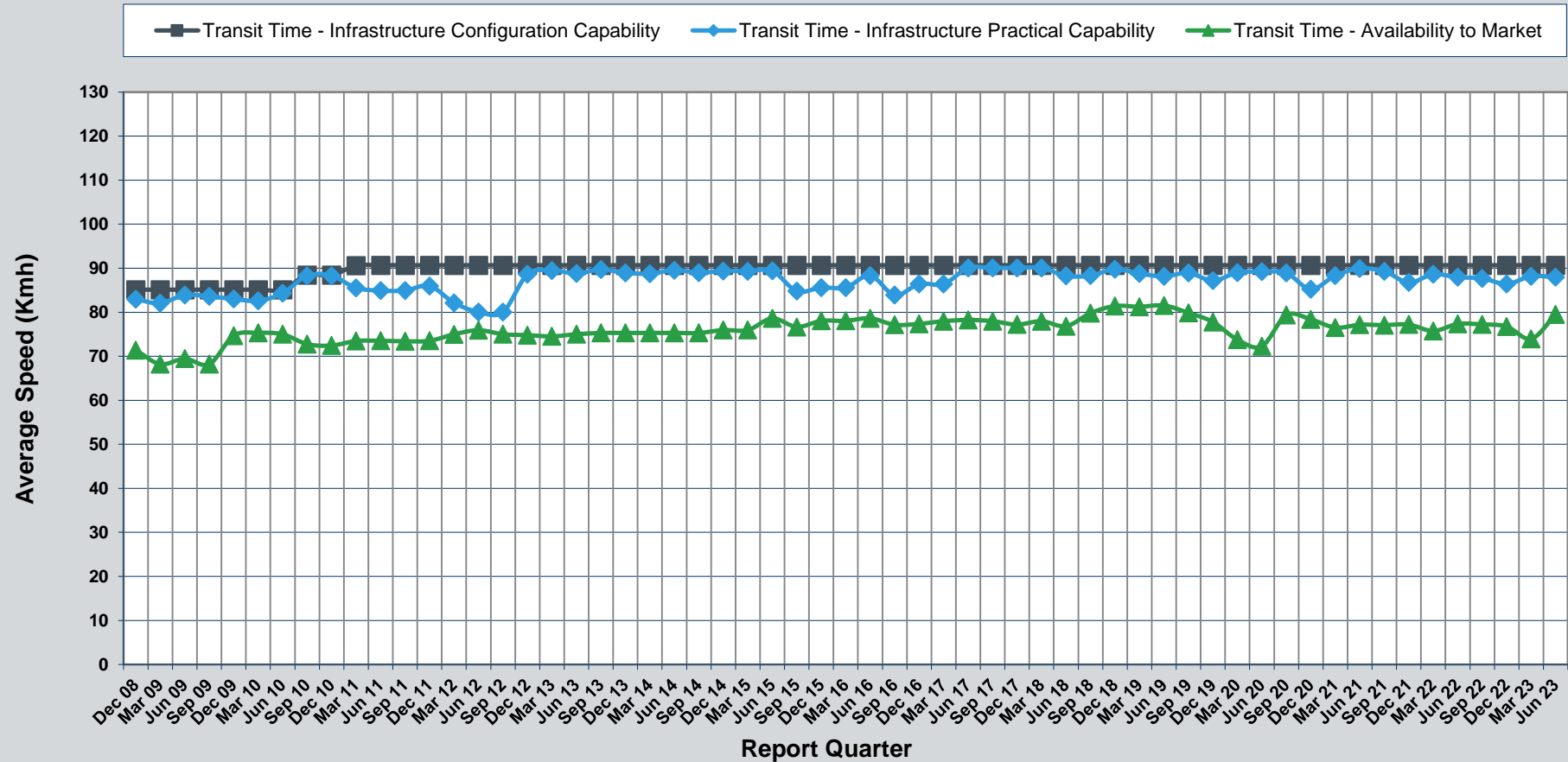
# Network Availability

## Newcastle to QLD Border



# Network Availability

## Cootamundra - Crystal Brook



## PERFORMANCE INDICATORS ‘RELIABILITY’

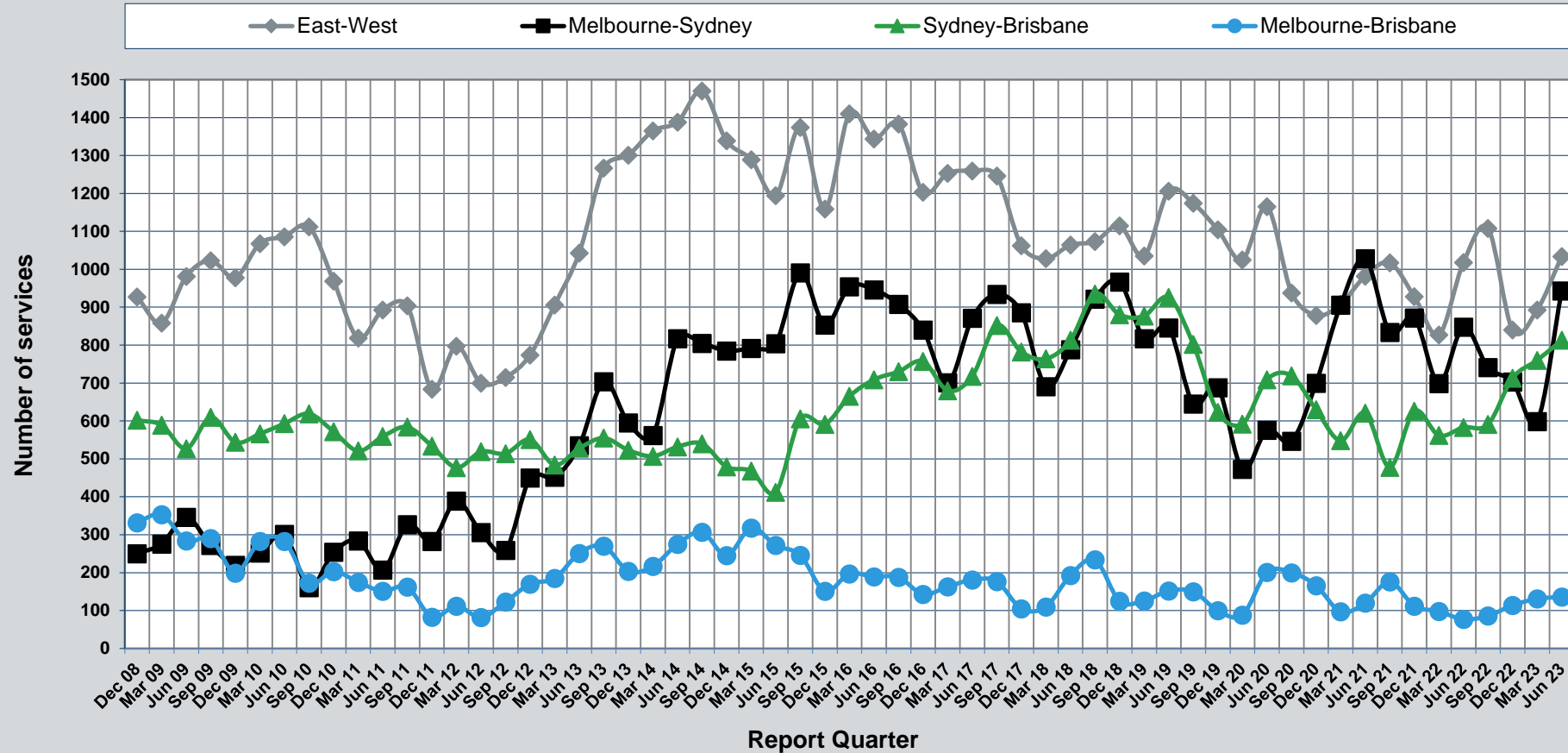
In accordance with ARTC's 2007 Interstate Access Undertaking, Performance Indicators relating to the following will be published.

- Number and percentage of Services which enter the Network no later than schedule, within tolerance (6).
  - Number and percentage of Services which are operated in a healthy manner (6).
  - Number and percentage of unhealthy Services that do not deteriorate further, within tolerance (5).
  - Number and percentages of healthy (1) Services (2) that exit the Network within tolerance (3) (5).
  - Number and percentage of Services which exit the Network no later than schedule, within tolerance (7).
  - Number and percentage of Services which exit the Network no later than one hour (4) after schedule (7).
1. For this purpose, a healthy Service is one which:
    - a. presents to the Network within tolerance, is configured to operate to its schedule and operates in a way that it remains able to maintain its schedule; or
    - b. is running late only due to causes within the Network, but only where the root cause is outside the rail operator's control; or
    - c. is running within tolerance, regardless of previous delays.
  2. Services include all Committed and scheduled Capacity (excludes adhoc Services).
  3. For this purpose tolerance is to be 15 minutes (unless otherwise agreed).
  4. It may be appropriate to employ shorter or longer timeframes as appropriate depending on corridor transit times.
  5. A measure of below rail activity.
  6. A measure of above rail activity.
  7. A measure of combined above and below activity.

*NOTE: Excludes urban and regional commuter services*

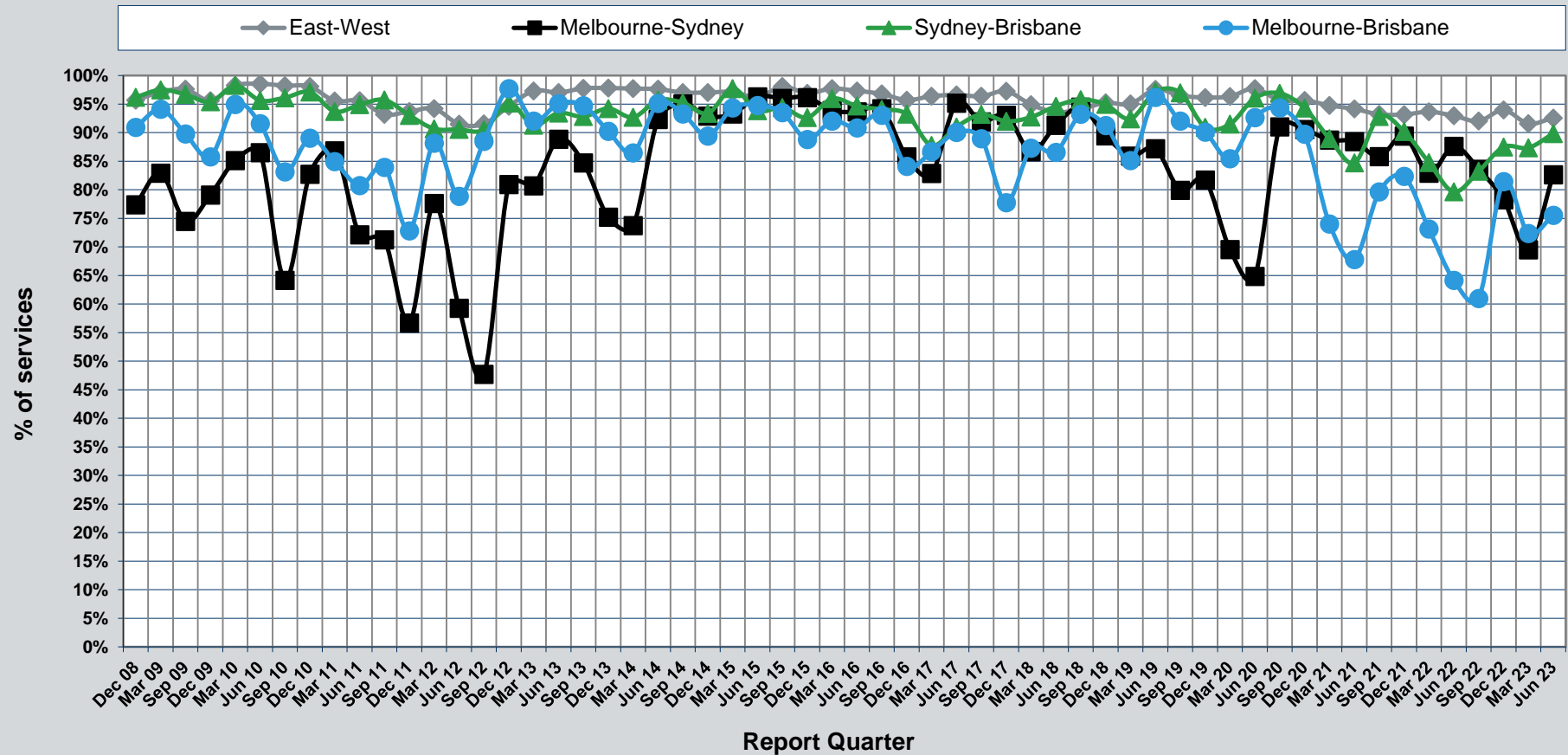
# Reliability

Number of Healthy Services Exiting the network within tolerance - All Corridors



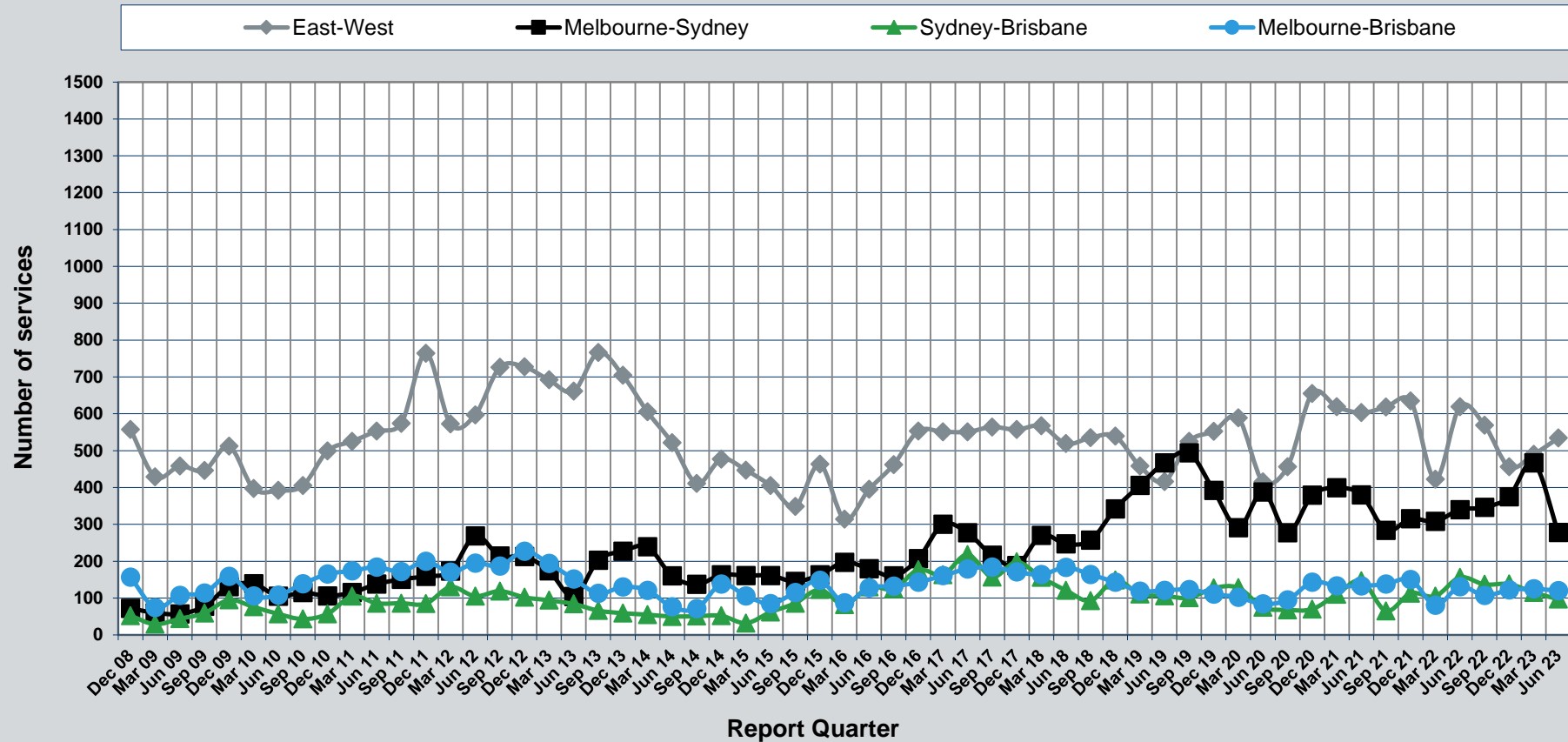
# Reliability

Percentage of Healthy Services Exiting the network within tolerance  
All Corridors



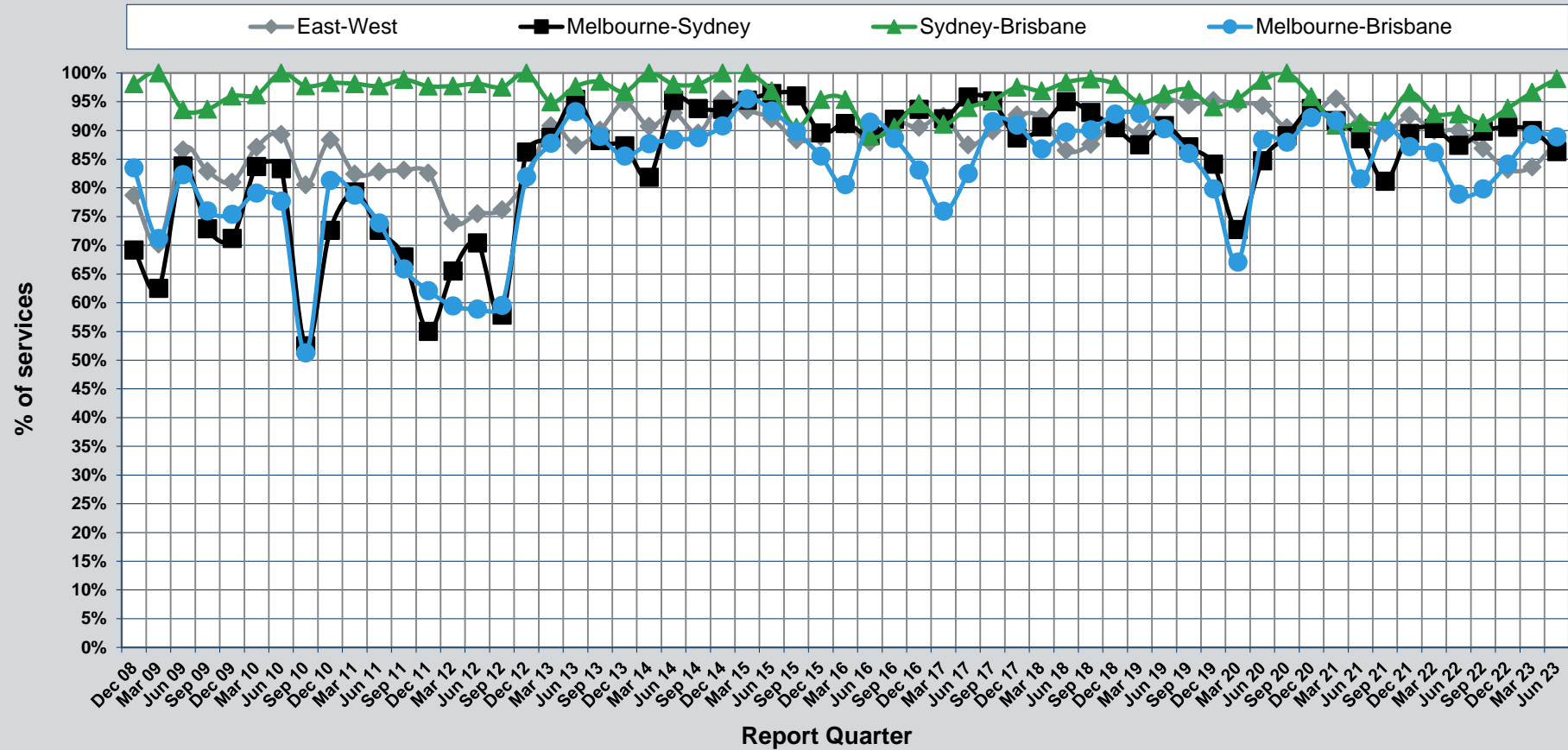
# Reliability

Number of unhealthy services that do not deteriorate further, within tolerance  
All Corridors



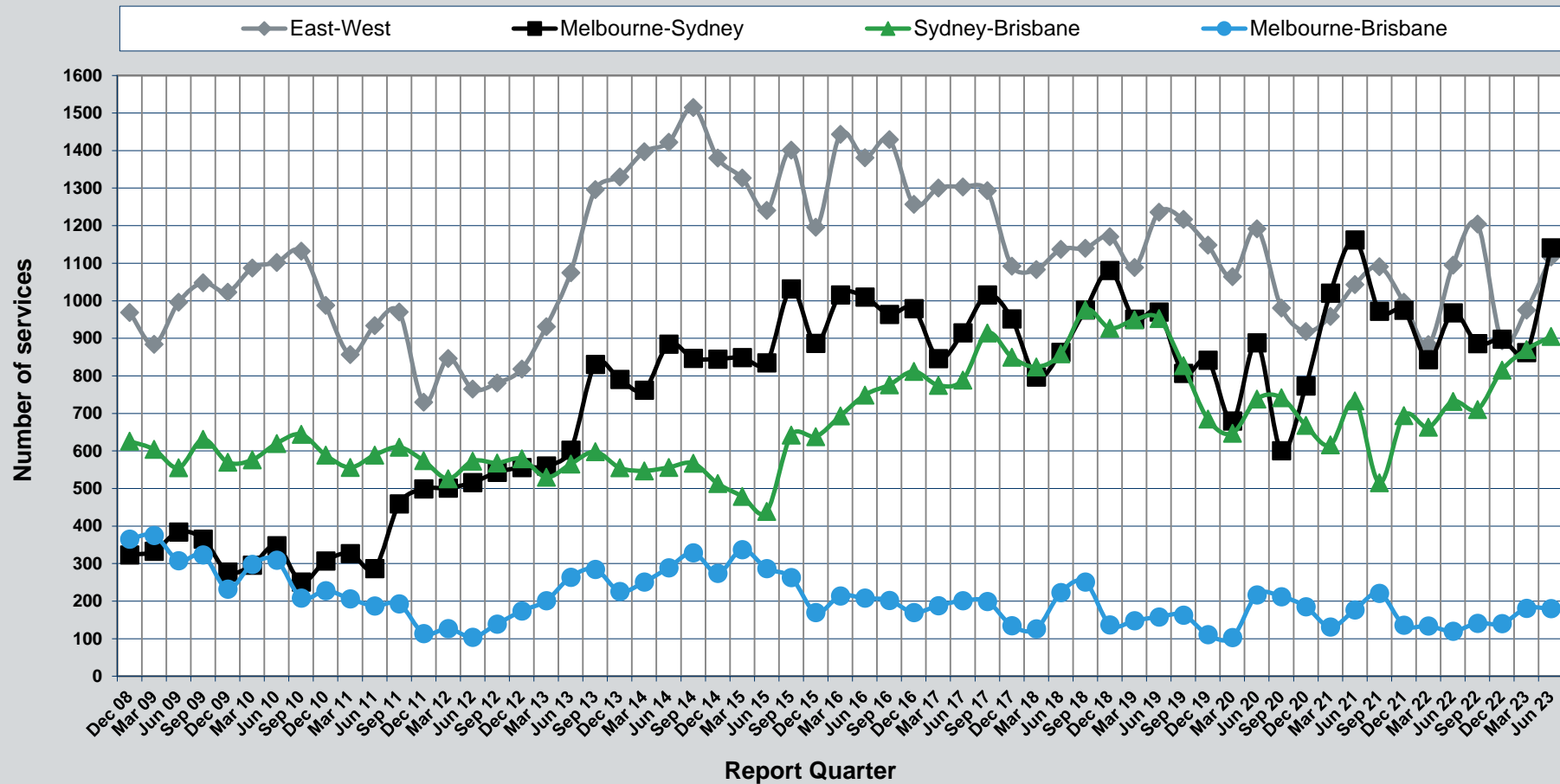
# Reliability

Percentage of unhealthy services that do not deteriorate further, within tolerance  
All Corridors



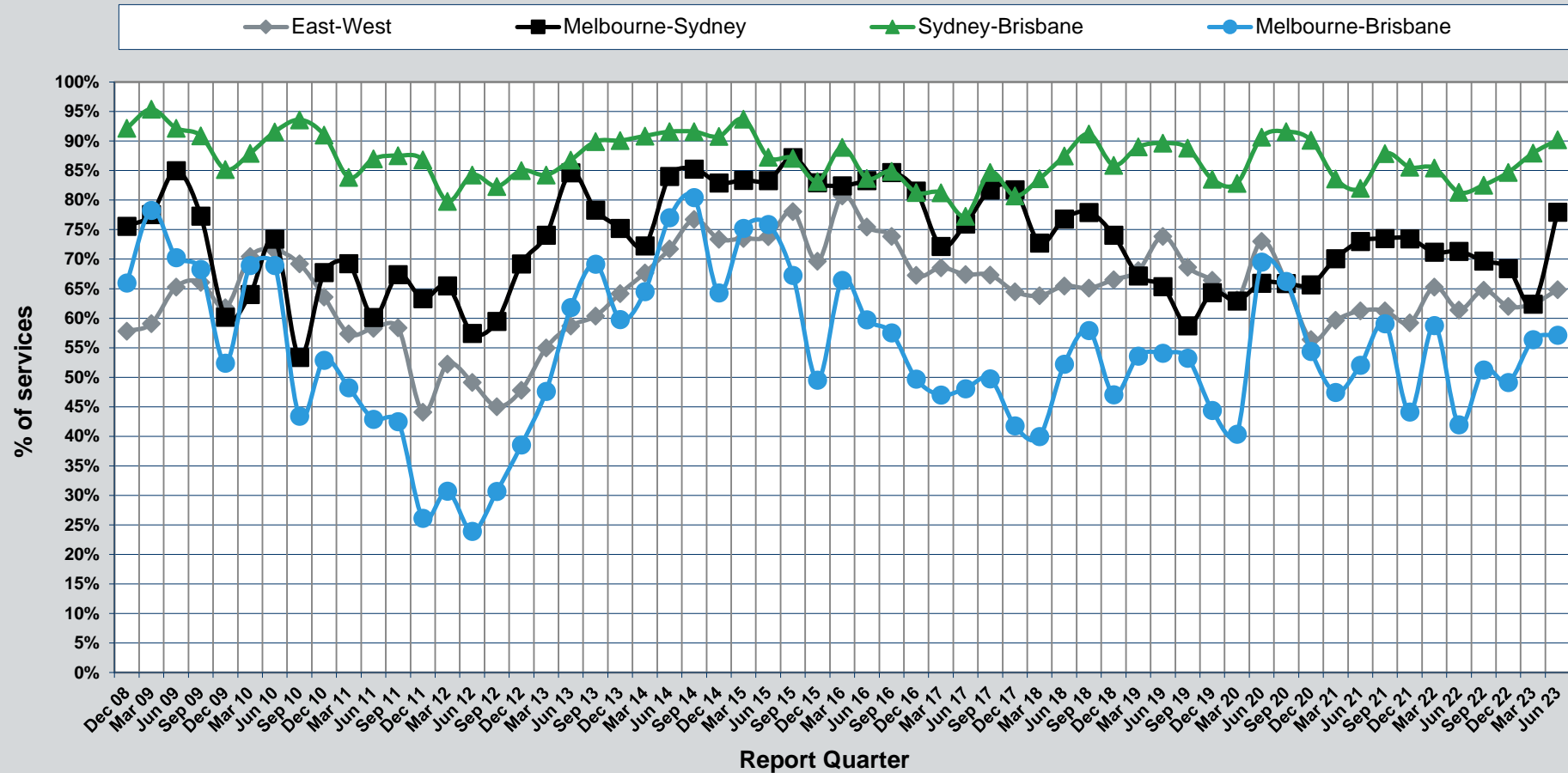
# Reliability

Number of services which are operated in a healthy manner - All Corridors



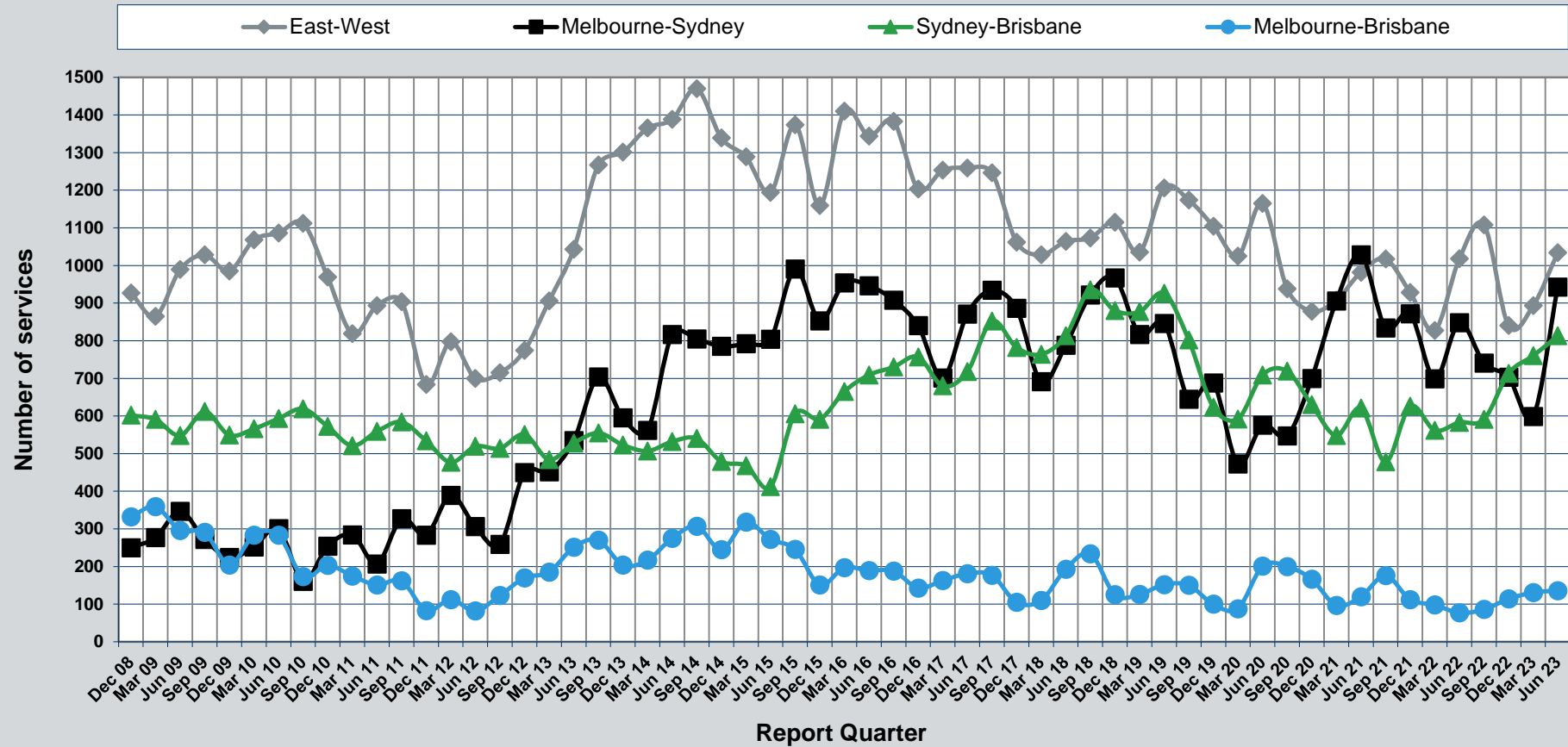
# Reliability

Percentage of services which are operated in a healthy manner - All Corridors



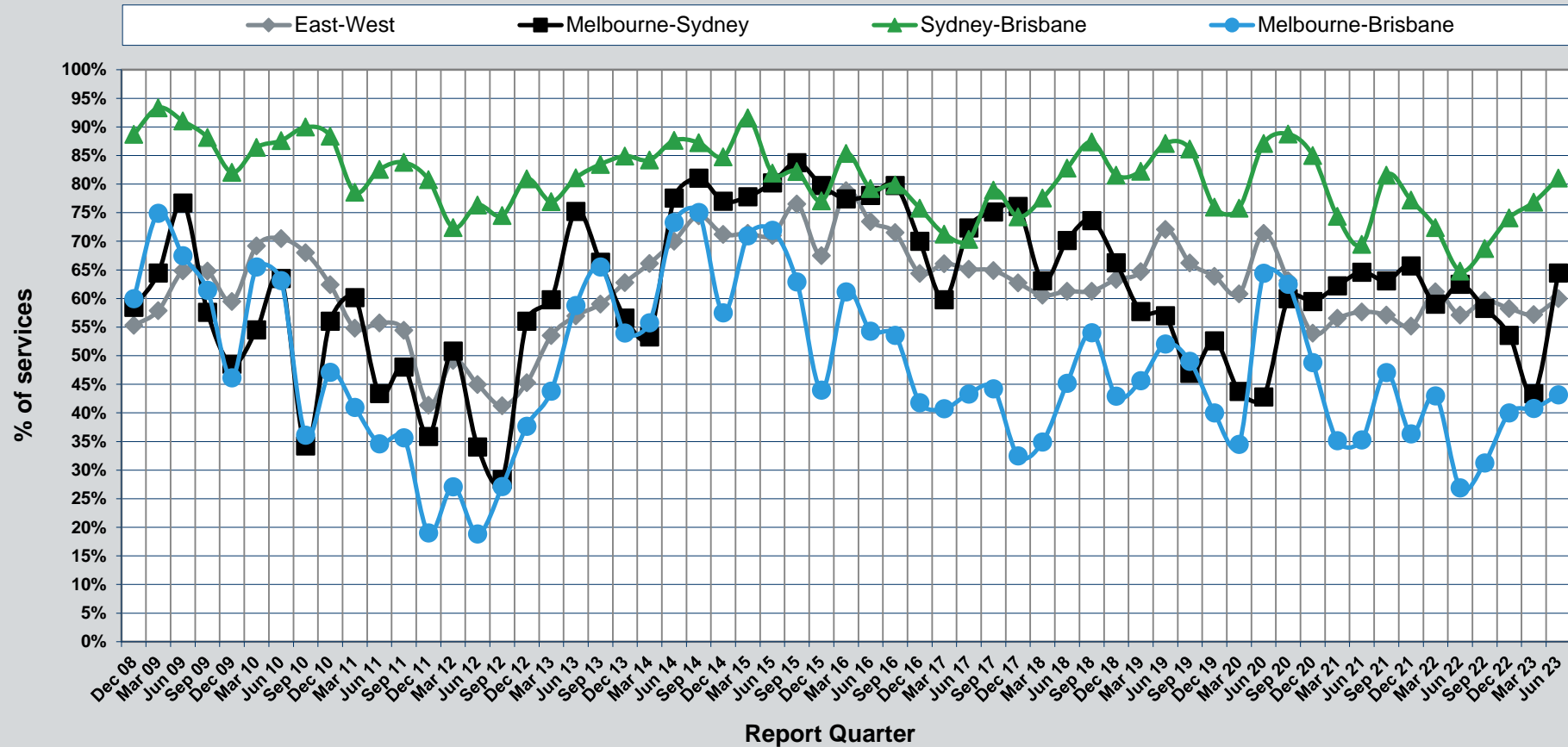
# Reliability

Number of services which exit the Network no later than schedule, within tolerance  
All Corridors



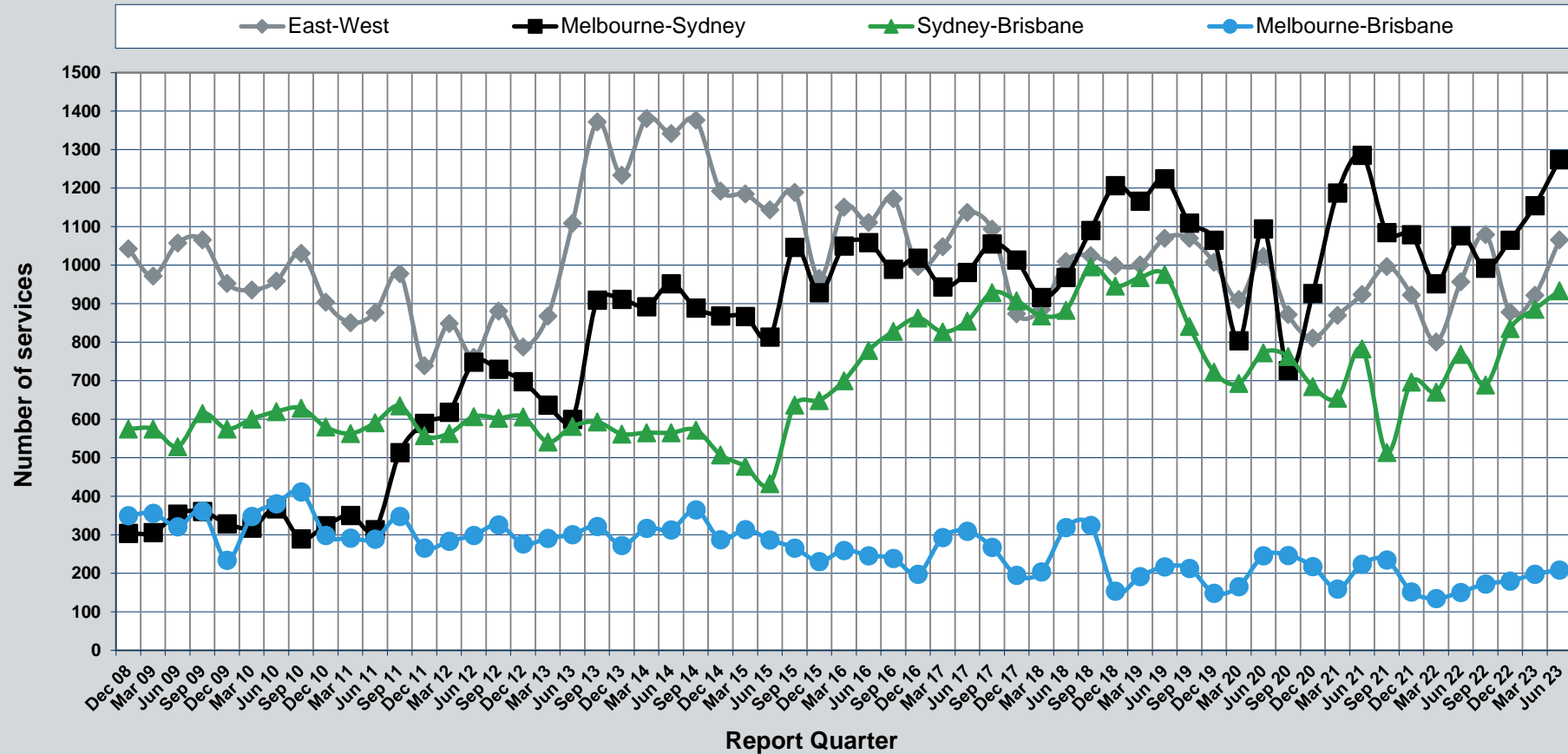
# Reliability

Percentage of services which exit the Network no later than schedule, within tolerance  
All Corridors



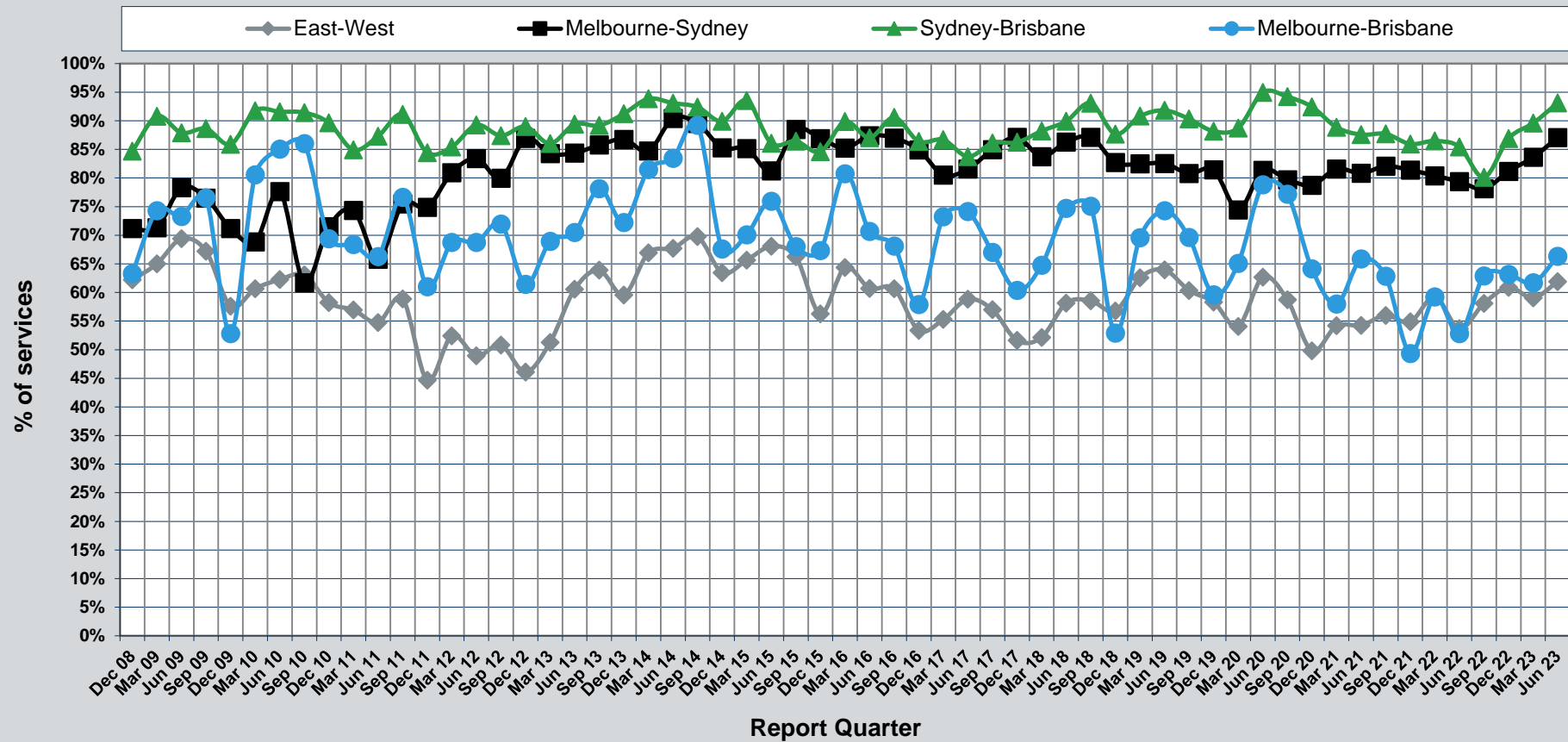
# Reliability

Number of services which enter the Network no later than schedule, within tolerance  
All Corridors



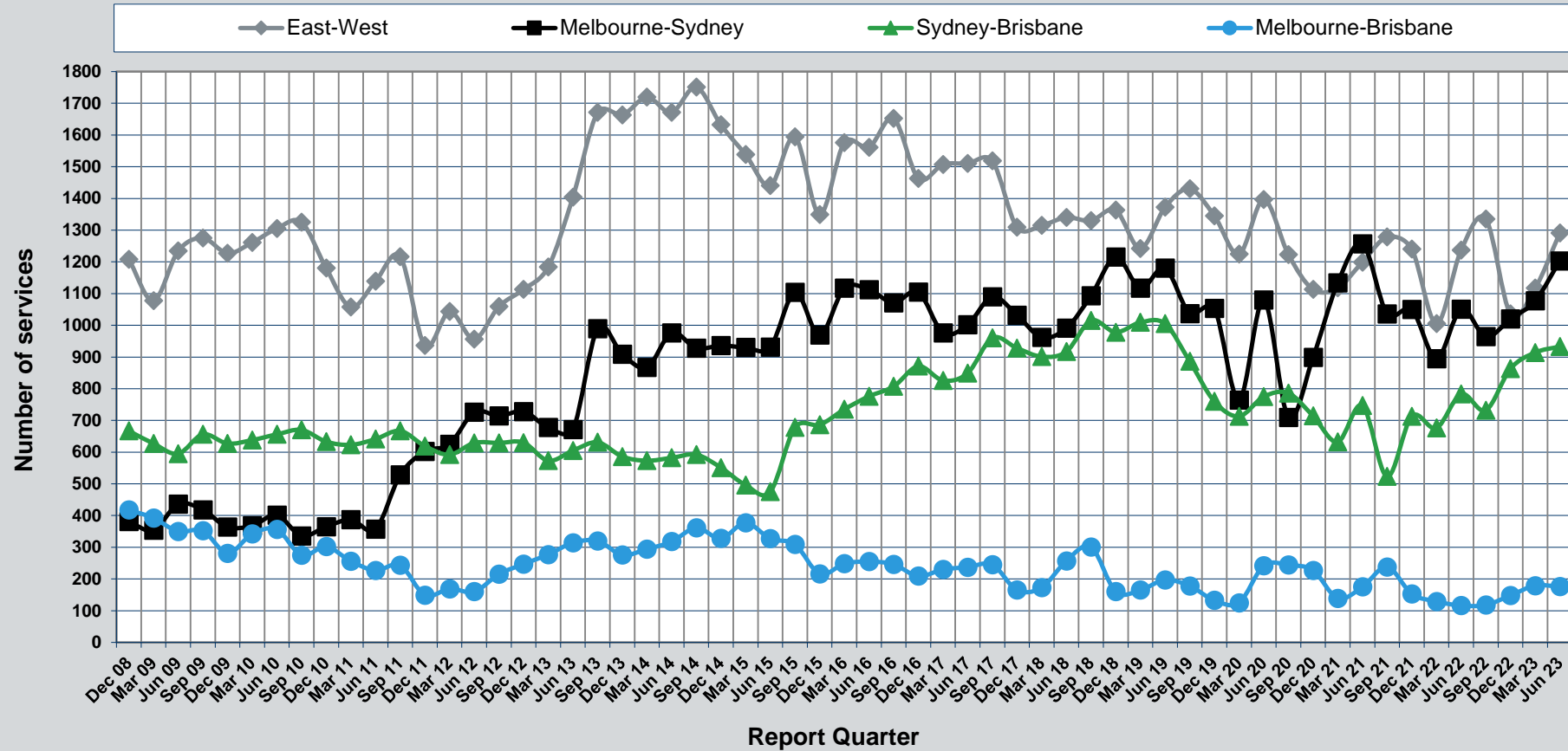
# Reliability

Percentage of services which enter the Network no later than schedule, within tolerance  
All Corridors



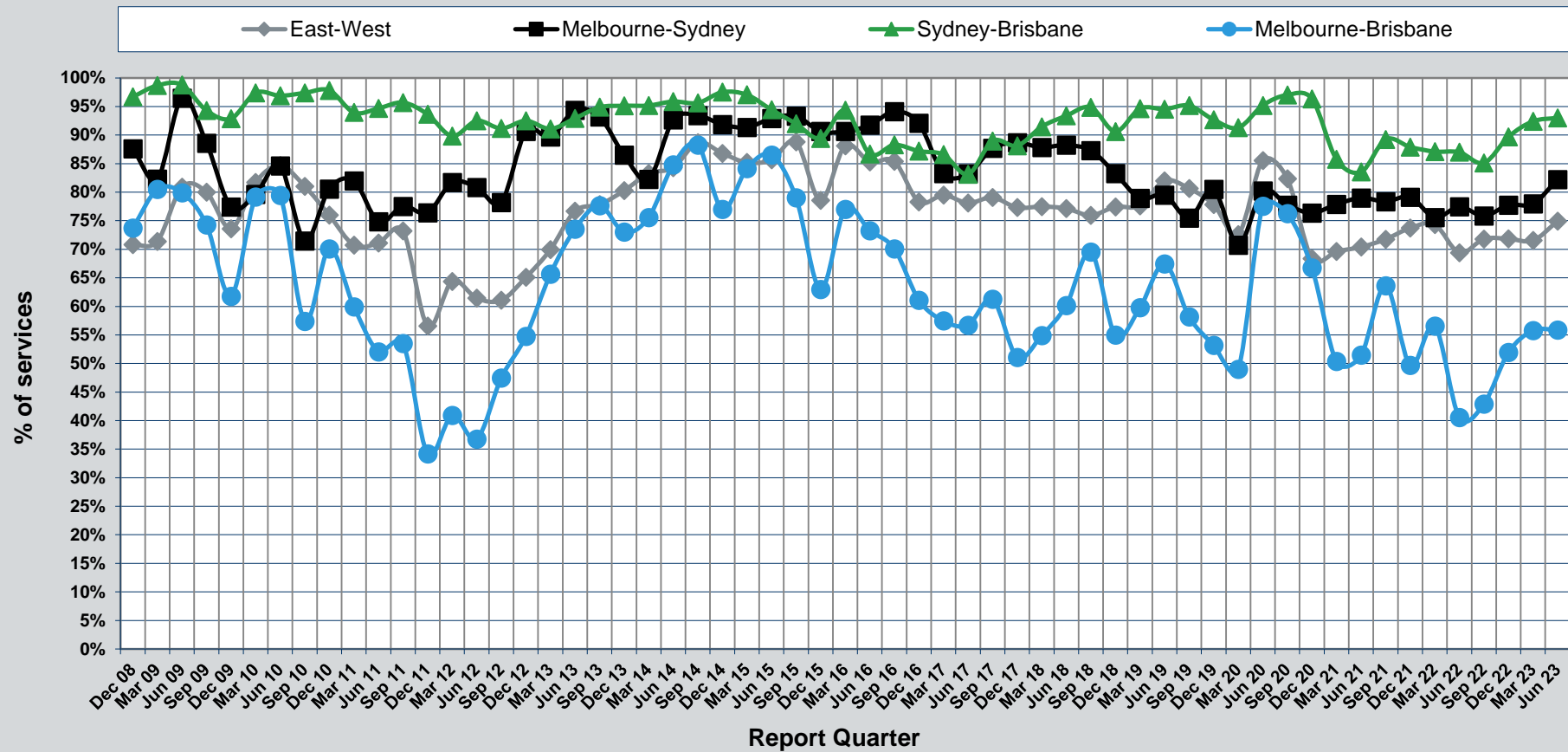
# Reliability

Number of services which exit the network no later than one hour after schedule  
All Corridors



# Reliability

Percentage of services which exit the network no later than one hour after schedule  
All Corridors





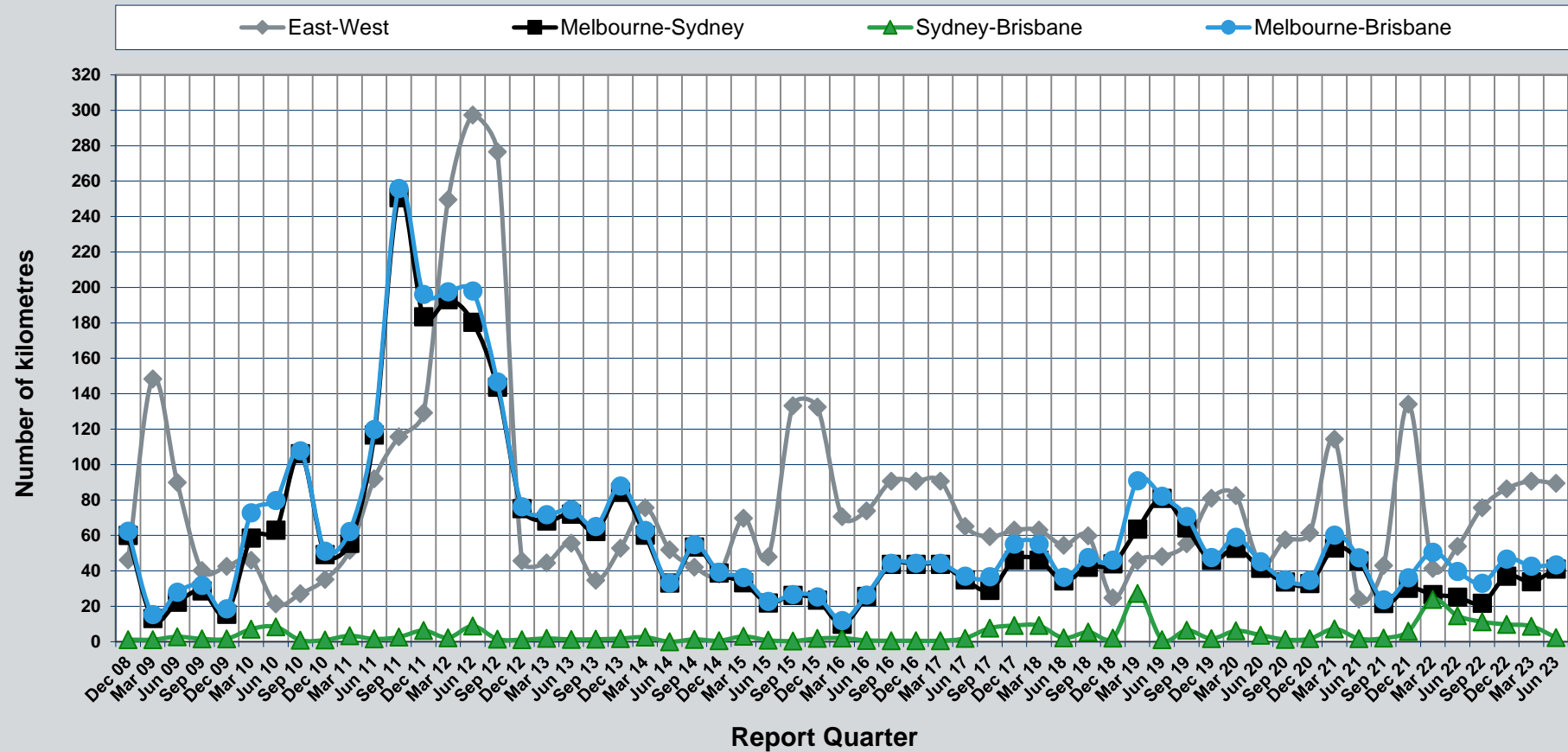
## **PERFORMANCE INDICATORS 'TEMPORARY SPEED RESTRICTIONS'**

In accordance with ARTC's 2007 Interstate Access Undertaking, the following Temporary Speed Restrictions Performance Indicators are published:

- Number of kilometres and percentage of track under temporary speed restriction at the beginning of a reporting period.

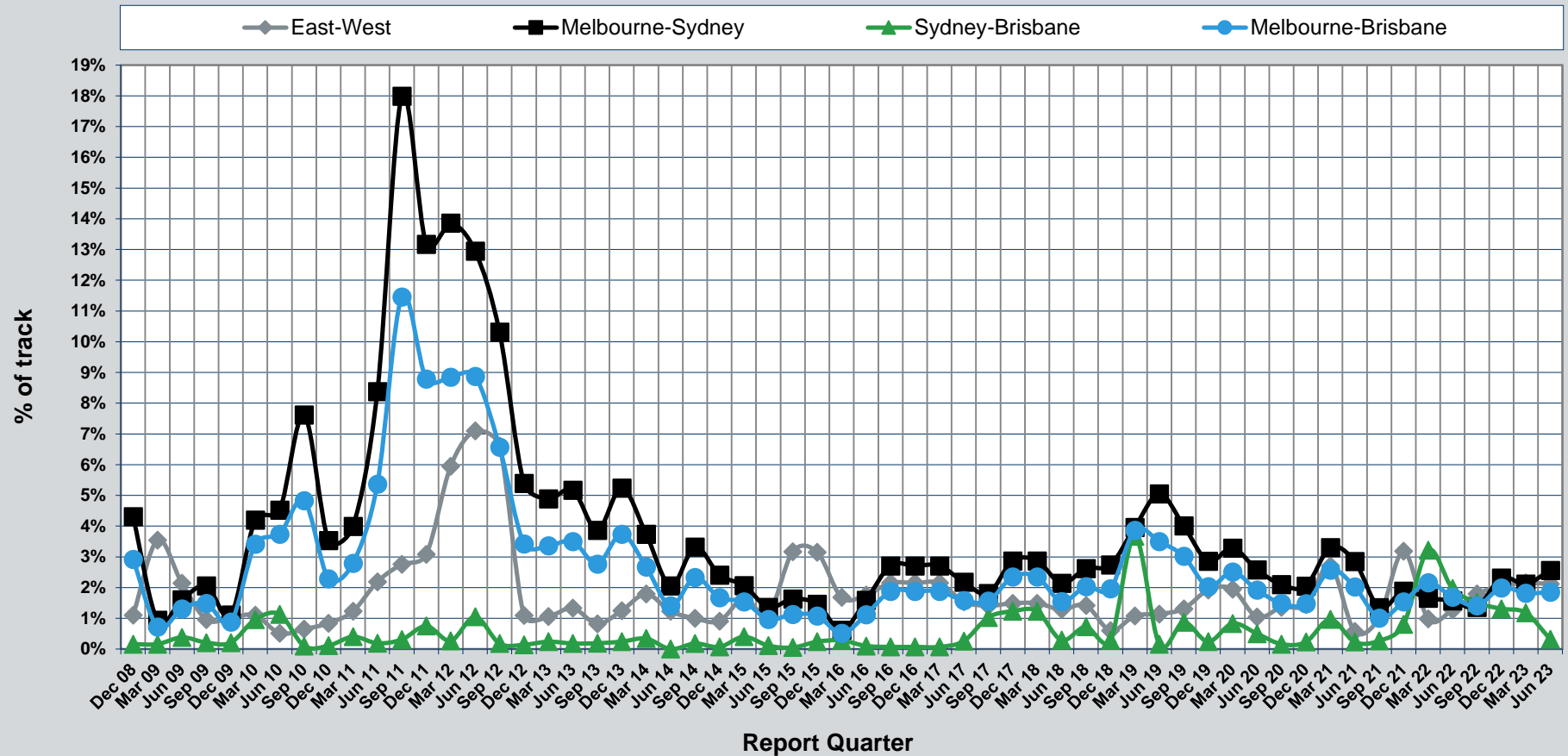
# Temporary Speed Restrictions

Number of kilometres under temporary speed restriction on the Network  
at the end of a reporting period



# Temporary Speed Restrictions

Percentage of track under temporary speed restriction on the Network at the end of a reporting period





## PERFORMANCE INDICATORS 'TRACK CONDITION'

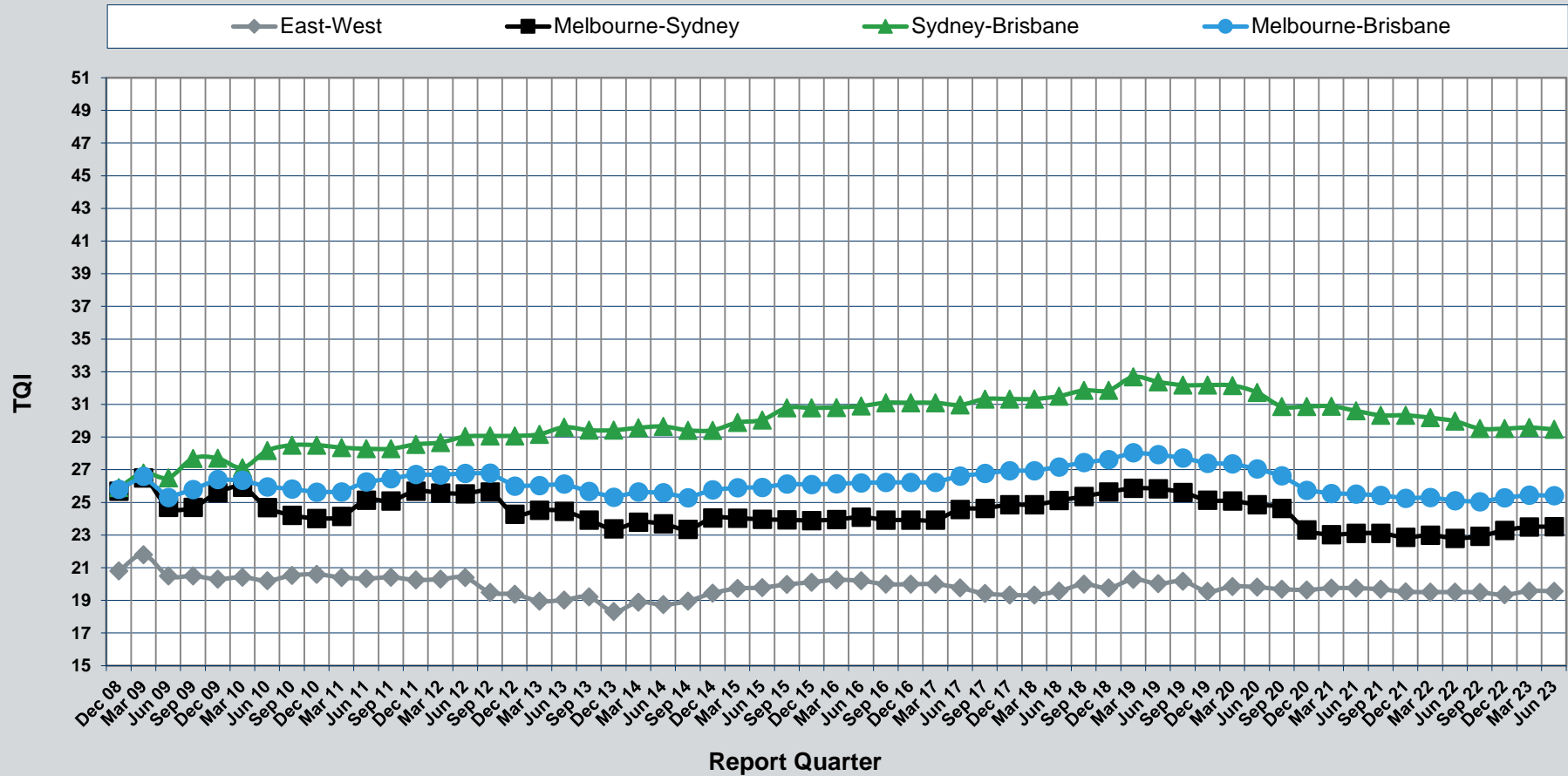
In accordance with ARTC's 2007 Interstate Access Undertaking, Performance Indicators relating to the following will be published.

Track quality measured by index (1) (2)

1. To be measured by Track Quality Index (TQI) and averaged over each Segment. TQI is calculated over 100m sections, using 0.5m raw data from the AK car. TQI is the sum of the standard deviations (x3) in each rail for a 20m inertial top (average over left and rights rail), horizontal alignment (versine over a 10m chord (average over left and right rail)), twist over 2.0m and gauge.
2. A measure of below rail activity.

# Track Condition

## Track Quality Measured By Index (TQI)



## PERFORMANCE INDICATORS 'TRANSIT TIME'

In accordance with ARTC's 2007 Interstate Access Undertaking, the following Transit Time Performance Indicators are published:

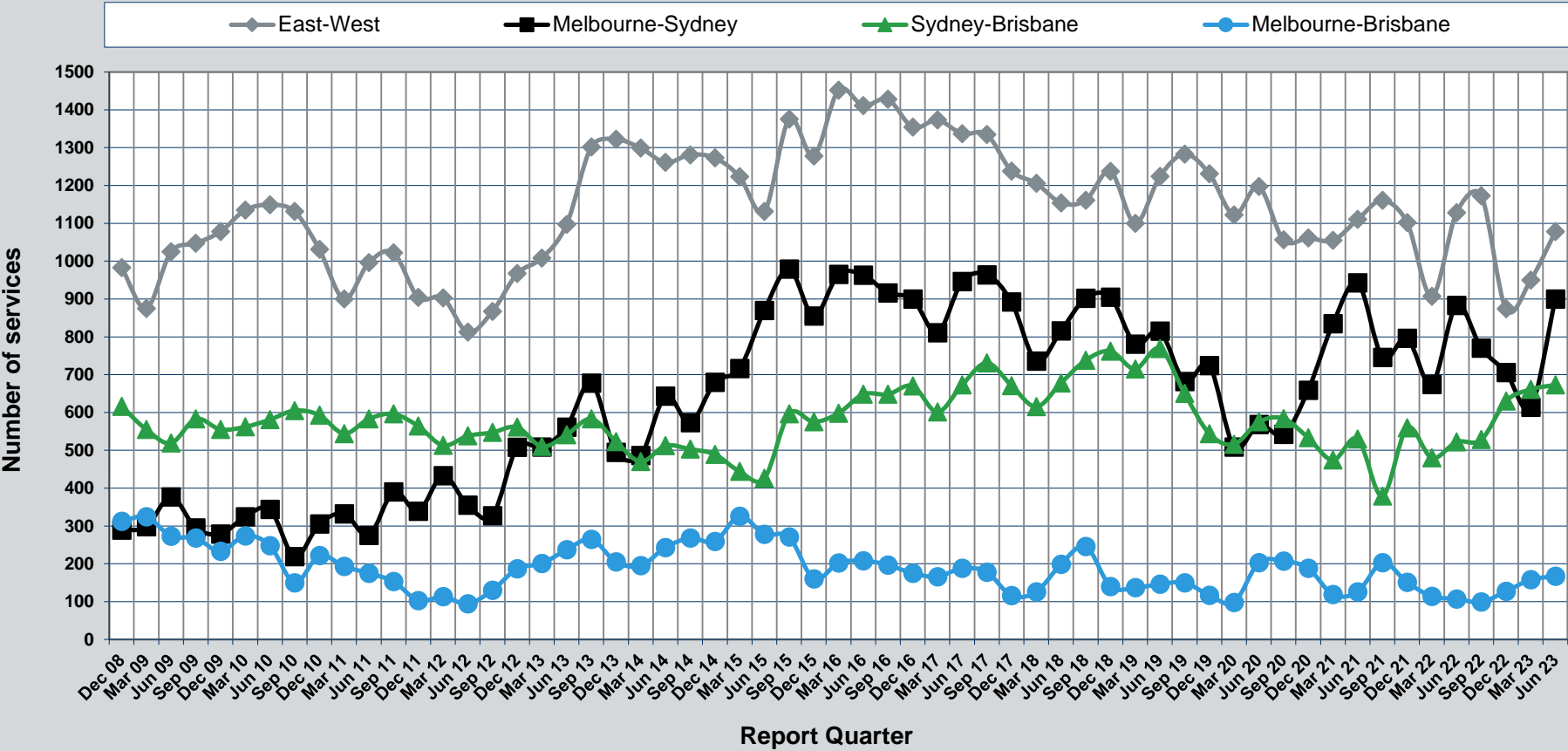
- Sum of minutes delay (and minutes per hour transit) unable to be attributed to a cause or beyond either party reasonable control.
- Sum of minutes delay (and minutes per hour transit) attributed to below rail cause by type of delay eg track, signals/communications, train management/control (4).
- Sum of minutes delay (and minutes per hour transit) attributed to above rail cause by type of delay eg late entry, yard/terminal, crew, locomotive, rollingstock, running (5).
- Number and percentage of Services(1) which transit(2) the Network no later than schedule transit, within tolerance(3)(6).

1. Services include all Committed and Scheduled Capacity (excludes adhoc Services)
2. Transit time is the difference between entry and exit times and so includes all time for all enroute activities (scheduled and actual).
3. For this purpose, tolerance is to be 15 minutes.
4. A measure of below rail activity.
5. A measure of above rail activity.
6. A measure of combined above and below activity.

*NOTE: Excludes urban and regional commuter services.*

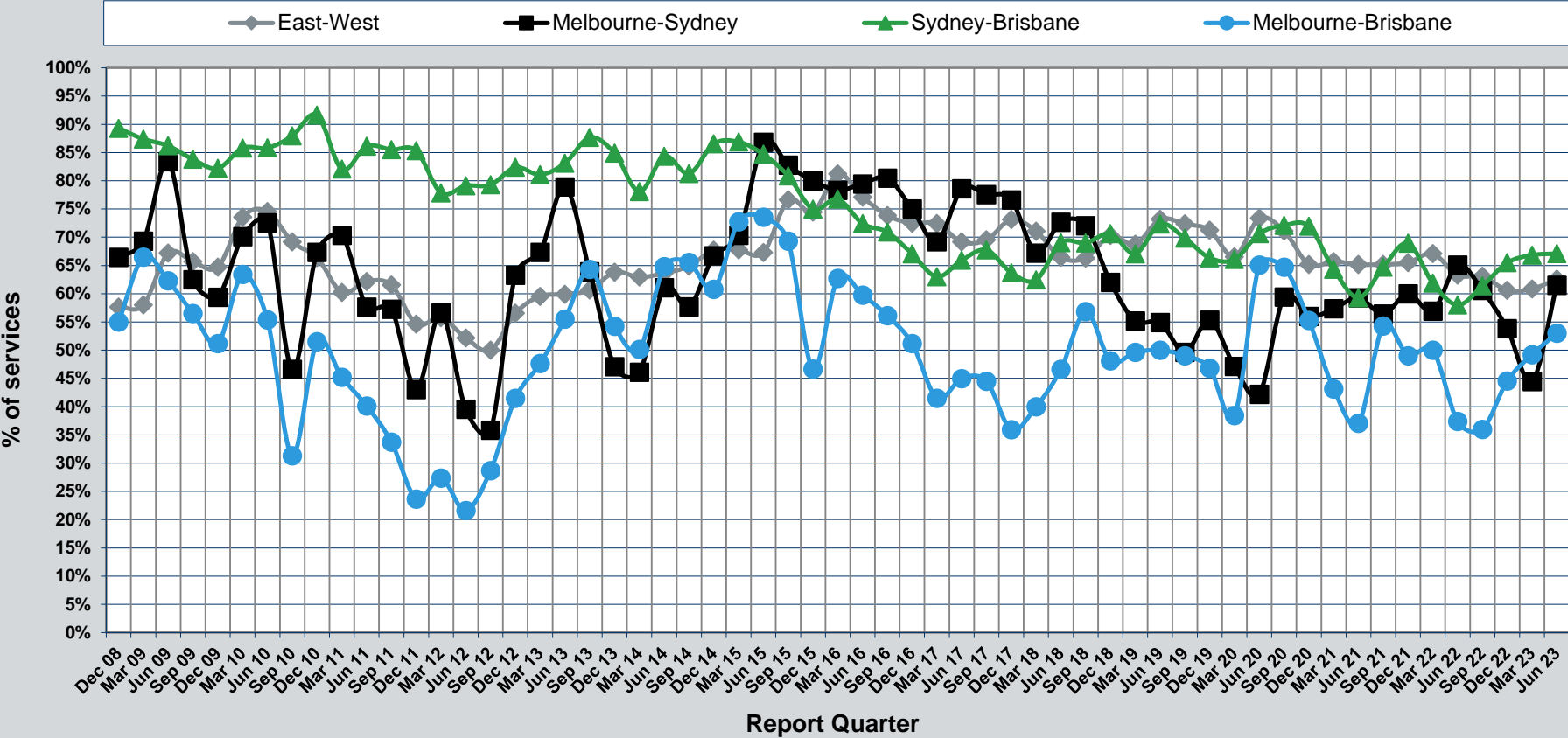
# Transit Time

Number of Services which transit the Network no later than scheduled transit, within tolerance - All Corridors



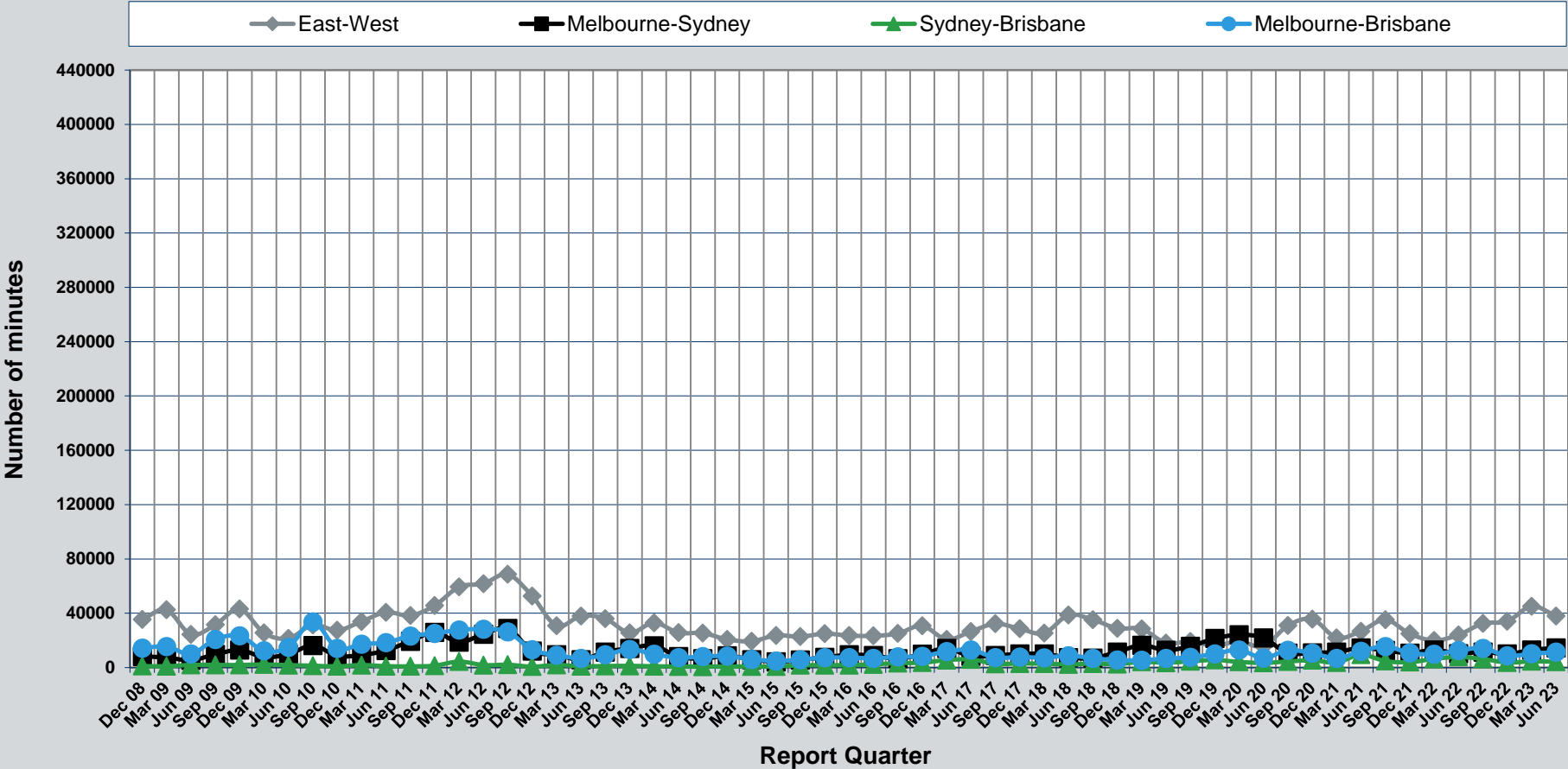
# Transit Time

Percentage of Services which transit the Network no later than scheduled transit, within tolerance - All Corridors



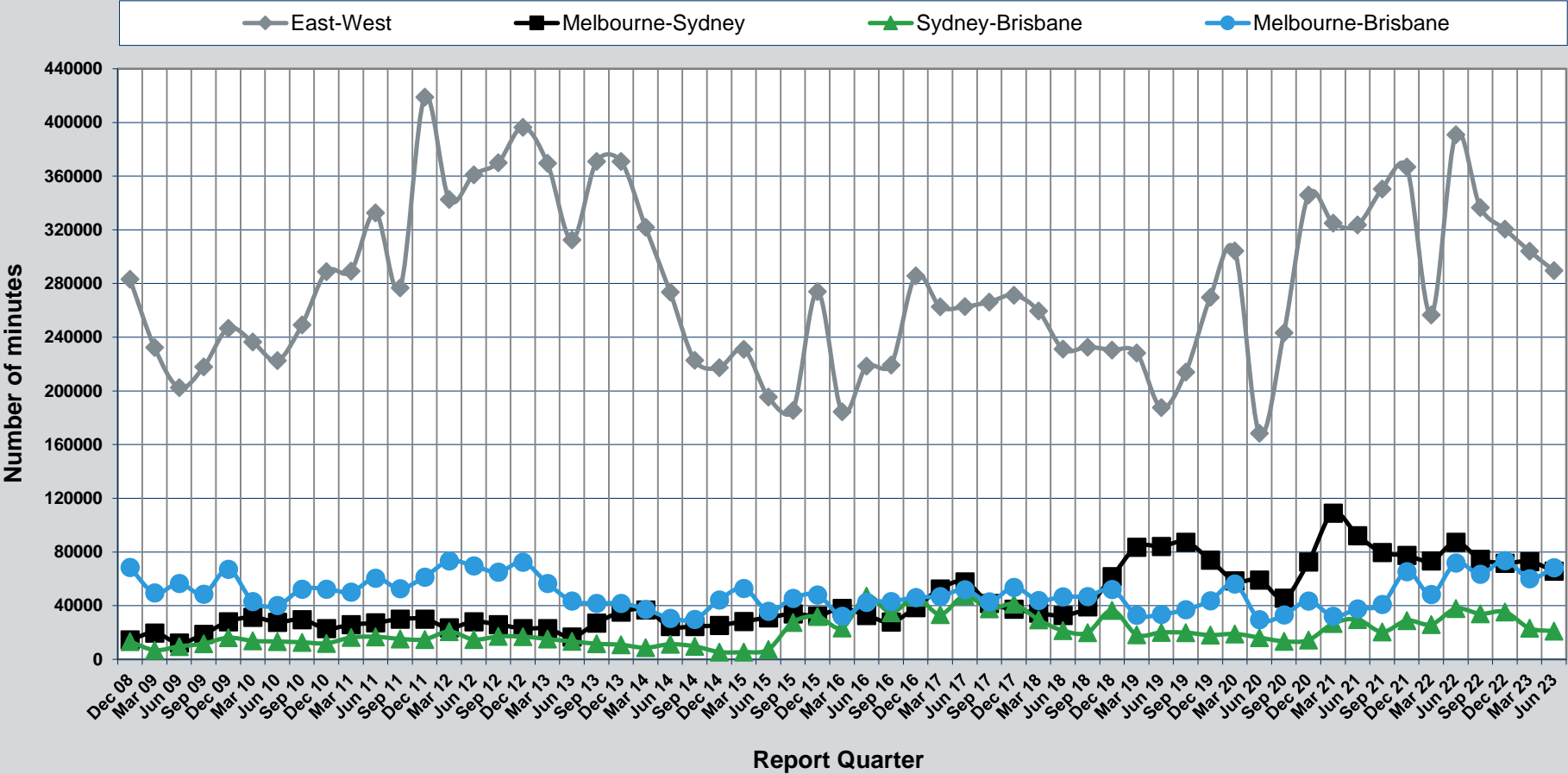
# Transit Time

Total minutes delay attributed to below rail cause (ARTC fault)



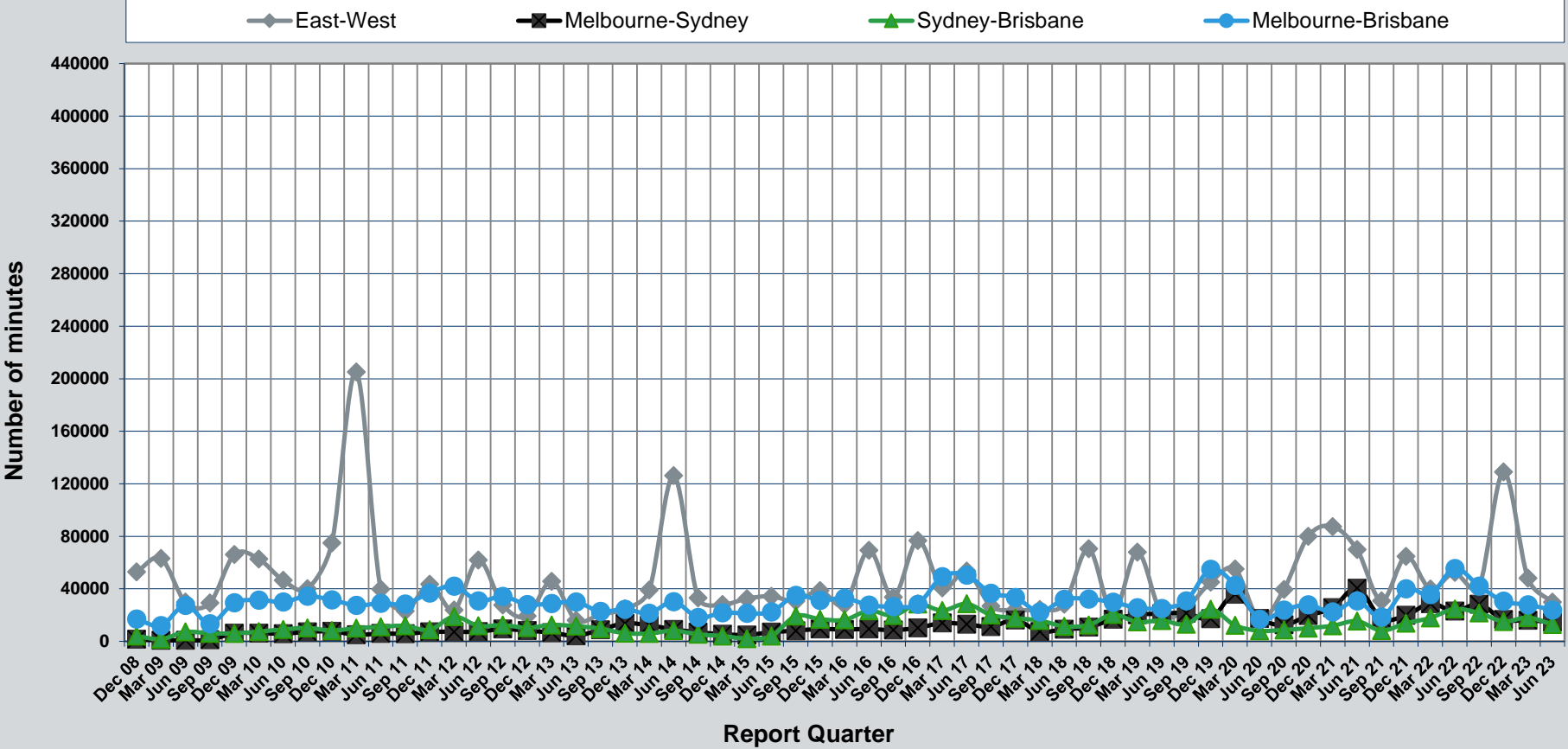
# Transit Time

Total minutes delay attributed to above rail cause (Operator fault)



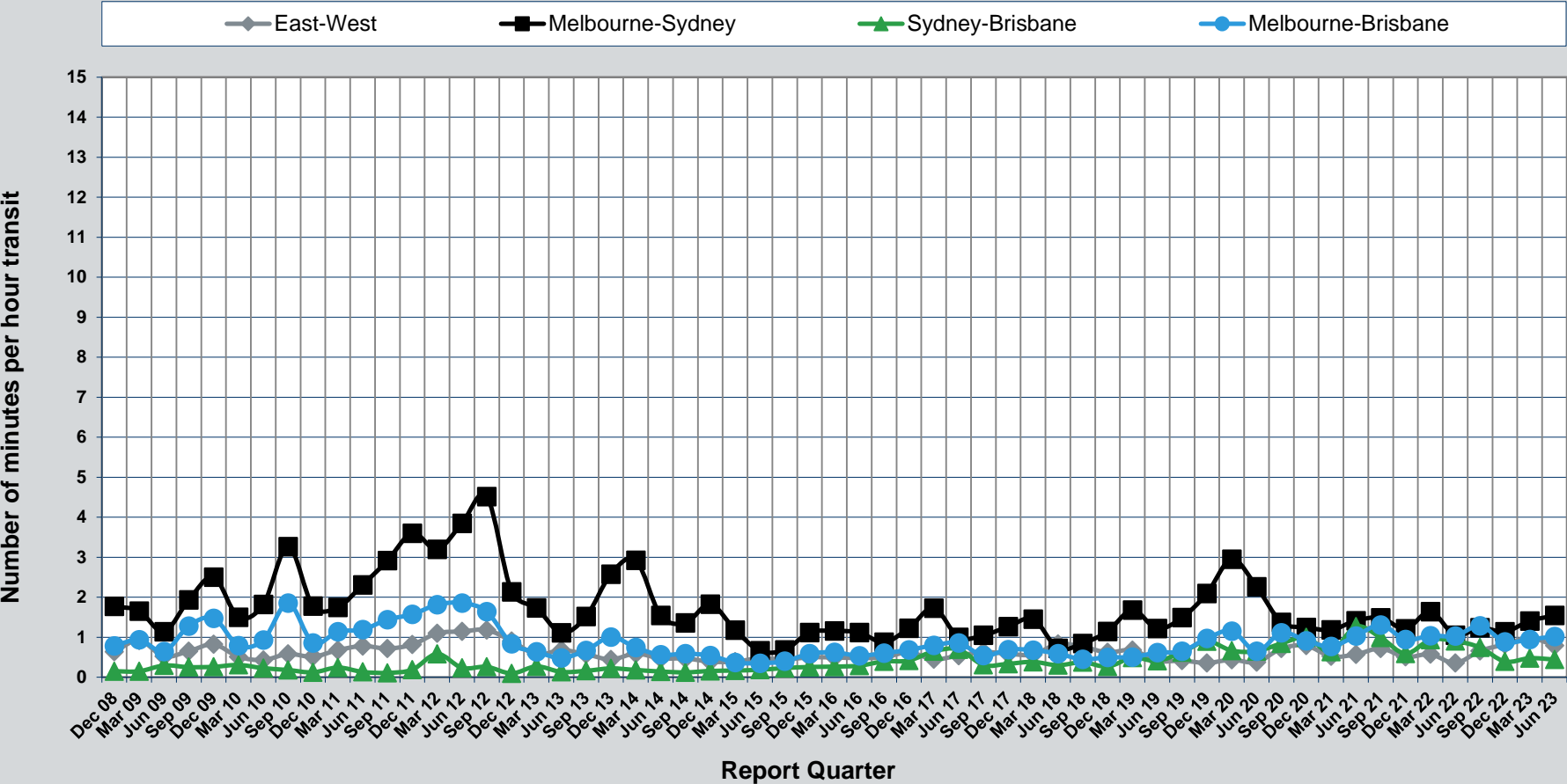
# Transit Time

Total minutes delay unable to be attributed to a cause or beyond either party's reasonable control



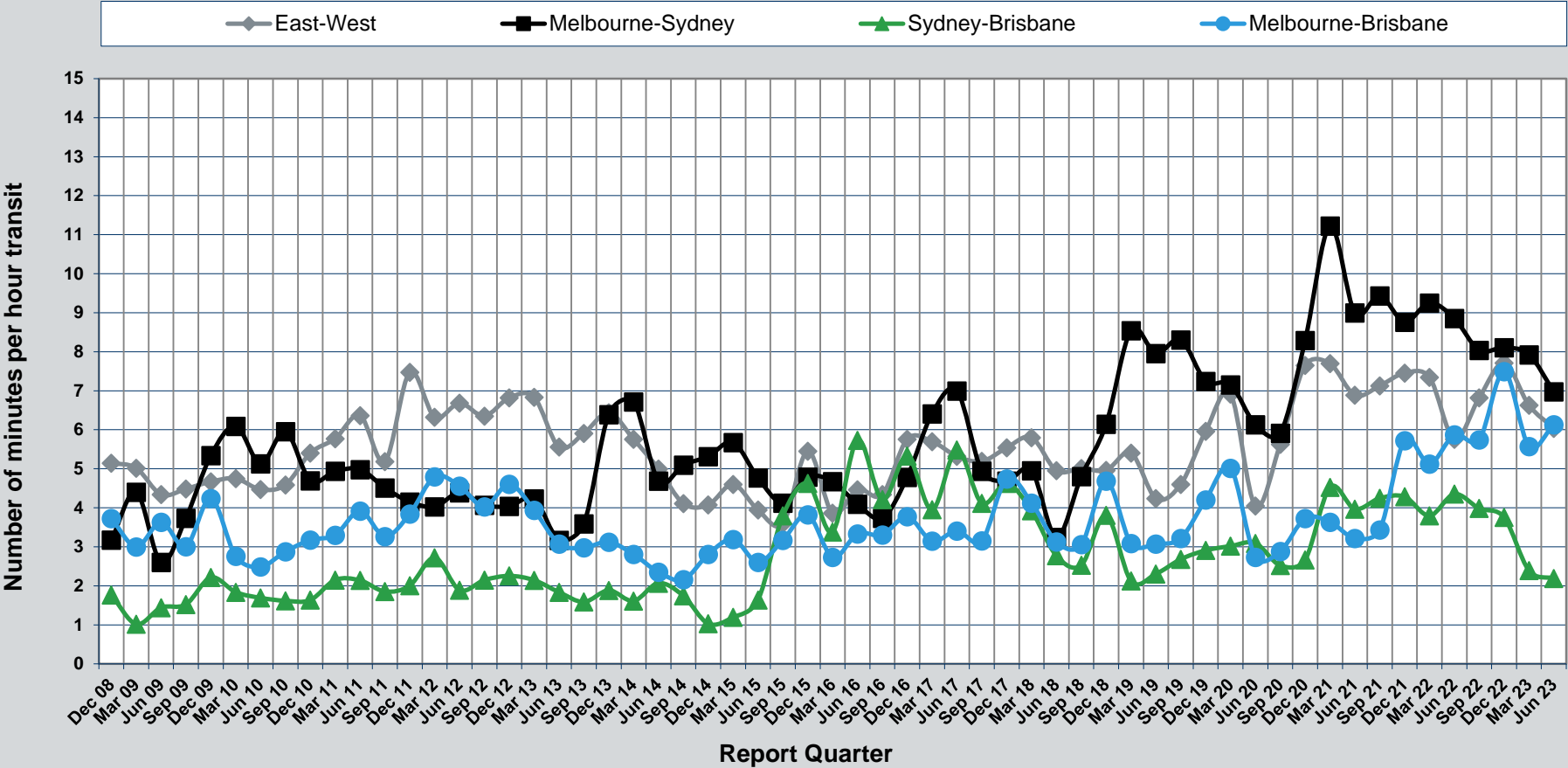
# Transit Time

Total ARTC delay minutes per hour of transit



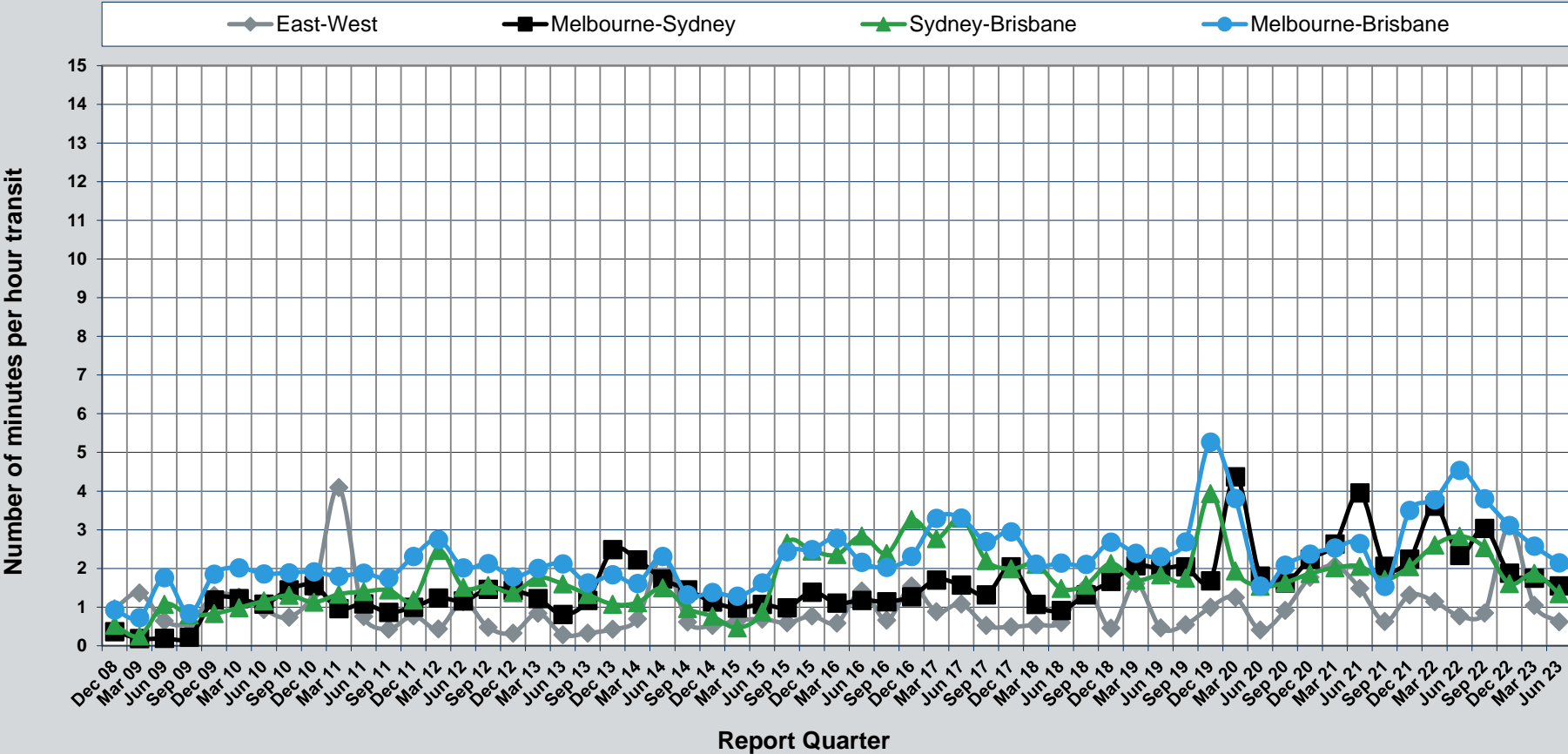
# Transit Time

Total Operator delay minutes per hour of transit



# Transit Time

**Total delay minutes per hour of transit unable to be attributed to a cause or beyond either party's reasonable control**





### **Appendix 3 – Unit Costs Reports**

See overleaf for the Unit Cost reports that were the subject of our procedures.

AUSTRALIAN RAIL TRACK CORPORATION LTD			
<b>2021-22 Unit Cost Calculation required for Public KPI Reporting in accordance with ARTC's</b>			
<b>Access Undertaking to the Australian Competition and Consumer Commission (August 2008)</b>			
Measure	Description	2021-22 Unit Cost	
Unit Infrastructure Maintenance Cost	Total annual expenditure associated with outsourced and internal infrastructure maintenance including a prorata allocation of corridor support and management. Allocation pro-rated over all activities (infrastructure maintenance, capital works and incident expenditure and operations) on a cost basis. Excludes corporate/system management.	\$2.01	per 000 GTK
		\$17,247	per track km <sup>1</sup>
Train Control	Total annual expenditure associated with ARTC network control and transit management.	\$1.40	per train km
Operations	Total annual expenditure associated with ARTC network control and train transit including a prorata allocation of corridor support and management. Allocation pro-rated over all activities (infrastructure maintenance, capital works and incident expenditure and operations) on a cost basis. Excludes corporate/system management.	\$1.57	per train km

AUSTRALIAN RAIL TRACK CORPORATION LTD			
2022-23 Unit Cost Calculation required for Public KPI Reporting in accordance with ARTC's			
Access Undertaking to the Australian Competition and Consumer Commission (August 2008)			
Measure	Description	2022-23 Unit Cost	
Unit Infrastructure Maintenance Cost	Total annual expenditure associated with outsourced and internal infrastructure maintenance including a prorata allocation of corridor support and management. Allocation pro-rated over all activities (infrastructure maintenance, capital works and incident expenditure and operations) on a cost basis. Excludes corporate/system management.	\$2.27	per 000 GTK
		\$19,330	per track km <sup>1</sup>
Train Control	Total annual expenditure associated with ARTC network control and transit management.	\$1.45	per train km
Operations	Total annual expenditure associated with ARTC network control and train transit including a prorata allocation of corridor support and management. Allocation pro-rated over all activities (infrastructure maintenance, capital works and incident expenditure and operations) on a cost basis. Excludes corporate/system management.	\$1.62	per train km