Transport for London

SCOPE

APPENDIX K1
Information Model Requirements

TfL Pathway

Part of the TfL Management System

Information Model Requirements

Project * Programme *	Name of Project or Programme

Reference	Recognised reference code (e.g. profit centre, UIP, etc.)

Stage	Pathway Stage

Responsible	Project Engineer	Name
	Signature	Date

Accountable	Project Manager	Name
	Signature	Date

Product History	**Version**	**Date**	**Summary of changes**
	0.1	dd/mm/yy	First draft

This document must be filed in accordance with the **document filing structure**

* Delete as appropriate (the Accountable person should always be at least one management level higher than the Responsible person).

TRANSPORT FOR LONDON

Information Model Requirements

These Information Model Requirements are based on the Construction Industry Council Building Information Modelling Protocol (CIC/BIM Pro first edition 2013), the copyright of which belongs to the Construction Industry Council.

1. DEFINITIONS

1.1 In these Information Model Requirements unless the context otherwise requires, the following words and phrases shall have the following meanings:

1.1.1 **Building information Modelling (BIM)**: As defined in section 1.2 of the Exchange Information Requirements (EIR)

1.1.2 **Common Data Environment** agreed source of information for any given project or asset for collecting, managing and disseminating each information container through a managed process.

1.1.3 **Data Authoring** : Creation of Production Information and Handover Information

1.1.4 **Data Capture**: Collecting, from various sources structured information relating to asset(s).

1.1.5 **Data Coordination**: Use of structured data about the asset(s), to virtually assure and evidence coordination across all task teams, existing infrastructure and adjacent works.

1.1.6 **Data File**: A computer file containing digitized geometrical, numerical, text, audio or video information which can be used by a computer application or system.

1.1.7 **Data Simulation**: Use of structured information to virtually test the design, construction, operation and maintenance of the asset(s).

1.1.8 **Data Validation**: Rule based tools used to validate and check all Production Information and Handover Information against the EIR and Standards.

1.1.9 **Data Visualization**: Visually representing structured information to support decision making.

1.1.10 **Document Rendition**: A data file in an immutable format, derived from a Document Definition.

1.1.11 **Federated Model** means a Model consisting of connected but distinct individual Models.

1.1.12 **Information container**: named persistent set of information retrievable from within a file, system or application storage hierarchy

1.1.13 **Information Execution Plan**: plan that explains how the information management aspects of the service/task will be carried out by the delivery team

1.1.14 **Information model** is a set of structured and unstructured information containers

1.1.15 **Information Management Role** means a role in connection with the Service/Task which includes, inter alia, the establishment and management of the processes, protocols and procedures set out in the Information Requirements.

1.1.16 **Information Manager** means the person appointed, initially by the Client and subsequently by the Contractor, to perform the Information Management Role.

1.1.17 **Information Providers Models** means any Models which Other Information Providers produce and deliver as specified in the Model Production and Delivery Table[7] and any Federated Models (or any part there of) produced and delivered by Other Information Providers.

1.1.18 **Information Requirements** means the Information Requirements (Appendix 1) in relation to a Service/Task. The information requirements are the specification for what, when, how and for whom information is to be produced. .

1.1.19 **Level of Information need** means the framework which defines the extent and granularity of information

1.1.20 **Master Information Delivery Plan (MIDP)** is the plan incorporating all the relevant Task Information Delivery Plans.

1.1.21 **Model** means a digital representation of part of the physical and/or functional characteristics of the Service/Task

1.1.22 **Model File**: Computer Aided Design (CAD) file(s) containing shape(s) with defined origin, orientation and dimensions, communicating the physical characteristic of the assets. A Model File may also include Non-Graphical Data, associate to the CAD file(s) and / or shape(s), identifying the functional characteristics of the asset(s).

1.1.23 **Native File**: Original graphical data and / or non-graphical data file in its default format, as created in the authoring tool.

1.1.24 **Project Data Environment**: A system which forms part of the Common Data Environment and is accessible to the Client, the Contractor, or any employee, Subcontractors or supplier of the Contractor, the Service Manager, the Supervisor and Others (as applicable). It is used to manage and exchange the master version of all shared Production Information and Handover Information.

1.1.25 **Production Information and Handover Information**: The Model File(s), Composite Model(s), Non-Graphical Data, Document Definition(s) and Document Rendition(s) [which have been agreed between the Parties] to be produced, updated and maintained and delivered during the project, as set out in the MIDP(s) until the Defects certificate is issued. Referred to as the Project Information Model (PIM) within BS EN ISO 19650-1-2018.

1.1.26 **Project Information Exchange (PIx) Protocol – IT Assessment form**:

A mechanism for capturing the *Client*, *Contractor's*, Subcontractors and supplier's information exchange capability and IT maturity. The forms are to be used to identify any restrictions or limitations in the production, use and management of the Production Information and Handover Information. The forms also capture the agreed information exchange file formats and versions.

1.1.27 **Other Information Providers** means any person having responsibilities in relation to the production, delivery and/or use of Models and appointed by the Client in relation to the Service/Task, excluding the Information Providers.

1.1.28 **Task Information Delivery Plan (TIDP)** is the schedule of information containers and delivery dates, for a specific task team

1.1.29 **Specified Models** means the Model or Models which the Information Providers is to produce and deliver as specified in the Model Production and Delivery Table[7].

1.1.30 **Structured information containers**: include geometrical models, schedules and data bases

1.1.31 **Unstructured information containers**: include documentation , video clips and sound recordings

2. PRIORITY OF CONTRACT DOCUMENTS

2.1 These Information Model Requirements form part of the Form of Agreement.

2.2 In the event of any conflict or inconsistency between a Model prepared and delivered in accordance with these Information Model Requirements and any document or information extracted from such Model, except where the Information Requirements states otherwise, the Model shall prevail.

3. OBLIGATIONS OF THE CLIENT

3.1 The Client shall:

3.1.1 arrange for Information Model Requirements in substantially the same terms as these Information Model Requirements and for the obligations set out herein, or obligations which substantially reflect the requirements of these Information Model Requirements, to be incorporated into all Project Form of Agreements; and

3.1.2 save to the extent that such obligations are within the scope of the Information Provider's obligations under any other part of the Form of Agreement:

a ensure that until the end of the Service/Task the Information Requirements and the Model Production and Delivery Table are reviewed and updated at each Stage[7]; and

b ensure that the appointment of the Information Manager shall be changed or renewed as necessary to ensure that there is at all times until the end of the Service/Task a person performing the Information Management Role; and

3.1.3 comply with the Information Requirements.

4. OBLIGATIONS OF THE PROJECT TEAM MEMBER

4.1 The Information Provider shall:

4.1.1 produce the Specified Models (excluding any material forming part of the same which is provided to the Project Team Member by or on behalf of the Client) to the Level of Information specified in the Model Production and Delivery Table[7] using all the reasonable skill care and diligence normally used by an appropriate and competent professional designer experienced in producing models similar to the Specified Models in connection with projects of a similar size, scope and complexity and at a similar location to the Project, provided that if the Form of Agreement imposes a higher standard of care such higher standard shall apply; [1]

4.1.2 deliver the Specified Models at the Level of Information specified in the Model Production and Delivery Table [7]at the Stage specified therein and in accordance with the Information Requirements; [1]

4.1.3 use the Information Providers Models in accordance with any procedures therefore in the Information Requirements;

4.1.4 comply with the Information Requirements; and

4.1.5 arrange for these Information Model Requirements to be incorporated into any sub-contracts that it enters into in relation to the Service/Task to the extent required to enable the Information Provider to comply with these Information Model Requirements

5. ELECTRONIC DATA EXCHANGE

5.1 Without prejudice to the Information Provider's obligations under these Information Model Requirements and the Form of Agreement, the Information Provider does not warrant, expressly or impliedly, the integrity of any electronic data during the course of its transmission via the Common Data Environment, provided that the Information Provider has transmitted and verified such electronic data in accordance with the Information Requirements.

1 Only applicable to Project Task Orders

5.2 The Information Provider shall have no liability to the Client in connection with any corruption or unintended alteration of the electronic data in a Specified Model which occurs after it has been transmitted to the common data environment and verified by the Information Provider, in each case in accordance with these Information Model Requirements Form of Agreement, save where such corruption or alteration is a result of the Information Provider's failure to comply with these Information Model Requirements , the Form of Agreement or its failure to use due skill and care in the transmission or verification of the electronic data.

6. USE OF MODELS

6.1 Clause X10.6 of the Form of Agreement shall apply.

7. TERMINATION

7.1 Clauses 1, 2, 3, 5, and 6 of these Information Model Requirements shall continue to apply following termination of the Information Provider's employment under the Form of Agreement

APPENDIX 1

Information Requirements

The document(s) referred to as [the Exchange Information Requirements] contained within the [TBC] forming part of the Form of Agreement.

This section is for the use of the TfL PMO Pathway Team only

Product Details

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A1	06/03/2018	Template updated to reflect rationalisation of Product PD0203 A1 and Template F5711 A1 into one product. Change under CR-10013. Term BIM replaces use of IM&M or IMM.