BDTIC
4CH BUILDING DIGITAL TWIN International Congress

Effective Ontology Networks
for interoperability

Bram Bazuin
Head of Expertise Fields
Semmtech
brambazuin@semmtech.com

ORGANIZED BY:

BDTA DigiChecks EUnet4DBP

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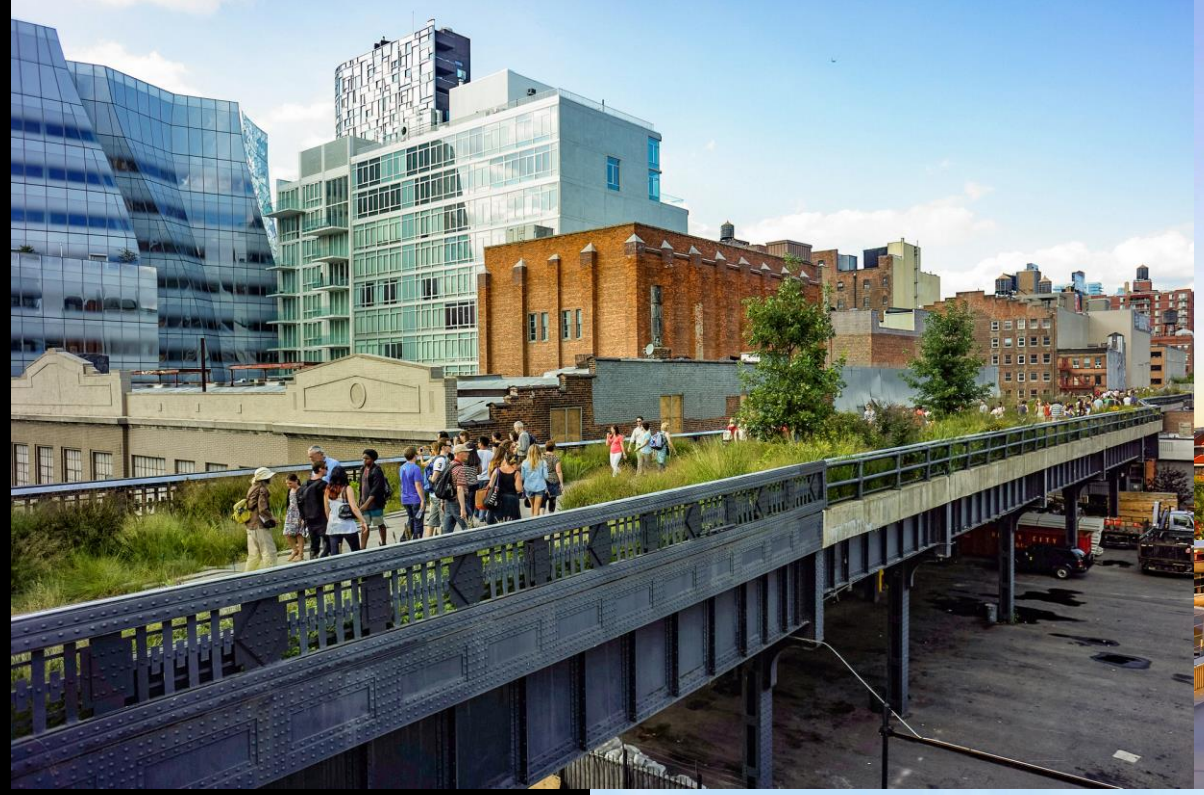

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BUILDING DIGITAL TWIN ASSOCIATION

Building Digital Twin Association

VISION

To allow the **coordination** of a multicriteria **efficient** decision-taking across all AECOO stakeholders by digitally duplicating EU building stock.

OPEN TECH FRAMEWORK

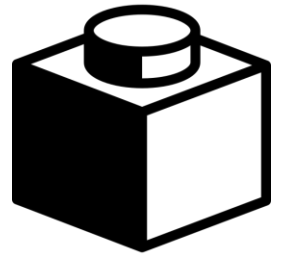
Generate an **Open Technology Framework** which allows improved **interoperability** with and across Building Digital Twins.

REUSE

Developments will consider **existing and domain-independent Open Standards** whenever possible.

What's going well?

- **Ontologies** proven to be a **corner piece** for Digital Twins.



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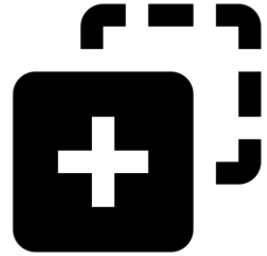
What's going well?

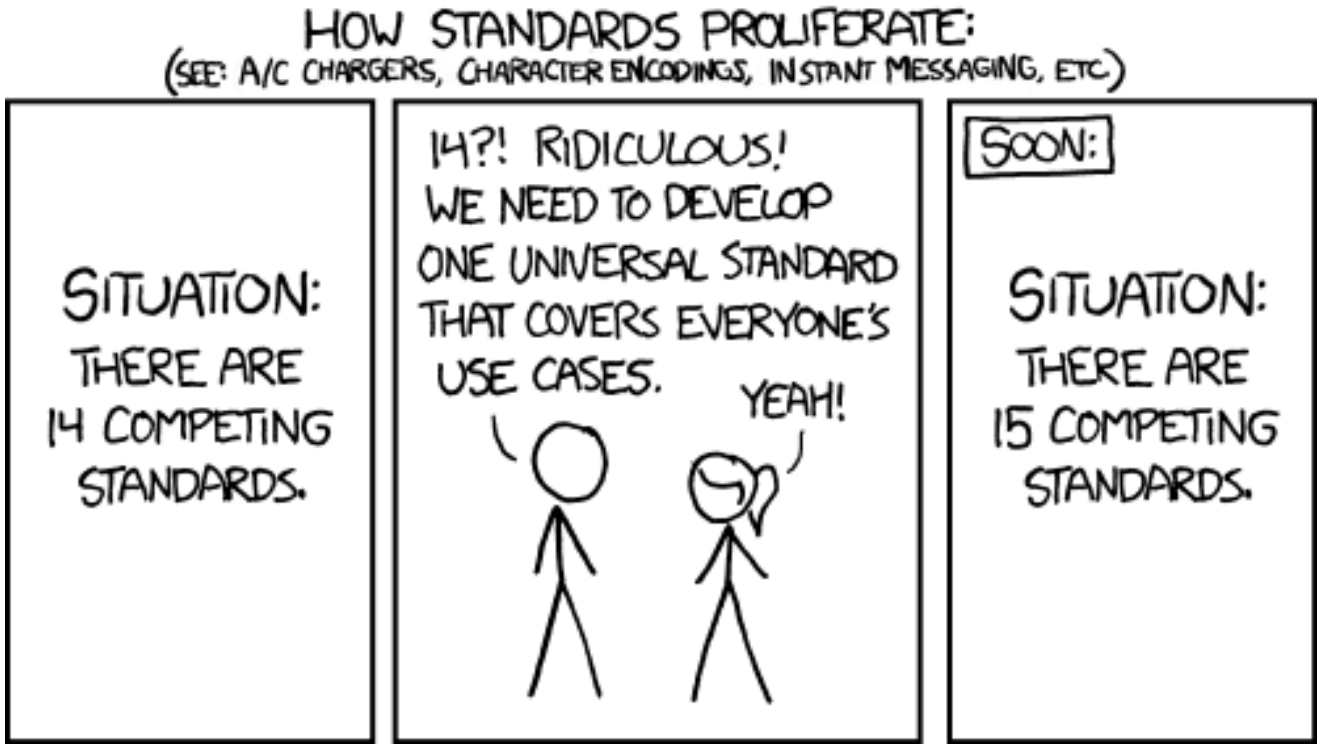
- By far most ontologies apply **W3C Linked Data** recommendations.

What could be improved?

Ontology reuse still sub-optimal, limiting effectivity.

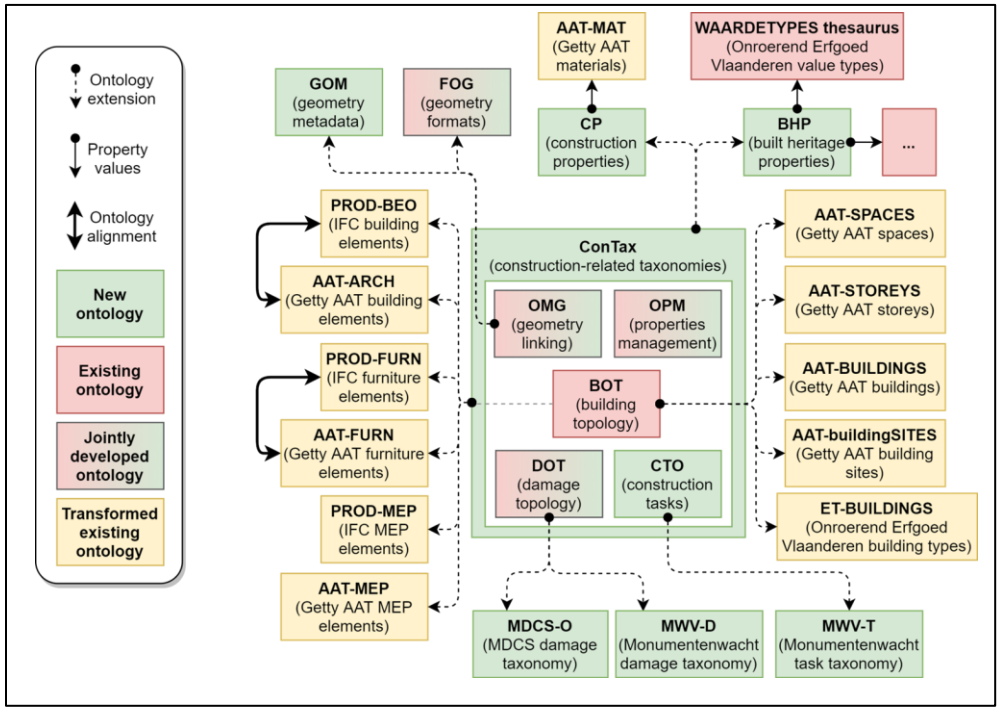


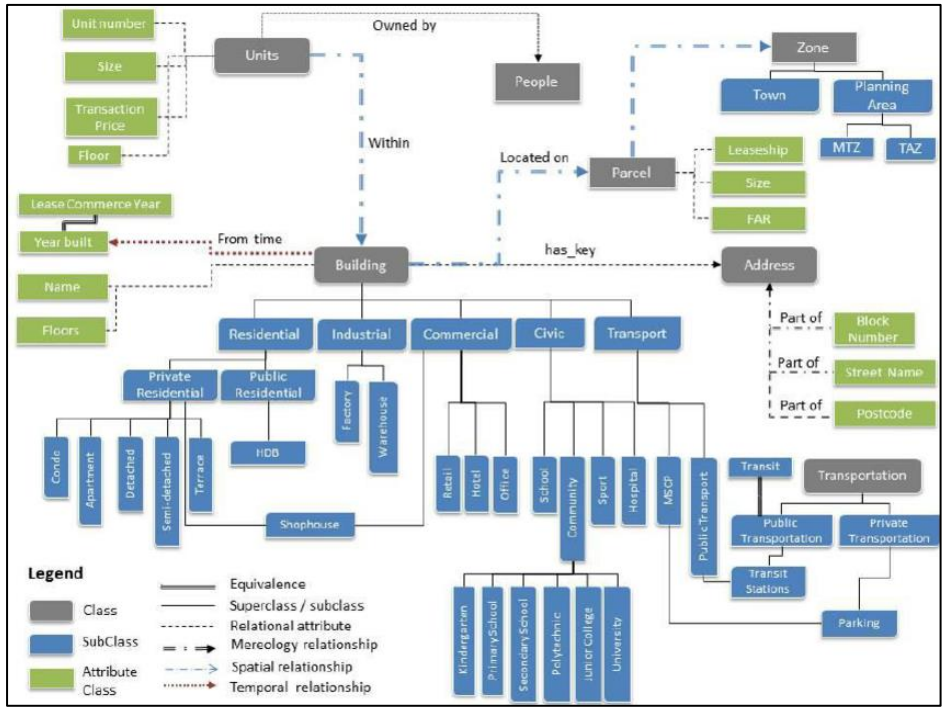
A Modern Classic in Standardisation

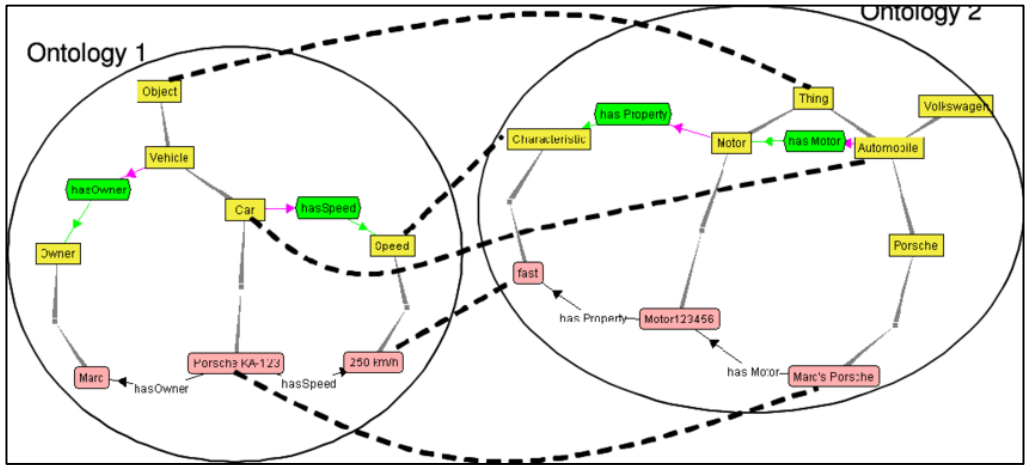


https://xkcd.com/927/

Existing Ontology Networks







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Notes on Presentations

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Bram's Notes (A)

- **COGITO** – Graphical notation aids early discussions, however, does not ensure it happens.
- **BIM2TWIN** – Use-case based approach, modelling choices of others a challenge for alignment.
- **HYSTORE** – Limited number of existing ontologies is a challenge as well as an aid.
- **Judith Fauth** – Non-technical domain experts have a key stake in ontologies.

Bram's Notes (B)

- **ACCORD & CHEK** – (1) An ad-hoc process kicks issues down the road, (2) RDF is a key component, not a one-size-fits-all.

- **DigiChecks** – Modularize abstraction levels and those responsible for developing. Define selection criteria for

- **CIMNE** – Use RDF for information exchange, not for storage (e.g. timeseries).

Activities & Road Map

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Activities BDTA

- ✓ Definition of “Ontologies and Building Digital Twins”
- ✓ Development of some ontologies
- ➢ Definition of Core Components (CEN TC442, EN17632)
- ❑ Alignment and definition of Interoperable Ontologies principles
- ❑ Improved interoperability of existing Domain Ontologies
- ❑ Catalog of Building Digital Twin Ontologies

BDTA Roadmap

#BDTIC

BDTA as **initiator**

2024

Provide Digital Twin Ontologies in a BDTA Catalog

2025

Add toolkit and guidelines to BDTA Catalog

2026+

Align Values and Principles for Ontology Networks

BDTA as **facilitator**

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