Annex B

Call-Off Contract Template

Framework Agreement Number: ICT11448 IT Solutions
Call-Off Contract Number: ICT12423/6

THIS CALL-OFF CONTRACT is made the *10th* day of *October 2016*

BETWEEN:

(1)   Transport for London (the "Contracting Authority") on its own behalf and for the benefit of the other TfL Group Members and Other Contracting Parties; and

(2)   **CSC Computer Sciences Limited** (the **"Service Provider"**) registered in England and Wales with registration number **963578** and whose registered office is at **Royal Pavilion, Wellesley Road, Aldershot, Hampshire, GU11 1PZ.**

RECITALS:

A.   The Contracting Authority and the Service Provider have entered into an agreement dated 03 August 2015 which sets out the framework for the Service Provider to provide certain Deliverables to the Contracting Authority or the Contracting Authority ("the Framework **Agreement**").

B.   The Contracting Authority wishes the Service Provider to provide the specific Deliverables described in this Call-Off Contract pursuant to the terms of the Framework Agreement and this Call-Off Contract and the Service Provider has agreed to provide such Deliverables on those terms and conditions set out in the Call-Off Contract.

THE PARTIES AGREE THAT:

1.   CALL-OFF CONTRACT

1.1   The terms and conditions of the Framework Agreement shall be incorporated into this Call-Off Contract.

1.2   In this Call-Off Contract the words and expressions defined in the Framework Agreement shall, except where inconsistent with the context requires otherwise, have the meanings given in the Framework Agreement. In this Call-Off Contract references to Attachments are, unless otherwise provided, references to attachments of this Call-Off Contract.

2.   DELIVERABLES

2.1   The Deliverables to be supplied by the Service Provider pursuant to this Call-Off Contract are set out in Attachment 1.

2.2   The Service Provider acknowledges that it has been supplied with sufficient information about this Call-Off Contract and the Deliverables to be provided and that it has made all appropriate and necessary enquiries to enable it to provide

the Deliverables under this Call-Off Contract. The Service Provider shall neither be entitled to any additional payment nor excused from any obligation or liability under this Call-Off Contract or the Framework Agreement due to any misinterpretation or misunderstanding by the Service Provider of any fact relating to the Deliverables to be provided. The Service Provider shall promptly bring to the attention of the Call-Off Co-ordinator and Commercial Manager any matter that is not adequately specified or defined in the Call-Off Contract or any other relevant document.

2.3 The timetable for any Deliverables to be provided by the Service Provider and the corresponding Milestones (if any) and Key Milestone Dates (if any) and Implementation Plan (if any) are set out in Attachment 1. The Service Provider must provide the Deliverables in respect of this Call-Off Contract in accordance with such timings and the Service Provider must pay liquidated damages in accordance with the Framework Agreement of such an amount as may be specified in Attachment 1. The Service Provider shall be liable for the ongoing costs of providing Deliverables in order to meet a Milestone and Key Milestone Dates. Time shall be of the essence in relation to the Key Milestone Dates where stated in the Implementation Plan.

2.4 The Service Provider acknowledges and agrees that as at the commencement date of this Call-Off Contract it does not have an interest in any matter where there is or is reasonably likely to be a conflict of interest with the Deliverables provided to the Contracting Authority under this Call-Off Contract.

3. CALL-OFF TERM

This Call-Off Contract commences on the date of this Call-Off Contract or such other date as may be specified in Attachment 1 and subject to the provisions of the Framework Agreement, shall continue in force *for four years* unless terminated earlier in whole or in part in accordance with the Framework Agreement.

4. CHARGES

Attachment 2 specifies the Charges payable in respect of the Services provided under this Call-Off Contract. The Charges shall not increase during the duration of this Call-Off Contract unless varied in accordance with the Framework Agreement. The Service Provider shall submit invoices in accordance with the Framework Agreement and the Charges shall be paid in accordance with this Call-Off Contract.

5. CALL-OFF CO-ORDINATOR /COMMERCIAL MANAGER AND KEY PERSONNEL

The Contracting Authority's Call-Off Co-ordinator in respect of this Call-Off Contract is named in Attachment 1 and the Service Provider's Key Personnel in respect of this Call-Off Contract are named in Attachment 2.

This Call-Off Contract has been signed by duly authorised representatives of each of the Parties.

SIGNED

For and on behalf of the [*Contracting Authority*]

Signature: ▓▓▓▓▓▓▓▓

Name: ▓▓▓▓▓▓▓▓

Title: COMMERCIAL LEAD

Date: 12\10\16

SIGNED

For and on behalf of [*the Service Provider*]

Signature: _____

Name: _____

Title: _____

Date: _____

Attachment 1

The Contracting Authority's Call-Off Co-ordinator in respect of this Call-Off Contract is ~~████████~~ (Commercial Manager).

Requirement Ref no.	Title	Response statement and level of change	All requirements met?	Detail any limitations or deficiencies or omissions
	3.1.1 Access Planning section			
3.1.1.1	Manage Planning Information	This is 1 Out of the Box (OOTB) functionality. The rail blueprint will deliver the following functionality: -Access / Possession title and description (OOTB terminology), -Access reference, -Date and time Range, -Location Start and End points, -Associated Work Order Numbers. The 'Isolation details' information will be depicted via an additional field where the relevant content will be available. Each Work Order data will be transposed to Proscient via the one-way integration in a one-time import from IBM Maximo. The rail blueprint will deliver the following functionality, using OOTB terminology: -Access Reference, -Access Possession title and description including wild cards Period (Start / End dates, optionally time), -Access / Possession Location, -Sites of Work / Locations, -Work Order reference.	Yes	The history function records the 'state changes' and when people have accessed an item and made edits, but does not record what the edit was. This has been discussed and agreed as meeting the requirements of RfL Crossrail (at Tender submission clarification meeting on Wednesday 20 July 2016). In addition, in order to search and filter and audit the history additional configuration (not budgeted) effort of the reporting capability of the rail blueprint is required and thus this requirement is considered a scope exclusion.

| 3.1.1.2 | Identify Planning Information | Capped configuration effort of the OOTB capabililty will be used for:
-Work Order type e.g. renewals, enhancements etc.

History function records 'state changes', when people have accessed an item and made changes.

Access /possessions can be assigned to specific users as required and a listing of the activities is shown on the home screen. This has a powerful search engine and the ability to apply filters to see exactly what the user is looking for.

A simple but powerful Gantt chart view enables users to see the sequence of activities scheduling and dependencies of a particular job in relation to others. Powerful drag and drop features enable users to reschedule and any conflicts with business rules e.g. for access / possession will be highlighted to enable the schedule to be optimised further.

A map view of the location of work shows planning information, the status of the work and potential conflicts represented on the map. This information is shared across the user community to provide visibility of the work activity and allow users to manage the activities by taking appropriate actions.

This is 1 Out of the Box (OOTB) functionality.

The rail blueprint will deliver the following functionality, using OOTB terminology:
-Access reference,
-Access Possession title and description including wild cards,
-Period (Start and end dates and optionally time),
-Access Possession location (start and end), | Yes |

-Sites of work / locations (option to select access / possession information based upon a site of work or set of sites),
-Work Order reference (option to select access / possession information based on work order numbers).

The following will be delivered through capped configuration effort of the OOTB capability:
-Work Order type e.g. renewals, enhancements etc. This has been discussed and agreed as meeting the requirements of RfL Crossrail (at clarification meeting on Wednesday 20 July 2016).
The functionality 'Access Type e.g. possession / non-possession work' will be delivered through capped configuration effort of the OOTB capability.
The 'Isolation details' information will be depicted via an additional field where the relevant content will be available.

Each Work Order data will be transposed to Proscient via the one-way integration in a one-time import from IBM Maximo.
Proscient end users will easily identify the pertinent access planning information by using the user friendly powerful filtering functionality.

Planning information is initially identified by creating the information in the form of Accesses, Possessions etc. This information is capable of being modified / edited in accordance with the business rules. This information can then identified / viewed either holistically or by the use of filters to look at specific information. For example a user can see all planned work or they could apply a filter for example Possessions and in this case all other work is filtered out so that the user will only see the pertinent possessions. These could be further filtered to see what stage they have reached in their

3.1.1.3	View Planning Information	lifecycle e.g. "Confirmed."		
		This is 1 Out of the Box (OOTB) functionality, as discussed and agreed as meeting the requirements of RfL Crossrail (at clarification meeting on Wednesday 20 July 2016).	Yes	The following functionality is above and beyond the rail blueprint and is considered as scope exclusion:
		The rail blueprint will deliver the following functionality, using the OOTB terminology:		-The access planner may print or export the access possession information using a generic template.
		-The access planner is presented with access / possession information based upon the selected identification and filtering criteria selected / entered,		-If required the access planner may request publication of a pre-defined document
		-The information is presented in a suitable format to support a user review process,		
		-If required the access planner may amend the existing search and filtering information to refine or expand the information.		
		Each Work Order data will be transposed to Proscient via the one-way integration in a one-time import from IBM Maximo.		
		Access planners will benefit that the Planning information can be quickly viewed in a number of different ways which improves the clarity and the interdependency of the access planning activities:		
		-Home screen view – filtered by the users to their particular needs,		
		-Plan view – view of all work filtered by state and date range,		
		-Map view – view of all work filtered by state and date range,		
		-Reporting functionality – data reporting based on & ad hoc reports.		
		The access planners will benefit from formulating the		

output of the planning information by utilising the capability to append additional fields (additional attributes) in order to capture the additional information that will be required for the management of the access planning information.

The Proscient application output of the access planning & control process will be a documented set of artefacts which will contain all the information pertinent to the activity (site of work access, access, possession, permit - not exhaustive) in a structured, comprehensive and easily understood way in order to ensure the transition of the policy into practice and not overwhelm with excessive information.

3.1.1.4	Request Planning Publication	This is 1 Out of the Box (OOTB) functionality.	Yes	Integration with third-party document management systems is not within the OOTB functionality and is considered a scope exclusion
		The requested functionality of producing the following documentation: -RfL Engineering Access Statement, -RfL Draft Period Possession Plan, -RfL Confirmed Period Possession Plan, -RfL Weekly Operating Notice, will be delivered by configuring the OOTB reporting capability which is available in the Rail Blueprint. Publication of the access planning information and the interdependent plans and activities is achieved by pertinent Proscient Users by using the printed output of the access / possession documentation and or/or by accessing the reporting tool throughout the planning cycle. Printed outputs are in pre-defined PDF formats and can be easily viewed and printed to any available line printer on the company network which improves efficiency and application usability. Regulation of the access planning output will be achieved by allowing Proscient users, whether external or internal, the appropriate predetermined permissions to the systems according to the organisation policies. The end users' permissions are flexible and can be easily adjusted and formulated in order to ensure compliance and the seamless of the operations across the organisation. The reporting tool will contain the reports of the rail blueprint.		

| | | | | Requires additional reporting configuration effort (phase 1) compared to the Rail blueprint |

| 3.1.1.5 | Publish RfL Engineering Access Statement | This is 1 Out of the Box (OOTB) functionality.

The requested functionality of producing the 'RfL Engineering Access Statement' document will be delivered.
Publication of the Engineering Access Statement (EAS) and the interdependent plans and activities is achieved by pertinent Proscient Users by using the printed output of the access / possession documentation and or /or by accessing the reporting tool throughout the planning cycle. Printed outputs are in pre-defined PDF formats and can be easily viewed and printed to any available line printer on the company network which improves efficiency and usability.

Regulation of the access planning output will be achieved by allowing Proscient users, whether external or internal, the appropriate predetermined permissions to the systems according to the organisation policies. The end users' permissions are flexible and can be easily adjusted and formulated in order to ensure compliance and the seamless of the operations across the organisation. | Yes | Requires additional reporting configuration effort (phase 1) compared to the Rail blueprint |
| 3.1.1.6 | Publish a RfL Draft Period Possession Plan | This is 1 Out of the Box (OOTB) functionality.

The requested functionality of producing the 'RfL Draft Period Possession Plan' document will be delivered by configuring the OOTB reporting capability of the rail blueprint.

Publication of the Draft Period Possession Plan (DPPP) information and the interdependent plans and activities is achieved by pertinent Proscient Users by using the printed output of the access / possession documentation and or /or by accessing the reporting tool throughout the planning cycle. Printed outputs are in pre-defined PDF formats and can be easily viewed and printed to any | Yes | |

| 3.1.1.7 | Publish a RfL Confirmed Period Possession Plan | available line printer on the company network which improves efficiency and usability.

Regulation of the access planning output will be achieved by allowing Proscient users, whether external or internal, the appropriate predetermined permissions to the systems according to the organisation policies. The end users' permissions are flexible and can be easily adjusted and formulated in order to ensure compliance and the seamless of the operations across the organisation. | | |
| | | This is 1 Out of the Box (OOTB) functionality.

The requested functionality of producing the 'RfL Confirmed Period Possession Plan' document will be delivered by configuring the OOTB reporting capability of the rail blueprint.

Publication of the Confirmed Period Possession Plan (CPPP) Information and the interdependent plans and activities is achieved by pertinent Proscient Users by using the printed output of the access / possession documentation and or /or by accessing the reporting tool throughout the planning cycle. Printed outputs are in pre-defined PDF formats and can be easily viewed and printed to any available line printer on the company network which improves efficiency and usability.

Regulation of the access planning output will be achieved by allowing Proscient users, whether external or internal, the appropriate predetermined permissions to the systems according to the organisation policies. The end users' permissions are flexible and can be easily adjusted and formulated in order to ensure compliance and the seamless of the operations across the organisation. | Yes | Requires additional reporting configuration effort (phase 1) compared to the Rail blueprint |

| 3.1.1.8 | Publish a RfL Weekly Operating Notice | This is 1 Out of the Box (OOTB) functionality.

The requested functionality of producing the 'RfL Weekly Operating Notice' document will be delivered by configuring the OOTB reporting capability of the rail blueprint.

Publication of the Weekly Operating Notice (WON) and the interdependent plans and activities is achieved by pertinent Proscient Users by using the printed output of the access / possession documentation and or /or by accessing the reporting tool throughout the planning cycle. Printed outputs are in pre-defined PDF formats and can be easily viewed and printed to any available line printer on the company network which improves efficiency and usability.

Regulation of the access planning output will be achieved by allowing Proscient users, whether external or internal, the appropriate predetermined permissions to the systems according to the organisation policies. The end users' permissions are flexible and can be easily adjusted and formulated in order to ensure compliance and the seamless of the operations across the organisation. | Yes | Requires additional reporting configuration effort (phase 1) compared to the Rail blueprint |

| 3.1.1.9 | Planning Analytics and Reporting | This is 1 Out of the Box (OOTB) functionality.

The functionality includes the use of the list capability and preset filters which provide essential dynamic search capability that may supersede the need for reports. This has been discussed and agreed as meeting the requirements of RfL Crossrail (at clarification meeting on Wednesday 20 July 2016).

The rail blueprint will deliver the following functionality:
-Optionally the access user may view the information through the "View Planning Information" process prior to creation of an ad-hoc report.

The benefits of providing a holistic view of the organisation via the powerful reporting engine is that enables everyone in the organisation, from Board Room to frontline, to visualise, manage & control access planning and reduce risk and make better operational decisions with a new way to visualise and manage risk and activity. Proscient provides the capability to efficiently and effectively communicate data through various interfaces which leads to improved coordination, alignment and communication by connecting cross-discipline work, leveraging disparate data across the organisation and translating that data into a common language of risk and presenting a holistic picture of the health and effectiveness of the organisation.

Produced reports will be in different formats (.pdf and .xls exported files) which can be accessible via the access planning system and / or as a set of standalone files which can be stored in the organisation intranet. | Yes | 'Process a report from a scheduled report repository'
The following functionality is above and beyond the rail blueprint and will be assessed for whether the functionality meets the requirements or it will be subject to a change control scope addition:
-Planning: draft possessions, approved possessions, possession work orders, completed possessions etc.,
-Management: outstanding risk assessments, unapproved access requests etc.,
-Control: access to sites of work within a period, non-possession accesses, possession accesses, un-used permits etc.

The following functionality is above and beyond the rail blueprint and is considered a scope exclusion:
-Pre-defined access planning and site of work access management data collections,
-May include a subset of access information following selection through the "Identify planning information" process,
-Optional selection of the required data elements from the data collections (entities and attributes may be selected or de=selected as required),
-User-entered dates (search dates – search period),
-Search and or filter information (search criteria including authorising user etc.). |

	3.1.2 Managing Signalling Possession section - outside of scope		
	3.1.3 Access Management section		
3.1.3.1	Manage Access Information	This is 1 Out of the Box (OOTB) functionality. The rail blueprint will deliver the following functionality, with the OOTB terminology: 'Process a site of work access request' -Site of work access request from work bank, -Site of work access request manually. 'Access request must include' -Site of Work / Location, -Date and times, -Access Reference if Applicable, -Work Orders if applicable, -Site of Work access stake holders. 'Process updates to a site of work access Request' -Amendments to an existing site of work access request, -A change may be associated with a new work order scheduled to be completed within the location / time of an existing access request. The process provides the ability for the user to identify / locate the site of work access request based upon. -Site of work Access reference, -Site of Work Access record status e.g. awaiting approval,	Yes	The 'Process a View of the Site of Work Access Audit History' functionality is above and beyond the rail blueprint and is considered a scope exclusion

-Site of work / location reference,
-Access reference and/or title,
-Date and time range,

-The option to remove a site of work access request, subject to audit,
-All updates to risk assessments are auditable and available for review by an access planner,
-All updates to allocated permits are audited and available for review by an authorised person,

The Rail blueprint will be configured for the following:
-Access Point ("safest" access point if applicable),
-Work Order Number,
-Type of Risk Assessment,
-Permit Number.

The following will be delivered through capped configuration effort. This has been discussed and agreed as meeting the requirements of RfL Crossrail (at clarification meeting on Wednesday 20 July 2016):
-The option to remove a site of work access request, subject to audit,
-All updates to risk assessments are auditable and available for review by an access planner,
-All updates to allocated permits are audited and available for review by an authorised person.

Each Work Order data will be transposed to Proscient via the one-way integration in a one-time import from IBM Maximo.

| 3.1.3.2 | Manage Risk Assessments | This is 1 Out of the Box (OOTB) functionality. The rail blueprint will deliver the following functionality, with the OOTB terminology: Process a Site of Work Access Request Risk Assessment: -Hazard Register information – potential risk and hazards associated with the location of the site of work or the planned work activities, -Operations and Maintenance information relating to the assets, location and or work activities, -Work management information, -Legislation e.g. COSHH, -Planner knowledge / advisory of a potential hazard, -An existing risk assessment based upon the site of work or asset, -Mandatory Risk assessment, -Risk assessment is completed based upon the user selecting the types of hazard and risks from the RfL Crossrail defined risk and hazard list, -Risk assessment is completed which covers all of the identified risks and hazards. Updates to a Site of Work access request Risk Assessment: -Amendments to an existing risk assessment are processed by an access planner or maintenance planner, -The option to remove a risk assessment is available subject to permission, -Ability for the user to identify the risk assessment is as per 3.1.3.1, -All updates to risk assessment are audited and available for review through the audit history. Petrotechnics will provide support to RfL Crossrail for creating own Risk Assessment Templates (RATs) database and the Hazards & Controls (H&Cs). The RATs will from the foundation for driving the risk assessments | Yes | The history function records the 'state changes' and when people have accessed an item and made edits, but does not record what the edit was |

3.1.3.3	Manage Permits		

process during the access planning and control. Each Work Order data will be transposed to Proscient via the one-way integration in a one-time import from IBM Maximo.

Seamless integration with the existing processes will be achieved by the capability to transpose the Hazard Register via the Risk Assessment Templates (RATs) and any other pertinent information to the Risk Assessments in order to create the OOTB Access Management package.

This is 1 Out of the Box (OOTB) functionality.   **Yes**

This requirement will be delivered by configuring the OOTB business processes.

Each Work Order data will be transposed to Proscient via the one-way integration in a one-time import from IBM Maximo.

Permits can be created automatically from importing from the RfL Maintenance Management System (MMS) or they can be created manually. They are uniquely identified with an ID number and have a lifecycle, which matches the RfL business process for permits. Rules within Proscient govern how permits can be edited and managed through their lifecycle. These will prevent potentially unsafe actions being carried out by misuse of the permit system. Permits can be referenced to Site of Work Access (SoWA) requests in order to better manage and controls the activities. Increased flexibility is provided by the functionality to update the SoWA packs in order to remove / append / amend a permit in order to reflect the changes in access management package. This has been discussed and agreed as meeting the requirements of RfL Crossrail (at clarification meeting on Wednesday 20 July 2016).

		End users will be able to safely and effectively manage permits by having a clear visualisation and quick access to the sequencing of activities and the interdependencies in between permits and SoWA requests. Improved control of the process will be achieved by the capability to easily monitor, control and audit all the stages of approval process are automatically recorded in the history. End users will benefit of the Perform audits and record lessons learned for review and for taking the appropriate corrective actions. Proscient users will benefit from the capability to append all additional data fields e.g. SoWA number, Access point etc. in order to capture the additional information that will be required for the management of the permits.	
3.1.3.4	Approve Access Request	This is 1 Out of the Box (OOTB) functionality. The rail blueprint will deliver the following functionality, with the OOTB terminology: -Authorising person can review all of the information within the work access request, -Manual Identification of a pending review Site of Work Access (SoWA) request, -Assignment of a SoWA request from an access planner to a reviewer for review, -If exceptions exist, option for the review to refer the access request back to an access planner for review and response, -If no exceptions are found then the reviewer accepts the access request and the status is changed to approved, -Review information is fully audited and available through SoWA audit history. 'Process a Site of Work Access Request approval'	Yes	The following functionality is above and beyond the rail blueprint and will be a scope exclusion: -System notification of an unapproved site of work access request which is approaching the execution date

-Authorising person has ability to review all of the information contained in a SoWA request,
-Manual identification of an unapproved SoWA request,
-Assignment of a SoWA request from and access planner to an authorising person following review and correction,
-If exceptions exist, option to refer the access request back to an access planner for review and response,
-If no exceptions are found then the authorising user approves the access request,
-Approval information is fully audited and available through the SoWA audit history.

Proscient will enable end users to efficiently and safely manage the 'approve access request' process by the significant visualisation of the access information which will inform users of the status of new future access requests, current access and previous access (now archived). This has been discussed and agreed as meeting the requirements of RfL Crossrail (at clarification meeting on Wednesday 20 July 2016)

This takes the form of:

-Shift access map views, which displays the location of access and the OOTB permits,
-Plan view, which shows Access and the related planning and control activities,
-Risk view in the which enables the appropriate users to make decisions on the extent of risk being managed.

3.1.3.5	Publish Access Request	Yes	This is 1 Out of the Box (OOTB) functionality. The requirement can be delivered but it requires additional configuration (not budgeted) effort of the rail blue print. Publication of the Access Requests is achieved by pertinent Proscient Users by utilising the reporting capability to publish the Site of Work Access information (work activity, Hazards & Controls, Risk Assessment information, location per shift) on the maintenance mobile devices to the pertinent team by authorising person through the 'assign' functionality. A set of pre-defined formats of printed in PDF formats can be easily viewed and printed to any available line printer on the company network which improves efficiency and application usability. Proscient cannot only be optimised for mobile devices but also can be available as an application and thus all activities can be provided via mobile devices. Proscient provides the capability to perform audits and record lessons learned for review not only for taking the appropriate corrective actions but also identifying opportunities for further improvement.	The rail blueprint supports mobile devices, but both 'Process Publication of Site of Work Access Information' and the reporting capability via mobile devices require additional configuration (not budgeted) of the rail blueprint and therefore 3.1.3.5 is considered a scope exclusion. This has been discussed and agreed as meeting the requirements of RfL Crossrail (at clarification meeting on Wednesday 20 July 2016)
3.1.4 Access Control section				
3.1.4.1	Request Site of Work Access	Yes	This is 1 Out of the Box (OOTB) functionality. The 'Request Site of Work Access' managed through alternative channels will be delivered by configuring the OOTB business processes except the requests requiring mobile devices as the latter requires additional configuration (not budgeted) of the rail blueprint.	The rail blueprint supports mobile devices, but both 'Process a Request for Site of work access' and the requested information via mobile devices require additional configuration (not budgeted) of the rail blueprint and therefore are considered scope exclusions. This has been discussed

Requesting Site of Work Access during the 'on-shift' period is part of the request process for any certificate / document in Proscient, which allows the location of the Site for access to be identified on at a geographic location on one of a data bank of maps held within the system to accurately locate the location of the activity. Request a 'Site of Work Access' (SoWA) request, if the Maintenance Team Leader / Maintenance team, can be conducted via the mobile functionality and / or via alternative communication channels e.g. a Proscient trained call support centre operator who will be using the desktop Proscient version as in previous experience in the Rail Industry suggests.

Proscient fully meets the requirements and in addition provides increased control and management capability by allowing the Maintenance Team Leader to request a SoWA, and for the Authorising person, who will have access to Proscient via desktop or mobile, to be "notified" to check and formally respond 'real time' to these SoWA requests. The response of the Authorising person will be conveyed to the Maintenance Team Leader via the mobile device (or via the exception channel as per the Business process); if 'permit to access' (approved) the Maintenance Team Leader will be authorised to proceed, and if 'denial of access' the Authorising person will have the capability to record the reason for denial in the feedback section and convey the expected outcome to the Maintenance Team Leader.

Improved traceability is achieved as all the stages of the planning approval process are automatically recorded in the history which can be recorded and imprinted in the front page of the produced documentation making easy for the end user to view and audit.

and agreed as meeting the requirements of RfL Crossrail (at clarification meeting on Wednesday 20 July 2016)

| 3.1.4.2 | Permit Access to Site of Work | This is 1 Out of the Box (OOTB) functionality.

The 'Permit Access to Site of Work' requests managed through alternative channels will be delivered by configuring the OOTB business processes except the requests requiring mobile devices as the latter requires additional configuration (not budgeted) of the rail blueprint.

Requesting Site of Work Access during the 'on-shift' period is part of the request process for any certificate / document in Proscient, which allows the location of the Site for access to be identified on at a geographic location on one of a data bank of maps held within the system to accurately locate the location of the activity. Request a 'Site of Work Access' (SoWA) request, if the Maintenance Team Leader / Maintenance team, can be conducted via the mobile functionality and / or via alternative communication channels e.g. a Proscient trained call support centre operator who will be using the desktop Proscient version as in previous experience in the Rail industry suggests.

Proscient fully meets the requirements and in addition provides increased control and management capability by allowing the Maintenance Team Leader to request a SoWA, and for the Authorising person, who will have access to Proscient via desktop or mobile, to be "notified" to check and formally respond 'real time' to these SoWA requests. The response of the Authorising person will be conveyed to the Maintenance Team Leader via the mobile device (or via the exception channel as per the Business process); if 'permit to access' (approved) the Maintenance Team Leader will be authorised to proceed, and if 'denial of access' the Authorising person will have the capability to record the reason for denial in the feedback section and convey the | Yes | The rail blueprint supports mobile devices, but 'Permit Access to Site of Work' via mobile devices require additional configuration (not budgeted) of the rail blueprint and therefore is considered a scope exclusions. This has been discussed and agreed as meeting the requirements of RfL Crossrail (at clarification meeting on Wednesday 20 July 2016) |

3.1.4.3	Relinquish Site of Work		
		expected outcome to the Maintenance Team Leader.

Improved traceability is achieved as all the stages of the planning approval process are automatically recorded in the history which can be recorded and imprinted in the front page of the produced documentation making easy for the end user to view and audit.

This is 1 Out of the Box (OOTB) functionality.

All the requirements will be delivered by configuring the OOTB business processes.

Relinquishing Site of Work is a lifecycle stage that requires the RfL business rules to be met and a user of the appropriate authority to execute the stage change. If any of the business rules are not met, the relinquishing of the Site will not be allowed to take place. All activities will be conducted via the mobile functionality and / or via the exception channel.

In particular, the authorising person / possession manager will provide via the mobile device (or the stand-by manual process as per the RfL Crossrail business process) the formal response to the Maintenance Team Leader / Maintenance Team before vacating the site of work. Proscient provides the opportunity for the authorising person to request any follow-up actions in respect of the site of work, work activities and/or accidents / near misses.

Authorising people will benefit from the capability of formulating the input of the 'relinquish of site of work' by utilising the capability to append additional fields (additional attributes) in order to capture and filter the additional information that will be required to manage the 'relinquish' request and subsequent response(s). | Yes |

3.1.4.4	Retract Access to Site of Work	This is 1 Out of the Box (OOTB) functionality.	Yes
		All the requirements will be delivered by configuring the OOTB business processes.	
		Retract Access to the site of work is a lifecycle stage that requires the RfL business rules to be met and a user of the appropriate authority to execute the stage change. If any of the business rules are not met, the retraction of access to the Site of work will not be allowed to take place. All activities will be conducted via the mobile functionality and / or via the exception channel.	
		In particular, the authorising person will be able to review and check that the site of work access request information including the risk assessment and allocated permits have been completed to ensure that all requested actions prior to 'retraction' of the permit. The authorising person can append additional follow-up actions (if required) and assign them automatically to the OOTB Maintenance Teams / Delivery planners; users will be notified automatically via an email when the transition happens.	
		Any exceptions related to the specific work site location and /or the Site of Work Access request can be manually recorded by the Maintenance Team as a 'Lesson Learned' attached to the specific work site location and /or the Site of Work Access request. In the latter case, when the copy functionality is utilised, in the copied Site of Work Access request the 'lesson learned' will be automatically highlighted the end user as advisory information. In the former case, when the particular work site location is selected then the 'lesson learned' will automatically pop-up as a prompt in order to increase awareness about the working conditions on the	

particular working location.		
Seamless integration with the existing processes will be achieved by the capability to transpose the Hazard Register and any other Health Safety Environment (HSE) Systems via the Risk Assessment Templates (RATs).		

3.1.4.5	Review Access Permit History	Yes	This is 1 Out of the Box (OOTB) functionality.	This core functionality has been discussed and agreed as meeting the requirements of RfL Crossrail (at clarification meeting on Wednesday 20 July 2016)
			All the requirements except the search and the filtering of the history will be delivered by configuring the OOTB business processes.	In order to search and filter and audit the history additional configuration (not budgeted) effort of the reporting capability of the rail blueprint is required and thus this requirement is considered a scope exclusion.
			The Work Orders' data will be transposed to Proscient via the one-way integration with IBM Maximo. Each work order data and its associated details will be transposed via a one-time import from Maximo.	In addition, in order to search and filter and audit the history additional configuration (not budgeted) effort of the reporting capability of the rail blueprint is required and thus this requirement is considered a scope exclusion
			All the stages of the site of work access requests and permissions are automatically recorded in the history. The history of each activity is recorded and imprinted in the front page of the produced documentation making easy for the end user to audit the history.	
			End users will benefit from formulating the output of the work access requests and permissions information by utilising the capability to append additional fields (additional attributes) in order to capture the additional information that will be required to be visible in the history. Additional fields that can be appended to Proscient are 'Site of work access Number', 'Access point' and 'Work Order number' to name but a few.	
3.1.5 Managing Vehicular Site Access section				

3.1.5.1	Managing Vehicular Site Access	This is 1 Out of the Box (OOTB) functionality.	Yes
		Specific vehicular access management is not part of the rail blueprint, but this can be managed by creating an Off Lineside Activities job, with the OOTB terminology. Each Work Order data will be transposed to Proscient via the one-way integration in a one-time import from IBM Maximo. Proscient will enable end users to create new Vehicular Site Access request under the Proscient's application activity creation functionality based on the relevant time, space, risk requirements and information. In particular, a location controller / depot manager can receive booking requests and vehicle booking requests updates via work orders created by a maintenance planner or a manual permits created by an access planner through the access management system. The 'vehicular access requests' will be processed and identified in the form of: -Shift access map views, which displays the location of the vehicular access requests and permits, -Plan view, which shows Access and the related vehicular access requests and interdependent activities, -Risk view in the which enables the appropriate users to make decisions on the extent of risk being managed. The 'vehicle access' events can be created automatically from importing from the RfL Maintenance Management System (MMS) or they can be created manually. They are uniquely identified with an ID number and have a lifecycle, which matches the RfL business process for vehicular site access. Rules within Proscient govern how permits can be edited and managed through their lifecycle. These will prevent potentially unsafe actions being carried out by misuse of the vehicular site access	

system. Vehicular site access can be referenced to permits in order to better manage and controls the activities. In the event there is no existing access booking (permit), the location controller / gate guard can create a manual permit.

| 4 | Requirements section |

4.1	ACM100 Book a Standard Possession	This is 1 Out of the Box (OOTB) functionality.	Yes	In order to search and filter and audit the history additional configuration (not budgeted) effort of the reporting capability of the rail blueprint is required and thus this requirement is considered a scope exclusion
		All the requirements except the search and the filtering of the history will be delivered by configuring the OOTB business processes.		
		The Proscient application allows and users to book and visualise - based on the relevant time, space, risk requirements and activity specific information - possessions along the "Crossrail" route and in particular in between the "Crossrail" Central Operating Section (COS), in the Network Rail (NR) Interface between RfL Crossrail and NR and the Plumstead Depot.		
		Proscient provides the functionality to visualise all possession areas on the infrastructure map as either icons and / or polygons and present all possessions in a Gantt chart, via the time view, in order to effectively manage access planning & control, visualise the interdependencies and the possessions' information.		
		In addition, there is capability to append additional fields (additional attributes) in order to capture the additional information that will be required for the management of the possessions' areas.		

| 4.2. | ACM200 Book a Disruptive Possession | This is 1 Out of the Box (OOTB) functionality.

The booking of Disruptive Possessions will be provided through the OOTB functionality in the rail blueprint build.

The Proscient application allows end users to book and visualise – based on the relevant time, space, risk requirements and activity specific information – disruptive possessions along the "Crossrail" route and provide notifications to effected stakeholders.

Proscient provides the functionality to visualise all possession areas on the infrastructure map as either icons and / or polygons and present all possessions in a Gantt chart, via the time view, in order to effectively manage access planning & control, visualise the interdependencies and the possessions' information. In addition, if required, end users can risk Assess all work activities and record any deviations / exceptions from the process for review and for taking the appropriate corrective actions. This has been discussed and agreed as meeting the requirements of RfL Crossrail (at clarification meeting on Wednesday 20 July 2016). | Yes | The email notification of stakeholders is above and beyond the rail blueprint and is considered a scope exclusion. This requirement can be covered by the search and list capability as an internal application notification |

| 4.3 | ACM300 Apply for a Work Site within a Possession | This is 1 Out of the Box (OOTB) functionality.

The 'Apply for a Work Site within a Possession' will be provided through the OOTB functionality in the rail blueprint build.

The Proscient application allows end users to apply, book and visualise - based on the relevant time, space, risk requirements and activity specific information - sites of work within a pre-approved possession areas along the "Crossrail" route.

Proscient provides the functionality to visualise all Work Site within a Possession areas on the infrastructure map as either icons and / or polygons and present all possessions in a Gantt chart, via the time view, in order to effectively manage access planning & control, visualise the interdependencies and the work sites information. In addition, if required, end users can risk Assess all work activities and record any deviations / exceptions from the process for review and for taking the appropriate corrective actions.

In addition, there is capability to append additional fields (additional attributes) in order to capture the additional information that will be required for the management of the Work Site within a Possession areas. | Yes | |

4.4	ACM400 Apply for Access to a Work Site	This is 1 Out of the Box (OOTB) functionality.	Yes	In order to search and filter and audit the history additional configuration (not budgeted) effort of the reporting capability of the rail blueprint is required and thus this requirement is considered a scope exclusion. This has been discussed and agreed as meeting the requirements of RfL Crossrail (at clarification meeting on Wednesday 20 July 2016)
		All the requirements will be delivered as OOTB functionality with capped configuration effort.		
		The Proscient application allows end users to apply, book and visualise – based on the relevant time, space, risk requirements and activity specific information – access to a work site. There is capability to append additional fields (additional attributes) e.g. Tunnel access, LU stations, RfL stations, NR access points – not exhaustive, in order to capture the additional information that will be required to apply for access to a site of work.		
		All track access and non-track access requests are uniquely identified with an ID number (access authentication code) and have a lifecycle, which matches the RfL business process for 'Apply for Access to a Work Site'. Rules within Proscient govern how applications can be edited and managed through their lifecycle. These will prevent potentially unsafe actions being carried out by misuse of the application system.		
		Proscient provides the functionality to visualise all 'Apply for Access to a Work Site' on the Infrastructure map as either icons and / or polygons and present all possessions in a Gantt chart, via the time view, in order to effectively manage access planning & control, visualise the interdependencies and the applications' information.		
		All the stages of the access requests are automatically recorded in the history. The history of each activity is recorded and imprinted in the front page of the produced documentation making easy for the end user to audit the access requests history.		

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Proscient can be optimised for mobile devices and used for mobile access management.

| 4.5 | ACM500 Book an Isolation | This is 1 Out of the Box (OOTB) functionality.

The requirement will be delivered as OOTB functionality with capped configuration effort.

The Proscient application allows end users to book isolations in between the "Crossrail" Central Operating Section (COS), in the Network Rail (NR) Interface between RfL Crossrail and NR and the Plumstead Depot.

Proscient provides the functionality to create and manage interdependencies and links in between activities i.e. isolations; site of work access requests etc. in order to increase visibility and manage efficiently the sequencing of activities.

In addition, there is capability to append additional fields (additional attributes) in order to capture the additional information that will be required for the management of the isolations. | Yes |
| 4.6 | ACM600 View Engineering Train Requirements - outside of scope | No response statement required. This is outside of supplier scope | n/a | n/a |
| 4.7 | ACM700 Produce Consolidated List of Possessions | This is 1 Out of the Box (OOTB) functionality.

The requirement will be delivered as OOTB functionality as the rail blueprint will allow the visibility of the planned possessions.

The Proscient application allows end users to produce the Consolidated List of Possessions by identifying the possessions and the pertinent information and present it in list views. End users have the capability to amend the search criteria in order to refine or expand the resulting | Yes |

		Information.		
4.8	ACM800 Generate a Weekly Operating Notice (WON)	This is 1 Out of the Box (OOTB) functionality.	Yes	Requires additional reporting configuration effort (phase 1) compared to the Rail blueprint
		The requirement will be delivered as OOTB functionality with capped configuration effort of the rail blueprint ad hoc reporting capability.		
		Publication of the Weekly Operating Notice (WON) will be provided by configuring the reporting tool. Weekly Operating Notices (RfL WON) can be easily configured to the suitable format and information and can published automatically (scheduled – if required) and send to the MTR train drivers and other interested parties (e.g. Network Rail signallers, Train drivers etc.) via email / fax.		

4.9	ACM900 Safe Handover & Return of Possession (Possession Management)	This is 1 Out of the Box (OOTB) functionality.\n\nAs this requirement requires additional configuration (not budgeted) of the rail blueprint and is considered a scope exclusion.\nThe Proscient application allows the competent person to remotely create and remove isolations and an email will be sent to the respective stakeholder – RCC of the isolation – in the state change i.e. when isolation is created / removed. Proscient provides the functionality to create and manage interdependencies and links in between activities i.e. Isolations, site of work access requests etc. in order to increase visibility and manage efficiently the sequencing of activities.\n\nIn order, for the Proscient application to automatically create / remove isolations an interface has to be created and a link established with the appropriate signalling information. It is suggested that this requirement will require bi-directional integration (phase 2) and it is subject to integration design.	Yes	The requirement to 'automatically create / remove isolations' requires additional configuration (not budgeted) of the rail blueprint and integration with third-party systems and is considered a scope exclusion. This has been discussed and agreed as meeting the requirements of RfL Crossrail (at clarification meeting on Wednesday 20 July 2016)
4.10	ACM1000 Manage Physical Access via RfL & LU Stations – outside of scope	No response statement required. This is outside of supplier scope	n/a	n/a
4.11	ACM1100 Manage Physical Access via RfL Maintenance Doors / Hatches etc. – outside of scope	No response statement required. This is outside of supplier scope	n/a	n/a

4.12	ACM1200 Manage Access to Lorry Unloading Points	This is 1 Out of the Box (OOTB) functionality.	Yes
		The rail blueprint will deliver this functionality.	
		Proscient will enable end users to 'Manage the Access to Lorry Unloading Points' process under the Proscient's application activity creation functionality based on the relevant time, space, risk requirements and information.	
		In particular, in the Plumstead depot and the other unloading lorry points an approved time slot for vehicles to make deliveries will be provided via 'access to Lorry unloading points' created through the application. The 'access to Lorry unloading points' events are uniquely identified with an ID number and have a lifecycle, which matches the RfL business process for 'access to Lorry unloading points'. Therefore, the Gate Guard is able to verify that the vehicle is approved to make a delivery and that the time-slot is correct via checking the unique ID. After the vehicle has arrived, unloaded and departed the gate guard can update the system that the delivery has been confirmed.	
		Rules within Proscient govern how 'Manage the Access to Lorry Unloading Points' can be edited and managed through their lifecycle. These will prevent potentially unsafe actions being carried out by misuse of the access planning & control system. This has been discussed and agreed as meeting the requirements of RfL Crossrail (at clarification meeting on Wednesday 20 July 2016).	

| 4.13 | ACM1300 Manage Road Rail Access Points | This is 1 Out of the Box (OOTB) functionality.

The rail blueprint will deliver this functionality.

Proscient will enable end users to 'Manage Road Rail Access Points' process under the Proscient's application activity creation functionality based on the relevant time, space, risk requirements and information.

In particular, Proscient can provide access and manage the movement to both RfL and non-RfL vehicles to the lorry waiting area at a Road Rail Access Point as the aforementioned events are uniquely identified with an ID number and have a lifecycle, which matches the RfL business process for 'Road Rail Access Points'.

Rules within Proscient govern how 'Manage Road Rail Access Points' can be edited and managed through their lifecycle. These will prevent potentially unsafe actions being carried out by misuse of the access planning & control system. This has been discussed and agreed as meeting the requirements of RfL Crossrail (at clarification meeting on Wednesday 20 July 2016). | Yes |

4.14	ACM1400 Reporting	This is 1 Out of the Box (OOTB) functionality.	Yes
		The standard and the ad-hoc reports of the rail blueprint will be provided.	
		Proscient is able to produce a set of and ad hoc reports on access. There is also an ad hoc easily configurable reporting function which allows end users with the appropriate permissions to amend and continuously improve the reporting output.	
		Reports users will benefit from formulating the output of the reports by utilising the capability to append additional fields (additional attributes) e.g. Number of possessions / sites of work on a given day, Successful / unsuccessful access attempts at each access point including details of whom, time etc. - not exhaustive, in order to capture the reporting additional information required.	
	5 Constraints & Assumptions section (includes non-functional requirements)		

				The rail blueprint supports mobile devices, but functionality is contained to the essential steps of the business process life-cycle
5.1	Solution Constraints	This is 1 Out of the Box (OOTB) functionality. Proscient is currently delivering apps for iOS and Android, with windows certification underway and no plans for blackberry. In addition: -Mobility will be delivered via apps for iOS and Android -RPO and RTO will be subject to infrastructure design -Disaster recovery will be subject to infrastructure design (recommend a failover design with minimal lag, and capable of use during deployment of updates from test i.e. deploy update to DR build, and then switchover, which the Prod build gets updated.) -In the event of loss of application availability, recommended business process checks must be instituted to safely continue with existing work, and to raise new work from paper based versions of the system as a backup. This will requires some further design, as there is an intent to go paperless. -Wireless Infrastructure and QoS are client responsibilities	Yes	
5.2	Implementation Environment	This is 1 Out of the Box (OOTB) functionality. The system will be deployed via physical server installations within the RfL Crossrail LAN. Access will be available via desktop client using Windows and IE9+. Mobility will be via apps for iOS and Android. The wireless Infrastructure and the OOTB QoS will be a client responsibility. This will be subject to the infrastructure design and the DSD. Currently, the application has been successfully deployed to a user base of 500, with concurrency levels of 250 users doing 17000 transactions per hour, on a	Yes	

		virtualised server environment. Typical uptime is 99.999%, with only outages for updates.	
5.3	System Design Statement	Per the technical specifications noted in section 1.4 of the response document, Proscient can be accessed by desktop and laptop devices running Windows 7+ and minimum Intel Core i% processor with 4GB RAM, or mobile devices running iOS8.0+ or Androidv 4.4+	Yes
		This is 1 Out of the Box (OOTB) functionality.	Yes
5.4	Other Applications	Petrotechnics will provide support to RfL Crossrail for creating own Risk Assessment Templates (RATs) database and the Hazards & Controls (H&Cs). The RATs will from the foundation for driving the risk assessments process during the access planning and control. The functionality of the rail blueprint allows to: - Transpose the Hazard Register via the Risk Assessment Templates (RATs) and any other pertinent information to the Risk Assessments in order to create the OOTB Access planning & control. RATs are configurable and subject to updates by personnel with the appropriate permissions. Each Work Order data will be transposed to Proscient via the one-way integration in a one-time import from IBM Maximo.	

5.5	Off-The-Shelf Software - not applicable	No response statement required. This is outside of supplier scope	n/a	n/a
5.6	Workplace Environment	This is 1 Out of the Box (OOTB) functionality. For the Proscient mobile devices please refer to the Proscient technical documentation.	Yes	
5.7	Relevant facts and Assumptions	This is 1 Out of the Box (OOTB) functionality. The Proscient application can fully meet the performance requirement as it has been tested for real 200 concurrent users The performance and scalability tests that Petrotechnics have conducted against the recommended configuration (as per the technical information document) have proven that once the following factors (not exhaustive) - Network traffic - Browser rendering (combined with laptop / desktop specifications) - Type of activity performed - Number of concurrent users - Client specific configuration - Deployed hardware (specifications, physical / VM / cloud) can be controlled by the client then the Proscient application can fully meet the requirement and thus the majority of the transactions respond within five seconds. Some data intensive transactions could result in higher response times but still deemed to be responsive.	Yes	
6	Current Systems	No response statement required. This is outside of supplier scope	n/a	n/a

Current Systems

RfL "Crossrail" is a green-field site with no existing IT or systems capability in respect of access planning, access management and site of work access control.

The "Crossrail" Signalling system provides the mechanism for 'configuring' possessions within the "Crossrail" central operating section. Manual processes are used to configure the signalling possessions and to 'view' the status of possessions through the signalling system (dedicated device) on the day of work (used by the authorising person to determine the possession status before permitting access to a site of work).

Solution Deliverables

Assured Implementation of Services

CSC's project resources have extensive Project, Programme and Portfolio Management (P3M) skills and knowledge and are experienced APM, PMI, PRINCE2 practitioners. CSC is able to tailor these approaches to interface to those of both TfL and our suppliers, in this case Petrotechnics, who employ the Project Management Institute (PMI) methodology.

Implementation Approach : Design Build and Test - Petrotechnics

This forms the bulk of the involvement of Petrotechnics, as suppliers of the core application, Proscient™. This work stream represents the most complex aspect of the project and is therefore described in greatest detail.
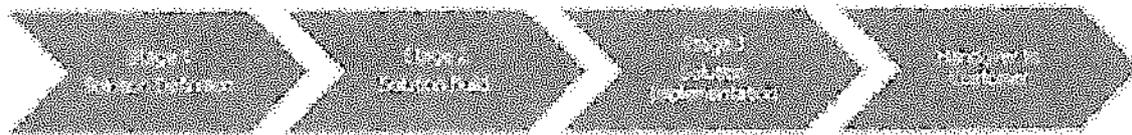
Figure 1. Petrotechnics project Stages

Stage 1 – Solution Definition

Project Initiation

Format – Internal Workshop

As part of project-start up, the assigned Petrotechnics Business Process Consultant, Project Manager and Systems Analyst will review relevant Customer Access Management documentation including:

- User Requirement Specifications.
- Access planning processes.
- Reporting requirements (Access Analytics and Reporting documentation incl.).
- Access Management & Control (Possession, Site of Work Access and Permit to Work procedures).
- Task Risk Assessment.
- Control of Isolations procedure.

Output - First draft of the Project Execution Plan for formal review by TfL.

Requirements Gathering and Business Process Validation

Format – Joint Workshop

In addition to project governance representatives (sponsor, project manager, etc.), the Design Team will be made up from authoritative TfL representation (process owners, standards owners, etc.) in the following (not exhaustive) disciplines:

- Operations.
- Maintenance.
- HSE.
- Maintenance planning/scheduling.
- Access Planning.
- Major disciplines involved, for example; electrical, mechanical and civil.

The requirements will include the following:

- Access planning & control certificates – Site of Work Access; Permits; Routines; Isolation Plans & Phases; Operational Risk Assessments (ORA); Stand Alone Risk Assessments.
- Access plans: Possessions; events, closures, etc.
- Lifecycle state model diagrams for each of the types of certificate, showing the transitions and rules that apply.
- Roles and Permissions - these will be set so that the specific roles agreed in the Business Process workshop are the "gatekeepers" required to take each certificate through its lifecycle.
- Inter-dependency rules, conflict detection and cross reference relationships for different certificate types.

Output – Detailed Business Process Validation Report, which forms the technical specification for the Template configuration and build of Proscient™.

Reporting Requirements

Format - specifications

CSC will propose a number of different types of standard reports available in the Proscient software tool. CSC will work with TfL to determine how the custom reports (Request Publish Planning, Rail for London (RfL) Engineering Access Statement, RfL Draft Period Plan, RfL Confirmed Period Plan and RFL Weekly Operating Notice) can be structured to meet the detailed requirements.

Output – Agreed report definitions

Stage 2 – Solution Build

This stage will convert the Business Process Validation report and associated documentation from Stage 1 into the TfL Proscient™ software build, tested by CSC and Petrotechnics.

Graphic Development - TfL

TfL will identify and agree on the graphics, showing major operational units or pieces of equipment, that will be incorporated into the build of the "Map View" functionality, and be responsible for their creation.

RfL will provide the approved graphics and respective requirements (positioning of the graphics in the RfL in the infrastructure). CSC will structure the graphics into a logical layout, and the list of locations mapped to the physical position in the Map View. The identified Proximity hazards from RfL will be mapped to the specified locations.

Output

Graphical representation of the Central Operating Section for upload into Proscient, as agreed with the Contracting Authority.

Application Configuration

The Proscient® configuration will include:

- Types of certificate – Site of Work Access; Permits; Routines; Isolation Plans & Phases; Operational Risk Assessments (ORA); Stand Alone Risk Assessments and other agreed work control documentation.
- Types of access certificate – Possessions, Vehicle loading, RRV access, etc.
- Lifecycle transitions and rules – to reflect the agreed business process and timeouts.
- Roles and Permissions - the "gatekeepers" required to take each certificate through its lifecycle.
- Inter-dependency rules for different certificate types and relationships.

- The output from the Risk Assessment Template and hazards & controls exercise will be imported into Proscient™.
- The Auditing Questions will be imported into Proscient™.
- The agreed requirements for Integrated Operations Management.

Output

Instance of Proscient configured to meet TfL requirements, delivered into Internal Quality Assurance Testing

Petrotechnics Internal QA Testing

Testing at this point is described in the response to 1.3.

Output

Instance of Proscient configured to meet TfL requirements, delivered into TfL pre-production environment ready for CSC integration testing.

Stage 3 – Solution Deployment and Implementation - CSC

The implementation component of the project will be led by CSC, as system integrator, and will comprise the stages listed below.

- Host platform design and assurance - CSC will develop the Physical Technical Models for TfL to build the hosting environments. CSC will then verify the build in those delivered environments ahead of test deployment of the software.
- Software release deployment to pre-production environments to facilitate testing.
- CSC will complete:
    - o Platform-level integration testing to prove operation against the components of TfL's wider IT landscape, below the application level.
    - o Performance Testing (Load and Soak tests) in a production-equivalent environment.
- Support for TfL's user acceptance testing.
- Deployment of Proscient to the TfL production environment

High Level Project Plan
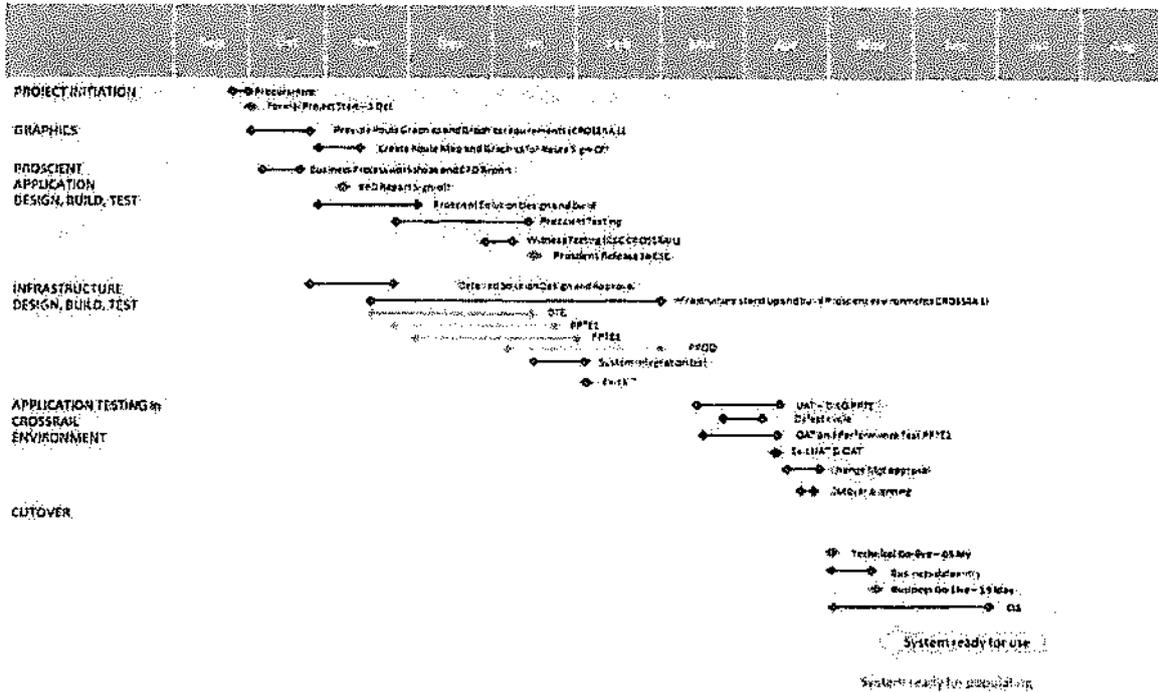
Dependencies

The challenging timescales put additional focus on inputs required from TfL. The key dependencies are:

- Prompt placement of a purchase order on completion of the procurement.
- Provision of the RfL pertinent procedural documentation (integration requirements inclusive) on schedule. The procedural documentation is required for the preparation before the Business Validation Workshop.
- Commitment to providing appropriate resource for the Business Process Validation Workshop,
- Sign-off of the Business Validation Workshop report on schedule
- Provision of the graphics content and the respective required materials on schedule.
- Provision of the hosting infrastructure on schedule.

Risk Management

CSC will record risks which will be documented and tracked via the Project Risk Register provided by the service provider (either via access to existing tools with Service Provider, or via templated worksheets).

Risks will be subject to pro-active ongoing management within the repository by the Service Provider and with mitigation progress reported as part of standard project reporting.

People

The Crossrail RCSIP Access Management System will come under the jurisdiction of the CSC Account Manager (AM) who will be the single point of contact and accountable across both the deployment project and the ongoing support service. As the lead contractor and system integrator, CSC will be the point of contact for all work on this project.

The AM will be the accountable owner for any escalations and will be responsible for resolving them in a timely and acceptable manner. The AM will:

- work at all levels to ensure all requirements are serviced;
- negotiate and resolve any disputes and escalations that arise from CSC and Petrotechnics services;
- work with Petrotechnics to bring to TfL the benefit of technological advances in the Proscient™ platform.

Process

CSC's Account Management Structure (AMS), as shown below, will provide TfL with the absolute accountability, responsibility, capability and quality that are required to for the management and governance of the Crossrail RCSIP Access Management System. Some specific functions are highlighted.

Figure 2. CSC's Account Management Structure (AMS)

INTEGRATION & TESTING DELIVERY

People

CSC has an extensive testing practice with tools and techniques to address the entire software and infrastructure development lifecycle. Therefore, in the Proscient™ deployment project we will utilise dedicated testing experts to plan, manage and execute all test cycles. Given the requirement for close

working with TfL and its other service providers for the elements which CSC will test or support testing of, the Test Manager will be UK-based to facilitate rapid decision making.

Similarly, Petrotechnics will utilise their dedicated test resources, trained in the Proscient™ product and using repeatable test scripts to expedite the testing cycle. System testing will be carried out at Petrotechnics premises in the UK.

Process

The diagram below illustrates the "double-V" testing lifecycle, which will be applied to the software and infrastructure development lifecycle and forms the basis of CSC's testing plan for the Proscient™ deployment.

In this model each set of tests flows from a specific part of the overall specifications. This drives completeness of coverage.
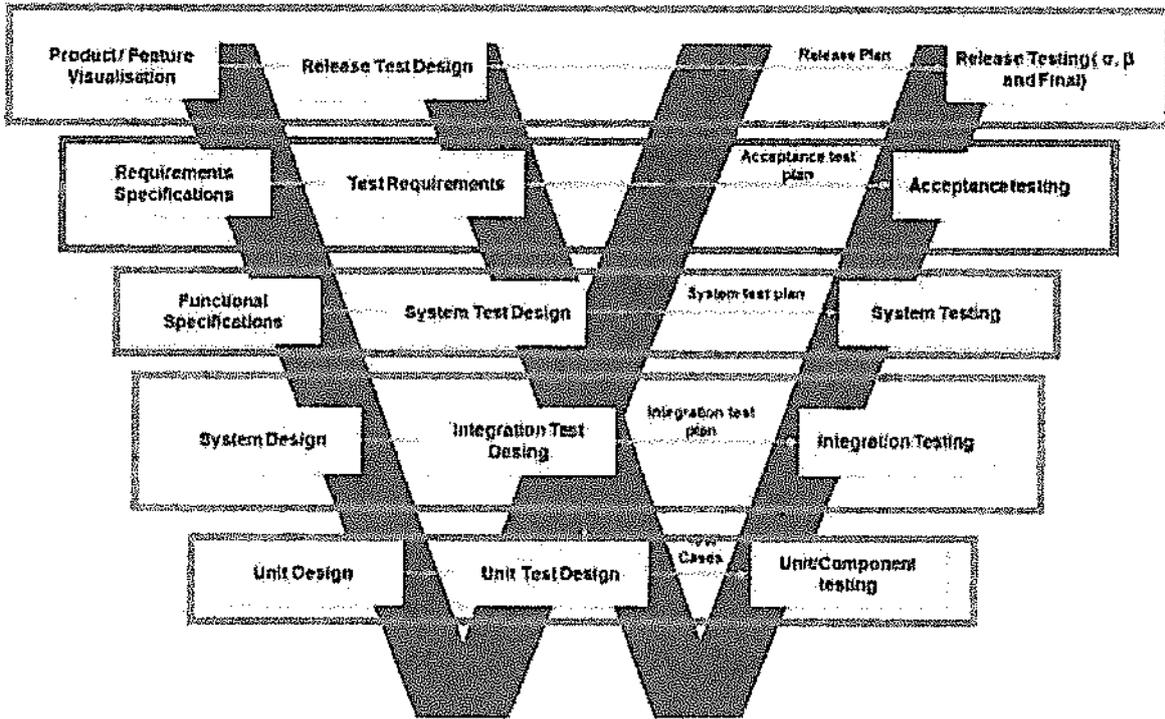
Figure 3. Testing Process Model

The streams can be identified in the project plan in response 1.2.

The colour coding indicates responsibility:

- **Red boxes** indicate CSC's role in the Proscient™ deployment testing, resulting from its responsibility for the design of the hosting environments. For the purposes of this diagram, performance testing can also be included in the integration stream.
- Integration testing will be carried out on the Software Release from Petrotechnics as a pre-cursor to UAT. The purpose of this test element is to determine that the application will operate within the TfL infrastructure architecture, including interface with firewalls and Active Directory. This is not to test data/functional integration with other applications (Maximo).
- Performance testing will be carried out as a parallel activity to UAT, as part of Operational Acceptance. This is part of the quality gate process for Technical Go-live.
  - **Blue boxes** indicate the testing to be completed by Petrotechnics as owners of the core application platform and the configuration process.(Unit and System Test)

- Proscient® system testing will be carried out by Petrotechnics testers progressively throughout the configuration of the software to ensure the requirements have been configured correctly, and on completion there will be verification testing before the application is offered to Customer for User Acceptance Testing
- **The Purple box indicates** the responsibility of TfL as owners of the overall requirements. This is scheduled to be completed as the last stage of testing. Planning and execution is the responsibility of TfL, with support from CSC and Petrotechnics. As a means of both accelerating UAT and achieving greatest benefit, it is proposed that for this project UAT is carried out via a Petrotechnics-supported process called Day In The Life (DILO)
- This 3 day workshop will be facilitated by Petrotechnics and delivered at TfL's premises. Test plans for the UAT elements will be defined by TfL, who will also provide real workplace examples to cover the simulated working situations for the DILO workshop.
- UAT/DILO will involve a cross section of the Customer's workforce i.e. Operations Manager, Access / Maintenance Planner, Site of Work Access Authorising person, Shift Supervisor, Permit Writer, Operator, Maintenance supervisor, Maintenance technician, HSE, Electrical discipline, etc., the majority of whom must have been part of the Customer design team, for continuity.

Technology

CSC and its subcontractor will deploy technology in the form of:

- Test planning and management tools – repositories enable the recording of test scripts, linking with the requirements to be tested and interfacing with automation tools to facilitate rapid re-testing.
- Test accelerators – CSC has alliances with major test automation providers, including HP, CA, IBM and Test Plant. These tools will be applied as appropriate, particularly for Performance Testing where automation is key to the ability to simulate load and usage for Load and Soak Testing
- Test reporting and progress management tools – these take the form of reporting dashboards which will give CSC and TfL managers and stakeholders a visual report of test progress, test success rate and defect management statistics.

APPLICATION SUPPORT MODEL

People

CSC will provide the ongoing support and maintenance services using leveraged teams located in the UK and in India. The leveraged team approach recognises that while a wide range of skills may be required to address the database and middleware support, the likelihood of a stable system, with minimal change will result in a relatively low demand for those skills over time.

Leveraged resources enable TfL to pay on a utility basis for those skills, rather than having to retain full time resources.

Process

According to the technical stack component, application support will be divided between Petrotechnics (Proscient™ application and databases) and CSC (middleware and database platforms). Both Petrotechnics and CSC will act as resolver groups, taking incident notifications (tickets) from the TfL service desk, which will handle Level 1 support for the application. Level 2 support for hosting infrastructure and end-user devices associated with the use of Proscient™, is out of scope of the CSC/Petrotechnics service and will be managed by TfL.

The diagram below summarises the service model. TfL will have a single point of contact for service performance information and escalation, provided by the existing CSC Service

Governance function, which is already integrated into TfL's wider service management processes.
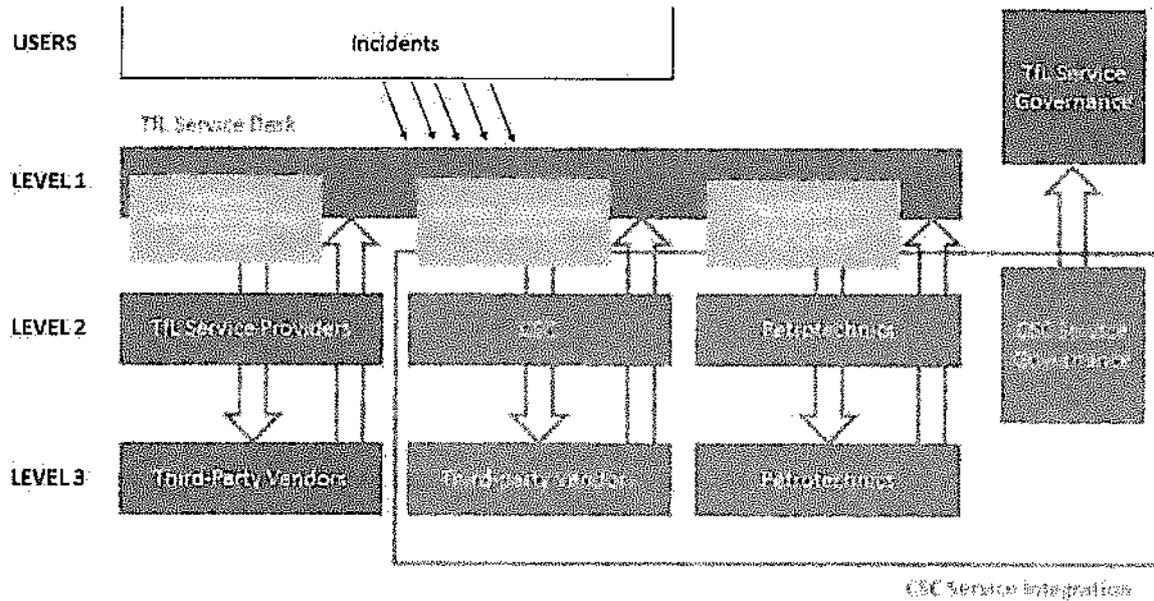
Figure 4. CSC Service Model

CSC's support services include the following key functions:

For middleware, at GOLD service level,

- Middleware support, including incident management (24x7)
- Monitoring services
- Capacity management
- Performance management

For databases (database platform, but not individual schemas, tables), at GOLD service level:

- Database support, including incident management (24x7)
- Back-up and recovery services
- Monitoring
- Performance tuning
- Enhanced high-availability services

Standard Support & Maintenance provides technical application support and access to all service releases, updates and upgrades of Integrated Operations Management module functionality. It includes a 24x7 global emergency response program based on issue severity.

Support services encompass the following key functions:

- Incident management and fault correction
- service reporting
- patch provision and implementation instructions
- user support
- assistance in the resolution of data-related incidents

Technology

CSC and its subcontractor will deploy technology in the form of:

- service management tools – particularly the ability to interface directly to the TfL service desk for the automated transfer of incident tickets. CSC will take advantage of existing interfaces of this nature for this project

- knowledge repositories – both CSC and Petrotechnics maintain support knowledge-bases updated from incident resolution activity. These updates inform future incident resolution activity and feed into formal technical documentation

Service Hours and Service Level Agreement's

Set out in the table below are SLA's for the support of this high-availability, critical system.

Further detailed SLA's will be agreed as part of the deployment project, as CSC seek to align with the broader TfL service regime.

Severity	Definition	Target Service Agreement	Measured
1	Any of the following: • All or any part of the service is unavailable resulting in failure of business critical activities. Business critical activities include client services which cannot be mitigated (mitigation shall include the use of other available services); • The incident affects the overall security of the TfL estate; • The incident has a detrimental impact on the IM operations of TfL declared by designated individuals within TfL IM. • The incident affects users at a critical site or more than 50% of users across all sites.	Service is restored or a work-around is agreed or plan to restore is agreed within 1 hour for 95% of incidents. Incident resolution is within 1 business day for 95% of incidents.	24 hours, 7 days a week, including public holidays
2	Business activities are adversely affected resulting in some impact on business operations where any of the following apply; • The incident prevents at least one department from effectively performing key business activities; • Shared functions are unavailable (e.g. switch or server outages); • The incident affects 4 or more users or shared functions. • The incident causes a failure to redundant services that increases the risk to business critical activities.	Service is restored or a work-around is agreed or plan to restore is agreed within 2 hours for 95% of incidents. Incident resolution is achieved within 3 business day for 95% of incidents	24 hours, 7 days a week, including public holidays
3	Business activities are adversely affected resulting in some impact on business operations where any of the following apply: • The incident prevents users from effectively performing non key business activities; • The incident is limited in scope and scale. This includes equipment failures where due to redundancy and resilience, non-critical services are unaffected. • The incident affects less than 4 users.	Service is restored or a work-around is agreed or plan to restore is agreed within 8 hours for 98% of incidents. Incident resolution is achieved within 10 business day for 95% of incidents	8am to 6pm, Monday to Friday, excluding public holidays.
4	Any of the following: • The service is not affected, e.g. queries; • The incident affects a service component that has a dependency on support parties that are not managed by TfL IM; • The incident affects a service component that cannot be fully supported	Reasonable endeavours only.	SLA not measured.

Service Credits

During any calendar month in which the measured percentage for that calendar month (the "Actual Service Availability" or "ASA") is less than the Target Service Agreement (TSA), and unavailability is due to failure of the application funcitonality and or deployment instructions or other deliverables attributable to the Service Provider, the Service Provider will issue a credit payment reflecting the difference between the TSA and the ASA.

For clarity, this calculation is illustrated in the examples below.

Target Service Availability	Actual Service Availability	Result	Calculated Credit
99.5%	99.9%	0.4% exceeded	▓
99.5%	90.5%	9% missed	▓
99.5%	94.5%	5% missed	▓

Attachment 2

Section – Pricing

Description	Year 1	Year 2	Year 3	Year 4
Full Implementation -				
Stage 1 : Solution Definition				
Business Process Validation (█████)				
Integration Definition (█████)				
Stage 2 : Solution Build & Deploy				
Graphics (█████)	£████			
Build & Test (█████)				
RATs Database Content Revision (█████)				
Reporting for RfL Crossrail requirements (█████)				
Deployment / UAT (█████)				
Project and Programme Management Resource (£█████)				
Perpetual Software Licences *	█████			
2nd / 3rd Line Support	█████	█████	█████	█████
Licence Support & Maintenance Costs	█████	█████	█████	█████
Total	█████	█████	█████	█████

Notes

*Licences to be hosted by TfL (on Premise).

Licences Required. 120 Full Access Licences. Role Based Access Control will be agreed per licence as required.

Optional Costs

Growth –

Included in Tender	User License Categories	Future User Purchase Quantities Price per User					
20	Activity Management Users	10-24	25-49	50+			
		█████	█████	█████			
100	Activity Execution Users			█████			
				█████			
0	Activity Visualisation Users			50-99	100-249	250-499	500+
				█████	█████	█████	█████

Integration

System Integration in accordance with URS Requirements	████████

Training ████████ich covers the provision of:

- Courses for 100 Activity Execution User and 20 Activity Management Users as described in Section E of the End User License Agreement,
- Work site team Training for all at 8 hours per day for one week of preparation, two weeks before and thereafter the Go-Live for two Trainers.
- Training material use.

No travel time or expenses have been included in these training costs as they will be dependent on timing of courses.

Payment Milestones

Payments terms are as follows:

Software License Costs: 100% on Contract Award

Maintenance & Support Production Server   : 100% payable annually from deployment to client

2nd / 3rd Line Support   : Monthly billing

Implementation Services: Please refer to Milestone Payments below:

Year 1 Payment Milestones		
Payment Milestone	**Milestone Title**	**Value**
PMS 1	Solution definition complete	████████
PMS 2	System testing successfully completed	████████
PMS 3	User Acceptance Testing successfully completed	████████
PMS 4	Business & System Go-live successfully completed (including warranty period)	████████

Notes

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Licences Required: 120 Full Access Licences. Role Based Access Control will be agreed per licence as required