

Implementing Information Management for Integrated Design of NZEB's

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BIM and Sustainable Buildings

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Antwerpen

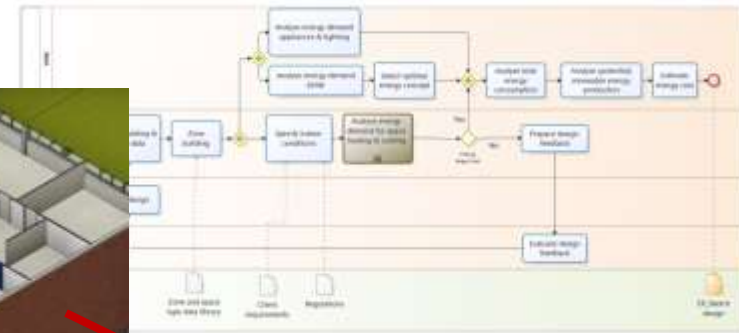
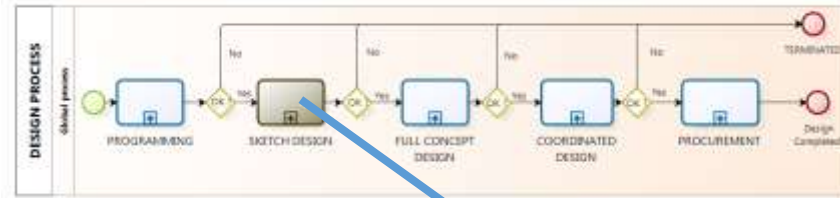
- **What's on the horizon**
- **Transition**
- **Standardisation**
- **What is available / ongoing ?**
- **Challenges and Pitfalls**
- **Conclusions / Recommendations**

What's on the horizon

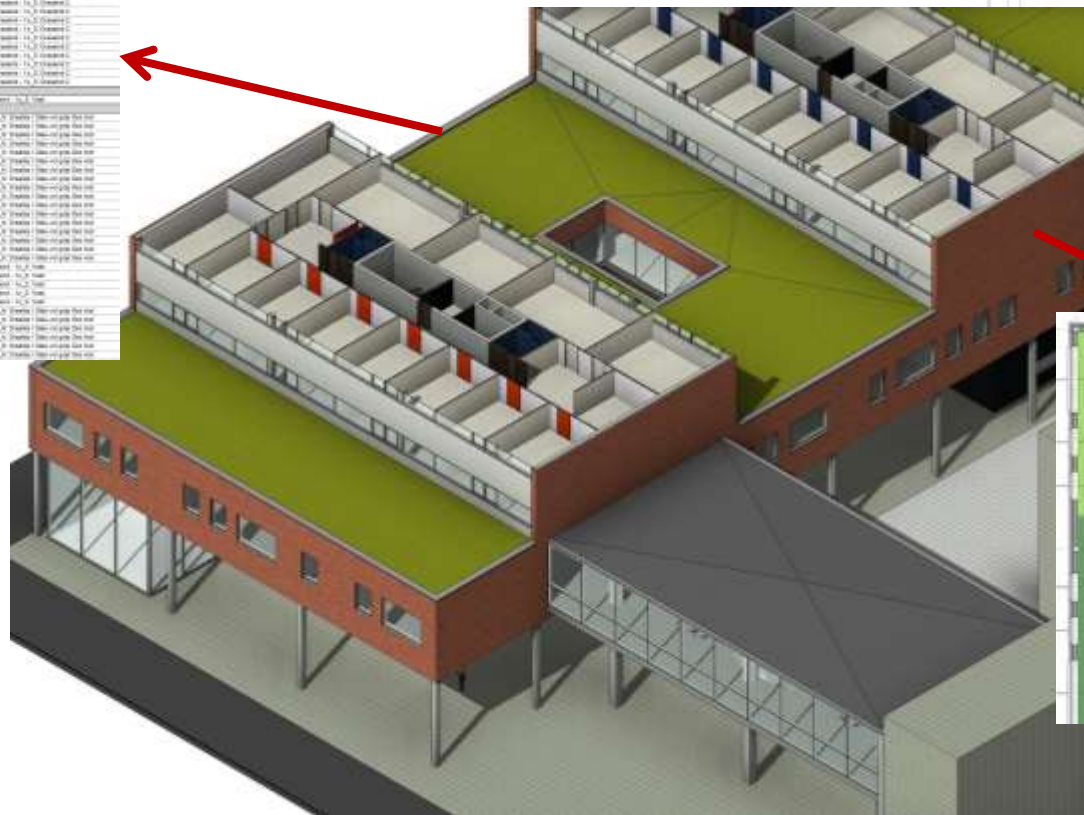
- › Integrated, well defined industrial processes and Information management
- › Case: NZEB from BIM to Simulation and BMS / FM

Integrated, well defined “industrial” processes

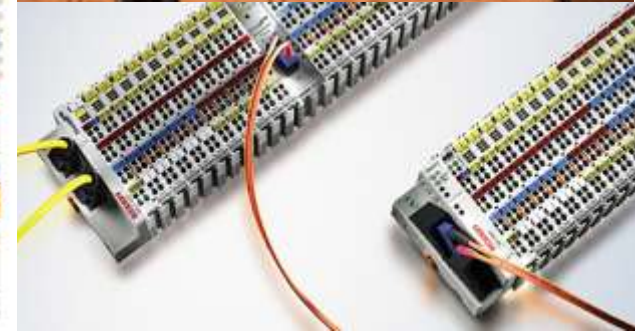
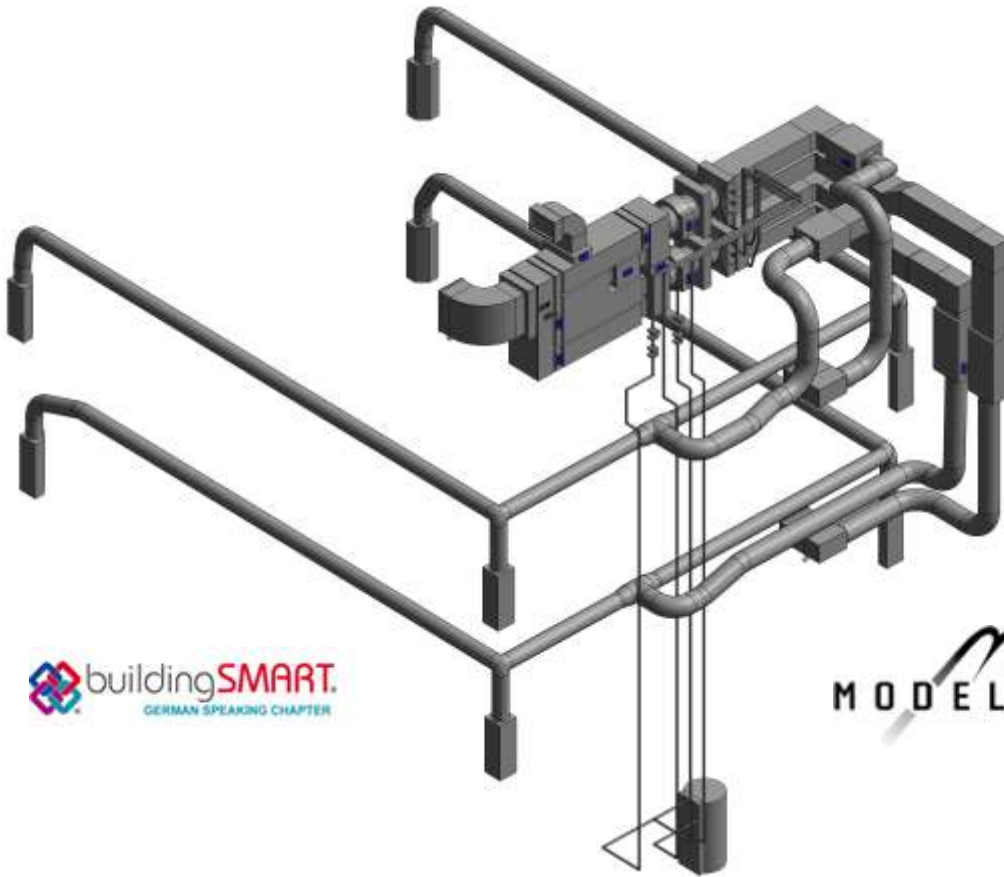
- Create needed information once
- Use information: entire life-cycle
- Views depending on discipline



A screenshot of a spreadsheet with multiple columns and rows of data, likely representing project information or energy performance metrics.



- BIM as “backbone”
- Using “Open Standards”
- Process: “Design, Build, Operate”



Transition to BIM

➤ Where to start?

Part 2

- Define general goals and ambitions (version 1)
- Analyse current workflows
 - Detect area's for improvement
 - Define needs
- Define improved workflows
- Stepwise implementation
 - First case / project
 - Invest in people
 - Don't believe the software vendors ... ;-)
 - BIM protocols / guidelines
- Get the employer / tenant / facility manager on board
- Adjust goals and ambitions, adjust BIM-based workflows

Standardisation

- › What need to be defined on which level?
- › Topics: some examples
- › What to expect (an what not ...)?

- What need to be defined on which level?
 - World wide: **ISO** TC 59 SC 13
 - Europe: **CEN** TC 442
 - Belgium: **NBN / BBRI** E 442
 - “Company”
 - Project

- Type of “document”
 - Official standard
 - Technical guideline
 - Templates
 - Libraries

- From ISO xx xxx to EN-ISO xx xxx (e.g. IFC, IDM, ...): “the basics”
- Product data
 - Properties: “machine readable standards”
 - Product templates
 - Linked databases
 - How to certify / control
 - How to maintain
 - Technical implementation
 - Material / component / system
- Processes
 - Committee draft EN-ISO 19650 (based on PAS 1192)

What is available?

- › UK BIM Level 2
- › UK BIM Level 3: strategic plan
- › *Le « Belgian BIM handbook » : un guide de bonnes pratiques*
- › BBRI: Technical committees, projects, working groups, BIM portal, ...

- › ... and much more on the net and in publications.

- *“A defined set of standards and tools”*
 - BuildingSMART / ISO
 - Processes (IDM): ISO 29481
 - Data dictionary (IFD): ISO 12006-3
 - Data (IFC): ISO 16739
 - PAS 1192 (part 2 to 5) (<http://bim-level2.org/en/>)
 - RIBA work stages (www.ribaplanofwork.com)
 - NBS BIM Toolkit: free online tool (<https://toolkit.thenbs.com/>)
 - Templates, case studies, ...

NBS BIM Toolkit

SEARCH DEFINITIONS... 🔍

PROJECTS CONTENT SUPPORT SIGN OUT

161020. PiXii Home

📍 ALM, Antwerpen-Berchem

Edit details Participants Export

Stage 0. Strategy

Overview Details Roles **Tasks** Deliverables Verify

Tasks at Stage 0

search tasks... 🔍

Ref	Task	Responsibility	
0.010	Identify Business Case requirements.	Client	✓
0.020	Identify Strategic Brief.	Client	✓
0.030	Identify Core Project Requirements	Client	✓
		Project lead.	✓
		Project lead	✓
		Project lead	✓
		Project lead	✓
0.080	Contribute to preparation of Strategic Brief	Lead designer	✓
0.090	Comment on project Programme	Lead designer	✓
0.100	Provide Feedback from previous projects	Lead designer	✓
0.110	Contribute to preparation of Strategic Brief	Architect	✓

Learn about stage 0

Stage 0 is used to ensure that the client's Business Case and the Strategic Brief have been properly considered before the Initial Project Brief is developed.

Help to make decisions at this stage:

- 🔗 [The Level 2 BIM standards and tools](#)
- 🔗 [Employer's Information Requirements](#)
- 🔗 [Uniclass 2015](#)

Related NBS services

Achieve successful digital information flow and exchange with a range of NBS services:

NBS BIM Object Standard

By considering object and information structures from the start you ensure that your project meets user needs and, ultimately, achieves better outcomes. Using the NBS BIM Object Standard ensures consistency and commonality by incorporating a standard set of minimum requirements for BIM objects. This standard brings benefits for clients, designers and manufacturers alike.

- Free online tool
- Based on UK context (RIBA, Uniclass, ...)
- Try it ... !

➤ PAS 1192 (part 2 to 5) (<http://bim-level2.org/en/>)



Welcome to the new BIM Level 2 website

We have developed this resource as a point of reference for clients, designers, contractors, trade suppliers, manufacturers, maintainers, operators and users to understand how to use Building Information Modelling (BIM) and data to improve productivity and reduce waste.

Work has been undertaken over the past four years in a joint Government – Industry Working Group called the BIM Task Group to provide Standards, Guides, Case Studies and shared experiences to help all stakeholders with their BIM adoption Journey.

Over the next six months you will see the final documents and materials launched here starting with the standards. There will be regular updates through to the autumn of 2016 and we invite you to keep visiting this website to see the new national and international guides and case study materials.



➤ Key measures

➤ Open standards

- The creation of a set of new, international ‘Open Data’ standards which would pave the way for easy sharing of data across the entire

➤ Contractual framework

- The establishment of a new contractual framework for projects which have been procured with BIM to ensure consistency, avoid confusion and encourage, open, collaborative working.

➤ Cultural environment

- The creation of a cultural environment which is co-operative, seeks to learn and share

➤ Public sector client

- Training the public sector client in the use of BIM techniques such as, data requirements, operational methods and contractual processes

<http://digital-built-britain.com/>

› *Le « Belgian BIM handbook » : un guide de bonnes pratiques*

BIM



This guide to BIM and its annexes present a “generic protocol” as well as general rules and fact sheets allowing the stakeholders to define the collaboration rules and thus, optimize the working process.

➤ Das Wissenschaftliche und Technische Bauzentrum (WTB):



➤ NBN / BBRI E442

➤ Technische Comité BIM & ICT

➤ Projecten

➤ VLAIO VIS/iv – Building Information Model

➤ CODEC (Prenormatieve studie
“Communication Framework for Digital Construction)

➤ Cluster BIM



➤ www.bimportal.be/nl/



Challenges and Pitfalls

- Examples
- General issues

› Examples

- › Software: project templates, versions, ...
- › Object libraries
 - › Generic
 - › Manufacturer
- › BIM without rules
- › Too much (geometrical) detail
- › Wrong information
- › Missing information

- Partners excluded / not willing or able to bim
- Shift in tasks: who pays and who get payed?
- Legal issues
 - Who owns the model?
 - Commercial object libraries (protected by a license)
- No clear definition of roles and responsibilities

Conclusions / Recommendations

- Start now
- Be realistic
- Support collaborative work
- Contribute to standardisation
- Enjoy ... !

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