Form of AVC

LONDON UNDERGROUND LIMITED

Stratford Market Depot, Trackside House,
Burford Road, Stratford, London E15 2SB

TELEPHONE : [redacted]

TO: THALES GROUND TRANSPORTATION SYSTEMS UK LIMITED (the Supplier)

Contract No.: TfL-01388
Variation No.: 02
Date.: 16/07/2021
F.A.O.: Alex Baker
Tel: [redacted]
Fax: N/A

AUTHORITY FOR VARIATION TO CONTRACT (AVC)

Authority is hereby given for the variation in requirement to be made and for the variation in the contract price. A copy of the completed form is to be retained by the Supplier, and the original returned to : London Underground Limited, Company Representative, Stratford Market Depot, Trackside House, Burford Road, Stratford, London E15 2SB.

DETAILS OF AUTHORITY FOR VARIATION TO CONTRACT	AMOUNT (£)	(p)
Jubilee Line and Northern Line Large File Transfer Project This Variation is agreed and ordered in accordance with the practices, processes and requirements as laid out within the TfL-01388 Contract, Clause 30 and Schedule 14. The purpose of this Variation is to proceed with the Jubilee Line and Northern Line Large File Transfer Project in line with the attached Detailed Delivery Strategy, version 3.1 (Appendix A). **Payment** This Variation is a firm price of £1,250,000 and will be paid in two stage payments in line with the below payment profile: 1. **Milestone 1:** Material procurement and delivery of scripts and configuration files to site (55% of the total Variation price) 2. **Milestone 2:** Project commissioning, delivery of book wiring and project closure (45% of the total Variation price) Payment will be made following the submittal of a substantiated application for payment which includes milestone completion reporting as appropriate and approved by the Client Representative.		

Programme The duration of the project programme is 12 months. An updated project programme is to be supplied by the Supplier within four weeks of execution of this Variation. All works undertaken pursuant to this Variation are subject to the terms and conditions of the TfL-01388 Contract.		
TOTAL COST TO London Underground Limited £	**1,250,000**	

[redacted] [redacted]

London Underground Limited Procurement Authority

London Underground Limited Company Representative

ACCEPTANCE BY THE SUPPLIER.

Signed [redacted] **Print Name** ALEX BAKER

on behalf of the Supplier

Title/position Service Delivery Portfolio Manager **Date** 16/07/21

RFT Ref. n/a

Date of Release: March 2020

London Underground Limited

Jubilee & Northern Lines Large File Transfer Project

Detailed Delivery Strategy

Status: Final

THALES GROUND TRANSPORTATION SYSTEMS UK LTD

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DOCUMENT CHANGE HISTORY

Change ref	Comments	Issue	Date
-	First release	1.0	31 Jan 2019
	Second Release	2.0	10 May 2019
	Third Release	3.0	21 November 2019
	Update to Third release following BAFO	3.1	06 March 2020

Abbreviations

Abbreviation	Definition
4LM	4 Lines Modernization
ACL	Access Control List
ATS	Automatic Train Supervision
AWS S3	Amazon Web Services Simple Storage Service
BKPRAS	Backup and Remote Access Server
CBTC	Communication Based Train Control
CDM	Construction Design and Management Regulations
COTS	Commercial Off The Shelf
DCS	Data Communication System
DD	Data Diode
DMZ	Demilitarised zone
EMC	Electro-Magnetic Compatibility
ERC	Energisation Release Certificate
ERC	Energisation Release Certificate
FO	Fibre Optic
FW	Firewall
GTS	Ground Transportation Systems (Thales)
HSCC	Hammersmith Control Centre
HSE	Health and Safety Executive
HSQE	Health Safety Quality and Environment
IP	Internet Protocol
IRC	Installation Release Certificate

JL	Jubilee Line
JNLFT	Jubilee & Northern Lines Large File Transfer project
JNSU	Jubilee & Northern Lines Systems Upgrades programme
JNUP	Jubilee & Northern Upgrade Project
KIM	Keyboard Interface Module
KVM	Keyboard Video Mouse
LAN	Large Area Network
LFT	Large Files Transfer
LUL	London Underground Limited
MTPL	Master Test Procedure List
NAS	Network Attached Storage
NL	Northern Line
PC	Personal Computer
PICO	Post Installation Check Out
QA	Quality Assurance
QUENSH	Quality, Environment, Safety and Health
RAM	Reliability, Availability and Maintainability
SCC	Service Control Centre
SLT	Safety Leadership Team
TBTC	Transmission Based Train Control
TCAN	Thales Canada - Toronto
TSSSA	Technical Services and Spares Supply Agreement
TUK	Thales U.K.
URS	Urban Rail Signalling (part of GTS Thales)
USB	Universal Serial Bus

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1. Introduction

Thales has been requested to produce a quotation for the Automatic Data Collection and Consolidated Cloud Platform.

The following base scope has been detailed and priced as part of this proposal for the Jubilee and Northern Lines Large File Transfer (JNLFT) project:

- Automatic data collection for Jubilee Line and Northern Line logs through installation of a data diode at Neasden and Highgate SCCs.

- Storage of all Jubilee Line and Northern Line data in a consolidated common cloud environment.

In addition to the above requirements, and subsequent to release and appraisal of Issues 1.0 and 2.0 of this document, LUL has released its updated requirements through issue of Ref. [1]. Following in-person and conference-call clarification with LUL (on and post 2nd April 2019) the following clarifications are made to the document Ref. [1]:

This document presents Thales' revised proposal for the JNLFT project, and constitutes a response to Option 2 in both the stages outlined in Table 2 of Ref. [1]. The document will focus largely on the technical solution and delivery strategy, with further detail on assurance, install, test and commissioning, project management and all supporting functions.

This revision also accommodates LUL's request that they undertake the installation and PICO activities, and describes the handover points.

Update 3.1 is to bring this delivery strategy into line with the joint agreements made prior to Thales issuing its best and final offer on 27th February 2020, and to answer additional clarifications made by email from LU's Richard Hinton on the 4th March 2020.

1.1. General Assumptions

The Contractor is bringing the following general assumptions and understandings to the Project Manager's (LUL) attention and these form a part of the quote as specifically identified conditions and exclusions that do not form part of the price estimate but may have significant additional cost or schedule impacts if realised. Other more specific assumptions are detailed throughout the document.

[redacted]

1.2. References

[1]	LU-REQUEST-JNLFTP rev2	Jubilee and Northern Lines Large File Transfer Project – LU Request to Thales	LUL

2. Technical Solution

2.1. Current Design

[redacted]

Figure 1 - Existing Equipment at Jubilee and Neasden SCCs

2.2. 4LM Solution - Background

[redacted]

- [redacted]
- [redacted]
- [redacted]

[redacted]

- [redacted]
- [redacted]

[redacted]

2.3. Jubilee Line and Northern Line Solution

[redacted]

2.3.1. Entire HW solution without cloud, including obsolescence refresh

[redacted]

[redacted]

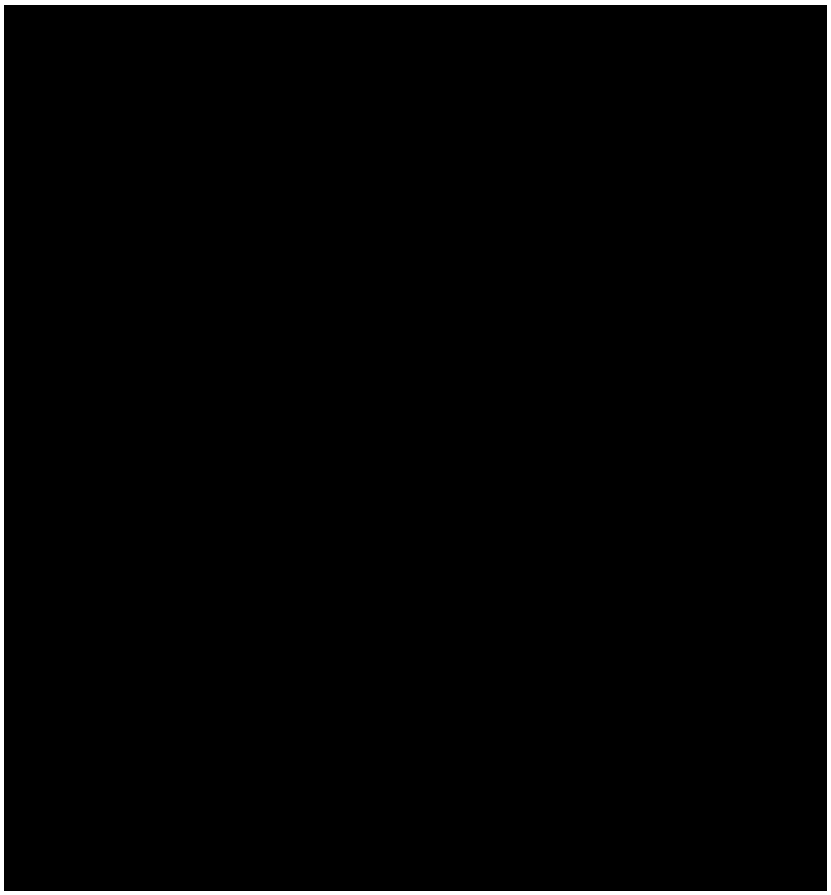


Figure 2 - JNL Log File Transfer Architecture

2.3.1.1. Obsolescence Refresh

[redacted]

[redacted]

[redacted]

[redacted]

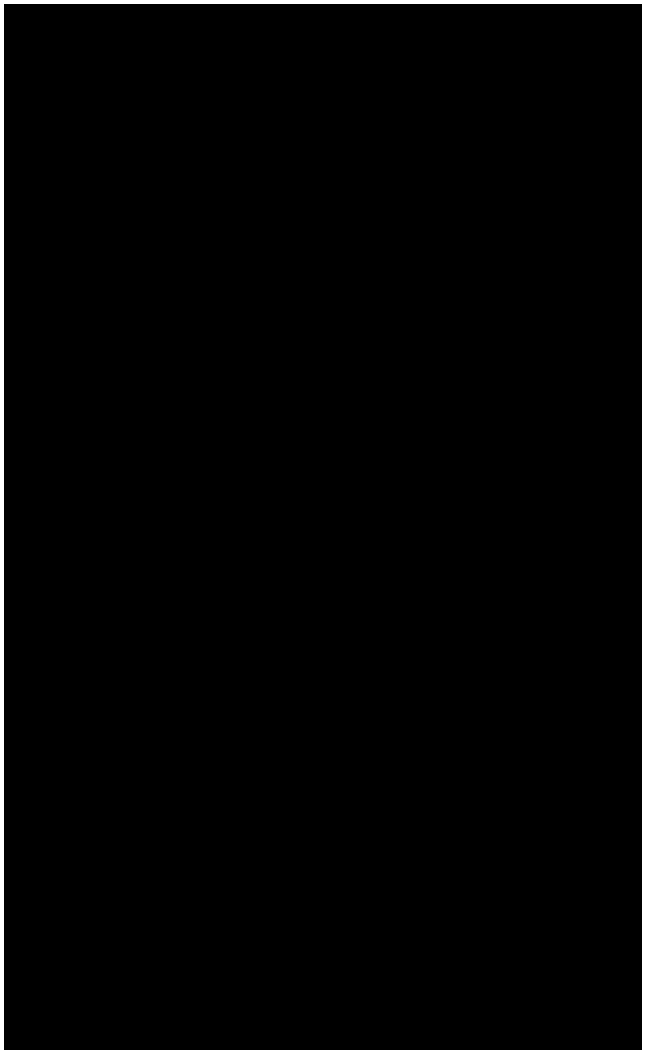


Figure 3 - Rack Layouts

[redacted]

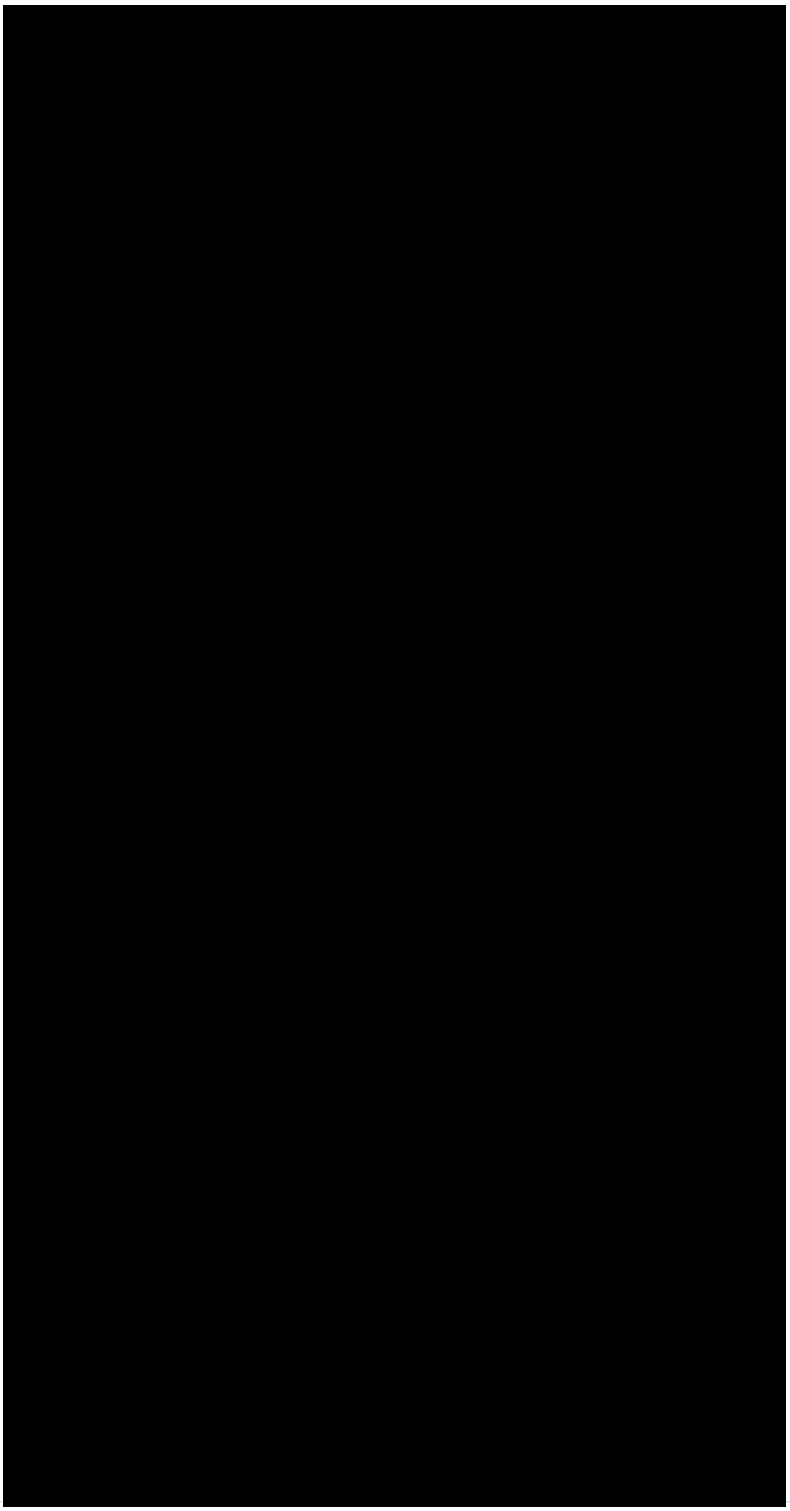
2.3.2. Upload to Cloud

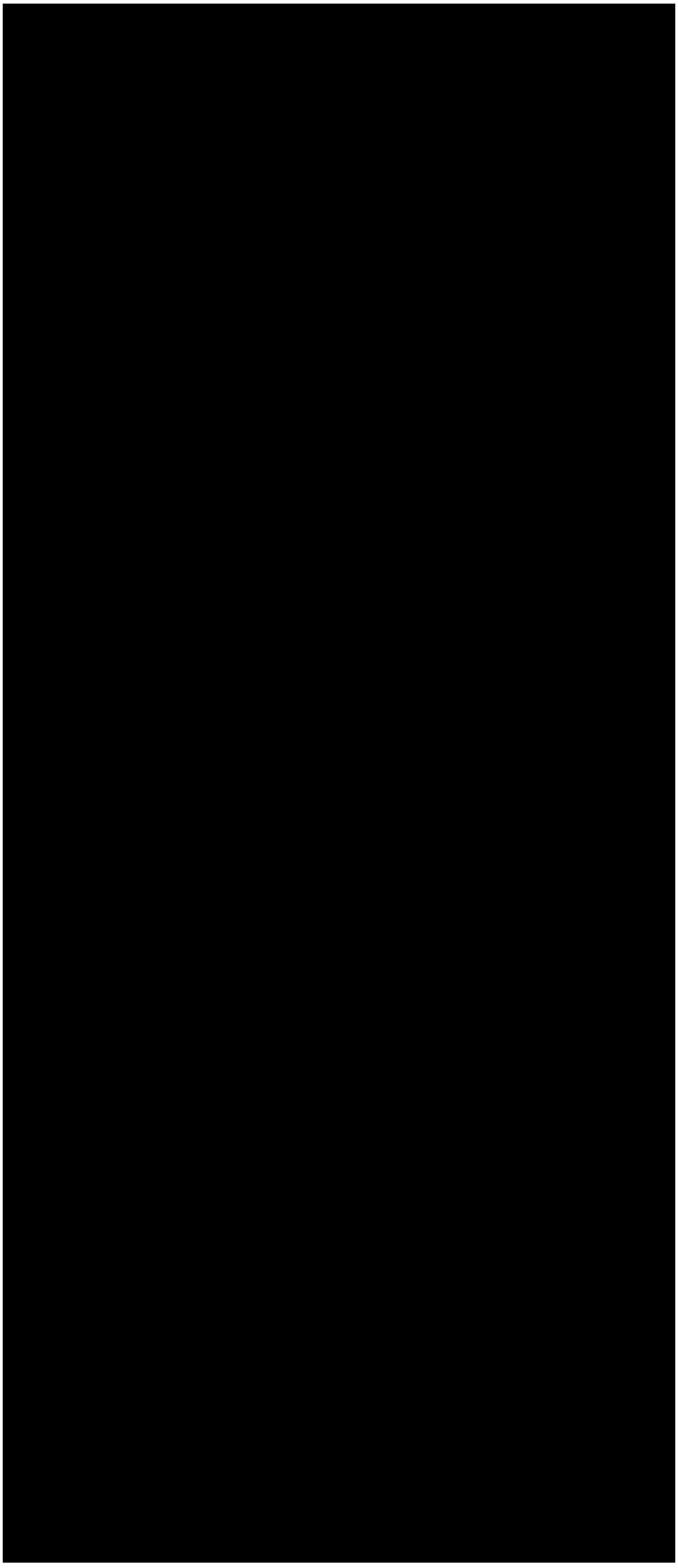
[redacted]

[redacted]

3. BoM and Space-Power

3.1. Bill of Materials:





3.2. Space & Power Estimates:

4. Training, Operation and Maintenance Manuals

Updated operation and maintenance manuals will be made available.

5. Installation

5.1. Installation Scope (to be completed by LUL)

[redacted]

6. Testing and Commissioning

Due to the fact that operational assets are being replaced, and the necessity to assure that continued correct operation of the signalling system at start of service immediately after the completion of certain installation activities, it is a condition of this offer that Thales undertakes the configuration, commissioning and certificating back into service.

6.1. Testing and Commissioning Strategy

The method adopted by the Thales Test and Commissioning (T&C) team to commission the alterations as required by the JNLFT Project is described in this section.

For JNLFT project, all tests that are required to be carried out whether in Canada or the UK are defined within a Master Test Procedure List (MTPL) produced by the Canadian Technical Authority. The tests are then carried out and when completed a review is undertaken to see if the Review Pass criteria has been met. The existing MTPL for Jubilee Line and Northern Line will be used and amended as necessary to incorporate any updates required by the JNLFT project.

[redacted]

The JNLFT Project will be conducted in a phased approach. This approach will allow for the delivery of the JNLFT Project with minimal impact on the existing Jubilee and Northern Lines and maintaining a revenue service.

Test & Commissioning will manage the testing in a way which supports this staged approach.

To minimise the impact on the existing Jubilee Line and maintaining a revenue service Thales T&C will conduct all modifications within Engineering Hours, [redacted]

[redacted]

Where commissioning activities are undertaken Thales UK will provide a Commissioning Quality Plan (CQP), which will include signatures from LUL, which demonstrates LUL acceptance to the commissioning process documented within the CQP.

6.1.1. Commissioning Spares

Thales does not intend to provide commissioning spares for JNLFT Project due to the limited amount of new hardware being installed.

7. Assurance

Assurance will be provided to support the installation and energisation of the new and/ or modified equipment at Highgate SCC and Neasden SCC, for the large file transfer system. The Installation Release Certificate (IRC) and Energisation Release Certificate (ERC) processes will be used to assure the installation and energisation activities.

The IRC and ERC processes that will be used for JNLFT are consistent with those that will be used for the JNSU project, which have been proven for use on JNUP and 4LM.

8. Post Commissioning

8.1. Reliability, Availability and Maintainability

Reliability, Maintainability and Availability will not be reduced from what was observed during the previous twelve month period.

8.2. Maintenance Spares

Thales does not intend to provide maintenance spares for JNLFT Project due to the limited amount of new hardware being installed. It is assumed that any spares requirements will be provided for by existing reserve stock of spares for relevant items or via support service agreements.

9. Quality Assurance

Thales implements a Corporate Governance system called Chorus 2.0 which has been certified by LRQA against ISO 9001 for Quality Management Systems, ISO450001 for Health and Safety, and ISO 14001 for managing our environmental aspects and impacts.

Chorus 2.0 defines the policies, procedures, instructions, guides, templates and forms, including the HSE, QA, competence management, and supplier management processes and activities, to be used throughout a project life cycle and the applicable areas of Chorus 2.0 will be applied to this project.

A Project Management Plan will be produced and the HSQE section will summarise the approach to this project and the tasks to be performed to meet the requirements of the contract QUENSH menu. It should be noted that:

- All client, operational rules and access arrangements will be followed
- Existing JNSU Generic method statements / risk assessments are sufficient to assure expected installation activities and Safe Systems of Work arrangements, supported by standard Dynamic Risk Assessment procedure for any site-based activities.

10. HSE Strategy

10.1. Summary of Thales GTS Strategy

Thales GTS vision for safety is 'enabling safe working practices to make Britain's journeys harm free - Safe journeys start here'.

JNLFT Project will be managed in accordance with the Thales GTS HSE strategy. Thales HSE team provides HSE support and advice from initial bid stage to the design phase, through to implementation, delivery support and project completion. Additionally the HSE team provides professional HSE advice, support and guidance on Governance, Compliance and Leadership.

Thales is certificated to ISO45001 and will thus manage safety with a focus on the monitor, audit and review cycle to ensure continual improvement.

10.2. Specific Delivery Strategy for JNLFT Project

HSE support will be required for testing and commissioning activities of this project. These activities are expected to take place between early-2020 and late-2020, with preparation works required in advance of work starting. Occupational HSE support for the software activities of the project will be minimal – limited to Thales office safety provision such as DSE etc. The approach to managing these activities will mirror that taken on JNSU and 4LM. The URS day team will be responsible for production of documentation, approval of safe systems of work, producing incident reports etc. The URS night team will be responsible for monitoring works on site, initial investigation of incidents etc.

A portion of the time of one member of the URS team will be allocated to manage the JNLFT Project. This team member will manage and coordinate activities using other team members as required.

A key part of the GTS strategy to apply to JNLFT Project is rigorous monitoring of the workplace to identify and remove hazards. Hazard identification is the key method of delivering the strategy commitment 'to look after one another'.

Client HSE requirements and adherence to standards will be met as indicated in the QUENSH menu completed specifically for JNLFT Project.

10.2.1. Construction, Design and Management Regulations 2015 (CDM)

Thales has assumed that, should the works be deemed as 'Notifiable' under the Construction, Design and Management Regulations 2015 (CDM), LUL will take on the responsibility of Principal Designer and Principal Contractor.

Thales has an experienced safety and operations team, familiar with the requirements of CDM and will work closely with LUL in applying the highest standards with respect to compliance with CDM. Works on the JNLFT Project will involve Thales employees and at least one subcontractor.

10.2.2. Subcontractor Management

There is no subcontract element to this project.

10.2.3. HSE Office Support

JNLFT Project will benefit from the support available from the URS safety team. The wide ranging knowledge and expertise of this team will deliver the following aspects of safety for JNLFT Project:

- Preparation of policy documents such as the delivery CPP
- Safety leadership initiatives such as SLT3 and topic of the month
- Assistance with the development of / and approval of safe systems of work – anticipated to be generic method statements and site specific instructions
- Monitoring of incidents and hazards and the creation of a monthly reporting dashboard
- Investigation of hazards / incidents and implementation of corrective actions

10.2.4. HSE On-Site Monitoring and Supervision

JNLFT Project will also benefit from a team of knowledgeable and experienced HSE Night Advisors who will be able to monitor and supervise work activities.

Thales will use the Night Advisors to monitor the safety of its own teams. LUL will be required to provide their own on-site safety supervision. Thales Night Advisors will work with subcontractors safety advisors to ensure that Thales standards of safety are achieved on site.

Thales HSE Night Advisors will be allocated to site using a risk-based approach. The risk-based approach will be applied to works on all Thales URS projects operating in conjunction with JNLFT Project. Recognising that risk is greater at the start of works/ with new employees increased monitoring and supervision will be applied at the start of the JNLFT project. Supervision levels will be assigned relevant to risk level as teams gain knowledge and confidence with managing safety.

During the test and commission phase the level of safety presence will be also be allocated in accordance with the risk-based approach for site monitoring. Maintaining a robust safety culture during the T&C phase is still critical to minimising risk. Safety leadership initiatives will continue into this project phase.

On this project, LUL will be providing all necessary site management including, where necessary, Site Persons in Charge (SPCs).

10.2.5. Risk Management

Risk assessments will be completed for all works and included in the safe system of work. Thales in particular will ensure that main risks are identified and managed appropriately. The GTS SLT2 and Urban Rail SLT3 (Topic of the Month) will be used to ensure discussion and communication of key risks. On site works for JNLFT Project are generally low risk and are anticipated to be as detailed in the table below.

Risk Ranking	Hazard	Comment
1	Driving to/ from site	Statistically driving will always be the highest risk faced by employees when this task is undertaken. Many journeys will be work related and subject to work related road risk processes. Likelihood low with high consequence.
2	Slips/ trips	Statistically the most common UK injury type. Particularly relevant in the railway environment on track or in tunnels with low level of lighting. Likelihood high with low consequence.
3	Cut/ abrasion/ wound	The most common injury type recorded currently by GTS. Most of the track works on JNLFT Project will involve hand held tools. Likelihood high with low consequence.
4	Manual Handling	The most likely cause of a time-losing injury. Activities will include carrying equipment to site, installing assets etc. Low likelihood with high consequence.
5	Safe hand back of the railway (business risk not safety)	Most works will be in Engineering Hours with restricted working hours. Delays to planned works can lead to delay in hand back and delays to service.

10.2.6. Protection

Thales is currently reviewing the methodology for provision of PWT EH with LUL. Protection provision on JNLFT Project is likely to be as follows:

1. All Thales installation subcontractors will supply their own PWTs for basic areas and LUL will provide PWTs for complex areas (as defined by the Rule Book).
2. For Thales T&C resources Thales will provide PWTs through an approved Third Party where required.

On this project, LUL will provide all protection as necessary.

11. Project Management

The JNLFT project will be managed by an integrated team, combining resources from Thales Ground Transportation Systems (in UK) and Thales Canada Transportation Solutions. A Project Management Plan (PMP) will be written, which will include sections for all functions involved in the project delivery.

The day-to-day project management, control and reporting will be managed by a Project Manager (PM) in the UK, leading both the UK and Canada project teams, as demonstrated by the high level structure in figure 4.

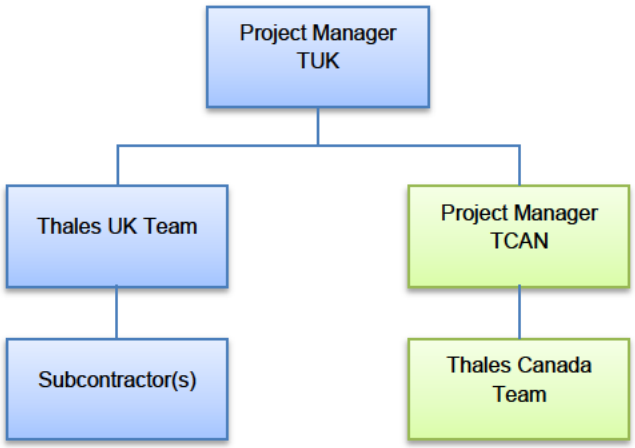


Figure 4 - JNLFT Project Organisation

11.1. Resourcing

Thales confirms that the approach to managing JNLFT has been based on a standalone project contract and that the necessary resources have been dimensioned according to the demand for this project. At the time of writing this document there are no known resource concerns.

The JNLFT resource needs have been incorporated into Thales' Integrated Business Planning (IBP) model to ensure all JNLFT project resources are allocated and available as planned to support on time delivery. Key resources are regularly reviewed and include Software, Hardware, Procurement, Testing and Commissioning.

The IBP model not only captures all firm and prospect resource requirements for project such as JNSU and 4LM but also for the wider Thales business, thus enabling visibility and availability of a wider network of resources. Specific training and development needs will be identified and captured within the Project Management Plan (PMP). Annual Professional Development Discussions (PDDs) will be used to identify additional training and development needs, available to all permanent Thales staff.

11.2. Reporting

Thales will issue a project status report every two months, at an agreed reporting period cycle, to provide an overview of the project status where this would typically include the following aspects, as required:

- General progress status update narrative including risks and issues.
- Update of Key Milestones
- Health Safety and Environment
- Quality
- Commercial

11.3. Schedule

A draft schedule has been developed in for the JNLFT Project and is shown in Appendix 1. The schedule will be updated to account for actions agreed in the contract award stage. Following this, the schedule will be updated and shared with LUL as part of the period reporting cycle. LUL will be required to provide updated inputs to Thales on LUL activities and dependencies at least one week prior to the agreed reporting period.

12. Procurement Strategy

Thales Ground Transportation procurement strategy for the JNLFT Project follows the Manage Acquisition process defined within our internal process system.

Thales' procurement strategy is broken down into two distinct areas which are considered within the scope of the strategy, as outlined below.

12.1. Commodity, Material and Equipment Procurement

All commodity, material and equipment procurement is considered against the Thales Chorus 2.0 process which establishes criticality and in turn dictates the management approach for these procurement activities as defined further herein.

These procurement requirements are managed through order placement and flow/ demand of materials through our ERP system utilising Material Resource Planning (MRP) functionality. All project material and equipment requirements, including relevant installation activities and project milestones will be loaded into our ERP system based on the Accepted Programme at the commencement of the Project (to align with the need by dates from the installation activities).

Our ERP system provides Thales the ability to sequence order placement based on need by dates factoring in supply chain contractual delivery data and the needs and requirements of the Project.

Our ERP system is maintained as a live system and allows Thales to make adjustments to its material requirements and respond to any Accepted Programme or milestone changes (managed through baseline changes within Primavera). This ensures that supplier delivery schedules are always up to date and correctly aligned with the latest Project schedule, allowing exception management and reporting. It is therefore vital the Project schedule it accurate and up to date.

12.2. Subcontract Work Packages, including Services

Subcontract work packages are also considered against the Thales Chorus process which establishes a criticality level that in turn dictates the management approach for these procurement activities as defined further herein.

Supply contract work packages are integrated in the project and Thales will use the supply contract management capability from its Procurement Team and the Technical/ Delivery knowledge from the relevant Subject Matter Experts (SME's) relating to the suppliers. These teams will work collaboratively and leverage an established supply base to achieve successful delivery.

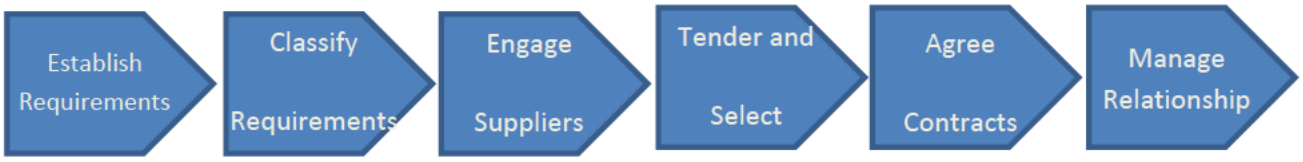
The objective being that supply contracts are managed by professionals in their field achieving both technical, schedule and budget compliance supported by SME's responsible for the technical content of the suppliers.

The specific commodity, material, equipment and supply contract work packages are defined below.

12.3. Management Process

Thales will utilise its CIPS accredited supply chain management processes within the Chorus Company management system, to manage the procurement requirements on the Project. The process is tailored to fully integrate into the overarching Project delivery programme with a flow down of critical path, dependencies, completion dates, incorporating technical and scope requirements.

The process follows 6 key steps designed to establish requirements, define criticality, engage a supply chain, tender and select, agree contracts and manage.



In addition there are core activities that run through the whole process that are defined in the process. These include management of Reporting, Roles and Responsibilities, Quality, Health, Safety and Environment and Risk and Opportunity Management.

The management process described above reflects the generic requirements of Chorus and specific details of the individual work packages are defined below.

12.4. Lessons Learned

The Thales Procurement Strategy for JNLFT Project will be utilise lessons learnt and where possible exploit any synergies from the current 4LM programme and other JNSU project contracts. Thales will seek to maximise on the relationship established with suppliers on 4LM and JNSU to leverage Thales spend where there are any common items and suppliers.

12.5. Work Packages

Below is a list of the work packages to be procured on the JNLFT Project.

12.5.1. IT Hardware – [redacted]

(Commodity, Material and Equipment Procurement)

The hardware items within the Bill of Materials are established qualified products. IT Hardware will be procured from a combination of [redacted], both of whom are Thales policy approved suppliers used by Thales entities across the UK in order to benefit from economies of scale and agreed mark-ups. The longest lead time item is [redacted].

The IT hardware package will be managed by a tactical buyer who will place the order through our ERP system and expedite the order through to completion. Any issues through the life of the contract

will be managed by the tactical buyer with escalation to the UK category manager for IT hardware where appropriate.

12.5.2. IT Software – [redacted]

(Commodity, Material and Equipment Procurement)

IT software will be procured from [redacted], a Thales policy approved supplier used by Thales entities across the UK in order to benefit from economies of scale and an agreed mark-up. The longest lead time item is [redacted] The IT software package will be managed by a tactical buyer who will place the order through our ERP system and expedite the order through to completion. Any issues through the life of the contract will be managed by the tactical buyer with escalation to the UK category manager for IT software where appropriate.

12.5.3. Cables - [redacted]

(Commodity, Material and Equipment Procurement)

The Cables within the Bill of Materials are established qualified product. Cable will be procured from [redacted], a supplier that has been used extensively on the 4LM and JNUP programmes. These products have [redacted] lead times. The cable package will be managed by a tactical buyer who will place the order through our ERP system and expedite the order through to completion. Any issues through the life of the contract will be managed by the tactical buyer.

12.5.4. Rack - [redacted]

(Commodity, Material and Equipment Procurement)

The rack within the Bill of Materials is an established qualified product. Racks will be procured from [redacted], a supplier that has been used extensively on the 4LM and JNUP programmes. These products have [redacted] lead times. The rack package will be managed by a tactical buyer who will place the order through our ERP system and expedite the order through to completion. Any issues through the life of the contract will be managed by the tactical buyer.

12.5.5. Data Diode – [redacted]

(Commodity, Material and Equipment Procurement)

The data diode will be supplied by [redacted] – who is a Thales approved supplier. Since Thales has already utilised a number of data diodes from [redacted], Thales has selected [redacted] data diode solution to achieve cost effectiveness through hardware commonality and familiarity and if required provide economies of scale to maintenance. The data diode package will be managed by a tactical buyer who will place the order through the ERP system and expedite the order through to completion. The tactical buyer will manage any issues through the life of the contract.

13. Assumptions, Dependencies and Non-Compliances

The following sections clarify the assumptions, dependencies and non-compliances that Thales have made in order the deliver the functionality required under JNLFT Project.

13.1. Assumptions

#	Assumption	Category
A1	The same Data Diode used on 4LM will be used.	Design
A2	[redacted]	Design
A3	No new redundant equipment will be provided.	Design
A4	No additional log file capture and/ or transmittal to cloud beyond what is currently available [redacted]	Design
A5	Since the provided equipment is COTS, Thales will not be required to perform any equipment qualification testing (environmental, EMC etc.) and has not allowed for any testing [redacted]	EMC
A6	[redacted]	Design
A7	[redacted]	Standards
A8	No RAM analysis will be undertaken as part of the JNLFT project scope.	RAMS
A9	There is no Human Factors assessment required for this scope of work.	Human Factors
A10	It is assumed that the existing cable management systems have sufficient capacity to accommodate all new cabling and associated fixings, however, as LUL is now responsible for all installation activities, this falls to LUL to confirm.	CRMS
A11	It is not anticipated that any Track Access protection is required to conduct these works, however, should in the event that this is required the LUL shall be responsible for the provision and arrangement of all required protection.	HSE/Protection
A12	It is not anticipated that the work content on this contract will make it 'notifiable' under CDM regulations. However, should the works be deemed 'notifiable' then LUL is to be designated responsible as the Principal Contractor and Principal Designer under CDM regulations.	HSE/CDM
A13	Warranty is [redacted] from the ERC (Energisation Release	Warranty

	Certificate). Following the expiry of the warranty period, Thales' warranty obligations shall deemed to be satisfied in full.	
A14	LUL review approvals shall be limited to [redacted] of document submission. After such time the document will have been deemed as accepted with no comments.	Document Approvals
A15	When LUL provides comments on documents – namely existing documents being revised from JNUP for example - Thales is not required to address sections/clauses that do not pertain to the scope of this works or previous comments against documents which were at AEAN status.	Document Approvals
A16	Any existing hardware and/or software defects (or outstanding works) associated with any other instructed or delivered work will not be addressed within the JNLFT project works.	Defects
A17	Images of the existing [redacted] (both Highgate and Neasden) to be provided by LUL at the commencement of the project in order to replicate existing functionality their replacements, even though Thales may have access to the images that were taken at the time of original installation.	Design
A18	No connection to the LUL Data Centre has been included for in the design	Design
A19	LUL will provide Thales with all necessary information and access rights to the account to also download JL/ NL data from their AWS 3S.	Design

Table 1: Assumptions

13.2. Dependencies

A summary of key dependencies is provided in the table below. Refer to the schedule in Appendix 1.

#	Dependency	Action	Dependent Activity
D1	[redacted]	LUL to supply	Commencement of installation and testing activities
D2	Images of the existing [redacted] to be provided by LUL in order to replicate existing functionality in new firewalls.	LUL to supply	Contract commencement
D3	LUL shall be responsible for providing the space allocation and power requirements for all new equipment on LUL sites as set out in Section 3 of this document. Where space or power is restricted it is assumed LUL will be responsible for the provision alternative arrangements.	LUL to supply	Space & Power Allocation
D4	LUL to provide and arrange Thales with site access, work method statements, protection and supervision as required under this scope of works in accordance with the schedule.	LUL to supply	Site Access
D5	LUL to provide current as-built scripts for [redacted]	LUL to supply	Contract commencement
D6	LUL to provide a minimum of [redacted] notice prior to undertaking installation works that will require configuration and commissioning prior to placing into service	LUL to supply	Site Access
D7	LUL to schedule all activities that require software, configuration and commissioning prior to placing into service to fall within one [redacted] And to ensure that Installation teams are available on-site during the testing and commissioning activities.	LUL to supply	Site Access

Table 2: Dependencies

Appendix 1 Draft Schedule