

Ontologies at Highways England

Pragmatic foundations for
federated Digital Twins

The Problem Statement



We lack a common, meaningful, and accessible model of the data that we use.



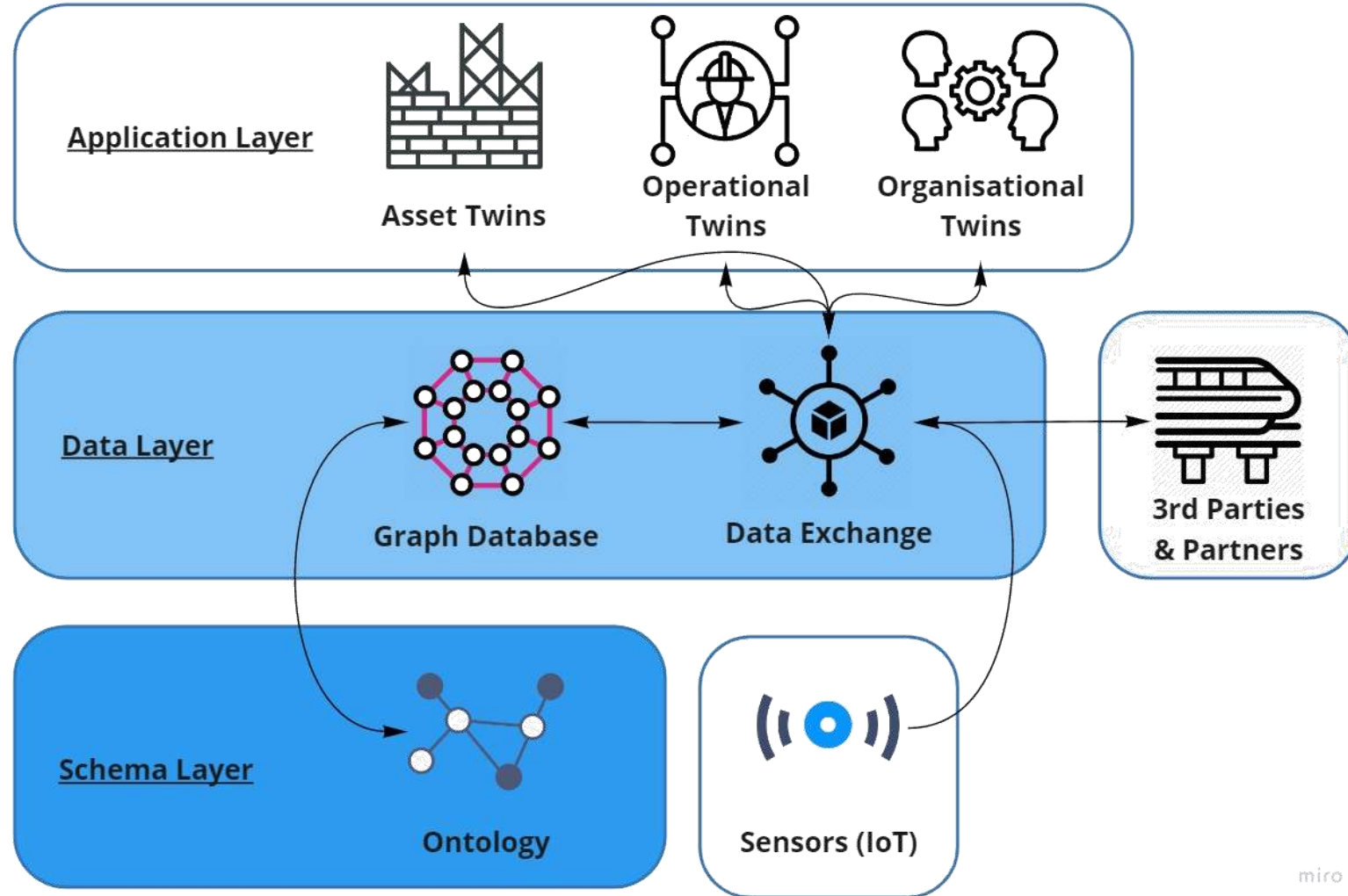
This leads to inconsistent and non-machine-readable specifications



And so, we struggle to exchange data quickly and effectively with others.

What are we trying to accomplish?

- An ontology that creates common meaning across the business.
- Written in the language of the business.
- Enabling internal and external data exchange.
- Underpinning a common data and application layer for Digital Twins.



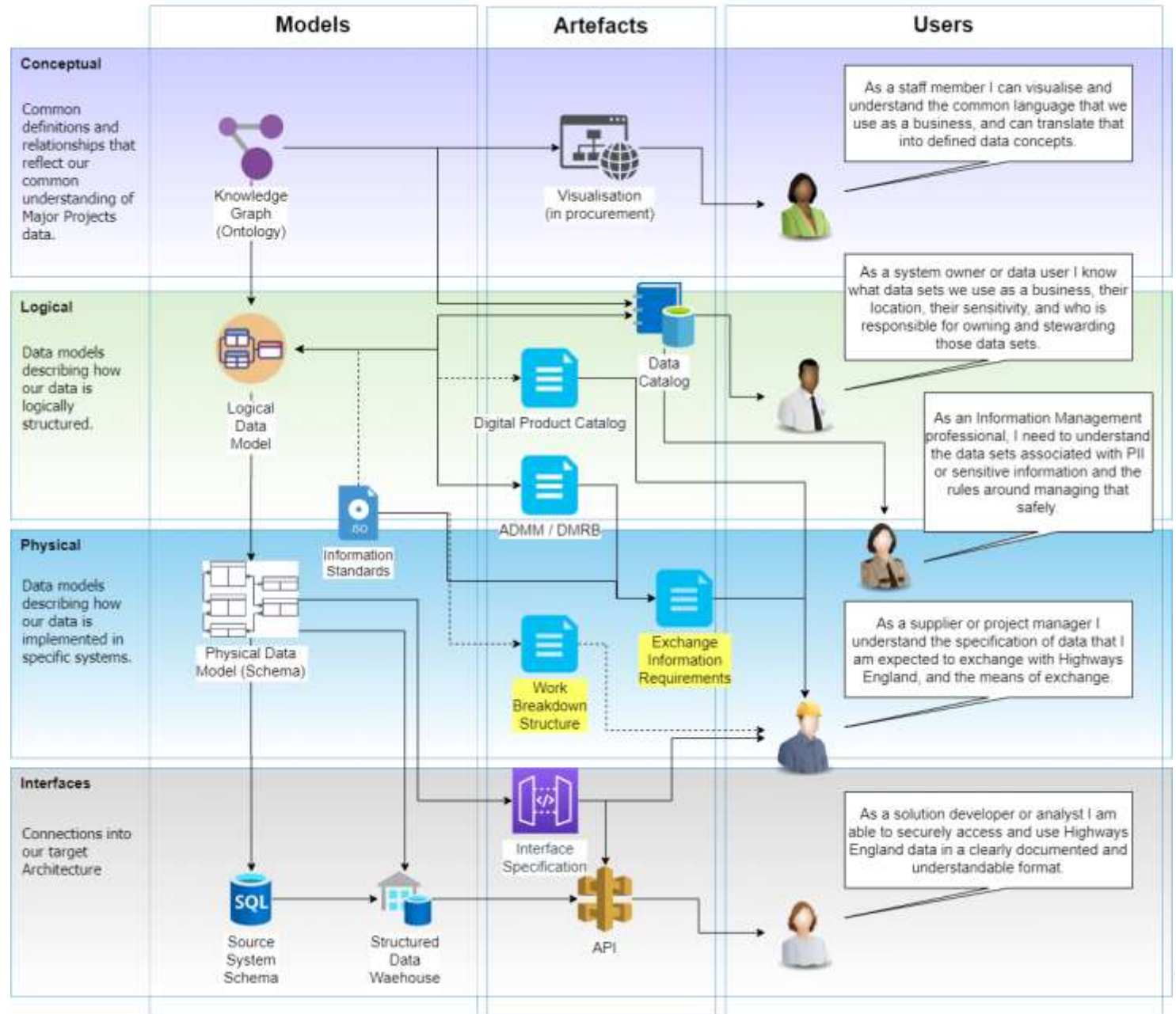
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Proposed method

Key features:

- Common set of centrally-held models.
- Aligned to industry Information Standards (e.g. BS1192 etc.).
- Used to generate consistent artefacts.
- Focus on Interface Specifications between systems.

Toolkit for Data Modelling



What are we investing in?

- Interactive visualisation of our Ontology
- To allow exploration and review by non-IT staff
- To ease maintenance and assurance of the Ontology.

