

Date October 28, 2020

To **Attn:** [REDACTED] Project Manager
Siemens Mobility Pty Limited
160 Herring Road, Macquarie Park NSW 2113
By email: [REDACTED]

From Louie Anagnostopoulos, Senior Project Manager
Digital Systems Program, Infrastructure and Place
Transport for NSW
Level 1, 219 Cleveland Street, Strawberry Hills, NSW,
2016

Subject **Traffic Management System – Variation Acceptance
No.001 – [REDACTED] Assessment**

(Teambinder Ref: DSPTMS-TFNSWSIEMENS-CORR-
000014, dated 27 August 2020)

Siemens Ref: **Contractor Initiated Variation No. 001**

(Teambinder Ref: DSPTMS-SMLY-TFNSW-SCM-
000010.00, dated 14 October 2020)

Dear [REDACTED],

TfNSW Ref: **IPD-19-7821**

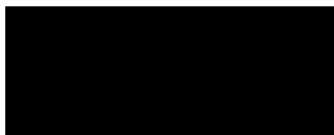
Variation Acceptance No. 001 – [REDACTED] Assessment

Pursuant to Schedule 7 section 4.3 (a) (i) of the Agreement TfNSW accepts Siemens Contractor Initiated Variation Proposal for the [REDACTED] Assessment work in the amount of [REDACTED] excl. GST, dated 14 October 2020.

There is no increase in time related to the provision of these works.

Capitalised terms in this letter have the same meaning as in the Agreement, unless otherwise indicated.

Yours sincerely



Louie Anagnostopoulos
Senior Project Manager, Traffic Management System
Infrastructure and Place

Contractor Initiated Variation

This document has been designed to fulfil the requirements where the Contractor has recommended a Variation pursuant to section 4(a)(ii) of Schedule 7 (New SOWs and Variation Procedures).

- Section 1 constitutes a Variation Request pursuant to section 4.1(a)(ii) of Schedule 7 (New SOWs and Variation Procedures) of the Delivery Agreement.
- Section 2 constitutes the Contractor's Variation Proposal pursuant to section 4.2(a) of Schedule 7 (New SOWs and Variation Procedures) of the Delivery Agreement.
- Section 3 (when signed) constitutes TfNSW's approval or rejection of the Contractor's Variation Proposal, or notification to the Contractor that it requires certain changes to the Contractor's Variation Proposal, pursuant to section 4.3 of Schedule 7 (New SOWs and Variation Procedures) of the Delivery Agreement.
- Section 4 constitutes the TLS Impact Statement pursuant to section 8 of Schedule 7 (New SOWs and Variation Procedures) of the Delivery Agreement and when signed by Sydney Trains, constitutes Sydney Trains' approval of the TLS Impact Statement, or notification to the Contractor that it requires certain changes to the TLS Impact Statement, pursuant to section 7 of Schedule 6 (Work Orders and Variation Procedures) of the TLS Agreement.

SECTION 1 – CONTRACTOR INITIATED VARIATION REQUEST [To be completed by TfNSW following a Variation being recommended by the Contractor]			
Project Contract No	IPD-19-7821	TfNSW RFTA No.	RFTA [nnnnnn]
Subject	Assessment		
Subsystem:	TMS Subsystem		
Initiated By:	Contractor Representative		
Submitted By:	TfNSW Representative	TfNSW Issue No.	
Submitted To:	Contractor Representative	Submission Date:	
Correspondence Ref.			
Contract Document Ref.			
CWBS Ref. No.			
Summary of Variation Proposed:			
Date by which Variation Proposal is to be submitted:			
Attachments			
Submitted by TfNSW Representative	Signed:	Date:	

SECTION 2 – CONTRACTOR'S VARIATION PROPOSAL

Variation Proposal No.:	IPD-19-7821 VAR 001
Details of Variation Proposed:	<p>As per Teambinder correspondence DSPTMS-TFNSW-SIEMENS-CORR-000014 sent to Siemens on 27/08/2020, TfNSW requests that Siemens assesses the technical and [REDACTED]</p> <p>As per the above, Siemens has assessed the impacts of the [REDACTED] Implementation during the PDR Phase and collected timesheets for each hour spent.</p> <p>Activities performed:</p> <ul style="list-style-type: none"> • Client Interactions with R&D Team and Project Team (meetings, preparations) • Creation and formalisation of Report as submitted to TfNSW • Understanding of Sydney Trains proposed architecture • [REDACTED] Technology Assessment by the R&D Team • Cost/Time impact on the TMS program for R&D and project activities • The impact of [REDACTED] has also been considered by the R&D Team and Project team. <p>As a result of the assessment Siemens has provided the [REDACTED] Assessment report including an indicative proposal for cost and impact to TfNSW if TfNSW would go ahead with the implementation of the [REDACTED] protocol.</p> <p>Please see below a breakdown of cost and hours spent by respective individuals for the development and calculation of the [REDACTED] Assessment</p>
Changes to or impacts on the Contractor's Activities:	Increase of the PDR Target Budget by [REDACTED] for the additional hours spent during the PDR.
Changes to the Contract Specifications:	No changes to the Contract Specification
Changes to the Resource Plan, Key People and Organisational Chart:	No changes to Resource Plan, Key People, and Organisations Chart
Contractor's proposed adjustments (decrease) to the Fees (including any cost savings) of such Variation calculated in accordance with section 7 (Pricing Principles) of Schedule 7 (New SOWs and Variation Procedures):	Increase of PDR budget by [REDACTED] as per the attached breakdown of additional hours spent during PDR Phase

Impacts on the workmanship, durability or functional integrity of any element of the Works or Assets:	No impacts as assessment only
Impacts on the Project Plans:	No impacts as assessment only
Details of the timetable and process for implementing the Variation:	No impacts as assessment only
Impacts on Approvals or Accreditations (which the Contractor must, as far as practicable seek to avoid):	No impacts as assessment only
Effects on the Delivery Locations:	No impacts as assessment only
Training Requirements:	No impacts as assessment only
Impacts on the Disengagement Plan:	No impacts as assessment only
Effects which the Variation will have on the Contractor's ability to satisfy any warranty given by the Contractor under or to perform any of the Contractor's obligations under the Delivery Agreement:	No impacts as assessment only
Details of any corresponding changes required to be made to the Delivery Agreement:	<p>Current wording: n/a</p> <p>Proposed wording (include deleted text as strikethrough text and underline new text): n/a</p>
Details of any anticipated impacts on Other Contractors and other Subsystems:	No impacts as assessment only
Any other information requested by TfNSW:	Please see attached breakdown for hours spent on the [REDACTED] Assessment
Other:	n/a
<p>Confirmation that the proposed Variation:</p> <p>(a) will not adversely affect the functional integrity of any of the elements of the TMS Subsystem; and</p> <p>(b) will not adversely affect the quality standards required under the Delivery Agreement.</p>	
Attachments	Breakdown of hours spent on [REDACTED] assessment during PDR Phase
Submitted by Contractor's Representative	<div>[REDACTED]</div> <div>Date: 14/10/2020</div>

SECTION 3 - ELECTION BY TfNSW		
APPROVED	[Yes / No]	
REJECTED	[Yes / No]	
CHANGES REQUIRED TO VARIATION PROPOSAL	[Yes / No]	
Timeframe for re-submission of Contractor's Variation Proposal:		
TfNSW Representative	Signed:	Date:

SECTION 4 – TLS IMPACT STATEMENT		
This Variation will have no impact on the TLS Contract		
Approval by Sydney Trains		
APPROVED	[Yes / No]	
CHANGES REQUIRED	[Yes / No]	
Sydney Trains Representative	Signed:	Date:

Date January 11, 2021

To **Attn:** [REDACTED], Project Manager
Siemens Mobility Pty Limited
160 Herring Road, Macquarie Park NSW 2113
By email: [REDACTED]

From Stefano Saccomani, Senior Project Manager
Digital Systems Program, Infrastructure and Place
Transport for NSW
Level 1, 219 Cleveland Street, Strawberry Hills, NSW,
2016

Subject **Traffic Management System – Variation Approval
002 – ATL Relocation**

Siemens Ref: DSPTMS-SMLY-TFNSW-VAR-000005.00

TfNSW Ref: IPD-19-7821
DSPTMS-TFNSW-SMLY-VAR-000001.00

[REDACTED]

Relocation of Integration Test Laboratory


Pursuant to Schedule 7 section 4.3 (a) of the Agreement TfNSW approves Siemens' Contractor Variation Proposal 002 for the relocation of Integration Test Laboratory from Chullora to Clyde with [REDACTED] to the Contract Value and [REDACTED] to the provision of this Variation.

Capitalised terms in this letter have the same meaning as in the Agreement, unless otherwise indicated.

Yours sincerely

[REDACTED]

Stefano Saccomani
Senior Project Manager, Traffic Management Systems
Infrastructure and Place

SECTION 2 – CONTRACTOR'S VARIATION PROPOSAL	
Variation Proposal No.:	002
Details of Variation Proposed:	SOW Stage 1 – Relocation of Integration Test Lab
Changes to or impacts on the Contractor's Activities:	none
Changes to the Contract Specifications:	none
Changes to the Resource Plan, Key People and Organisational Chart:	none
Contractor's proposed adjustments (increase or decrease) to the Fees (including costs of implementing the Variation and any one-off costs, including any cost savings) of such Variation calculated in accordance with section 7 (Pricing Principles) of Schedule 7 (New SOWs and Variation Procedures):	
Impacts on the workmanship, durability or functional integrity of any element of the Works or Assets:	none
Impacts on the Project Plans:	none
Details of the timetable and process for implementing the Variation:	none
Impacts on Approvals or Accreditations (which the Contractor must, as far as practicable seek to avoid):	none
Effects on the Delivery Locations:	The location reference name of the Integration Test Lab in the SOW is to be changed from 'Chullora' to 'Clyde'
Training Requirements:	none
Impacts on the Disengagement Plan:	none
Effects which the Variation will have on the Contractor's ability to satisfy any warranty given by the Contractor under or to perform any of the Contractor's obligations under the Delivery Agreement:	none

<p>Details of any corresponding changes required to be made to the Delivery Agreement:</p>	<p>Proposed wording:</p> <p>SOW 1</p> <p>Schedule 1</p> <p>Table 17 Scope of Works</p> <p>Sydenham Control Centre and Chullora <u>Clyde</u></p> <p>Table 19 Contractor Supplied Items</p> <p>Integrated LAB at Chullora <u>Clyde</u> DS Facility</p> <p>Schedule 3</p> <p>Table 20 Staging Diagram</p> <p>Chullora <u>Clyde</u> Site</p> <p>Appendix A TfNSW Supplied Items</p> <p>Table 1 TfNSW Supplied Items</p> <p>Integrated LABs at: Sydenham Control Centre and Chullora <u>Clyde</u></p> <p>Sydenham Control Centre Homebush Control Centre Chullora <u>Clyde</u></p>
<p>If the Contractor considers that the Variation may result in a delay:</p> <p>Details (including substantiation) of the period of the delay including of any impacts on the Contractor's Program, the Integrated Program and Milestone Dates:</p> <p>Where possible, date by which the Contractor requires TfNSW's decision on whether or not to proceed, such that the Contractor will not be delayed in the progress of the Contractor's Program:</p> <p>Where required by TfNSW, additional costs the Contractor anticipates would be incurred by it if TfNSW gave a Direction under clause 14.4 (Compression by Contractor) to compress the performance of the Contractor's Activities to overcome part or all of the delay expected to be caused by the Variation:</p>	<p>n/a</p> <p>n/a</p> <p>n/a</p>
<p>Details of any anticipated impacts on Other Contractors and other Subsystems:</p>	<p>none</p>
<p>Any other information requested by TfNSW:</p>	<p>none</p>

Other:	Assumption: "SOW 01 Schedule 02 Contractor's Solution Description" does not need to be updated	
<p>Confirmation that the proposed Variation:</p> <p>(a) will not adversely affect the functional integrity of any of the elements of the TMS Subsystem; and (b) will not adversely affect the quality standards required under the Delivery Agreement.</p>		
Attachments	None	
Submitted by Contractor's Representative	Signed:	Date: 04/11/2020

Date November 6, 2020

To **Attn:** [REDACTED], Project Manager
Siemens Mobility Pty Limited
160 Herring Road, Macquarie Park NSW 2113
By email: [REDACTED]

From Stefano Saccomani, Senior Project Manager
Digital Systems Program, Infrastructure and Place
Transport for NSW
Level 1, 219 Cleveland Street, Strawberry Hills, NSW,
2016

Subject **Traffic Management System – Notice 004 – [REDACTED]
[REDACTED] Assessment**

Siemens Ref:

TfNSW Ref: IPD-19-7821

[REDACTED]

[REDACTED] – Direction to Proceed

In relation to proposal - Project B3OC-0000058 TMS Sydney - Digital Systems Program - [REDACTED] Assessment.

As per section 5(a) of schedule 7 TfNSW would like to issue Siemens Mobility a direction to proceed on the basis that the total cost is capped at [REDACTED] TfNSW would like Siemens Mobility to start the planned works and in parallel provide a formal letter for variation by COB 13.11.2020.

Capitalised terms in this letter have the same meaning as in the Agreement, unless otherwise indicated.

Yours sincerely

[REDACTED]
Stefano Saccomani
Senior Project Manager, Traffic Management System
Infrastructure and Place

SECTION 2 – CONTRACTOR'S VARIATION PROPOSAL	
Variation Proposal No.:	004
Details of Variation Proposed:	See Attachment A.
Changes to or impacts on the Contractor's Activities:	See Attachment A generally – and, more specifically, sections 1.1, 2.1 and 2.2 of Attachment A
Changes to the Contract Specifications:	See Section 2.3 of Attachment A
Changes to the Resource Plan, Key People and Organisational Chart:	See section 5 of Attachment A. No impact.
Contractor's proposed adjustments (increase or decrease) to the Fees (including costs of implementing the Variation and any one-off costs, including any cost savings) of such Variation calculated in accordance with section 7 (Pricing Principles) of Schedule 7 (New SOWs and Variation Procedures):	See section 3 of Attachment A.
Impacts on the workmanship, durability or functional integrity of any element of the Works or Assets:	See section 2.4 of Attachment A.
Impacts on the Project Plans:	See section 2.5 of Attachment A.
Details of the timetable and process for implementing the Variation:	See section 4.1 of Attachment A relating to Planning.
Impacts on Approvals or Accreditations (which the Contractor must, as far as practicable seek to avoid):	See section 2.6 of Attachment A. No impact.
Effects on the Delivery Locations:	See section 2.7 of Attachment A. No impact.
Training Requirements:	See section 2.8 of Attachment A. No impact.
Impacts on the Disengagement Plan:	See section 2.9 of Attachment A. No impact.
Effects which the Variation will have on the Contractor's ability to satisfy any warranty given by the Contractor under or to perform any of the Contractor's obligations under the Delivery Agreement:	Other than outlined in Attachment A, the Contractor does not envisage any impact on its ability to perform its obligations under the Delivery Agreement.

Date February 10, 2021

To Attn: [REDACTED] Project Manager
Siemens Mobility Pty Limited
160 Herring Road, Macquarie Park NSW 2113
By email: [REDACTED]

From Stefano Saccomani, Senior Project Manager
Digital Systems Program, Infrastructure and Place
Transport for NSW
Level 1, 219 Cleveland Street, Strawberry Hills, NSW,
2016

Subject Traffic Management System – Variation Approval
004 – [REDACTED] Implementation

Siemens Ref: DSPTMS-SMLY-TFNSW-VAR-000003.00
DSPTMS-SMLY-TFNSW-VAR-000010.0

TfNSW Ref: IPD-19-7821
DSPTMS-TFNSW-SMLY-VAR-000004.00
DSPTMS-TFNSW-SMLY-VAR-000005.00
DSPTMS-TFNSW-SMLY-VAR-000006.00

[REDACTED]

Variation Approval 004 - [REDACTED] Implementation

Further to TfNSW's correspondence dated 6 November 2020 (TeamBinder Reference: DSPTMS-TFNSW-SMLY-VAR-000004.00) directing the Contractor to proceed on the basis that the total cost is capped [REDACTED] relation to proposal - Project B3OC-0000058 TMS Sydney - Digital Systems Program - [REDACTED], in accordance with clause 4.3(a) Section 4 (Variations) of Schedule 7, TfNSW approves the Variation for the [REDACTED] in the overall amount of [REDACTED] excl GST, inclusive of the previously directed capped fee of [REDACTED] excl. GST.

The scope of works approved under this Variation is as per Attachment A to Contractor's Variation Proposal – TfNSW Initiated Variation #004 – [REDACTED].

Capitalised terms in this letter have the same meaning as in the Agreement, unless otherwise indicated.

Yours sincerely

[REDACTED]

Stefano Saccomani
Senior Project Manager, Traffic Management System
Infrastructure and Place

SECTION 2 – CONTRACTOR'S VARIATION PROPOSAL	
Variation Proposal No.:	004
Details of Variation Proposed:	See Attachment A.
Changes to or impacts on the Contractor's Activities:	See Attachment A generally – and, more specifically, sections 1.1, 2.1 and 2.2 of Attachment A
Changes to the Contract Specifications:	See Section 2.3 of Attachment A
Changes to the Resource Plan, Key People and Organisational Chart:	See section 5 of Attachment A. No impact.
Contractor's proposed adjustments (increase or decrease) to the Fees (including costs of implementing the Variation and any one-off costs, including any cost savings) of such Variation calculated in accordance with section 7 (Pricing Principles) of Schedule 7 (New SOWs and Variation Procedures):	See section 3 of Attachment A.
Impacts on the workmanship, durability or functional integrity of any element of the Works or Assets:	See section 2.4 of Attachment A.
Impacts on the Project Plans:	See section 2.5 of Attachment A.
Details of the timetable and process for implementing the Variation:	See section 4.1 of Attachment A relating to Planning.
Impacts on Approvals or Accreditations (which the Contractor must, as far as practicable seek to avoid):	See section 2.6 of Attachment A. No impact.
Effects on the Delivery Locations:	See section 2.7 of Attachment A. No impact.
Training Requirements:	See section 2.8 of Attachment A. No impact.
Impacts on the Disengagement Plan:	See section 2.9 of Attachment A. No impact.
Effects which the Variation will have on the Contractor's ability to satisfy any warranty given by the Contractor under or to perform any of the Contractor's obligations under the Delivery Agreement:	Other than outlined in Attachment A, the Contractor does not envisage any impact on its ability to perform its obligations under the Delivery Agreement.

Details of any corresponding changes required to be made to the Delivery Agreement:	In addition to changes referenced in this Variation Proposal - see section 4.3 of Attachment A (TfNSW Dependency Changes).
If the Contractor considers that the Variation may result in a delay: Details (including substantiation) of the period of the delay including of any impacts on the Contractor's Program, the Integrated Program and Milestone Dates: Where possible, date by which the Contractor requires TfNSW's decision on whether or not to proceed, such that the Contractor will not be delayed in the progress of the Contractor's Program: Where required by TfNSW, additional costs the Contractor anticipates would be incurred by it if TfNSW gave a Direction under clause 14.4 (Compression by Contractor) to compress the performance of the Contractor's Activities to overcome part or all of the delay expected to be caused by the Variation:	See sections 4.1 and 4.2 of Attachment A. See section 3.4 of Attachment A. Not identified by TfNSW as required. TfNSW to advise if necessary and Siemens will provide estimate of additional costs.
Details of any anticipated impacts on Other Contractors and other Subsystems:	See section 4.3 of Attachment A – TfNSW Dependency Changes.
Any other information requested by TfNSW:	None requested.
Other:	N/A
Confirmation that the proposed Variation: (a) will not adversely affect the functional integrity of any of the elements of the TMS Subsystem; and (b) will not adversely affect the quality standards required under the Delivery Agreement.	
Attachments	Attachment A to Contractor's Variation Proposal – TfNSW Initiated Variation #004 – [REDACTED]
Submitted by Contractor's Representative	[REDACTED]

SECTION 3 - ELECTION BY TfNSW		
APPROVED	[Yes / No]	
REJECTED	Yes / No]	
VARIATION REQUEST WITHDRAWN	[Yes / No]	
CHANGES REQUIRED TO VARIATION PROPOSAL	[Yes / No]	
Timeframe for re-submission of Contractor's Variation Proposal:	<div style="background-color: yellow; width: 40px; height: 15px; display: inline-block;"></div> Not applicable	
TfNSW Representative	Signed <div style="background-color: black; width: 60px; height: 15px; display: inline-block;"></div> <div style="background-color: black; width: 150px; height: 35px; display: inline-block;"></div>	Date: 09/02/2021

SECTION 4 – TLS IMPACT STATEMENT		
See section 2.10 of Attachment A.		
Approval by Sydney Trains		
APPROVED	[Yes / No]	
CHANGES REQUIRED	[Yes / No]	
Sydney Trains Representative	Signed:	Date:

Details of any corresponding changes required to be made to the Delivery Agreement:	In addition to changes referenced in this Variation Proposal - see section 4.3 of Attachment A (TfNSW Dependency Changes).	
If the Contractor considers that the Variation may result in a delay: Details (including substantiation) of the period of the delay including of any impacts on the Contractor's Program, the Integrated Program and Milestone Dates: Where possible, date by which the Contractor requires TfNSW's decision on whether or not to proceed, such that the Contractor will not be delayed in the progress of the Contractor's Program: Where required by TfNSW, additional costs the Contractor anticipates would be incurred by it if TfNSW gave a Direction under clause 14.4 (Compression by Contractor) to compress the performance of the Contractor's Activities to overcome part or all of the delay expected to be caused by the Variation:	See sections 4.1 and 4.2 of Attachment A. See section 3.4 of Attachment A. Not identified by TfNSW as required. TfNSW to advise if necessary and Siemens will provide estimate of additional costs.	
Details of any anticipated impacts on Other Contractors and other Subsystems:	See section 4.3 of Attachment A – TfNSW Dependency Changes.	
Any other information requested by TfNSW:	None requested.	
Other:	N/A	
Confirmation that the proposed Variation: (a) will not adversely affect the functional integrity of any of the elements of the TMS Subsystem; and (b) will not adversely affect the quality standards required under the Delivery Agreement.		
Attachments	Attachment A to Contractor's Variation Proposal – TfNSW Initiated Variation #004 – [REDACTED]	
Submitted by Contractor's Representative	Signed:	Date: 22/01/2021

SECTION 3 - ELECTION BY TfNSW		
APPROVED	[Yes / No]	
REJECTED	[Yes / No]	
VARIATION REQUEST WITHDRAWN	[Yes / No]	
CHANGES REQUIRED TO VARIATION PROPOSAL	[Yes / No]	
Timeframe for re-submission of Contractor's Variation Proposal:	[Insert]	
TfNSW Representative	Signed:	Date:

SECTION 4 – TLS IMPACT STATEMENT		
See section 2.10 of Attachment A.		
Approval by Sydney Trains		
APPROVED	[Yes / No]	
CHANGES REQUIRED	[Yes / No]	
Sydney Trains Representative	Signed:	Date:

B3OP-00401 TMS Sydney Digital Systems

Attachment A to Contractor's Variation Proposal

TfNSW Initiated Variation

	Name	Role	Signature
Released by		Contract Manager	Not Required
Approved by		Project Manager	Not Required
Checked by		Commercial Project Manager	Not Required
Author		Offshore Project Manager	Not Required

Project #: B3OP-00401 Project: TMS Sydney Digital Systems Variation	State: Final Restricted	Int. ID: B3OP-00401-090103-VR-000001 Version: 0.3 Ext. ID: N/A Version: A	1 of 24
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Document history

Version Ext. ID	Version Int. ID	Date	Author	Sections changed	Change
---	R0.1	09/12/2020	██████	1	██████ draft
---	R0.2	18/12/2020	██████	Multiple	<p>Section 1.1: ISD123 to ICD123 for the reference to the assumptions</p> <p>Section 2.1.2.1 Technical details removed and reference to R2 added</p> <p>Section 2.1.4 details about RailML version</p> <p>Section 2.2 Rewording of the system integrations approach</p> <p>Section 2.3 ISD 70 and ISD71 impact to ISD 123</p> <p>Section 3.1 Assumptions tidied up</p> <p>Section 4.3: Dependencies revised</p>
A	R0.3	20/01/2020	██████	2.2, 3.1, 4.3	<p>2.2 and 3.1: rewording according to TFNSW comments</p> <p>4.3: Impacted Milestones FAT changed to PDR for # TMS-57630.</p> <p>4.3 Additional details according to TFNSW comments. Definition formation and canned data added.</p>

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Project #: B3OP-00401 Project: TMS Sydney Digital Systems Variation [REDACTED] [REDACTED]	State: Final Restricted	Int. ID: B3OP-00401-090103-VR-000001 Version: 0.3 Ext. ID: N/A Version: A	2 of 24
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Web contact page: [REDACTED]

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1 Introduction

1.1 Purpose and scope

TfNSW has requested a Variation to introduce [REDACTED] that will provide the new interface requirement based on [REDACTED] format. This Variation Proposal is made on the basis [REDACTED] with the assumptions identified in section 3.1 below.

This document is to be read in conjunction with "Section 2 - Contractor's Variation Proposal", in response to TfNSW Initiated Variation Request 004 [R01].

1.2 Terms and abbreviations

The following terms and abbreviations are used in this document:

Term / abbreviation	Explanation
CIB	[REDACTED]
DL	TMS Dispatching Layer
DDR	Detailed Design Review
DMA	(ROC) Data Management Area, or TMS DMA
DOOT	Day of operations timetable
DWTT	Daily working timetable (passenger)
SWTT	Standard working timetable (passenger)
DOP	Day of operation
DSP	Digital System Program
FAT	Factory acceptance test
ICD	Interface Control Document (detailed specification)
ISD	Interface Specification Document (customer requirements)
JMS	[REDACTED]
NDD	Next Day Duties
PDR	Preliminary Design Review
SIT	System Integration Test
ST	Sydney Transport
TfNSW	Transport for New South Wales
TMS	Traffic management system
TT	Timetable

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Term / abbreviation	Explanation
TN	Train Number
WLN	

Table 1 **Terms and abbreviations**

1.3 References

Reference	Document title	Document ID / source	Version
[R01]	Variation Request	DSPTMS-TFNSW-SMLY-VAR-000006.00	N/A
[R02]		DSPTMS-SMLY-TFNSW-VAR-000001.00	1.2

Table 2 **References**

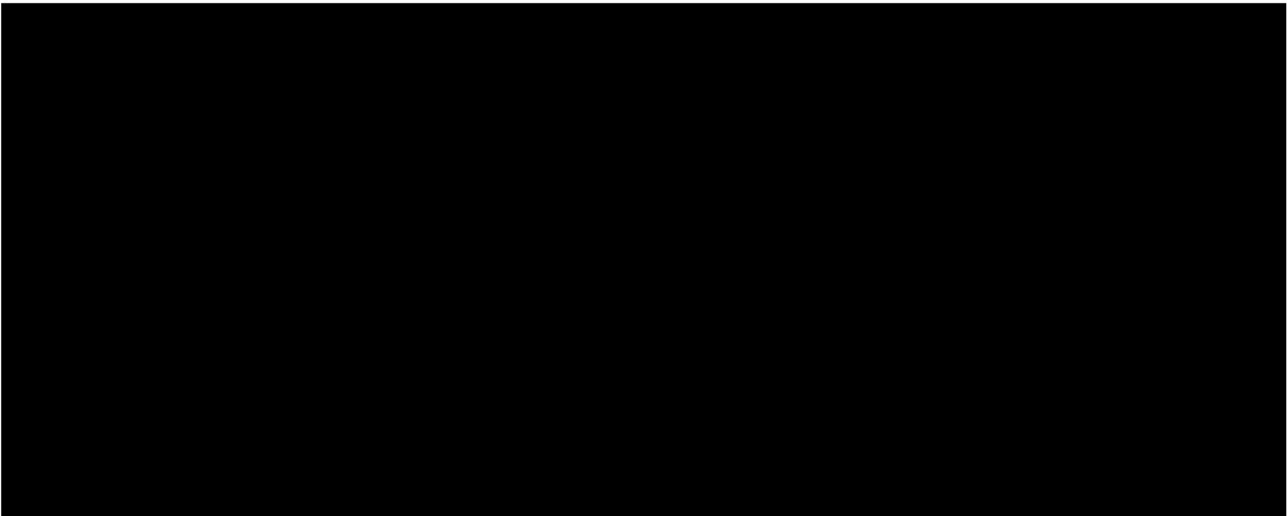
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2 Scope of Work

2.1 Detailed Scope

2.1.1 Interface Architecture

Siemens TMS will integrate the [REDACTED]
[REDACTED]



[REDACTED] [REDACTED]

[REDACTED] [REDACTED]

[REDACTED] [REDACTED] Architecture

The architectural views in this section of the document are intended to provide an example in context of this Variation Proposal, as well as to align our understanding of what has to date been discussed in meetings with Sydney Trains / TfNSW.

The diagram below gives an example overview of the producer-topic-consumer topology which has been assumed in relation to integrating the TfNSW Planning Systems with the TMS [REDACTED]

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The topology of the [REDACTED] shall be discussed and agreed by both parties Siemens and TfNSW during the forthcoming workshops on [REDACTED]

The sequences of the messages shall follow the logic outlined in the Siemens Assessment as per reference [R02] of this variation. The details design of the messages shall be agreed during the forthcoming workshops and finally recorded within the [REDACTED]

2.1.3 [REDACTED]

As stated in our [REDACTED] Siemens recommends using [REDACTED] [REDACTED] to be used between various subsystems in the DSP. Using such a standard is considered to be beneficial for all participants in the long term. The use of [REDACTED] with TfNSW/Sydney Trains views on the topic raised during the early design workshop in August, 2020.

Since the [REDACTED] [REDACTED] there is a unique opportunity to align on a common version.

On 23/11, Siemens had the first workshop with [REDACTED] get better insights into the current [REDACTED]. Follow-up workshops have been arranged for 11/12, and 17-18/12.

From the information gained to date, Siemens is confident that [REDACTED] TMS needs for Timetables and Topology to a high degree. Train formation however is not covered

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in [REDACTED]. Train locations and transition have not yet been studied but this should be possible. Once the [REDACTED] Siemens will analyze the gaps and work with TfNSW/ST to work out the best solution to address them.

As a risk mitigation, for particular aspects there is the possibility of falling back to an older [REDACTED]. This won't become a blocking point for the project. It's just less elegant than an approach based solely on [REDACTED]

Siemens suggests that TfNSW defines [REDACTED] and allows for the possibility of exceptions. Details about the specific version(s) used will be defined as part of [REDACTED] will also define which parts of the [REDACTED] will be used and the semantics of the exchanged information.

Regarding development effort, the integration of [REDACTED] is smooth and comes with low risk – technically it's comparable [REDACTED] needs to be integrated. The benefits arise on the long run to TMS Sydney integration with various partners.

2.1.4 Aspects covered by [REDACTED]

The table below indicates which data formats Siemens currently proposes to define in [REDACTED]

	Interface	In / Out of TMS	[REDACTED]	[REDACTED]	Release
1	Journey Updates (base-lines/transpositions)	Out	(undefined)	[REDACTED]	R2
2	Passenger Timetables (from TPS)	In	[REDACTED]	[REDACTED]	R1
3	Freight Timetable (from TRIMS)	In	[REDACTED]	[REDACTED]	R2
4	NDD / Stands / Standbys (from FARS)	In	[REDACTED]	[REDACTED]	R2
5	Freight Consist Details (from TRIMS)	In	Bespoke	[REDACTED]	R2
	Passenger Consist Details	In	[REDACTED]	[REDACTED]	R1
6	Fleet Allocation (from FARS)	In	Bespoke	[REDACTED]	R2
7	TMS-DMA	In ¹	[REDACTED]	[REDACTED]	R1
8	Journey Updates (train locations)	Out	(undefined)	[REDACTED]	R2

¹ Preferably TMS [REDACTED]. An intermediate data format for the transport of information shall be used for the separation / isolation of systems.

² Depending on [REDACTED], Siemens will check the appropriate format

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	Interface	In / Out of TMS			Release
9	Train Locations (from Transition Systems)	In	(undefined)		R1
10	Maintenance info and alarms	Out	(undefined)	TBD	R2
11		In	Bespoke		R2
12	Crew Rosters (from OpCrew)	In	(undefined)	TBD	R2

Table 3 CIB Interface format definitions

2.2 Delivery Strategy

This Variation Proposal is based on the on-time delivery of the TfNSW Dependencies identified in section 4.3.

The Variation impacts the design, implementation, integration and

This variation proposal follows the testing and integration approach as outlined in the overall TMS contract and further described in the TMS testing and commissioning plan.

Since TfNSW / Sydney Trains cannot

Consequently, the

This Variation Proposal is made on the basis that Siemens will obtain detailed information how the [REDACTED]

Siemens currently do not anticipate any licensing requirements, should TfNSW decides to use [REDACTED] from the same supplier and associated variation shall be evaluated by Siemens and TfNSW". The following describes the activities to be performed by Siemens under this variation:

-
- | Category | Bar 1 (Top) | Bar 2 (Middle) | Bar 3 (Bottom) |
|--------------------|-------------|----------------|----------------|
| Additional tooling | ~95 | ~85 | ~25 |
| Additional tooling | ~95 | ~85 | ~25 |
| Additional tooling | ~95 | ~85 | ~25 |

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Project: TMS Sydney Digital Systems	FinalDraft	Version: 0.3	of
Variation [REDACTED]	Restricted	Ext. ID: N/A	
[REDACTED]		Version: N/A	24

[REDACTED]	
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]

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Project: TMS Sydney Digital Systems	FinalDraft	Version: 0.3	of
Variation [REDACTED]	Restricted	Ext. ID: N/A	
[REDACTED]		Version: N/A	24

[illegible]

Table 4 **Contract Specifications Changes**

2.4 RAMS Impact

RAMS Impact from TMS point of view. TfNSW is responsible for

Item	Impact
Reliability	No Impact
Availability	No Impact
Maintainability	No Impact

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[REDACTED]		Version: N/A	24

Item	Impact
Safety	No Impact

Table 5 **RAMS Impact**

2.5 **Project Plans Changes**

Document	Impact
Systems Engineering Management Plan	No
Systems Engineering Framework Implementation Guide	No
Testing and Commissioning Plan	No
Systems Integration Plan	No
Requirements Management Plan	No
Configuration Management Plan	No
Human Factors Integration Plan	No
Reliability Availability Maintainability Plan	No
Cyber Security Management Plan	No
DS-SI Systems Assurance Plan	No
Hazard Log Management Procedure	No

Table 6 **Project Plans Changes**

2.6 **Approvals Changes**

None

2.7 **Delivery Location Changes**

None

2.8 **Training Requirements**

None

2.9 **Disengagement Plan Changes**

None

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2.10 TLS Impact Assessment

None

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3 Price Conditions

3.1 Key Assumptions

#	Assumption	Impact
1.	[REDACTED]	Scope
2.	[REDACTED]	Scope
3.	[REDACTED]	Scope
4.	[REDACTED]	Scope
5.	[REDACTED]	Test strategy
6.	Not used	
7.	Not used	
8.	Not used	
9.	Not used	
10.	Not used	
11.	Not used	
12.	Not used	
13.	Not used	
14.	[REDACTED] diagram examples in the assessment document [R02]	
15.	[REDACTED]	
16.	[REDACTED]	
17.	[REDACTED]	
18.	[REDACTED]	
19.	[REDACTED]	Scope
20.	[REDACTED]	
21.	Not used	

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#	Assumption	Impact
22.	[REDACTED]	
23.	Not used	
24.	Not used	
25.	[REDACTED]	Scope
26.	[REDACTED]	Scope
27.	Not used	
28.	[REDACTED]	[REDACTED]
29.	T [REDACTED]	

Table 7 Assumption List

3.2 Price Breakdown

The following table provides a breakdown of the variation cost:

Item	Details	Cost (AUD)
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]

Table 8 Price Breakdown

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3.3 Price Schedule

The following table provides the payment schedule:

Milestone	Approval Criteria	Cost (%)	Cost (AUD)

Table 9 Price Schedule

3.4 Validity

The variation proposal is valid until 30/01/2021.

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4 Planning

4.1 Detailed Planning

[REDACTED]

[REDACTED]

[REDACTED]

Changes

Milestone	Impacted	SOW Date	New Date
SOW1 R1 PDR	No	21/06/2021	Refer to Planning
SOW1 R1 DDR	No	13/10/2021	Refer to Planning
SOW1 R1 FAT	Yes	9/04/2022	Refer to Planning
SOW1 R1 TTR	Yes	3/07/2022	Refer to Planning
SOW1 R1 SVR	Yes	19/11/2022	Refer to Planning
SOW1 R2 PDR	Yes	21/01/2022	Refer to Planning
SOW1 R2 DDR	Yes	6/07/2022	Refer to Planning

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Milestone	Impacted	SOW Date	New Date
SOW1 R2 FAT	Yes	16/03/2023	Refer to Planning
SOW1 R2 TTR	Yes	2/06/2023	Refer to Planning
SOW1 R2 SVR	Yes	17/08/2023	Refer to Planning
SOW1 R1/R2 PA	Yes	16/09/2023	Refer to Planning
SOW1 R1/R2 FA	Yes	09/12/2023	Refer to Planning
SOW1 ATO PDR	Yes	2/04/2022	Refer to Planning
SOW1 ATO DDR	Yes	19/08/2022	Refer to Planning
SOW1 ATO FAT	Yes	11/05/2023	Refer to Planning
SOW1 ATO TTR	Yes	11/05/2023	Refer to Planning
SOW1 ATO SVR	Yes	28/08/2023	Refer to Planning
SOW1 ATO PA	Yes	24/06/2024	Refer to Planning
SOW1 ATO FA	Yes	16/01/2025	Refer to Planning
SOW3 PDR	Yes	30/09/2021	Refer to Planning
SOW3 DDR	Yes	1/02/2022	Refer to Planning
SOW3 FAT	Yes	15/07/2022	Refer to Planning
SOW3 TTR	Yes	03/10/2022	Refer to Planning
SOW3 SVR	Yes	6/02/2023	Refer to Planning

Table 10 Milestones Impact

4.3 TfNSW Dependency Changes

This table defines the dependencies on TfNSW, Other Contractors and Subsystems:

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#	TfNSW Dependency	Type	Date	Milestone Impacted
TMS-57290	[REDACTED]	New	Refer to Planning	R1 PDR
TMS-57600	[REDACTED]	New	Refer to Planning	R1 PDR
TMS-57340	[REDACTED]	New	Refer to Planning	R1 PDR
TMS-57610	[REDACTED]	New	Refer to Planning	R1 PDR
TMS-57620	[REDACTED]	New	Refer to Planning	R1 PDR
TMS-57630	[REDACTED]	New	Refer to Planning	R1 PDR
57631	[REDACTED]	New	Refer to Planning	R1 PDR
TMS-57330	[REDACTED]	New	Refer to Planning	R1 FAT
TMS-57320	[REDACTED]	New	Refer to Planning	R1 FAT
57321	[REDACTED]	New	3 months prior to FAT R1 and FAT R2. Refer to Planning	R2 TRR

#	TfNSW Dependency	Type	Date	Milestone Impacted
TMS-57640	[REDACTED]	New	Refer to Planning	R1 TRR R2 TRR

* sample data: [REDACTED]

** [REDACTED]

5 Organisation

5.1 Key People Change

No impact

5.2 Organisation Chart Change

No impact

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