Why Not COBie?

Digital Engineering Framework

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Introduction

COBie (Construction Operations Building Information Exchange) is an internationally recognised form for sharing information about digital models in a spreadsheet. This document aims to provide context around why the Transport for NSW (TfNSW) does not mandate COBie as a deliverable under the Digital Engineering (DE) Framework.

Support for broad range of transport infrastructure assets

Transport requires support for a broad range of assets including buildings, linear assets and fleet.

COBie was meant for the exchange of design/construction information related to 'buildings' and does not support a broader range of transport assets such as linear asset and fleet.

Although there has been efforts to extend COBie to support infrastructure (notably 'COBie for All' in 2014) the standard has not evolved sufficiently to fulfil the requirements of TfNSW. Figure 1 illustrates the overlap between the DE Asset Register and the COBie spreadsheet.
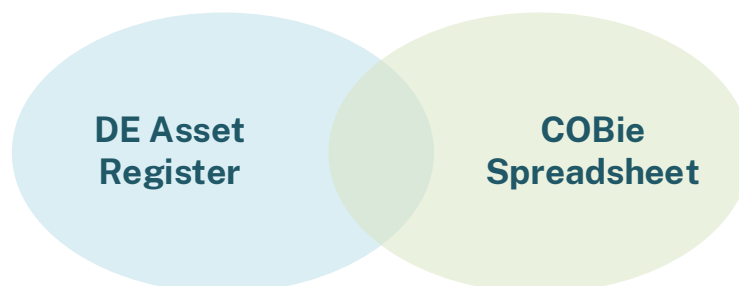

Figure 1 – DE Asset Register and COBie spreadsheet intersection

Asset data exchange requirements are broader than design, construction or asset handover

TfNSW is seeking to support a broad range of asset information exchange scenarios across the entire asset life cycle.

This includes:

- **Project asset data export** – supporting the export of data from a DE Asset Register and providing this data to a project to assist with understanding current state of assets.

- **Project asset data update** – supporting the ability for projects to provide updates to asset data, documents, etc. to a centralised DE Asset Register (potentially at multiple stages of the project).

- **Service provider asset data export** – segmentation of asset data by contract in the DE Asset Register and providing this data at contract changeover to asset maintenance service providers, cognisant of what data is new or was modified.

- **Service provider asset data** – supporting the ability to receive asset data updates from a service provider to the DE Asset Register to keep the asset owner information up to date.

If mandated, COBie would constitute a second required spreadsheet of asset information. Some data in the COBie spreadsheet would be a duplicate of data in the DE Asset Register, and what isn't a duplicate would likely be information which the owner or operator considered unnecessary.

Supporting a broader range of information types (exceeding COBie)

In order to support the information exchange scenarios stated above, the range of information that TfNSW requires in information exchange submissions exceeds the scope and design of COBie.

For example:

- asset owner

- O&M contract information

- asset condition and remaining service life

- installation/commissioning details

- asset risk.

Adherence to the principle of aligning data with the Building Information Model (BIM)

The TfNSW approach adheres to a common principle that asset information exchanged should be aligned with the BIM model.

Hence, assets identified in the data exchange must be able to be identified in the BIM model.

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Asset location and project assets

The structure of the TfNSW DE Asset Register accommodates for separation of project locations with project assets. This is very similar to COBie, however, the TfNSW approach is more extensive and not constrained by fixed location or asset configuration hierarchy.

Alignment with standards

The most directly applicable international standard, ISO 19650, does not mandate COBie. Instead, it leaves the content and format of information requirements up to owners, operators and maintainers (or countries, if national annexes dictate).

One of the reasons for this move is because most large owners and operators have bespoke needs, and care about some bits of information a lot more than others. A general dataset such as COBie therefore frequently cannot satisfy all needs.

For information on DE Framework

To find out more about the DE Framework, contact **Digital.Engineering@transport.nsw.gov.au.**

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