Digital Transformation of the Construction Industry

- Better Information Management

Lars Chr. Fredenlund
CEO
Cobuilder

Twitter: @_fredenlund

9th INTERNATIONAL QUALITY in CONSTRUCTION SUMMIT-
Istanbul, 5th of November 2019

Level of Digitisation…

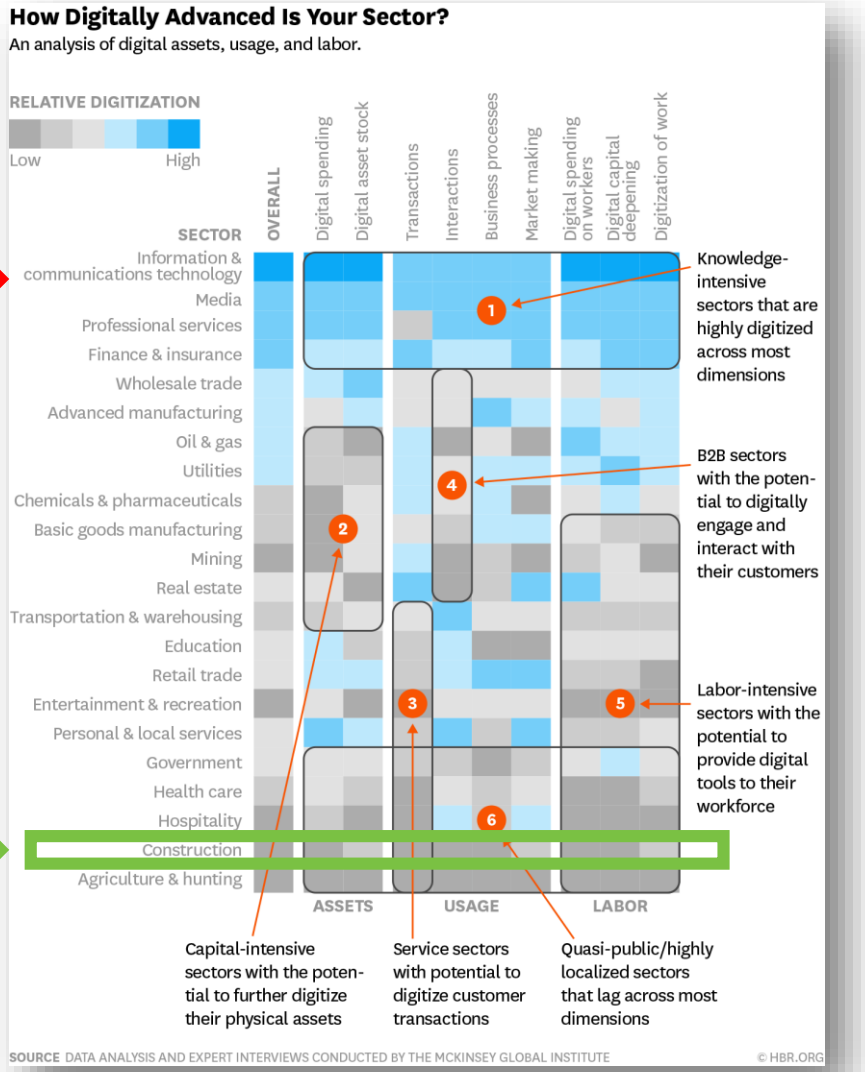
Target status

BIM Regulation

The digital Gap that needs bridging

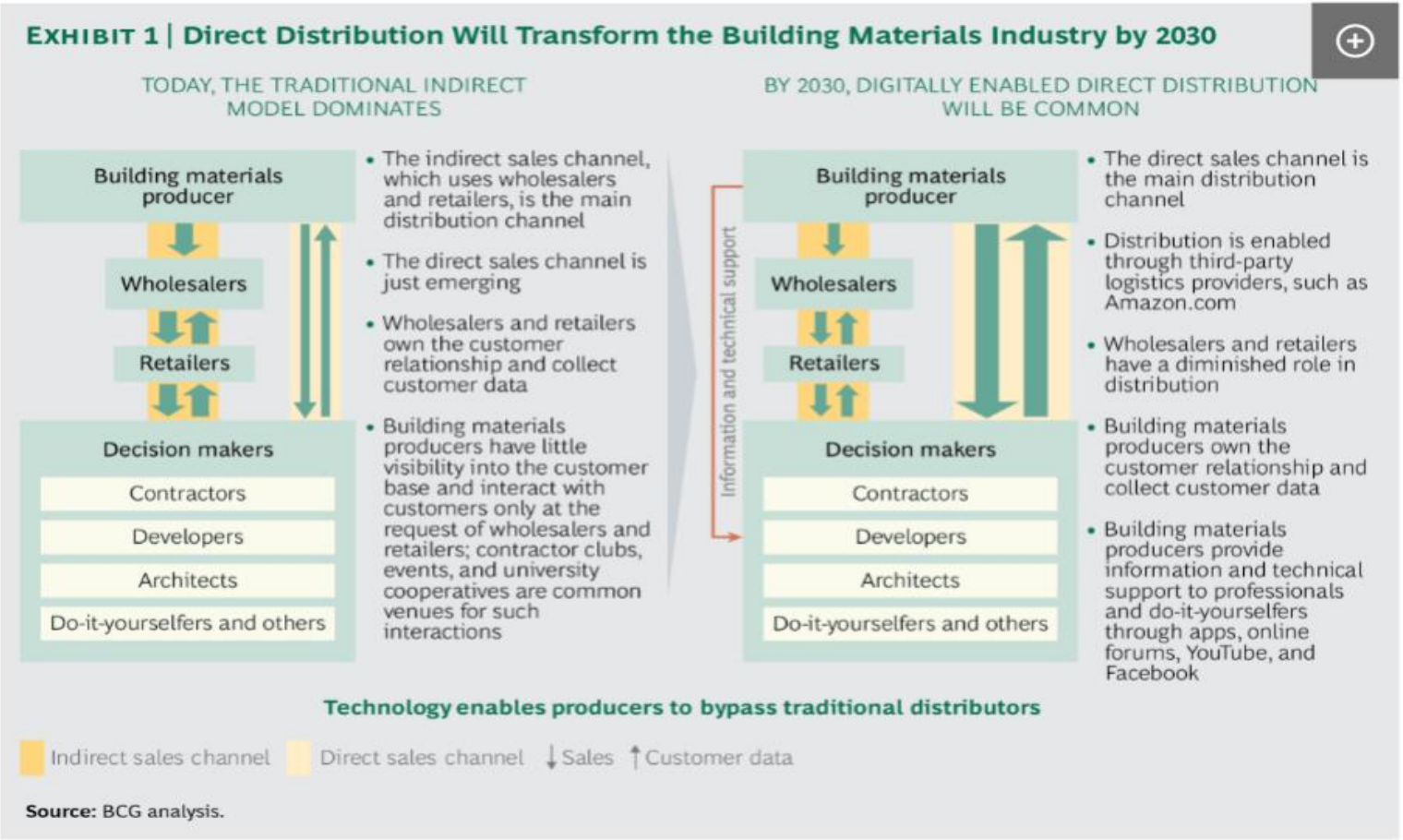
Actual status

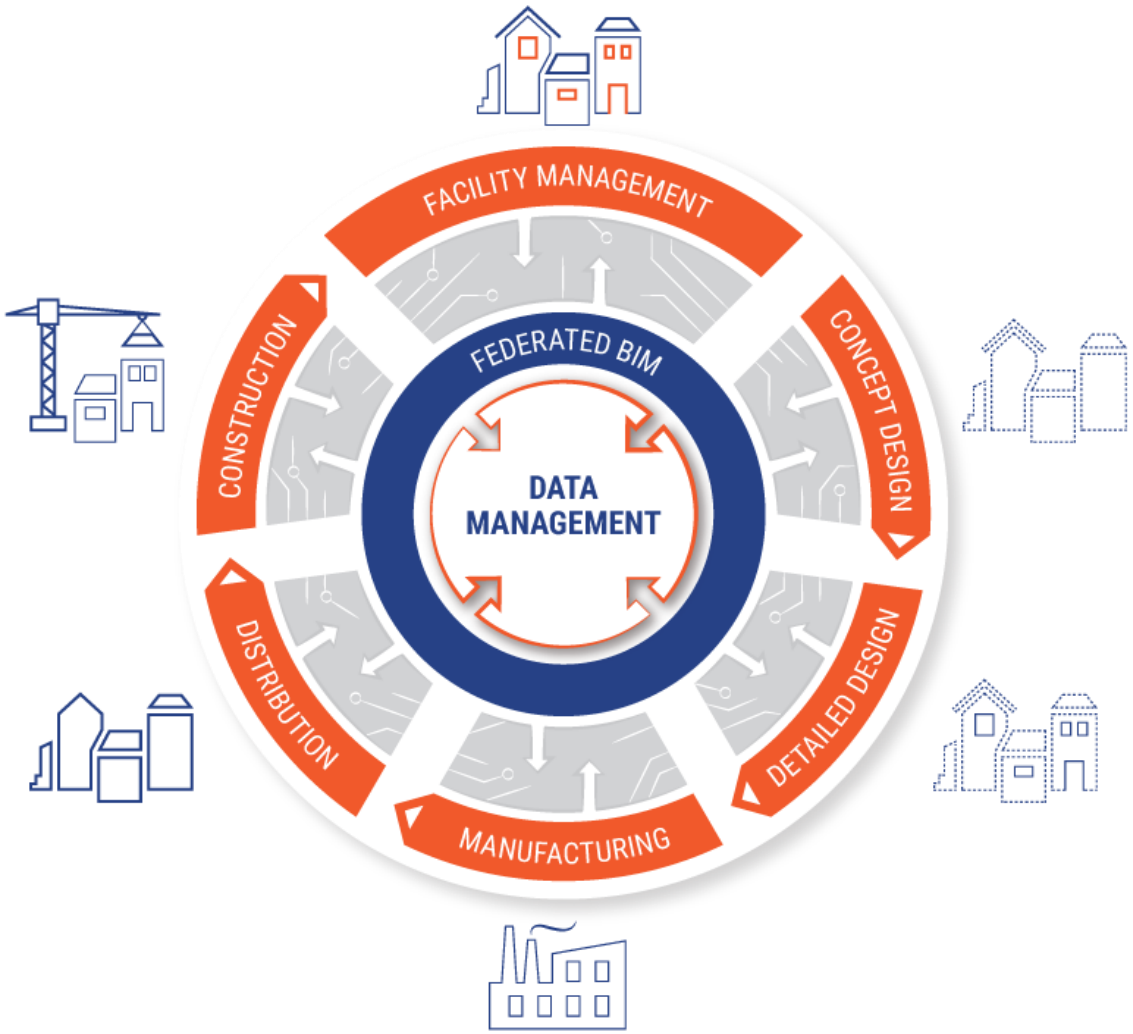
Construction



cobuilder

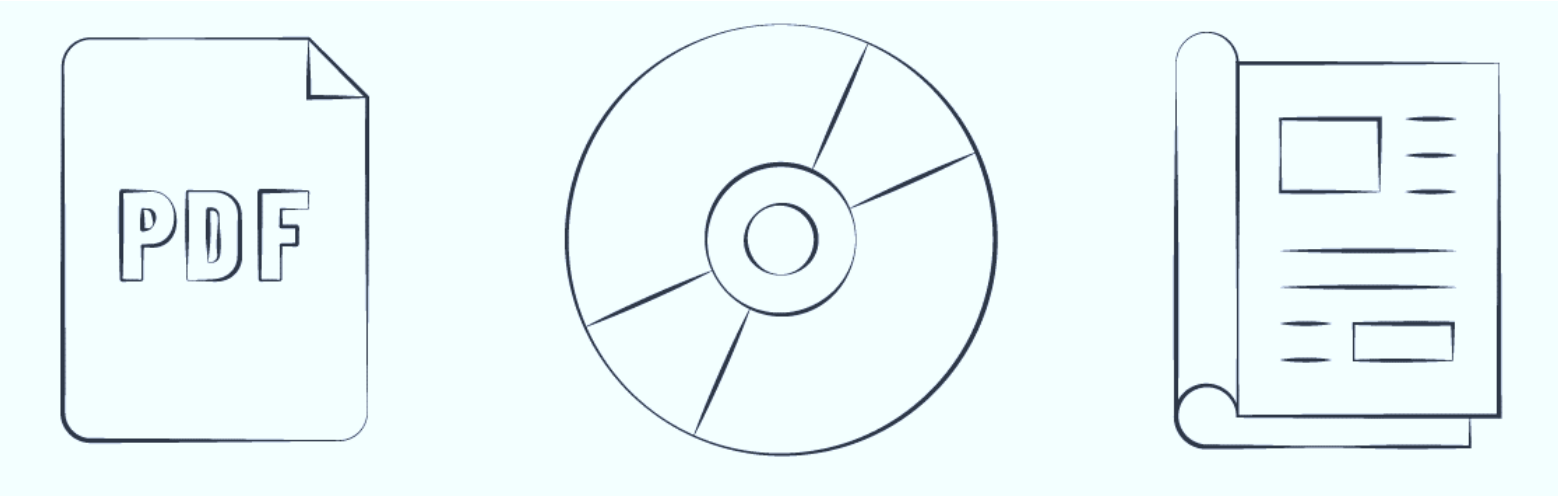
The transformation in the supply chain



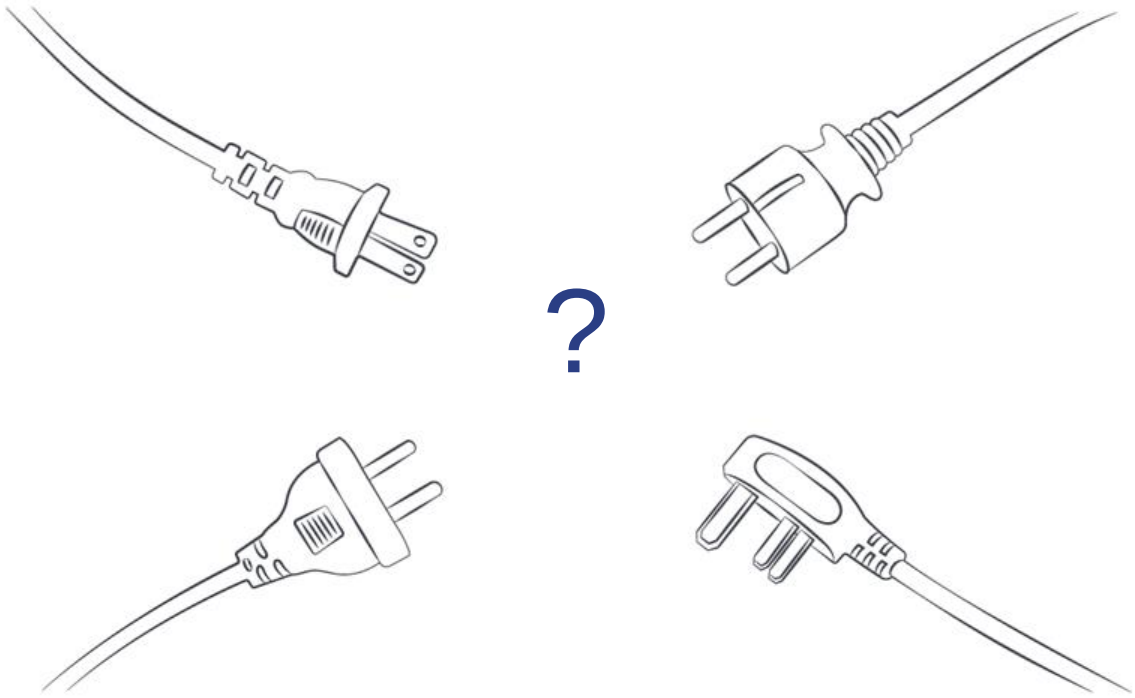

FACILITY MANAGEMENT
CONCEPT DESIGN
DETAILED DESIGN
MANUFACTURING
DISTRIBUTION
CONSTRUCTION
FEDERATED BIM
DATA MANAGEMENT

How can we transform **our** industry ?

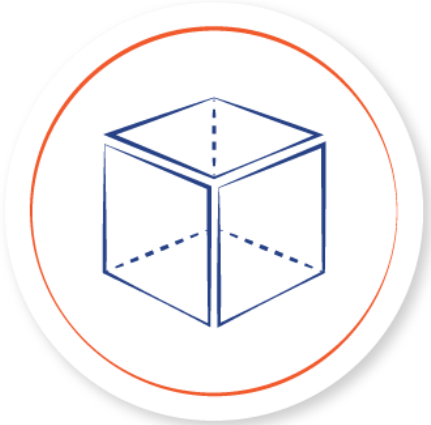
The big issue: **unstructured** data



Without standards ?



What are we talking about ?

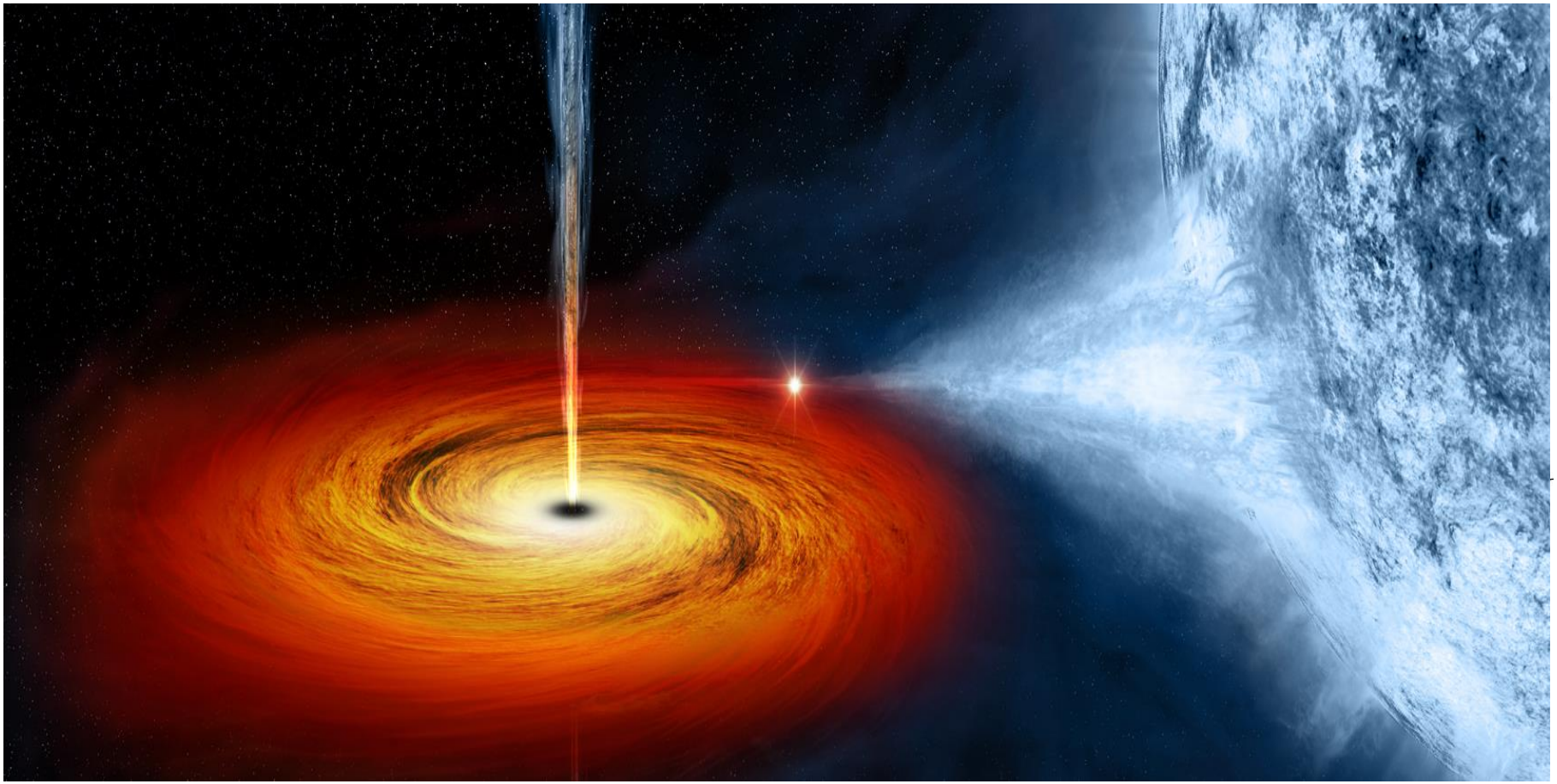


GEOMETRY

DATA

DOCUMENTATION

WARNING!! The fancy bit, BIM models = the Great Black Hole of BIM



And, everyone creates information locally !

NBS → Thermal Transmittance

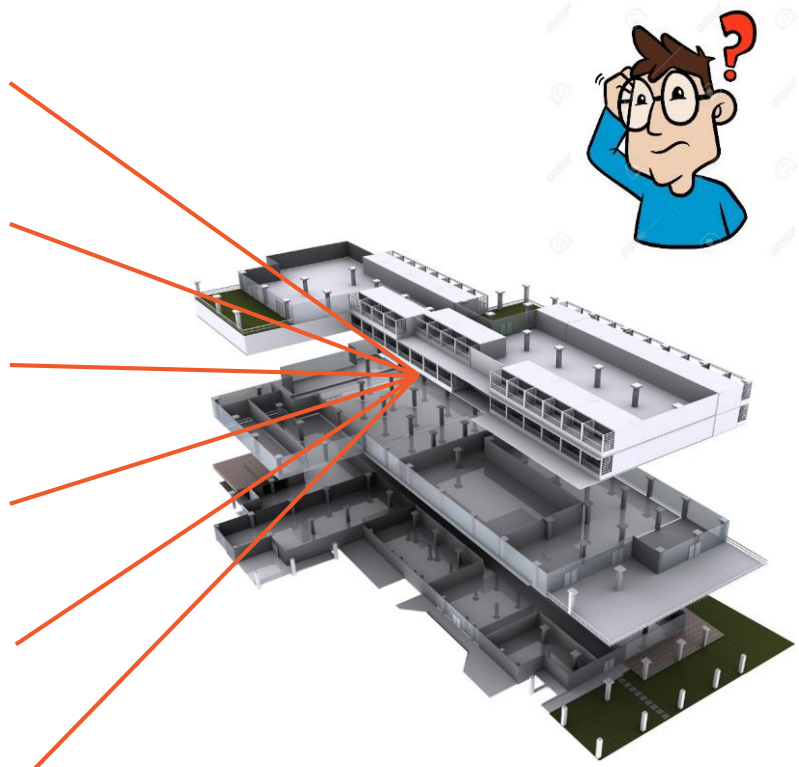
eCl@ss (CLASSIFICATION AND PRODUCT DESCRIPTION) → Heat transfer

IFC → Thermal Transmittance

AUTODESK REVIT → Thermal conductivity

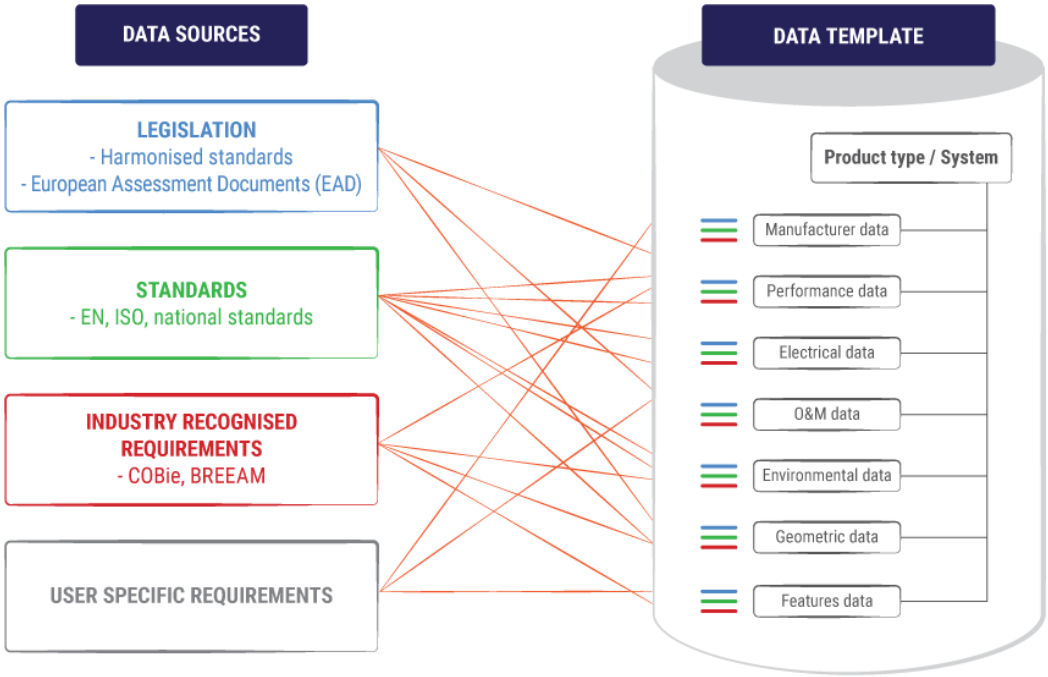
ETIM International → U-value

OMNICLASS (A Strategy for Classifying the Built Environment) → Thermal resistance

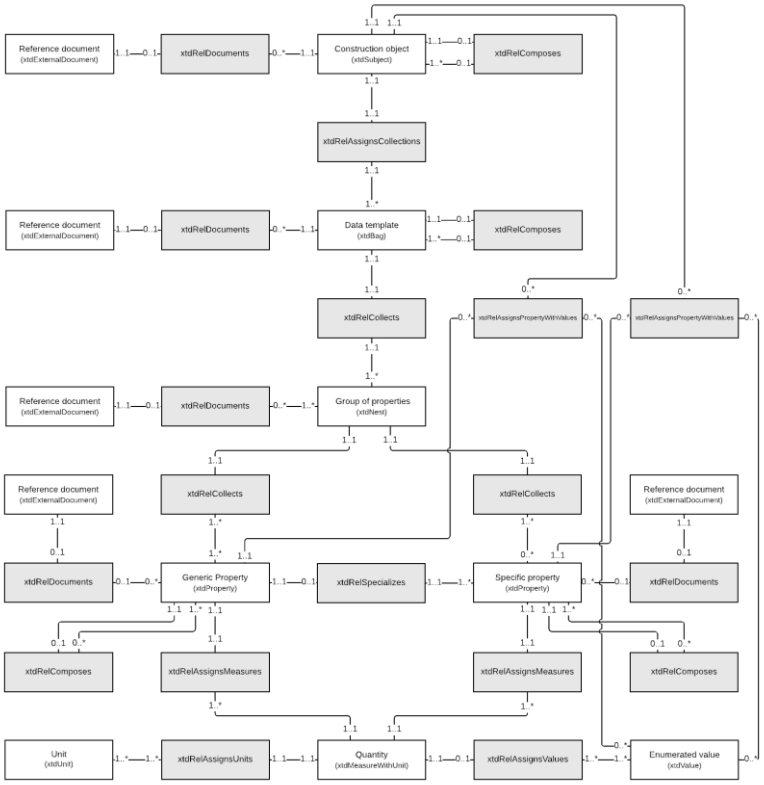


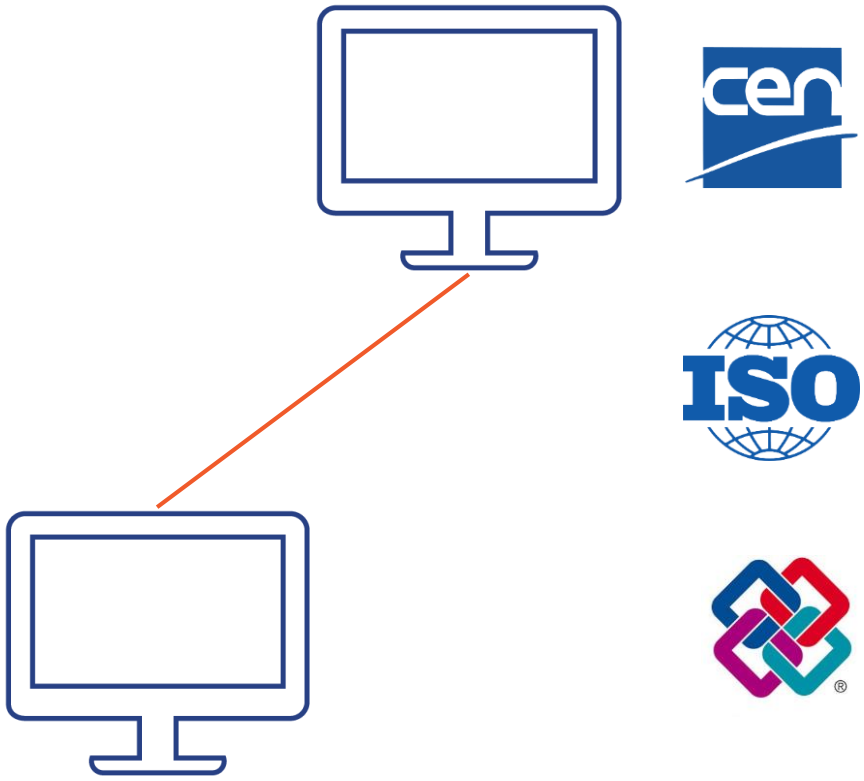
The solution – Data Templates !

Standardised properties & Data Templates



Data Templates = Machine readable data





Trust in reliable information

BRITISH STANDARD

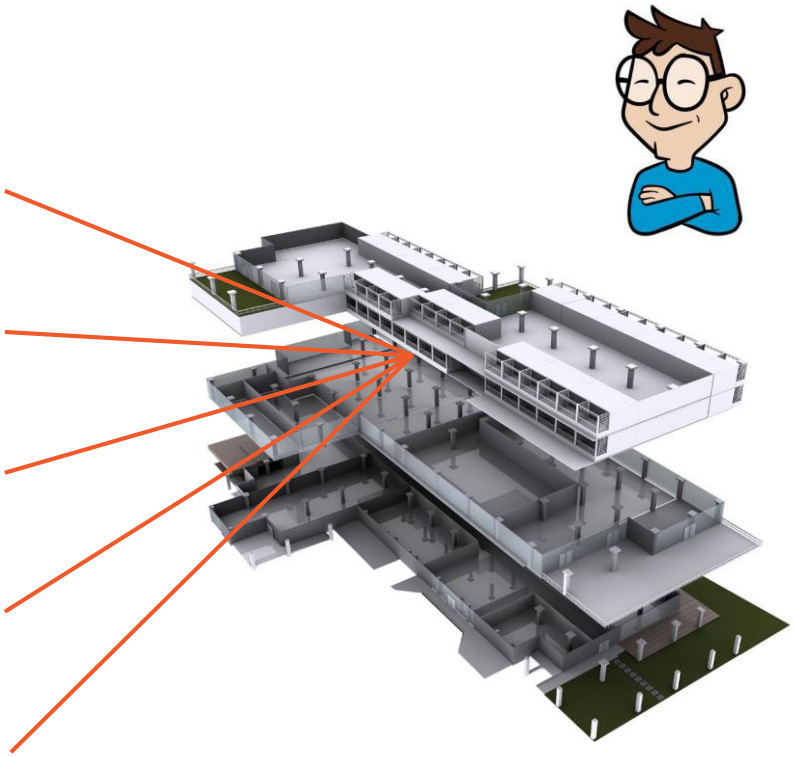
BS EN 14351-1:2006 +A2:2016

Windows and doors — Product standard, performance characteristics —

Part 1: Windows and external pedestrian doorsets

BSI British Standards

- Thermal Transmittance acc. to EN ISO 10077-1
- Thermal Transmittance acc. to EN 14351-1
- Thermal Transmittance acc. to EN ISO 10077-2
- Thermal Transmittance acc. to EN ISO 12567-1
- Thermal Transmittance acc. to EN ISO 12567-2



Contractual agreement

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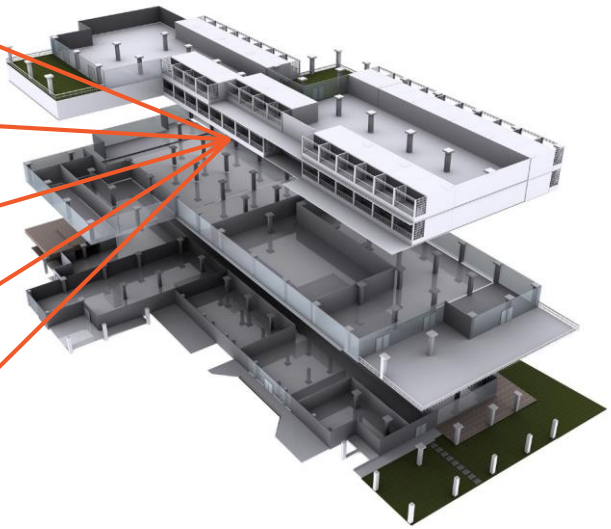
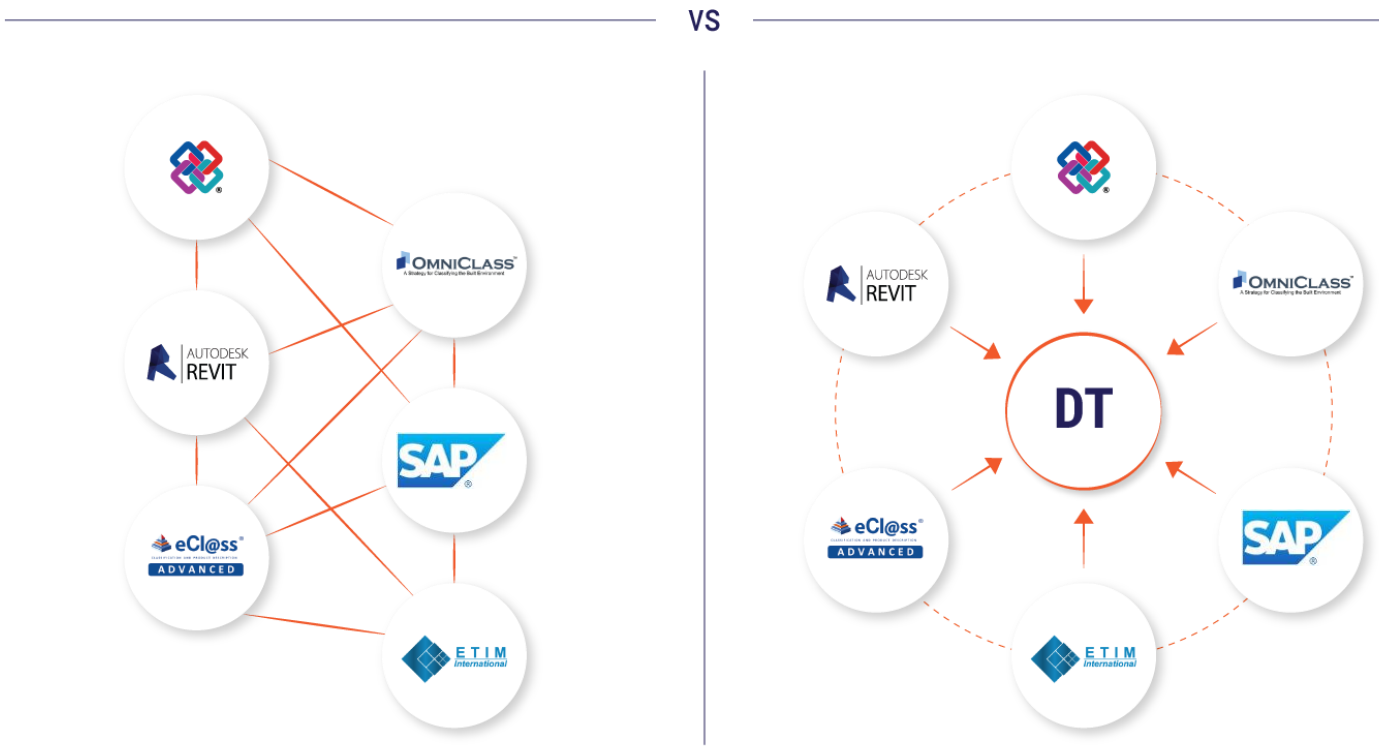


From siloed data – to the use of Data Templates



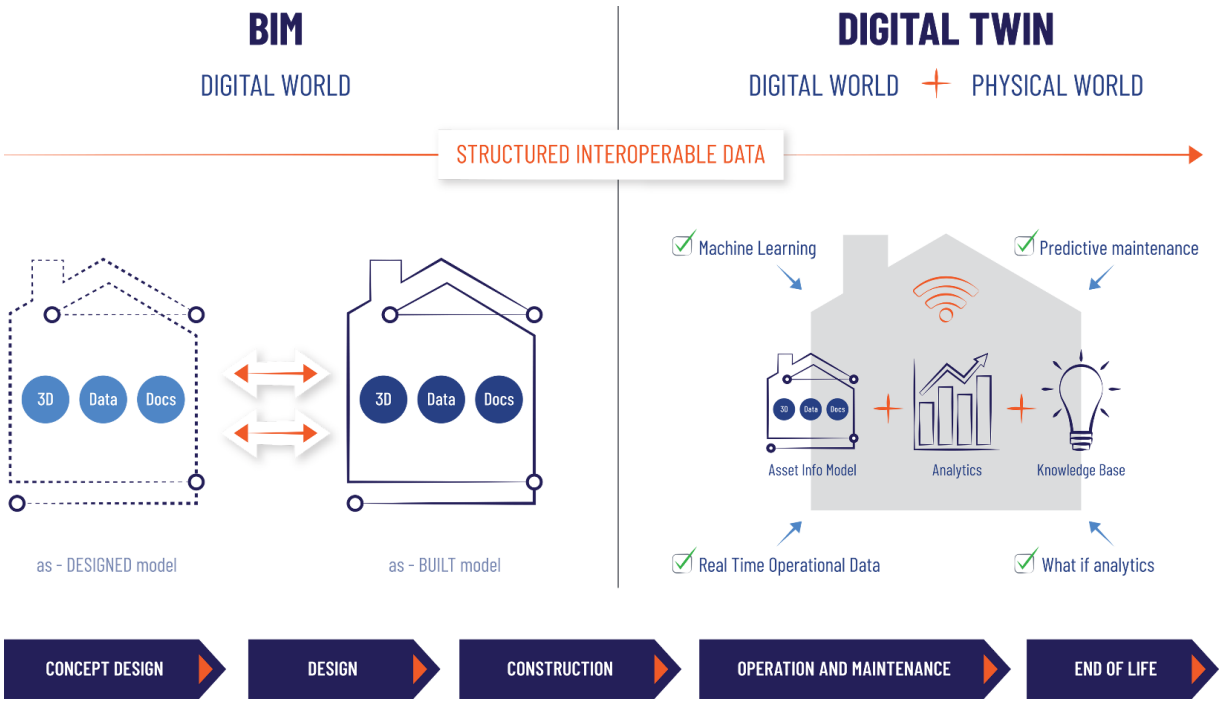
Finally we have a tool !

Designers

Ma

Clients

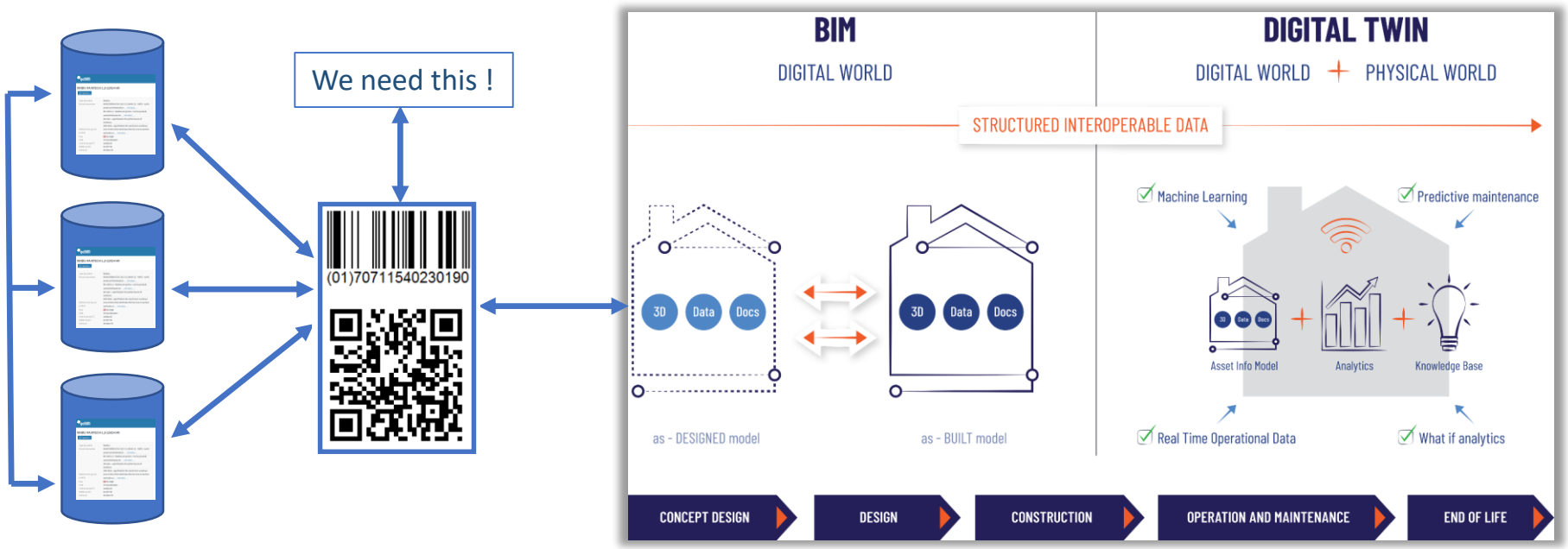
Digital Twin – this new digital market is becoming a priority for market actors



The as-designed model is based on input from the design teams which ultimately forms the basis for the as-built model that contains all the characteristics of a building. #CEN #ISO #ASTM etc. standards opens a closed market

BIM enables Cobuilder to provide data to create Digital Twins which is a virtual representation of physical as-built asset by linking standardized data to 3D. This opens a new digital market on planned development, where assets are sold

We also need **GS1** standards, common identifiers



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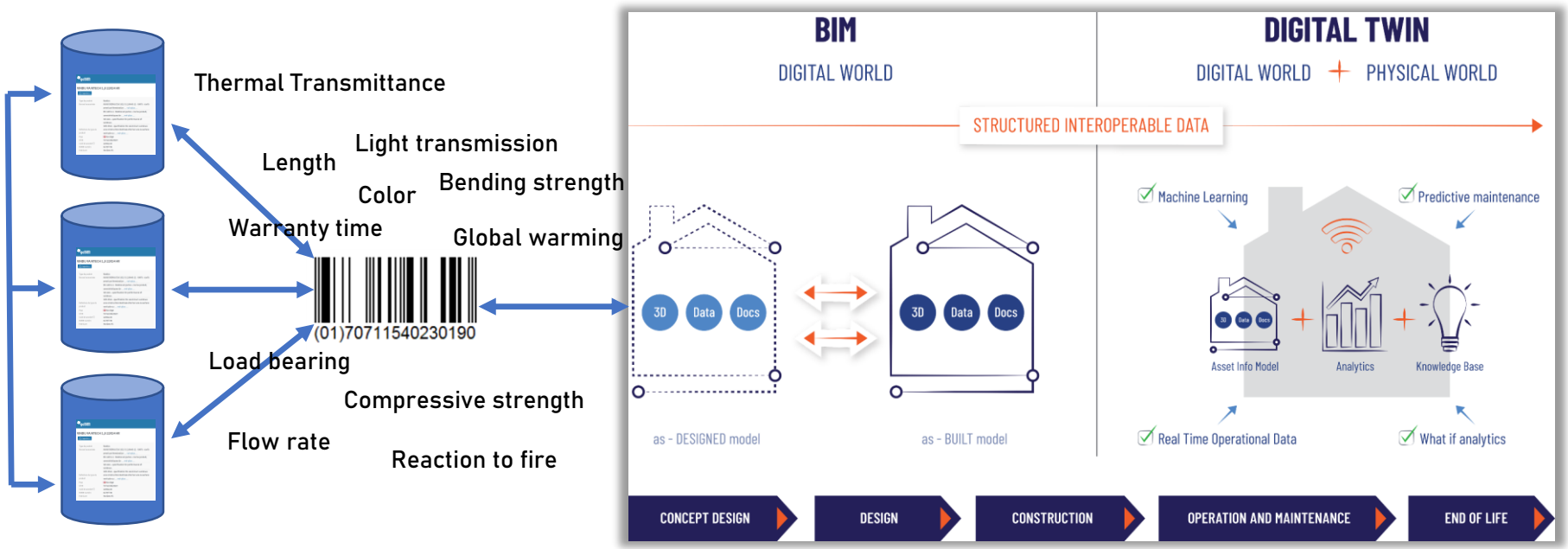
GS1 standards & structured Data Templates



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prEN ISO 23386

prEN ISO 23387

4 070071 967072

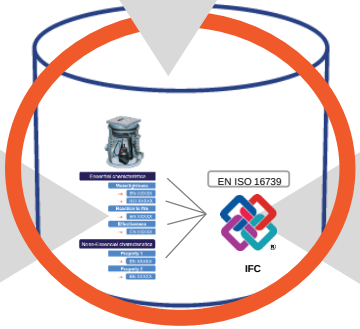
GS1

Essential characteristics

- **Watertightness**
  - EN XXXXX
  - ISO XXXXX
- **Reaction to fire**
  - EN XXXXX
- **Effectiveness**
  - EN XXXXX

None-Essencial characteristics

- **Property 1**
  - EN XXXXX
- **Property 2**
  - EN XXXXX



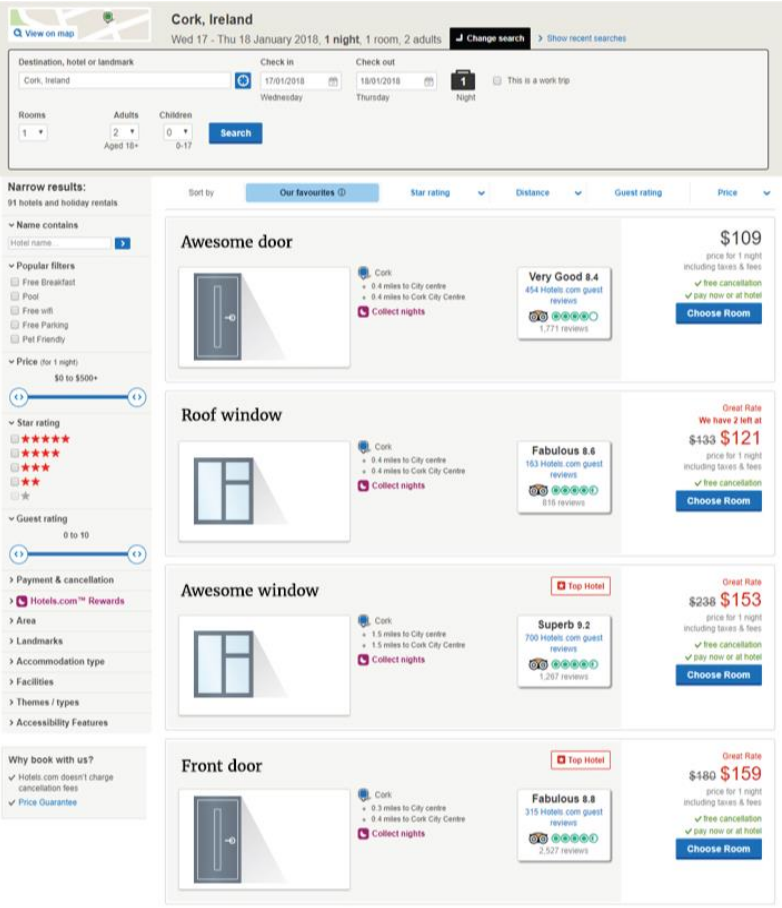
EN ISO 16739

IFC™

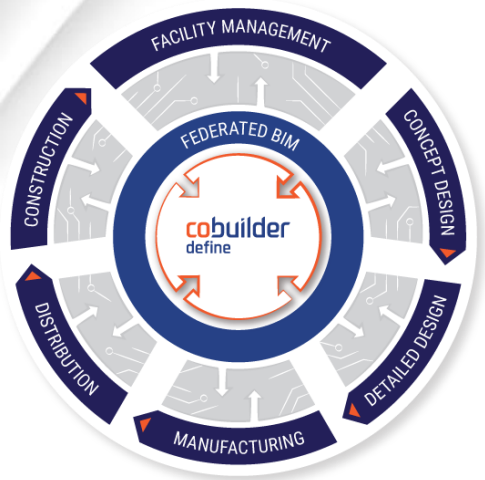
Common technical language in a data dictionary based on EN ISO 12006-3

Amazon like marketplaces !

Similary, digitalisation in the construction sector made it possible to use structured standart-based product information for both setting specific product requirements and identifying, specifying and purchasing construction products that meet those requirements.



Please, contact us for further questions on Digital Transformation !



Thank you!

Lars Chr. Fredenlund
fredenlund@cobuilder.com

Twitter: @_fredenlund

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