



Architects Council of Europe - Energy day

Quality Architecture for sustainable and high-performing buildings

9:00 – 15:30

WiFi network
Science 14 Free WiFi



Up-skilling the AEC industry to deliver high quality energy efficient retrofitting with BIM learning tools

BIMplement | NET-UBIEP | BIMCert | BIMeet



BIMplement



ACE Energy Day, Brussels
Afternoon session
18/06/2019



ACE Energy Day 2019

Up-skilling the AEC industry to deliver high-quality energy efficient retrofitting with BIM learning tools

Amandine DE COSTER-LACOURT

**Project Advisor, Executive Agency for SMEs (EASME)
Horizon 2020 Energy Unit**

The BUILD UP Skills initiative

Started in 2011:

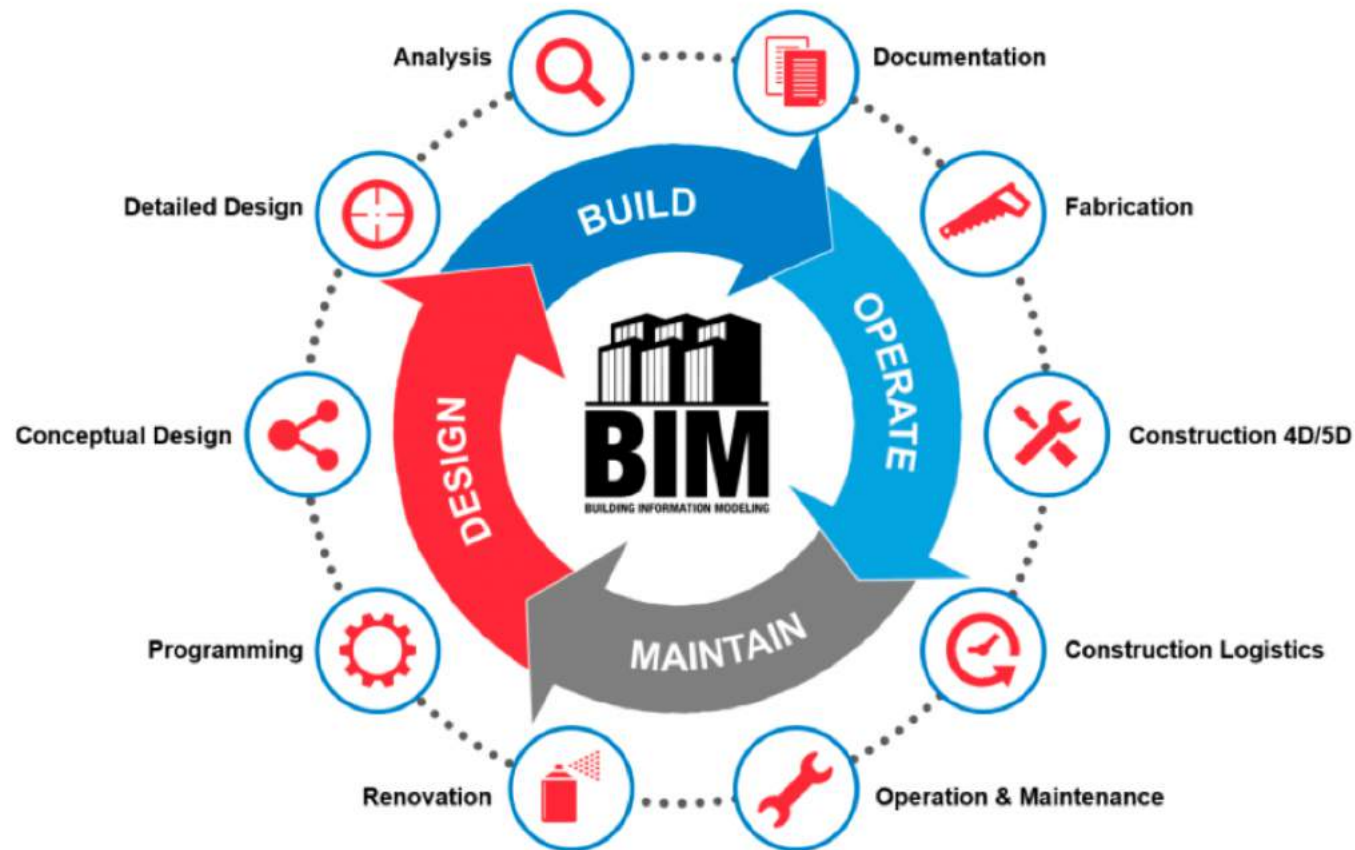


Gathering:



More info: www.buildup.eu/en/skills

BIM: what does it mean for the building value chain?



Source: <https://www.realserve.com.au>

Horizon 2020 projects: BIM qualification & training schemes

- **Net-UBIEP:** *Network for Using BIM to Increase the Energy Performance*, July 2017 - January 2020. IT, SK, ES, LT, HR, NL, EE.

<http://www.net-ubiep.eu/>



- **BIMplement:** September 2017 - February 2020. FR, NL, ES, LT, PL.

<https://www.bimplement-project.eu/>



- **BIMEET:** *BIM-based EU -wide Standardised Qualification Framework for achieving Energy Efficiency Training*, September 2017 – August 2019. LU, FR, UK, EL, FI.

<https://www.vtt.fi/sites/bimeet>



- **BIMcert:** March 2018 – October 2019, UK, IE, PT, HR, North Macedonia. <https://energybimcert.eu/>



→ 'BIMAlliance'



EASME workshop, Barcelona, 16 May 2019



The European Portal For
Energy Efficiency In Buildings



Proceedings, presentations and recordings soon on:
<http://www.buildup.eu/en>



EASME

Thank you for your attention

Amandine DE COSTER-LACOURT

**Project Advisor, Executive Agency for SMEs (EASME)
Horizon 2020 Energy Unit**



BIMplement | NET-UBIEP | BIMCert | BIMeet

- Brief introduction
- Challenges and Opportunities
- Lessons Learned





BRIEF INTRODUCTION

BIMplement

BIMplement why

- No energy efficiency without quality
- No quality without training
 - = the skills of the workforce have to be improved to achieve overall quality in nZEB**

But most SME's managers and workers think that training is useless and wasted time

BIMplement how

- Development of a BIM integrated qualification framework
- Implementation of this QF for 2 specific topics : airtightness and ventilation
- Configuring tools, learning methods, and qualification schemes
- Implementation of the trainings in 50 pilot field labs and experimental sites :
cross-craft, cross trade, hands on.



BRIEF INTRODUCTION

NET - UBIEP

Introduction project:

- *Developing BIM Qualification models with integrated energy performance requirements*
to
- *widespread a better comprehension of energy issues along all the value chain of building industry*
so
- *that both existing and new building will have better energy performances.*



Public Administrations	Professionals (Engineers & Architects)	Technicians (Installers & Maintainers)	Tenants, Owners & Building Administrators
They need to correctly prepare the rules and properly define the requirements for public tender using BIM for energy performance	They need to work in a collaborative environment by using the same basic BIM model implemented with the energy performances requirements through engineering analysis tools	They need to know how to read a BIM model, correctly interpret the data and ensure the owner that all the information for maintenance are available in the correct format	They need to know how to define the requirements for the correct maintenance of a building and how to handle the BIM model for the life time of the building
BIM evaluator BIM facility manager	BIM manager BIM coordinator BIM expert	BIM expert user	BIM evaluator BIM facility managers

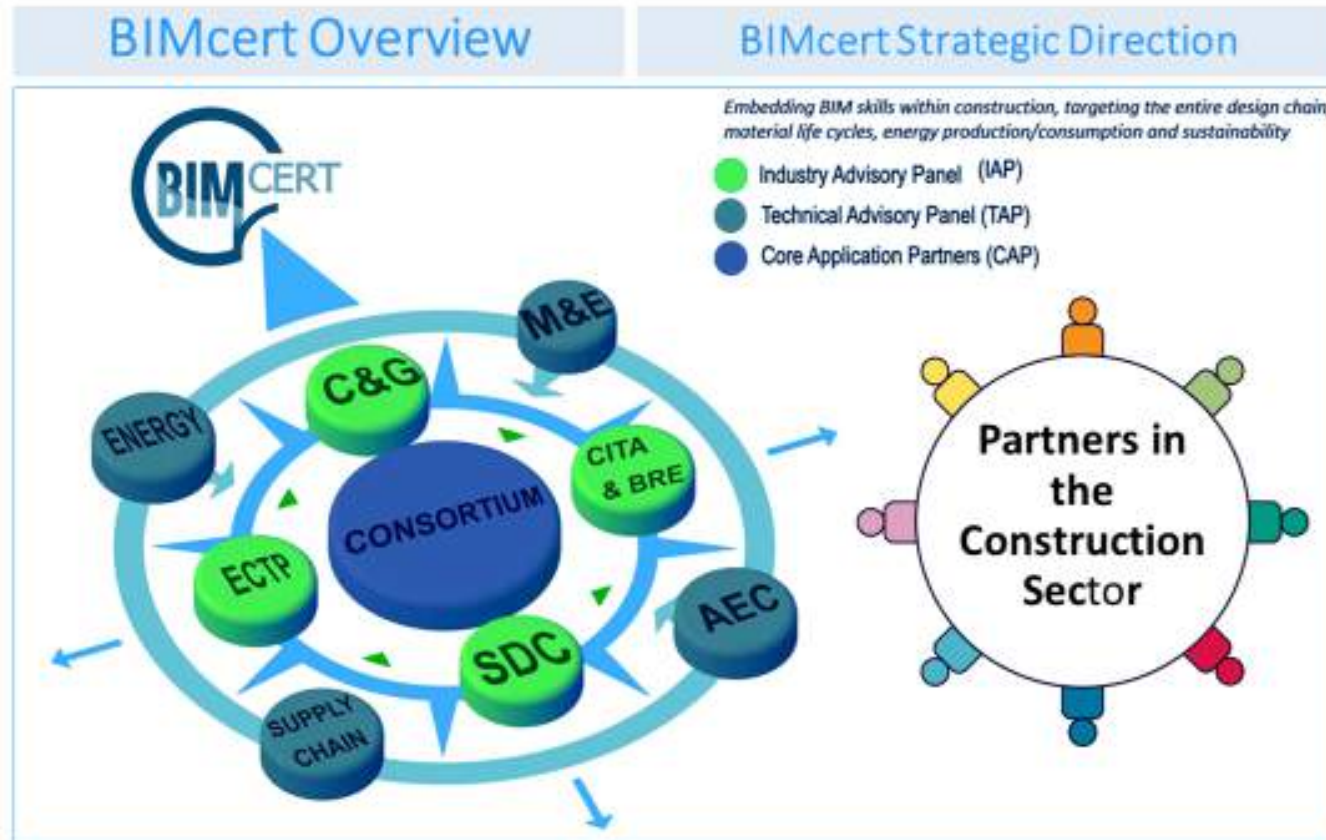


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BRIEF INTRODUCTION

BIMCert



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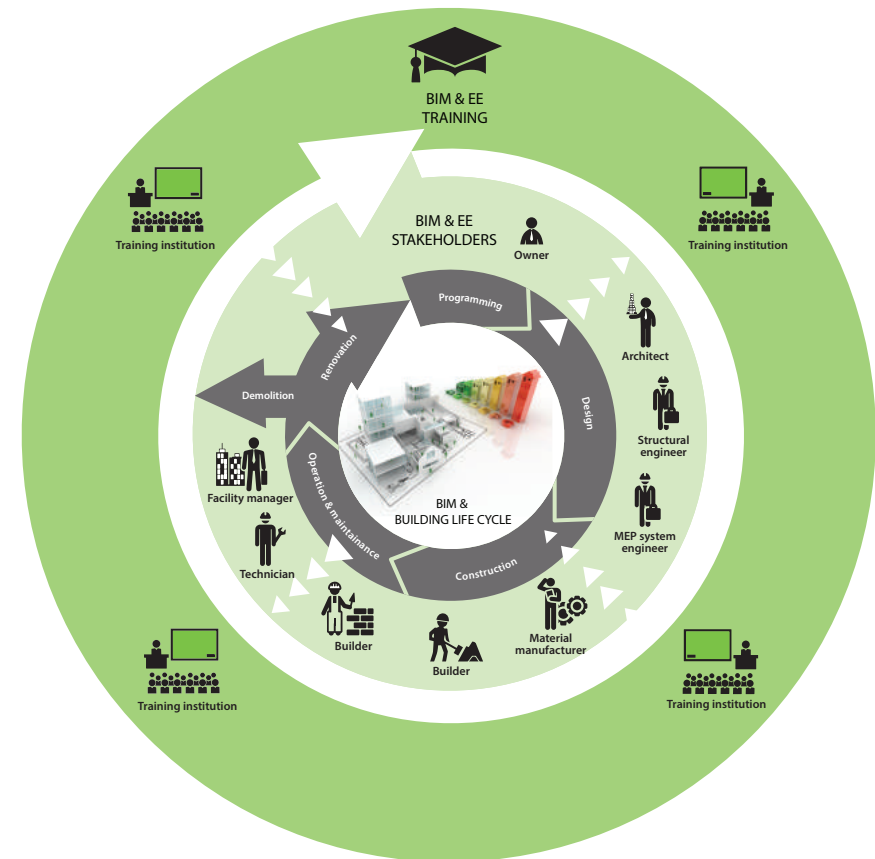


BRIEF INTRODUCTION

BIMeet

BIM-BASED EU -WIDE STANDARDIZED QUALIFICATION FRAMEWORK FOR ACHIEVING ENERGY EFFICIENCY TRAINING [BIMEET]

- Leverage the take-up of ICT and BIM through a significant **upgrade of the skills and capacities** of the EU construction workforce
- BIM for Energy Efficient Buildings bridging the gap between **improved design and actual EE measurements in Operation & Maintenance**
- BIMEET considers
 - **Each stage** of building's life-cycle
 - **All actors** involved
- To highlight specific skills required
 - For a global BIM approach
 - Enabling **achieving EE in buildings**



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Challenges and Opportunities

BIMplement | NET-UBIEP | BIMCert | BIMeet



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CHALLENGES AND OPPORTUNITIES

BIMplement

Achieve an improved quality for nZEB construction and renovation....

- by setting up a large scale training and continuous professional development
- using BIM both as a tool for an enhanced qualification scheme, and as an on-site tool for a better understanding of the work to be implemented
- addressing the **entire value chain** in a **cross-trade** and multilevel, **multidisciplinary approach**, strengthened with **hands on** and **workplace BIM enhanced training tools**



CHALLENGES AND OPPORTUNITIES

BIMplement

Training approach

- ✓ Clients who « place a training order » and make it mandatory
- ✓ Large companies that wish to get a better on-site implementation
- ✓ Suppliers that wish to bring better advices and instructions on site

Countries addressed

France, Lithuania, Netherland Poland , Spain

What kind of training

- ✓ **On site**
- ✓ **Hands on**
- ✓ **Cross-craft**
- ✓ **Addressing the entire value chain**

Architects

- ✓ **BIM models providers**
- ✓ **Influencers in the value chain**





CHALLENGES AND OPPORTUNITIES

NET - UBIEP

- *Challenges and opportunities*

Challenges:

- *How to obtain the target groups time (especially from the professional)!*
- *How to implement the results properly.*
- *How to sustain a vast network of educators.*

Opportunities:

- *Building the network of educators specialized in BIM irt NZEB*
- *Standardization of BIM profiles with added NZEB competences*
- *No confusion BIM/NZEB professions anymore!*





CHALLENGES AND OPPORTUNITIES

BIMCert

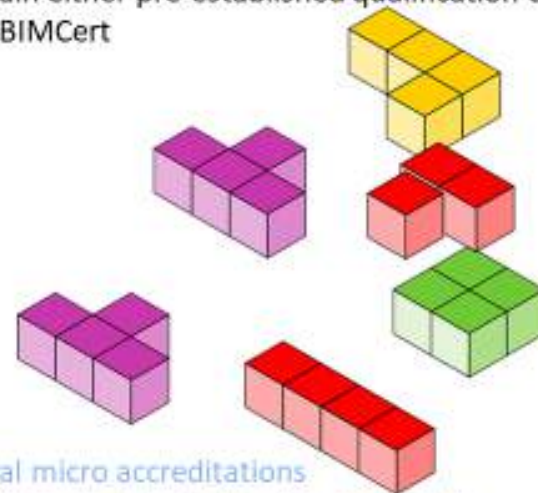


BIMcert Overview

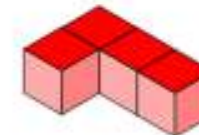
BIMcert Methodology

Modules are adaptable to each learners needs and career pathways
Learners can pick the micro accreditations that suit them

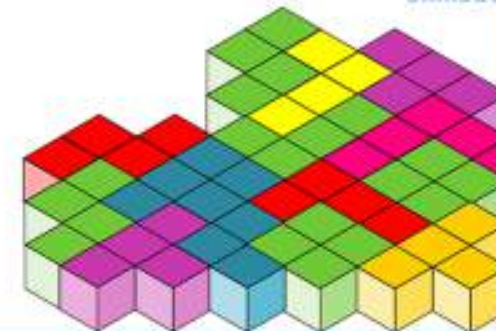
Allow learner to gain skills required for their own professional needs , combine them to obtain either pre-established qualification or an unique "BIM Passport" skillset recognised via BIMCert



Several micro accreditations
(covering specific knowledge and skills)



Flexibility to
build your own
personalised
skillset

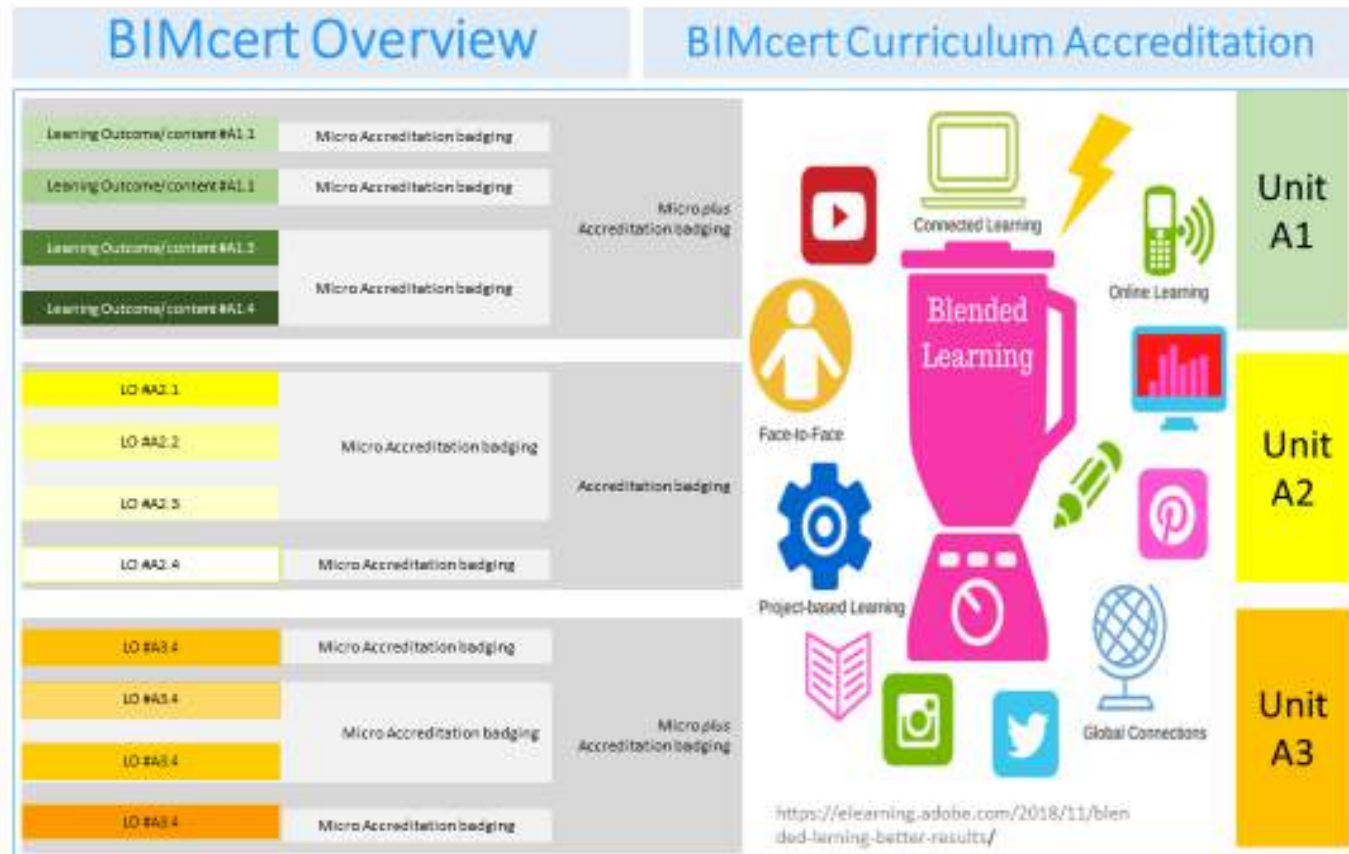


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CHALLENGES AND OPPORTUNITIES

BIMCert



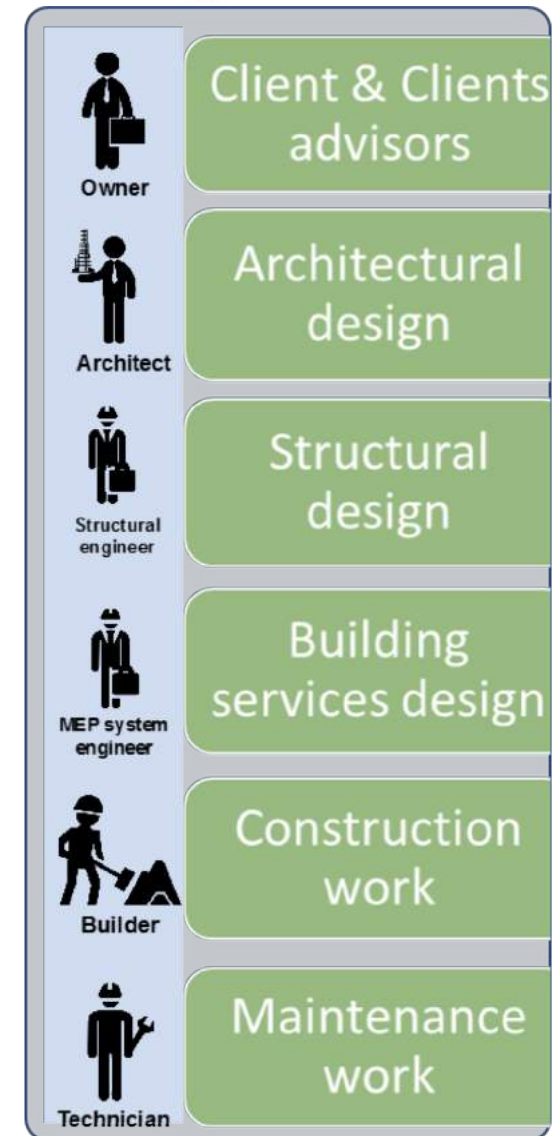
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CHALLENGES AND OPPORTUNITIES

BIMeet

- **Changing roles and competencies**
 - New requirements of skills and capabilities
 - Dynamic field: rapidly changing
- **Dedicated education and offerings**
 - Integration within domain education doesn't or rarely exists
 - Few dedicated trainings offered across EU
 - Harmonization of training content
- **Variety of tools**
 - New tools and processes
 - Technologies still not completely mature



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LESSONS LEARNED

BIMplement

- Clients to be convinced
- BIM models done by designers for their own use, not for on-site implementation
- Trainers to be trained on BIM
- Building companies and Trainees to push and to pull
- Time and planning of the workplace to take into account for the trainings ???
- Architects : as BIM models providers ; and as « influencers » in the value chain



LESSONS LEARNED

NET-UBIEP

- *What we learnt from other European projects*
 - *For the Qualification framework we used the results of the PROF/TRAC project*
 - *The developed courses are added in the BuildUpSkills Advisor app*
 - *The developed courses for the target group Technician are tested in the BIMplement project's fieldlabs and construction sites.*


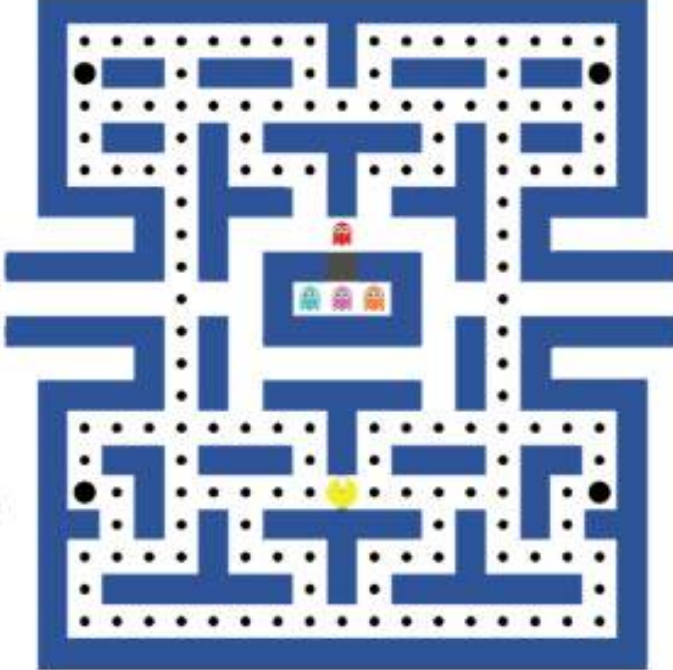




LESSONS LEARNED - <https://energybimcert.eu>

BIMCert



BIMcert Overview	BIMcert Methodology
<p>Not a linear progression</p> <p>Bite sized micro accreditation</p> 	



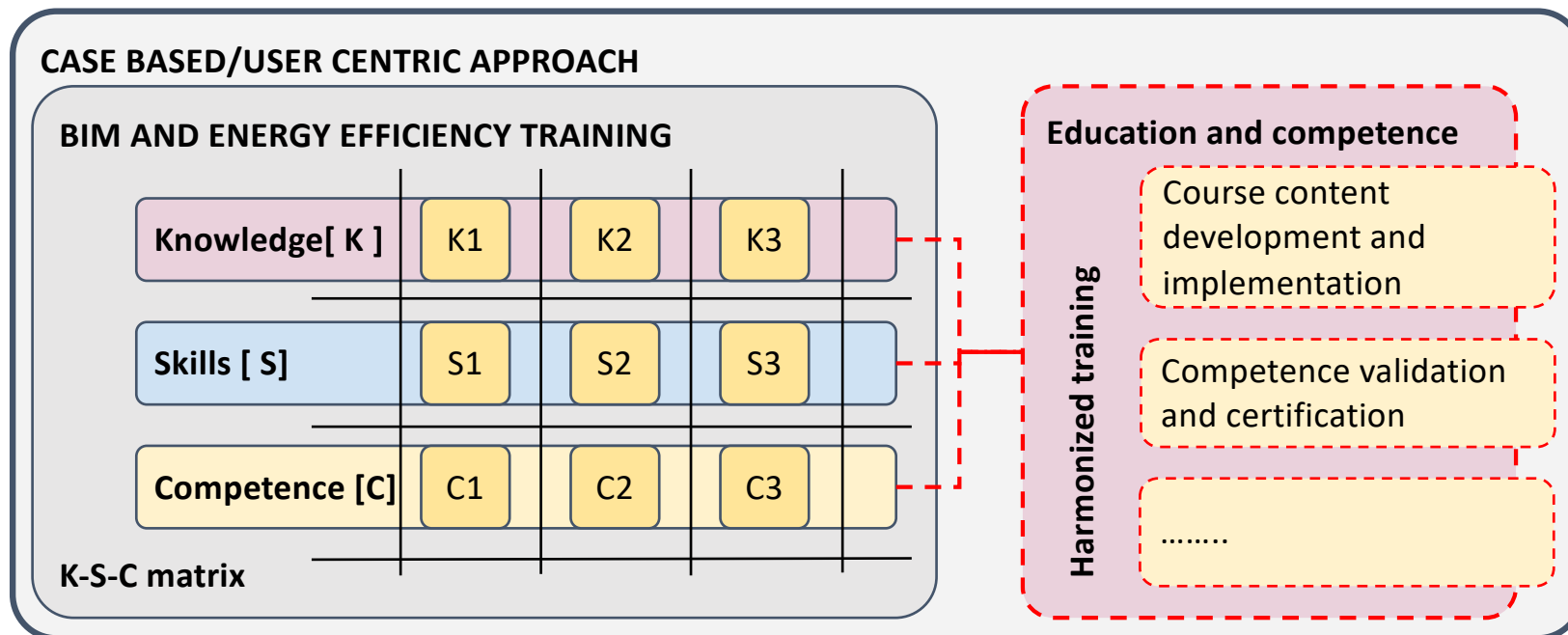


LESSONS LEARNED

BIMeet

Learning outcomes towards EU-wide training

- Based on Knowledge- Skills-Competence matrix + Blooms





LESSONS LEARNED

BIMeet

EU_LO Architectural design and BIM coordinator (arch), Chief designer (CD), Architect (ARCH), Assistant designer (ASS)		Bloom level	Course	
			Basic	Advanced
LO1	Learner is able to explain the principles and importance of BIM, Energy efficiency and performance based buildings	1,2,3,4	X	X
	Define and explain BIM, EE and performance based buildings, their principles and uses	1,2,3	X	X
	Explain and give examples of aspects and terminology of BIM, EE, building performance and impacts (financial and environmental)	1,2,3	X	
	Explain and compare BIM EE uses and related indicators, benchmarks and certification systems	1,2, 3,4	X	X
	Summarise and illustrate the potentials of renewable energy sources including district-scale solutions	1,2	X	
	Explain legislation and regulations for energy performance, thermal comfort and air quality.	1,2	X	
LO2	Learner is able to explain the issues that affect energy performance of buildings	1,2,3,4	X	X
LO3	Learner is able to use and demonstrate competence in profession specific solutions including BIM and EE tools	1,2,3,4,5,6	X	X
LO4	Learner is able to explain and solve the essential issues related to data transfer and sharing and illustrate situations	1,2,3,4,5,6	X	X
LO5	Learner is able to develop, select and explain the flow of the collaborative interdisciplinary BIM EE processes and point out essential issues of successful leadership	3,4,5,6		X



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The information in this publication does not necessarily represent the view of the European Commission.

ANY QUESTIONS?



BIMplement

Training experiences in France | Netherlands | Poland



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Feedback, BIMplement and Integrated Training at work experiences in France





Context

- Blue collars have difficulties for coming into training center
- Blue collars are reluctant to take trainings
- Collaboration between the different disciplines and building professionals is still not very common.
- Blue collars have difficulties with digital transition in building





BLUE COLLARS HAVE DIFFICULTIES FOR COMING INTO TRAINING CENTER,... OUR ANSWER :

- We chose as the best vehicle, a conclusive French experiment, *the Integrated Training at work*
- The training center comes into construction site :





BLUE COLLARS ARE RELUCTANT TO TAKE TRAINING,... OUR ANSWER :

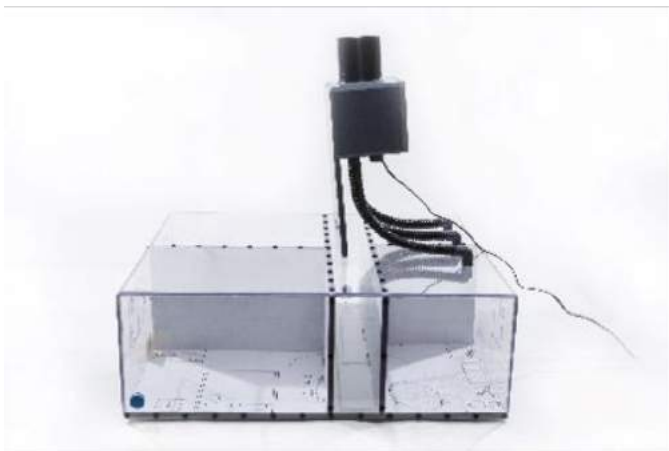
- Hands on training center comes into construction site :





BLUE COLLARS ARE RELUCTANT TO TAKE TRAINING,... OUR ANSWER :

- Facilitate understanding of issues with interactive educational tools :





BLUE COLLARS HAVE DIFFICULTIES WITH DIGITAL TRANSITION IN BUILDING,... OUR ANSWER :

- BIM, It's not concrete :



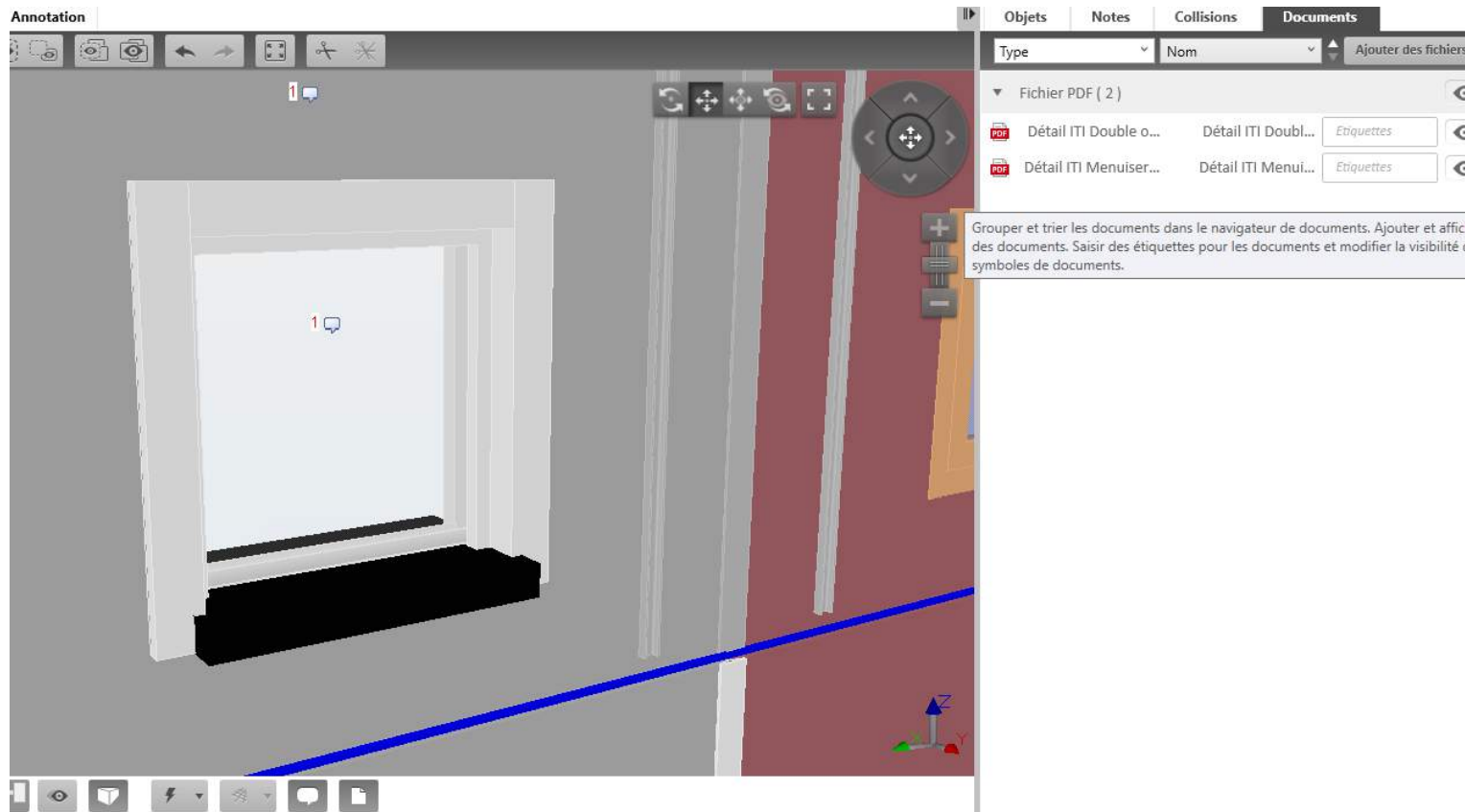
- Our mobile training center can be to visualize with REVIT





BLUE COLLARS HAVE DIFFICULTIES WITH DIGITAL TRANSITION IN BUILDING,... OUR ANSWER :

- BIM, It's too expensive :

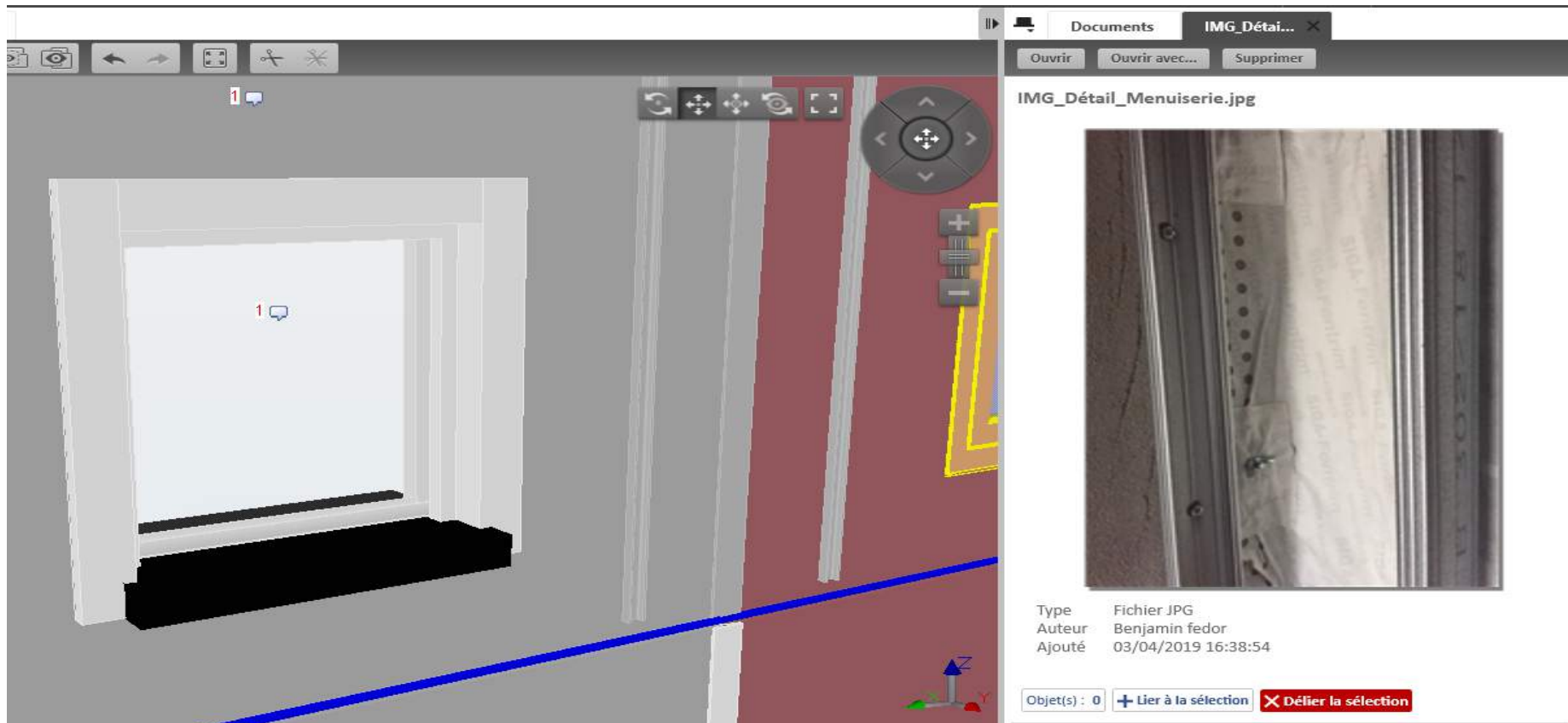


- We training us to use free viewer, TEKLA BIMsight for this example



BLUE COLLARS HAVE DIFFICULTIES WITH DIGITAL TRANSITION IN BUILDING,... OUR ANSWER :

- BIM, It's only to draw :



- With the same free viewer, Blue collars can keep proof of quality of the work performed





WHY PARTICIPANTS LIKE THIS TYPE OF BLENDED TRAINING...

APPROVED BY A LARGE MAJORITY OUR TRAININGS (88% SINCE STE STARTING UP)

- A short training session in which learners are really actors
- A short training session in which there is more place for practice than theory (70/30)
- A short training session that offers concrete answers for our blue collars
- More informations on Integrated Training at work and on the opinions of participants (Video in french) :

<https://www.youtube.com/watch?v=4kvwsACTgmU&t=>



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B. 18/06/2019





Getting information TO the building site

ISSUE

How to get ensure subcontractors get the right information, so the right people do the right job

TEAM

Company manager, BIM manager, modeller, site manager (t)





Getting information TO the building site

METHODOLOGY

- 1) Analyse current BIM maturity and information level on weak points in air tightness
- 2) Choose 1 or 2 weak points and build a step-by-step instruction guide with model information
- 3) Identify quality check points and add to instruction guide
- 4) Identify qualifications needed for weak points and link to instruction guide and to model





Getting information TO the building site

FIRST RESULTS

Detail D-001
Lage dakrand 3.0

Agens:

OpzetSAM-Behoeftes:

- Dit geheel van Polycarbonateel is dakrand met extra versterking. Dit is een niet zelfdragend constructieelement.

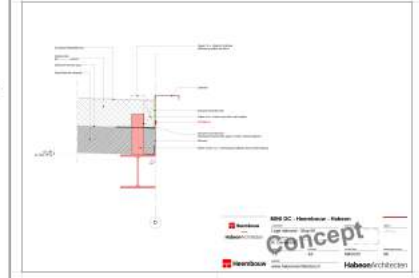
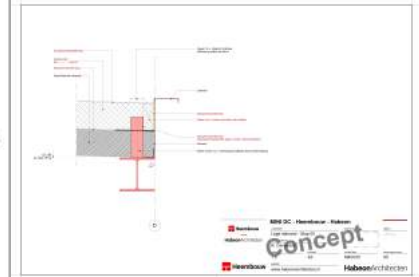
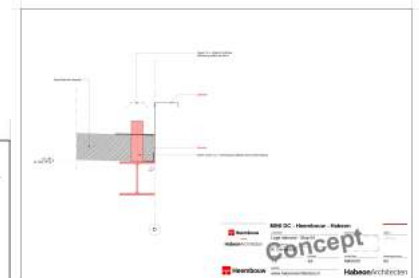
Overgangsbereik:

- Vooraf voor overgang van werkmaterialen (over gewas). Dit moet voorzichtig gebeuren.

Heembouw / Habeon Referentie details

Project: mD-001

Heembouw | HabeonArchitecten





Getting information FROM the building site

ISSUE

How to gather the knowledge and experience of blue collar workers and distribute it among colleagues (blue and white)

TEAM

Company manager, Quality manager, BIM manager, 2 site managers (t), 4 foremen





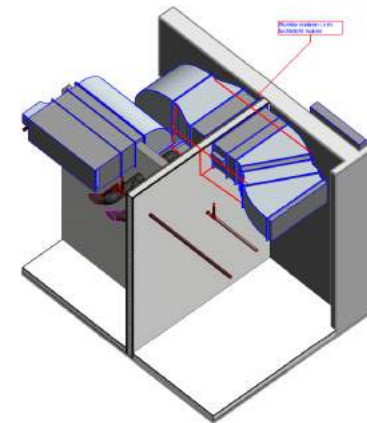
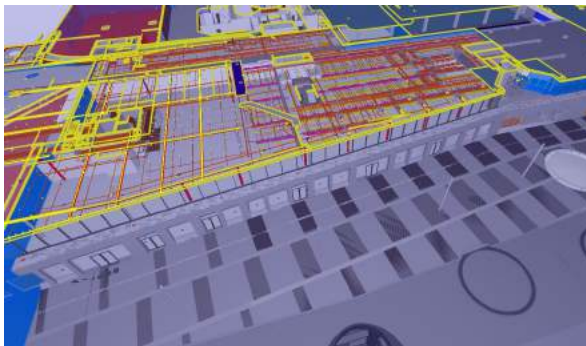
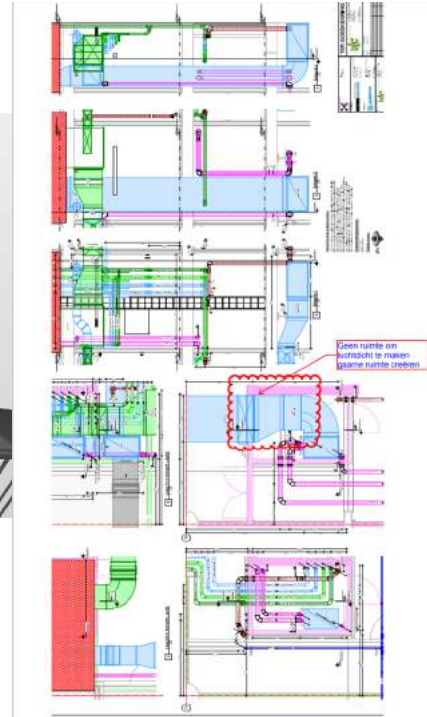
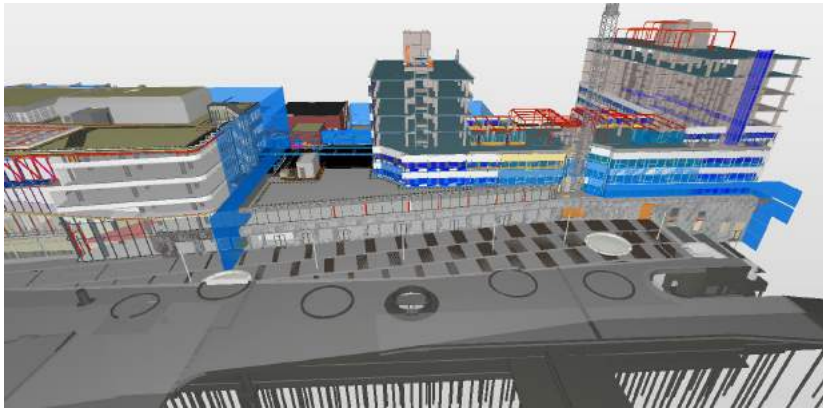
Getting information FROM the building site

METHODOLOGY

- 1) Analyse current BIM maturity and information issues (with ventilation a/o air tightness)
- 2) Choose 1 or 2 information issues and devise a strategy for sending feedback
- 3) Process feedback into (updated) models and communicate results
- 4) Asses needed qualifications and improvement of qualifications



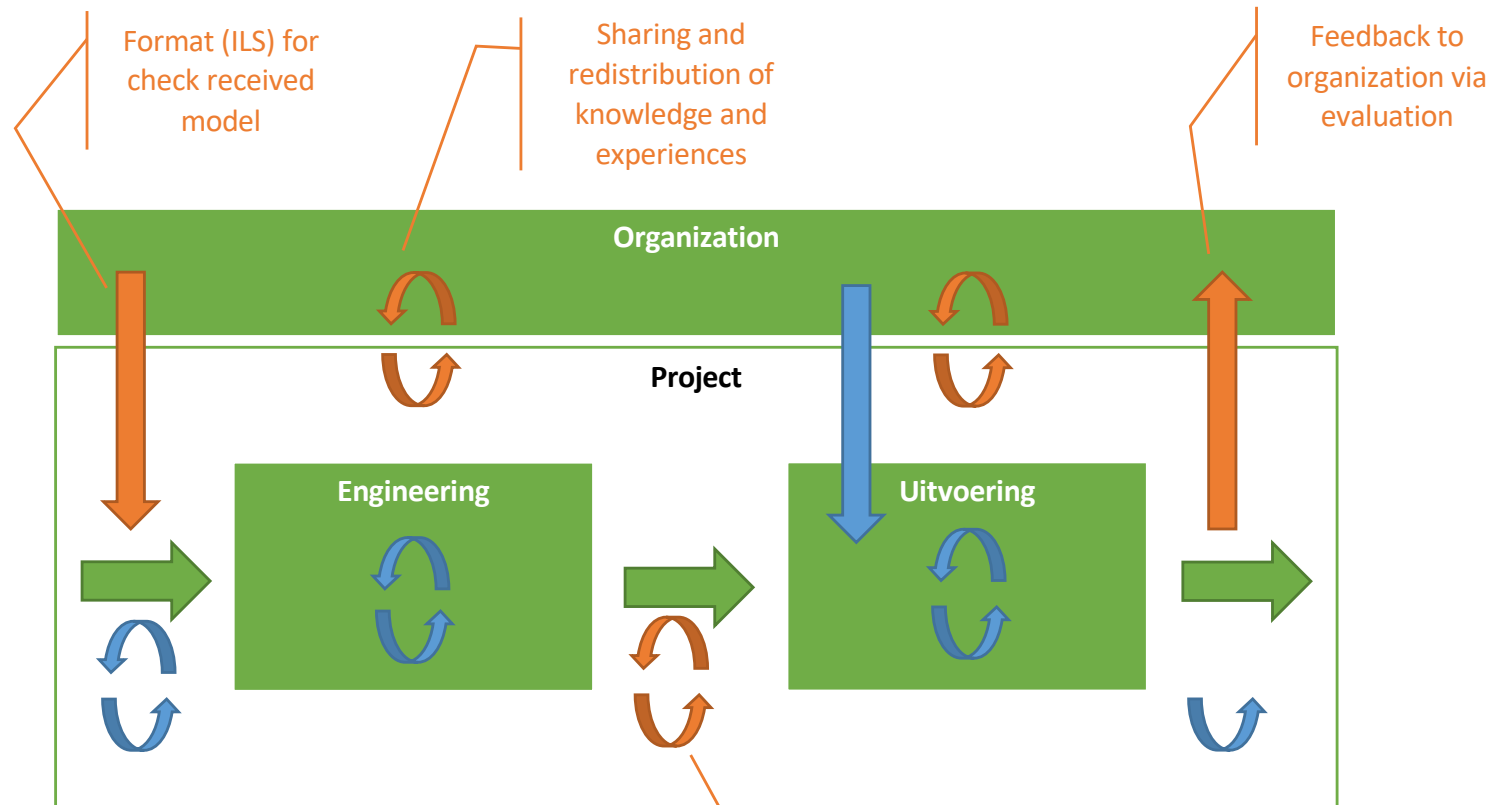
Getting information FROM the building site FIRST RESULTS





Getting information FROM the building site

FIRST RESULTS



Structured and teamwise transfer



Experimental sites

Text 0	Cannot design a BIM model (2D drawings only)			
Text 1	The BIM model is enriched with BCF or eq. comments	Construction management/design/supervision team		
Text 2	Designs his own basic BIM model where IFC Export are mastered (native models only) + Received and implements a simple BEP for construction	Building	MEP	Other
	Designs his own detailed BIM model where IFC Export are mastered (native models only) + implements a detailed BEP for construction	Text 2	Text 2	Text 2

BIMplement

The tables are completed on their own, data come from the other sheets

Project presentation

name of the project	Wydział Architektury Politechniki Poznańskiej	
place:	Poznań	Poland
type of project	pilot project	go to "project"
type of building	public buildings	
Date beginning of construction		date end of project (handover)
project implementation	site implementation	
required nZEB level	local nZEB regulation	
airtightness or ventilation	both	

Project BIM synthesis

	Client team		BIM manager		Construction management/design/supervision team							
	Project officer	building operator	depends on Client's team	depends on Building	Structure	MEP	Other					
Niv 0	0	BIM skills	BIM 3	BIM 3	BIM 3	BIM 3	BIM 3	6	6	13		
Niv 1	1	BIM documents	Text 2	Text 2	Text 2	Text 2	Text 2	4	4	6		
Niv 2	2	Average BIM : #/5	2,5		3,0		3,2					
Niv 3	3	nZEB awareness	nZEB 2	nZEB 2	nZEB 2	nZEB 2	nZEB 4	nZEB 4	nZEB 0	4	4	8
Niv 4	4	Ventilation skills	vent 0	vent 0	vent 2	vent 2	vent 0	vent 5	vent 0	0	4	5
Niv 5	5	airtightness skills	air 0	air 0	air 0	air 0	air 2	air 0	air 0	0	0	2
		Average nZEB : #/5	0,7		1,3		1,7					

Project manager Design team

	Project manager Design team			On-site workers							
	Architect	Structural	MEP	Building	MEP	Other					
Niv 0	0	BIM skills	BIM 5	BIM 4	BIM 0	BIM 5	BIM 5	BIM 3	BIM 3	9	13
Niv 1	1	BIM documents	Text 5	Text 0	Text 0	Text 1	Text 3	Text 0	Text 0	5	4
Niv 2	2	Average BIM : #/5	1,5			2,8					
Niv 3	3	nZEB awareness	nZEB 1	nZEB 1	nZEB 3	nZEB 0	nZEB 1	nZEB 0	nZEB 0	5	1
Niv 4	4	Ventilation skills	vent 0	vent 0	vent 5	vent 0	vent 2	vent 2	vent 2	5	4
Niv 5	5	airtightness skills	air 2	air 0	air 0	air 2	air 0	air 0	air 0	2	2
		Average nZEB : #/5	2			0,8					

detailed BIM model where IFC Export are mastered (native models only)			
a detailed BEP for collaboration & construction			
A BIM model is created by the			
digital technology of the working			
on construction site, a tablet for			
on construction site, a tablet for			
on construction site, a tablet with a collaborative platform + of work to be implemented of 2D plans linked with the BIM	Text 1	Text 3	Text 0
on construction site, a tablet with a collaborative platform for			
on construction site, a tablet for workers use digital technologies on construction site for implementation and			





Training pack

- Field lab results (step by step instruction, worker feedback)
- BIM viewer use
- nZEB (air tightness a/o ventilation) instruction
- Net-UBIEP e-learning (+ videos)
- BUS app
- (...)





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Mostostal
WARSAWA



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18/06/2019



BIM TEAM



Piotr
Dymarski

Coach



Dawid
Fedko



Marcin
Grzelak



Marta
Dębska



Piotr
Klik

BIMplement Trainers



AWARENESS CAMPAIGN



BIM
Specialists



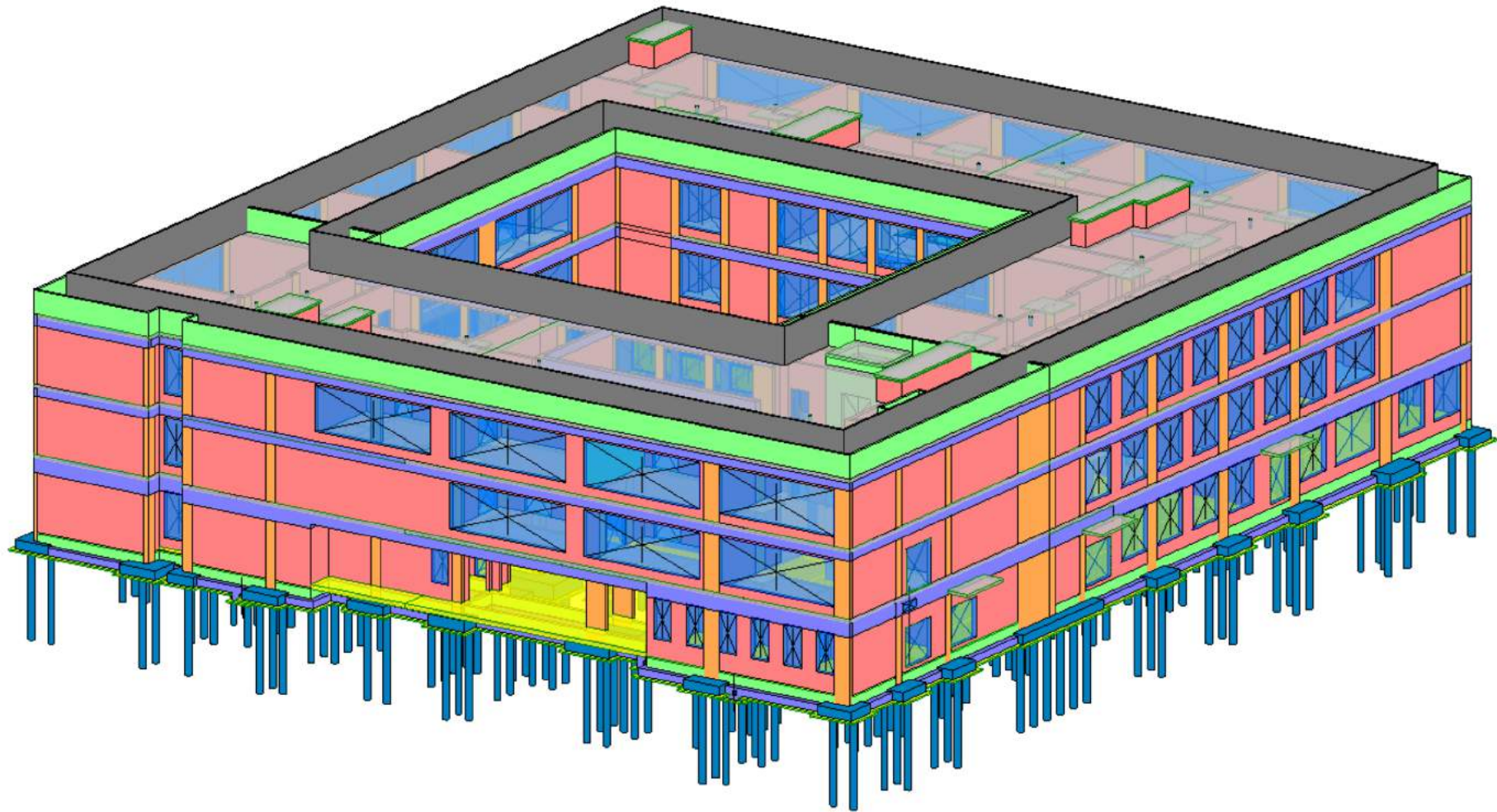
BENEFITS



Construction
workers



AWARENESS CAMPAIGN – WHAT ARE THE REAL NEEDS?



BIMplement

Mostostal
WARSAWA





AWARENESS CAMPAIGN – WHAT ARE THE MAIN PROBLEMS?



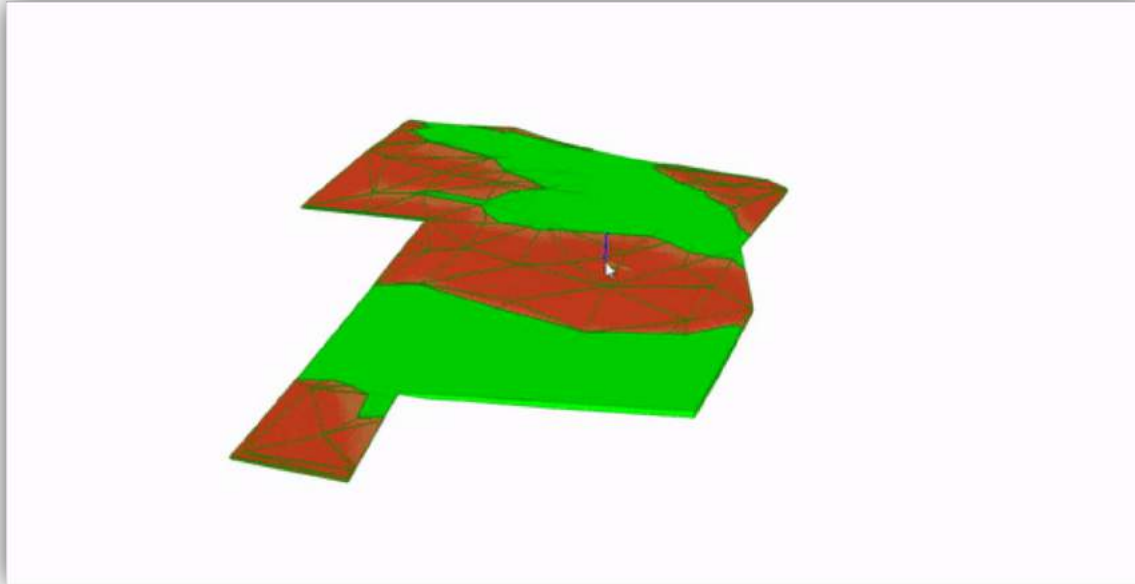
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WARSAWA

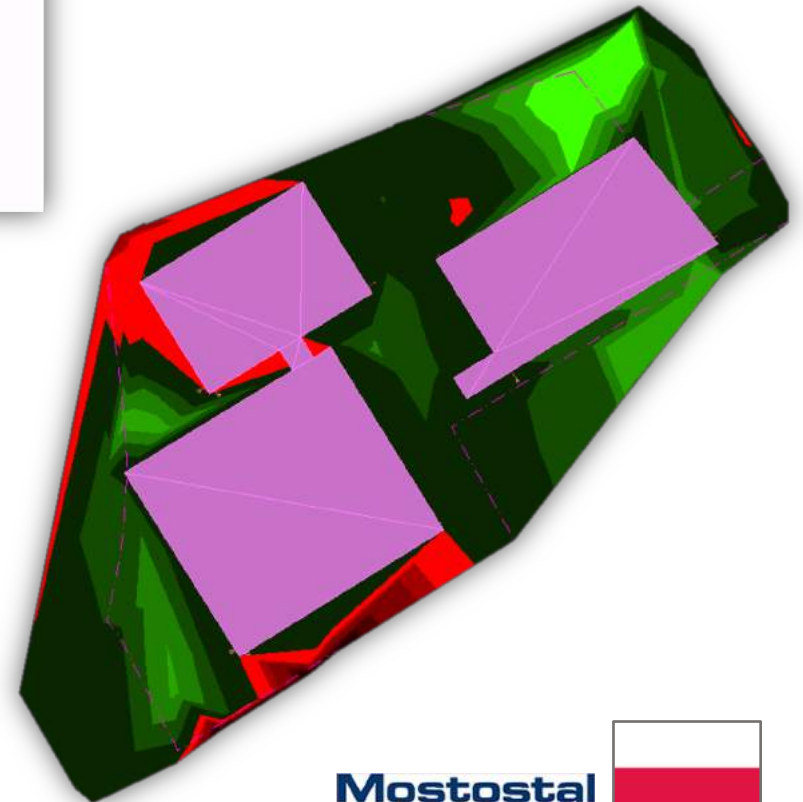




AWARENESS CAMPAIGN – SOLVE THE PROBLEM AND GET ATENTION

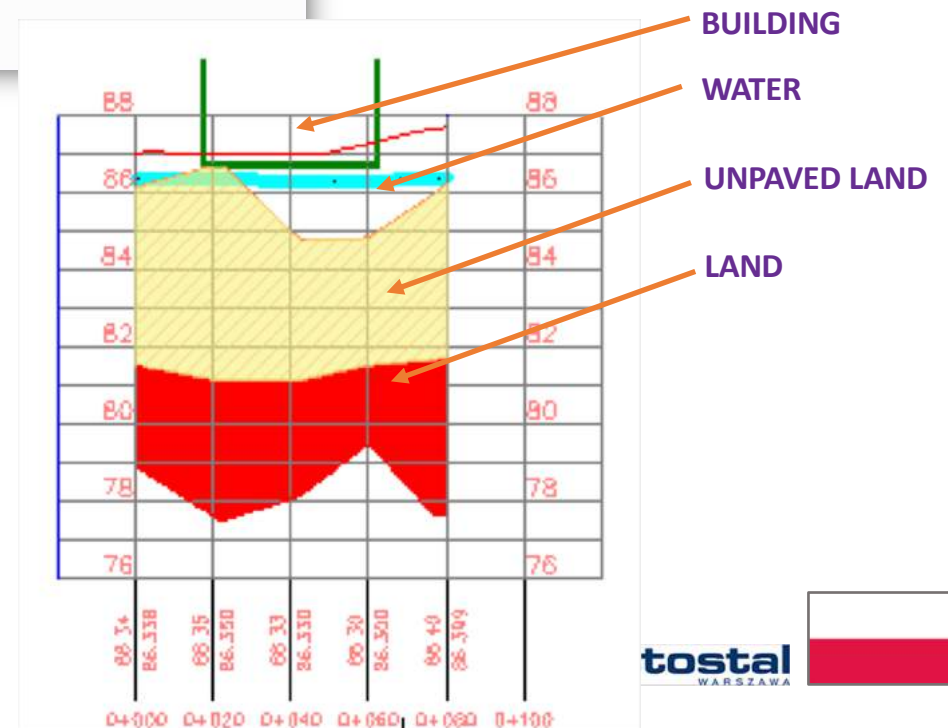
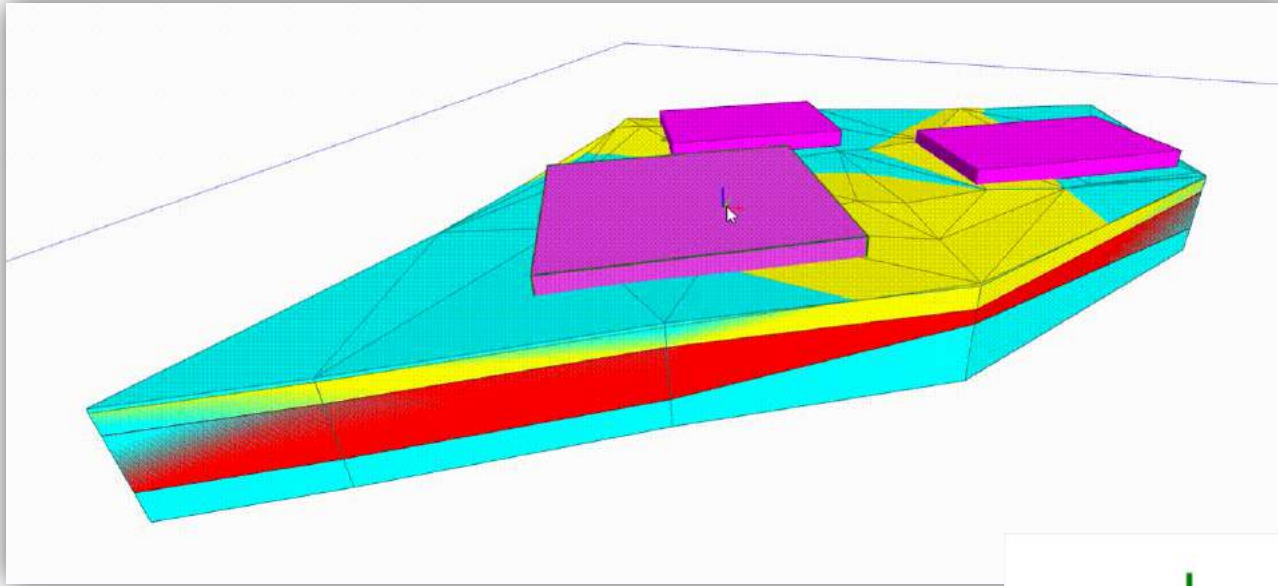


CALCULATIONS		
EXCAVATION	EARTHWORK	DIFFERENCE
m3	m3	m3
2402	2384	18



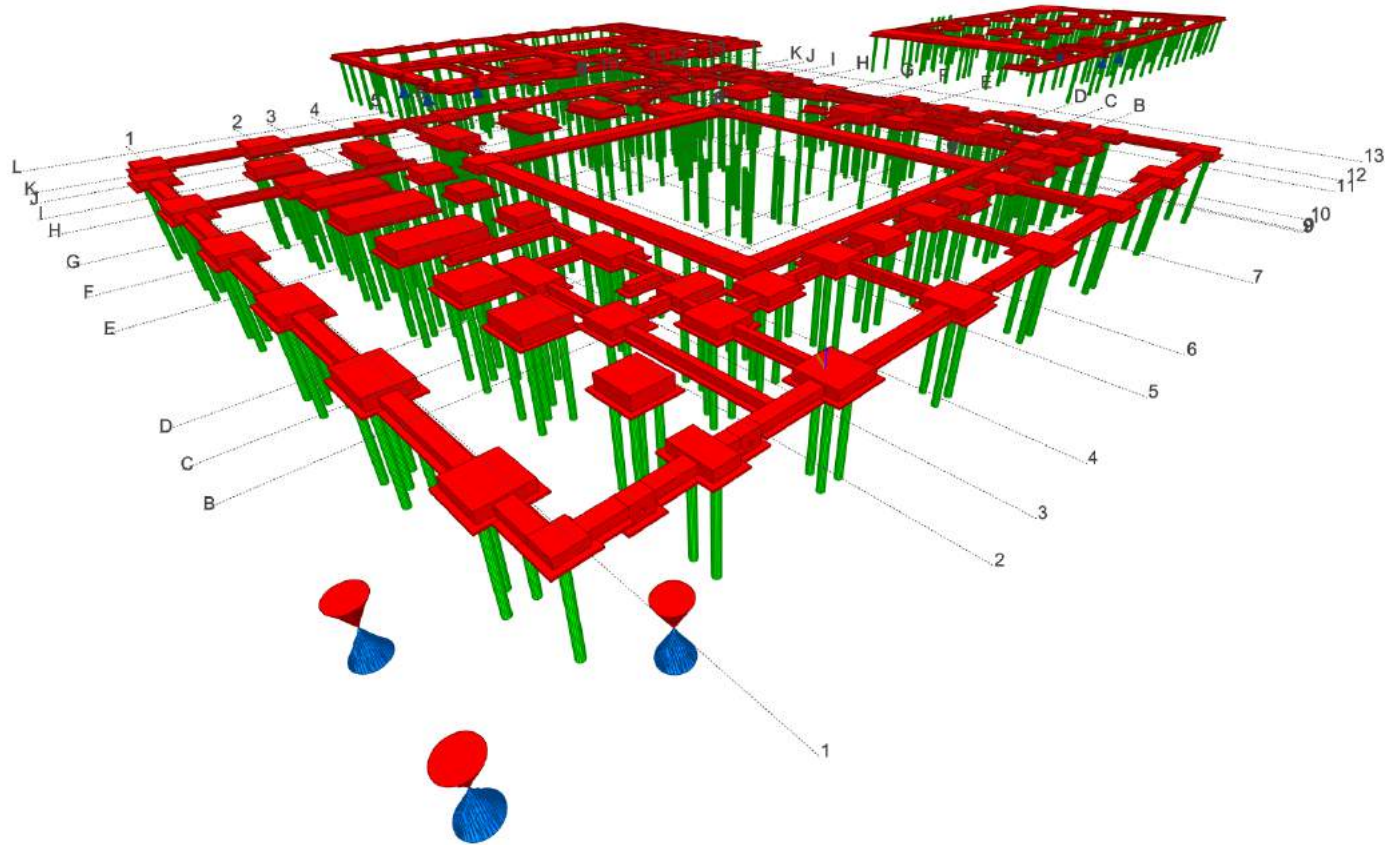


AWARENESS CAMPAIGN – SOLVE THE PROBLEM AND GET ATENTION





AWARENESS CAMPAIGN – SOLVE THE PROBLEM AND GET SAVINGS





**AWARENESS CAMPAIGN
IDENTIFY NEEDS**



Current Needs List



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AWARENESS CAMPAIGN – IDENTIFY NEEDS

Browse models

Information retrieval

Quantity take-offs

Communication
through the platform

Clash detection



TRAININGS





TRAININGS – WORK ON IFC

Diagram illustrating the workflow from Revit properties to IFC data tables. An arrow points from the Revit interface on the left to the IFC data tables on the right.

Revit Properties (Left):

- Properties table with columns: LevelId, Id, Document, Property, Value.
- Properties table with columns: Property, Value.
- Properties table with columns: Property, Value.
- Properties table with columns: Orientation, Category, WallType, Stack, Property, Value.
- Properties table with columns: Property, Value.
- Properties table with columns: Orientation, Category, Top Constraint, Phase Created, Revit, Property, Value.
- Properties table with columns: Property, Value.

IFC Data Tables (Right):

00 MW_KLASYFIKACJA

01 Kategoria	FUNDAMENTY KONSTRUKCYJNE	
02 Podkategoria	STOPA PROSTOKĄTNA	
03 Typ	K-FUN-STOP-PR-BET: K-FUN-STOP-PR-BET_180x210x50	

01 MW_LOKALIZACJA

01 Budynek	Szkoła	
02 Poziom	B1	

02 MW_DANE MATERIAŁOWE

Klasa betonu	C25/30	
Materiał	BETON	

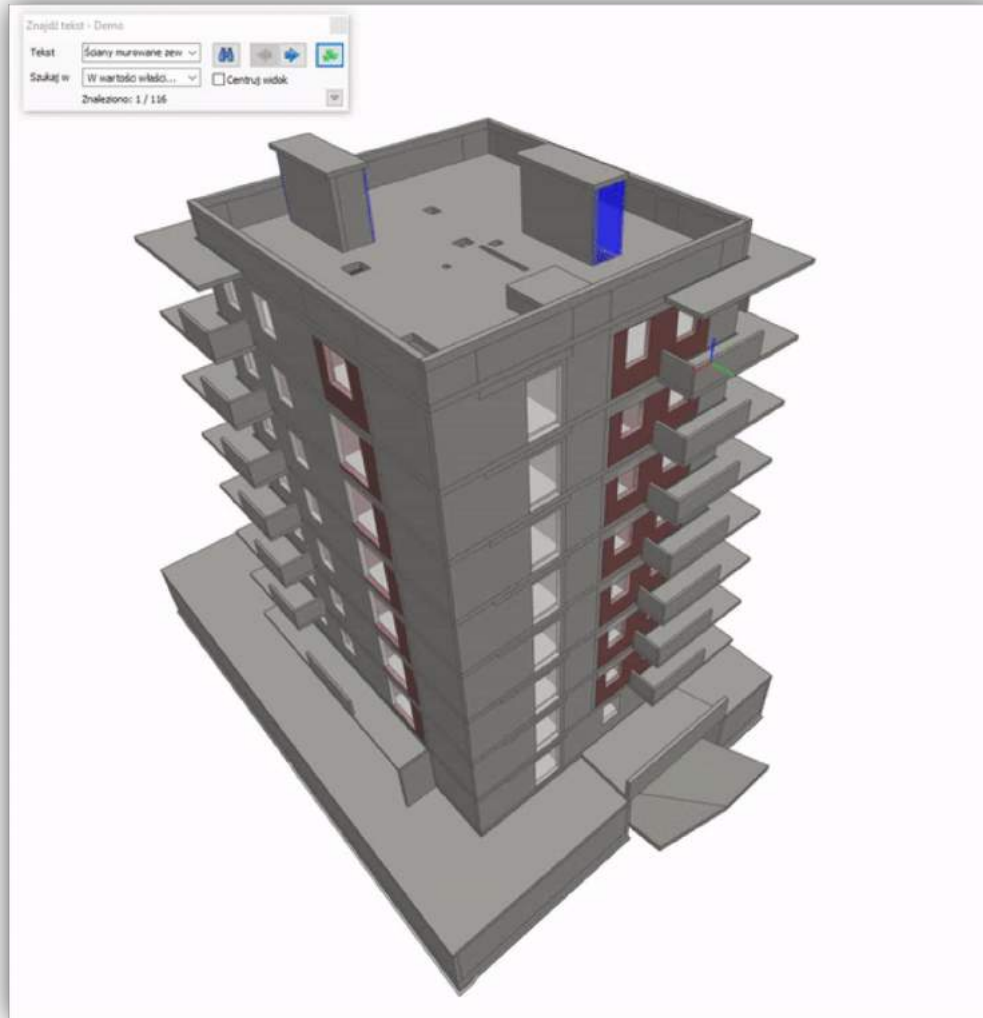
03 MW_DANE ILOŚCIOWE

Długość	210	cm
Objętość	1,89	m3
Powierzchnia	3,78	m2
Szerokość	180	cm
Wysokość	50	cm





TRAININGS – QUANTITY TAKE-OFFS



Construction

Finishing works

Performing orders based on the quantity from the model

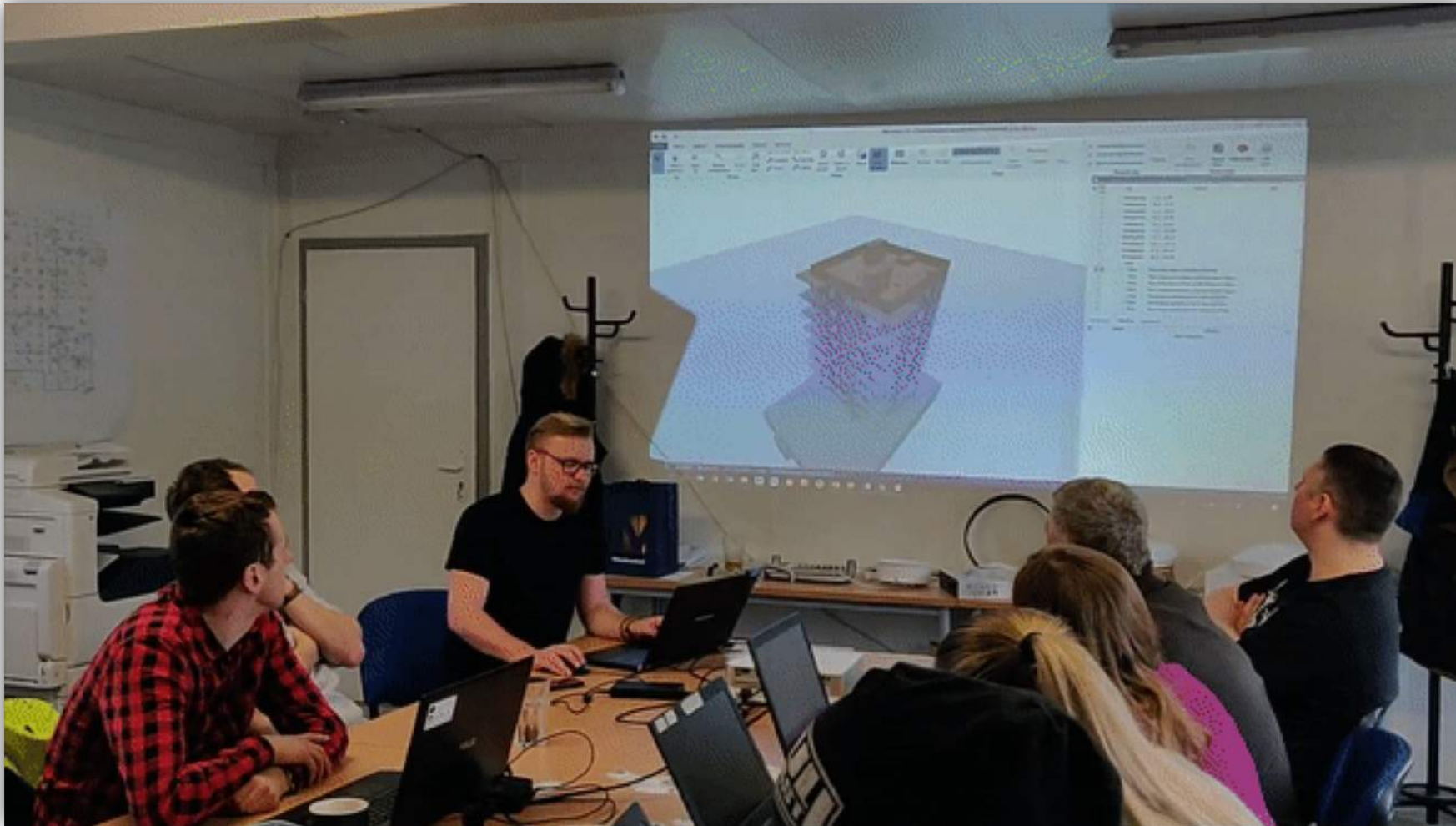


BIMplement





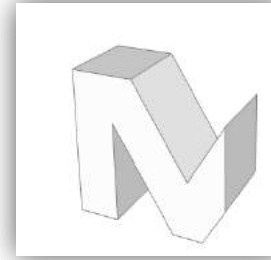
TRAININGS – QUANTITY TAKE-OFF



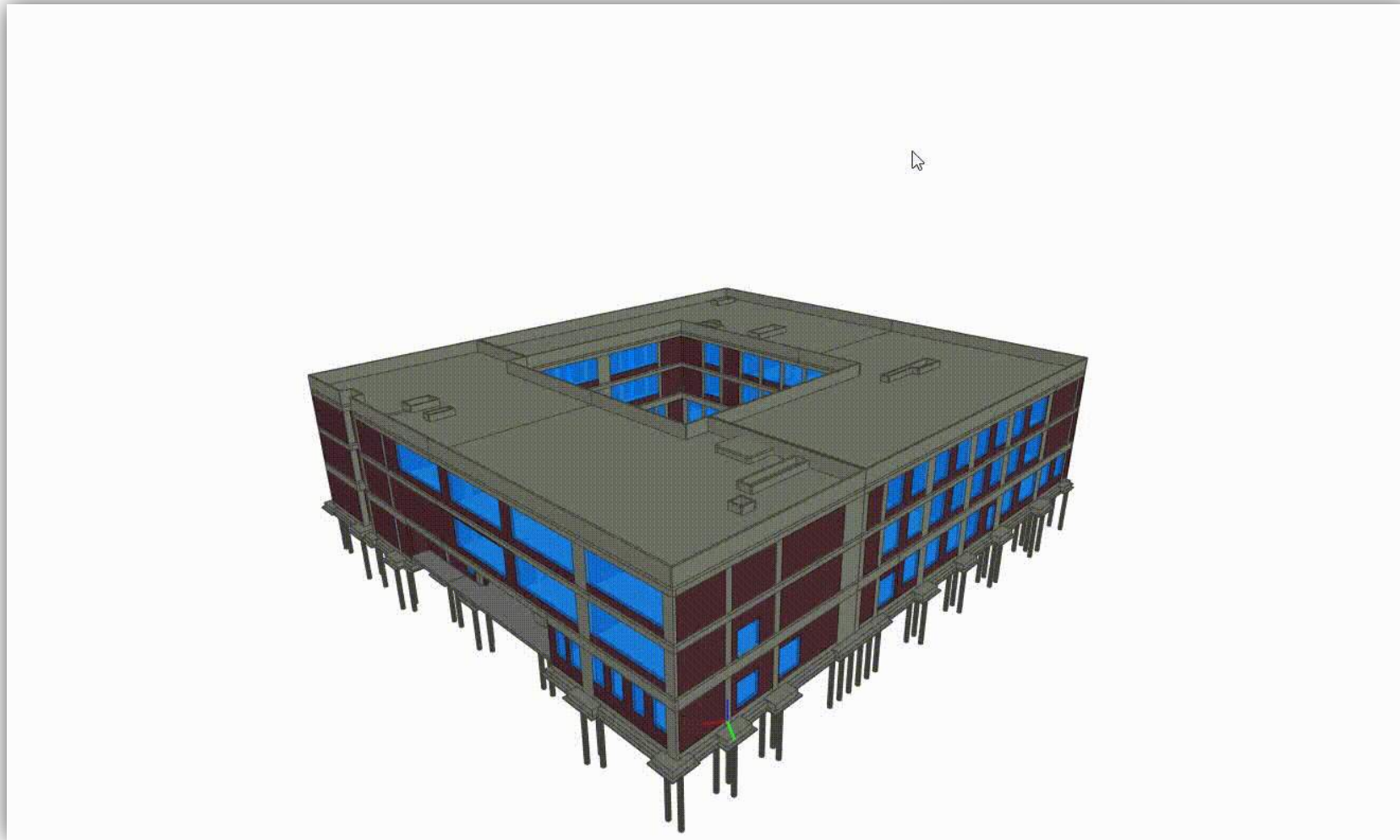
BIMplement

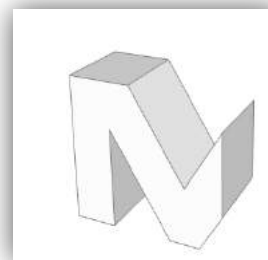
Mostostal
WARSZAWA



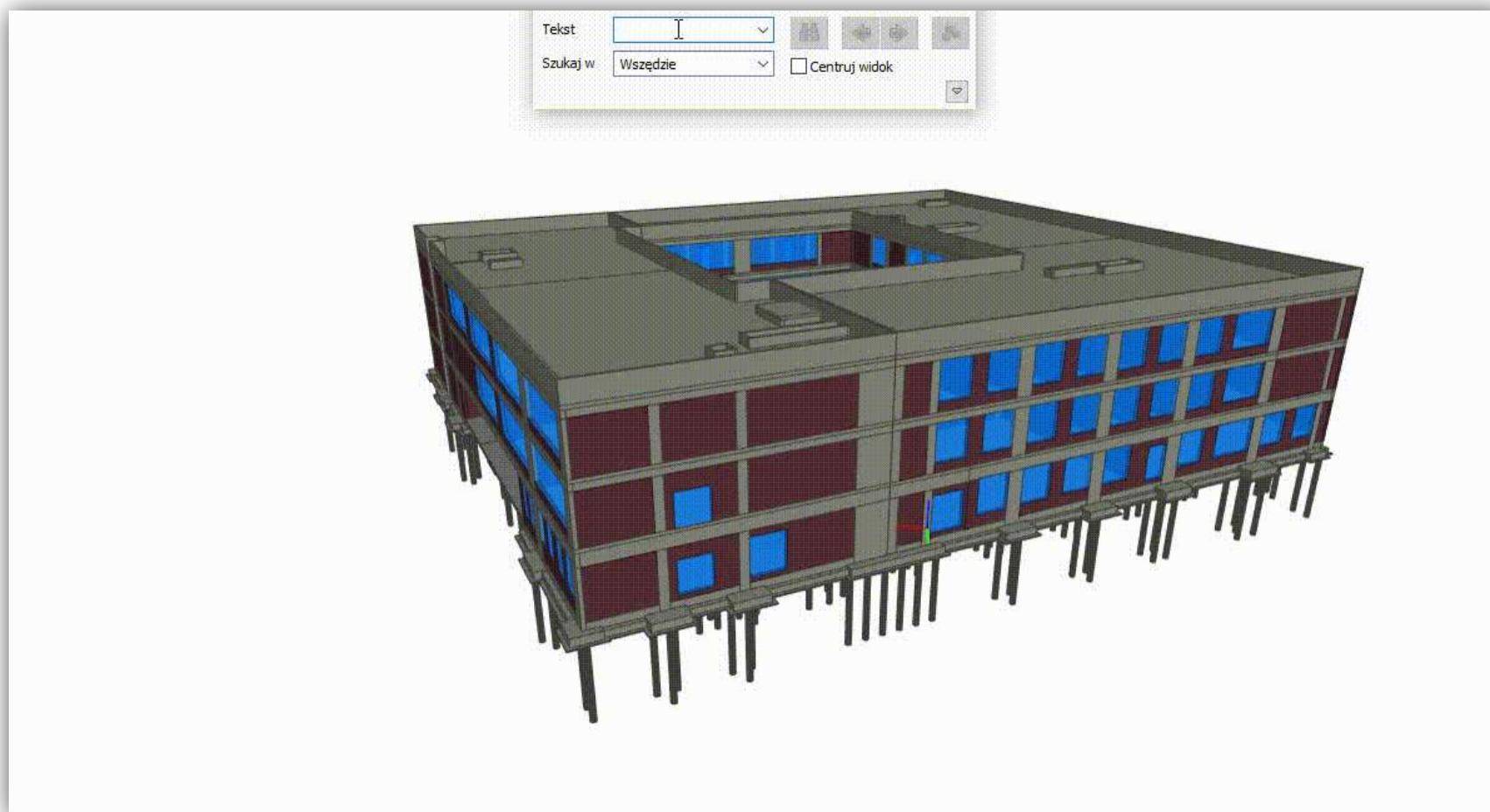


TRAININGS – SEARCHING FOR ELEMENTS





TRAININGS – SEARCHING FOR ELEMENTS





TRAININGS – SCHEDULING



<< Based on 2D documentation



BIM 4D >>



BIMplement

Mostostal
WARSZAWA





TRAININGS – SCHEDULING



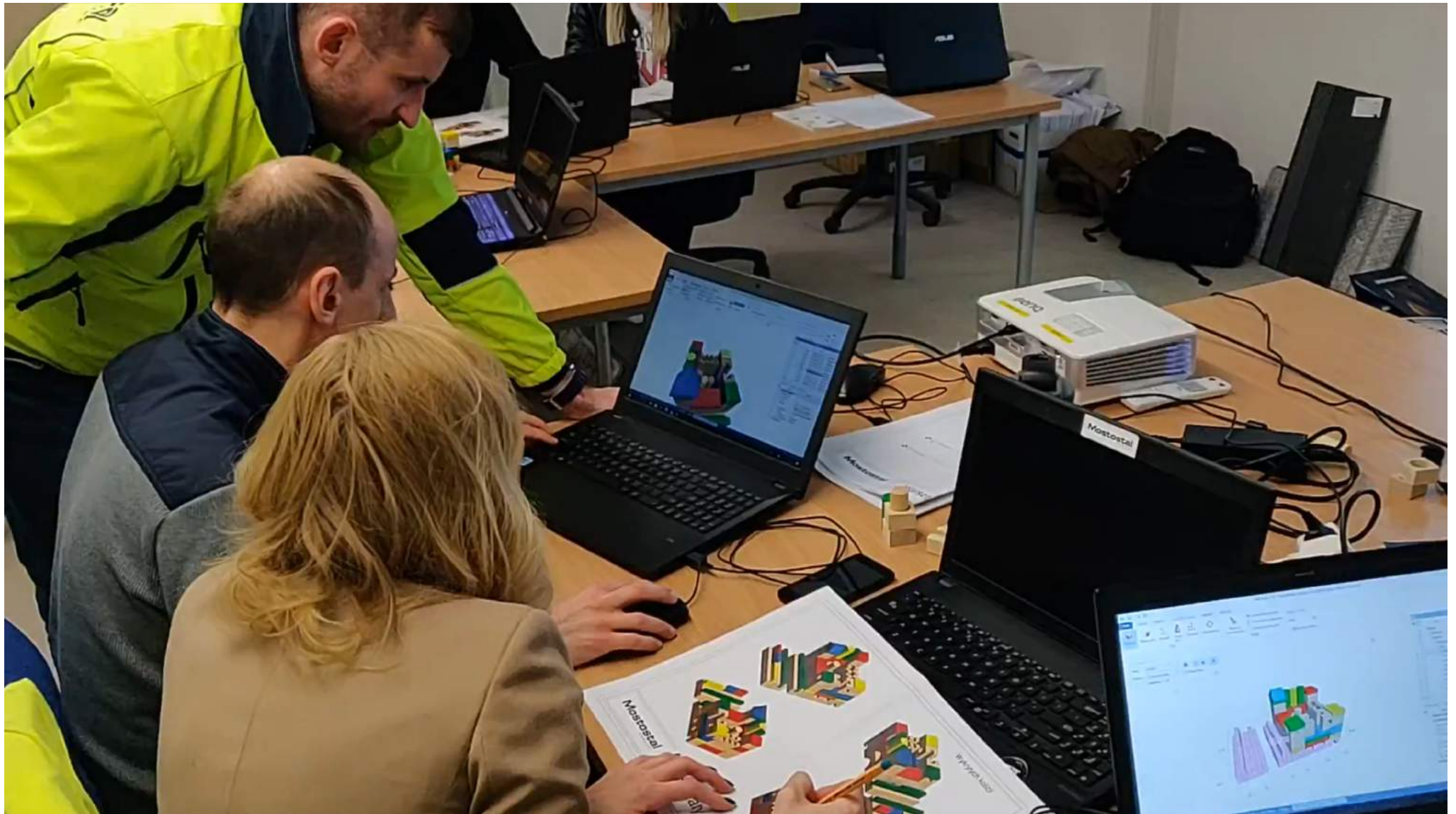
BIMplement

Mostostal
WARSAWA





TRAININGS – CLASH DETECTION



BIMplement

Mostostal
WARSZAWA

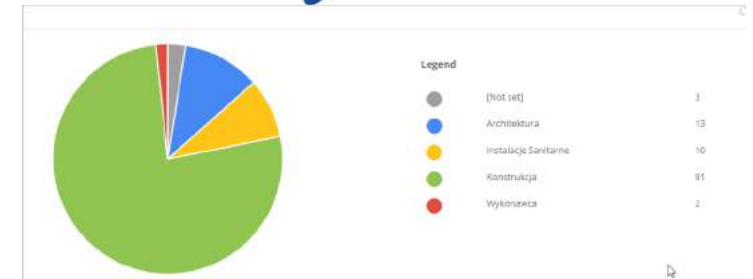




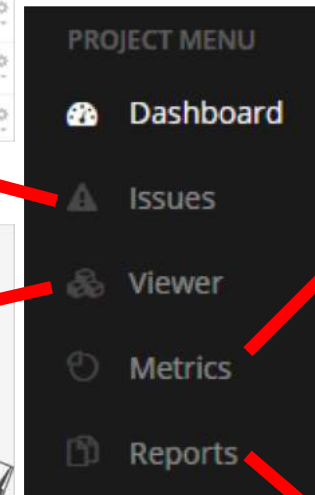
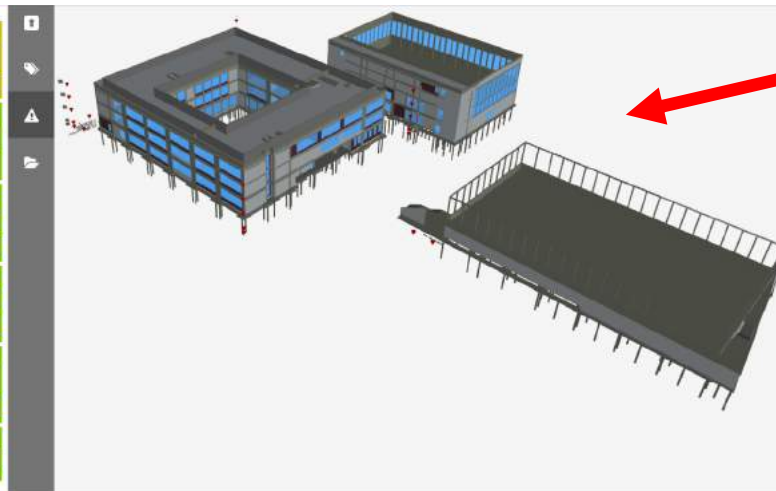
TRAININGS – COORDINATION



#	TITLE	TYPE	PRIORITY	STATUS	CREATED	DUE DATE	ZONE	PHASE	ASSIGNED TO
159	Kanalizacja podposadzkowa - jaki jest sposób łączenia tych elementów	02_Zapytanie o informacje	High	02 Otwarty	5/7/2019	5/9/2019	Boisko/Garaż - B1	Projekt wykonawczy	beata@mprojekty.pl
158	Kanalizacja podposadzkowa - mało miejsca	01_Błąd w projekcie	High	02 Otwarty	5/7/2019	5/9/2019	Szkola - B1	Projekt wykonawczy	beata@mprojekty.pl
157	Kanalizacja podposadzkowa - brak informacji	02_Zapytanie o informacje	High	02 Otwarty	5/7/2019	5/9/2019	Szkola - B1	Projekt wykonawczy	beata@mprojekty.pl
156	Kanalizacja podposadzkowa - mało miejsca	01_Błąd w projekcie	High	02 Otwarty	5/7/2019	5/9/2019	Szkola - B1	Projekt wykonawczy	beata@mprojekty.pl



159. Kanalizacja podposadzkowa - jaki je...	Type: 02_Zapytanie o informacje Priority: High Status: 02 Otwarty Assigned to: Beata Olczyk	View in model View / Edit
158. Kanalizacja podposadzkowa - mało ...	Type: 01_Błąd w projekcie Priority: High Status: 02 Otwarty Assigned to: Beata Olczyk	View in model View / Edit
157. Kanalizacja podposadzkowa - brak L...	Type: 02_Zapytanie o informacje Priority: High Status: 02 Otwarty Assigned to: Beata Olczyk	View in model View / Edit
156. Kanalizacja podposadzkowa - mało ...	Type: 01_Błąd w projekcie Priority: High Status: 02 Otwarty Assigned to: Beata Olczyk	View in model View / Edit
155. Kanalizacja podposadzkowa - mało ...	Type: 01_Błąd w projekcie Priority: High Status: 02 Otwarty Assigned to: Beata Olczyk	View in model View / Edit
154. Kanalizacja podposadzkowa - mało ...	Type: 01_Błąd w projekcie Priority: High Status: 02 Otwarty	View in model View / Edit



68. Ściany - wg archi... Ściany są murowane a w konstrukcji żelbetowe

Author	Marcin Grelak (mgrelak@mostostal.waw.pl)
Created	3/19/2019 2:06 PM
Last changed by	Piotr Bujowski (wbujow@bujowski.com.pl)
Last changed	4/30/2019 11:41 AM
Due date	3/25/2019 11:00 PM
Assigned to	
Type	02_Zapytanie o informacje
Priority	Krytyczny
Status	02_Gotowy do sprawdzenia
Zone	Hala - L1
Phase	Projekt badawczy
Disciplines	Architektura, Konstrukcja
Issue group	
Cardinality	
Notification list	00 Mostostal Warszawa - Zespół Realizacji
Company	[Nie przypisano]

COMMENTS

USER / DATE	COMMENTS
Piotr Bujowski 4/30/2019 11:41 AM	Ściany są żelbetowe.



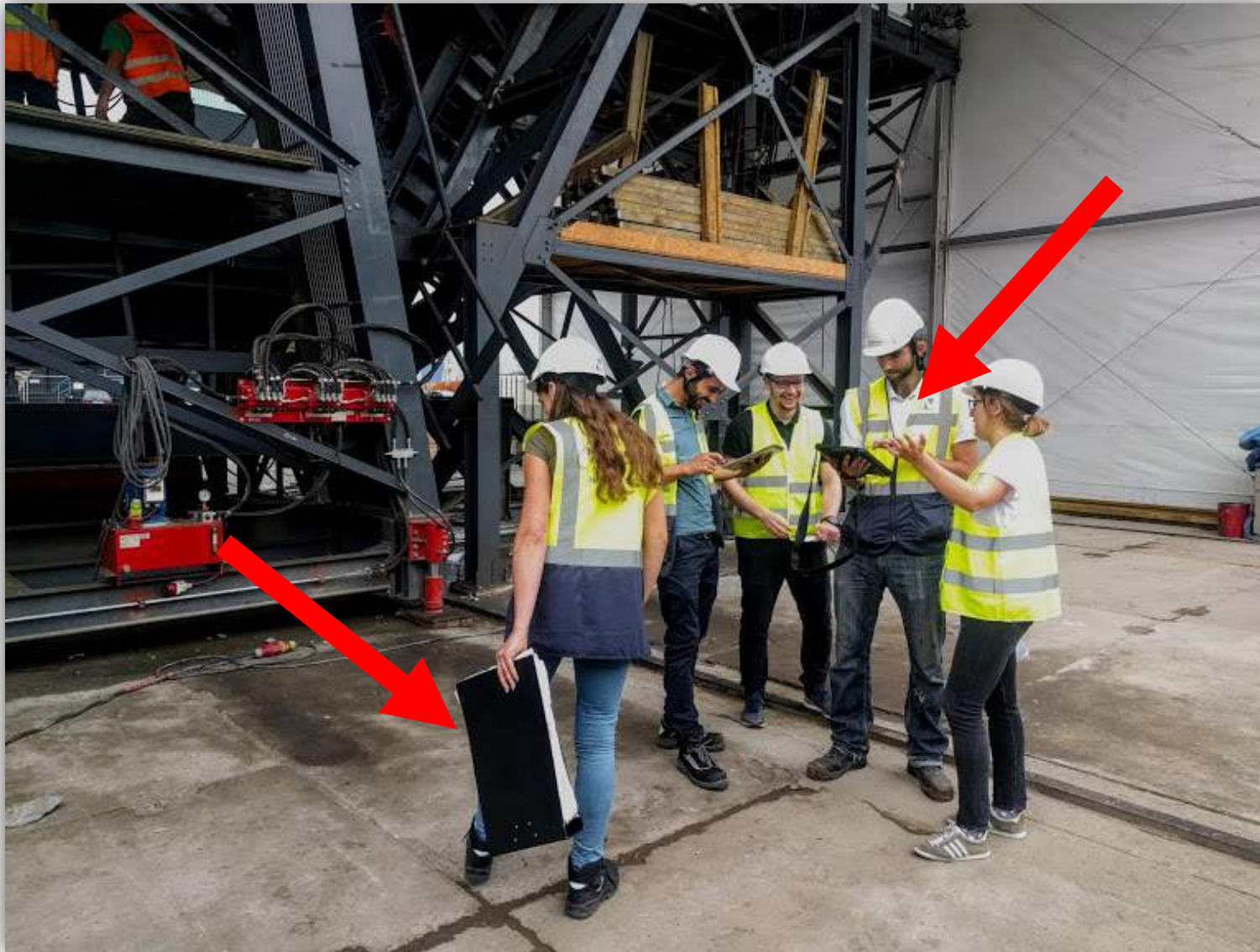


TRAININGS – COORDINATION





TRAININGS – DIGITALISATION



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TRAININGS - SUMMARY



- We conduct trainings at the construction site. Duration around 4h.
- We do not train from the software. We show functionalities that will be useful in everyday work by construction workers.
- We have to use models from a particular construction to arouse interest.
- It's good to work in groups divided into:
 - traditional way of working
 - modern way of working in BIM
- Not everyone can break into open communication. Time to change the way of working is needed.



CONTACT



Piotr Dymarski
Coordinator of BIM Team
E-mail: p.dymarski@Mostostal.waw.pl

Mostostal
WARSAWA



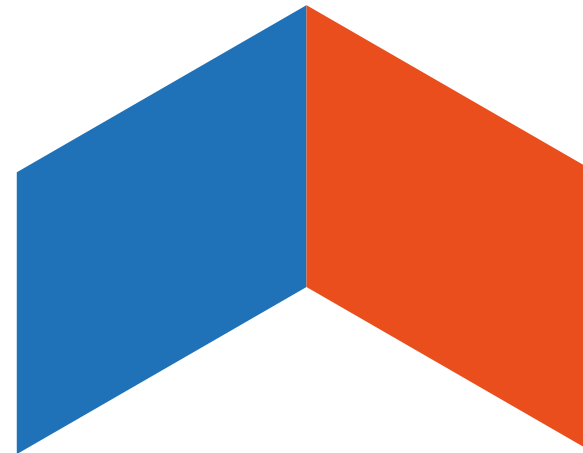
@PiotrDymarski
@H2020BIMplement





ANY QUESTIONS?

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This project has received funding from the European Union's h2020 framework programme for research and innovation under grant agreement no 745510

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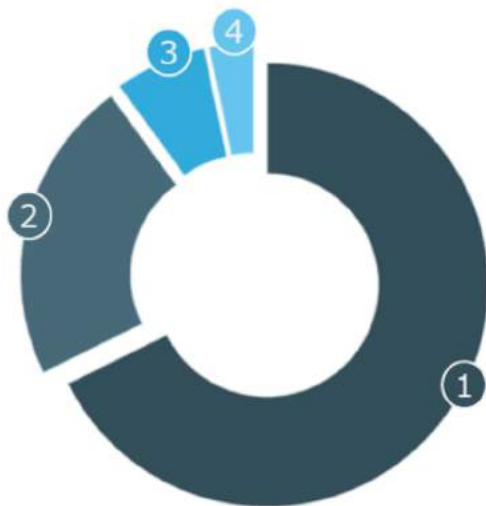
EU support for energy efficient buildings

Olav Luyckx

Project Advisor, Executive Agency for SMEs (EASME)
Horizon 2020 Energy Unit

EASME's role within the European Commission

- Manage EU programmes: total budget of € 10.4 billion (2014-2020)
- Feed project outcomes into EU policymaking



- 1 Horizon 2020 - € 7 billion
- 2 LIFE – € 2.3 billion
- 3 COSME - € 0.7 billion
- 4 EMFF - €0.34 billion



H2020 energy efficiency: types of actions – funding areas



Research & innovation
actions that establish new knowledge or develop more energy-efficient technologies and solutions.
EU funding rate: 100%.

Minimum 3 beneficiaries



Innovation
actions that demonstrate the viability of new technologies and solutions or support their first deployment in the market.
EU funding rate: 70%.

Minimum 3 beneficiaries



Coordination & support
actions* that improve skills, mobilise large-scale investments or facilitate EU policy implementation.
EU funding rate: 100%.

*Mostly minimum 3 beneficiaries (check the Work Programme 2018-2020)



Buildings



Consumers & Services



Industry & Products

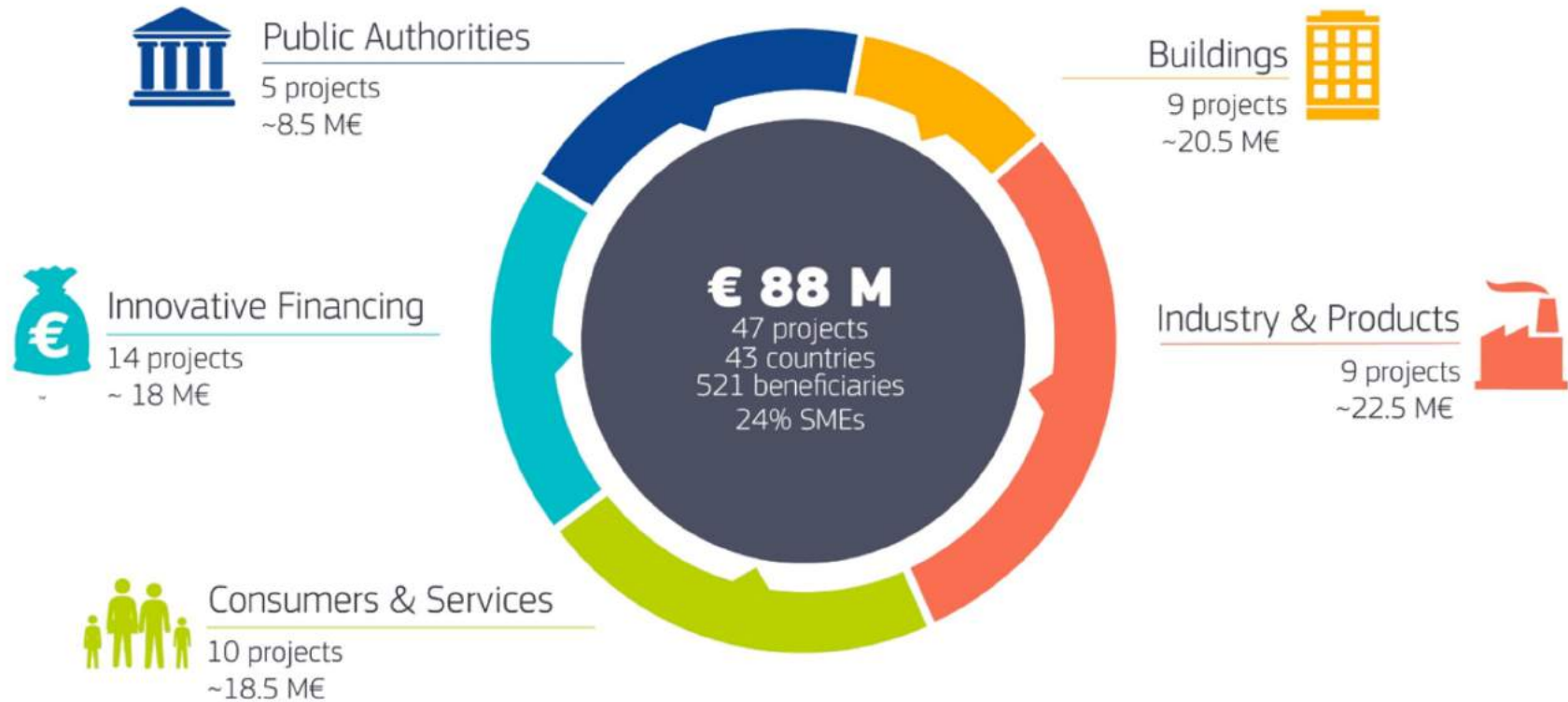


Public Authorities & Policy Support



Financing Energy Efficiency

H2020 Energy Efficiency 2018 Call Results



Horizon 2020 Energy Efficiency call for proposals 2019 related to buildings

Topic identifier	Topic title	Type of action
EE-01-2019	Decarbonisation of the EU building stock	IA
EE-02-2019	Integrated home renovation services	CSA
EE-03-2019	Stimulating demand for sustainable energy skills in the construction sector	CSA
EE-04-2019	Upgrading smartness of existing buildings through innovations for legacy equipment	IA
EE-05-2019	Next-generation of Energy Performance Assessment and Certification	IA
EE-18-2019	Bioclimatic approaches for improving energy performance in buildings in Africa and Europe	CSA

*With WP adoption begin July
Revised closing 10 September 2019*

<https://ec.europa.eu/easme/en/horizon-2020-energy-efficiency/112-million-energy-efficiency-2019>

Horizon 2020 funding for energy efficiency in 2020

Buildings in energy transition (B4E)



Registration: <https://h2020-energy-info-day-2019.com/registration/>

27 June: focus on Energy Efficiency Call 2020

1st deadline: opening 16/07/2019 - closing 15/01/2020

2nd deadline: opening 05/03/2020 - closing 10/09/2020

Buildings in energy transition (B4E)

1st Deadline: 15 January 2020



- B4E-1-2020: Towards highly energy efficient and decarbonised buildings (CSA)
- B4E-5-2020: Integrated design concepts for energy-efficient ICT in buildings (IA)
- B4E-6-2020: Big data for buildings (IA)
- B4E-7-2020: European building stock data 4.0 (CSA)
- B4E-8-2020: Renewable and energy efficient solutions for heating and/or cooling, and DHW production in multi-apartment residential buildings (IA)
- B4E-9-2020: Support to the coordination of European smart buildings innovation community (CSA)
- B4E-10-2020: Self-assessment and self-optimisation of buildings and appliances for a better energy performance (IA)

Buildings in energy transition (B4E)



2nd Deadline: 10 September 2020

- B4E-2-2020: Stimulating demand for sustainable energy skills in the building sector (CSA)
- B4E-3-2020: Upgrading smartness of existing buildings through innovations for legacy equipment (IA)
- B4E-4-2020: Next-generation of Energy Performance Assessment and Certification (CSA)
- B4E-14-2020: Enabling next-generation of smart energy services valorising energy efficiency and flexibility at demand-side (CSA)

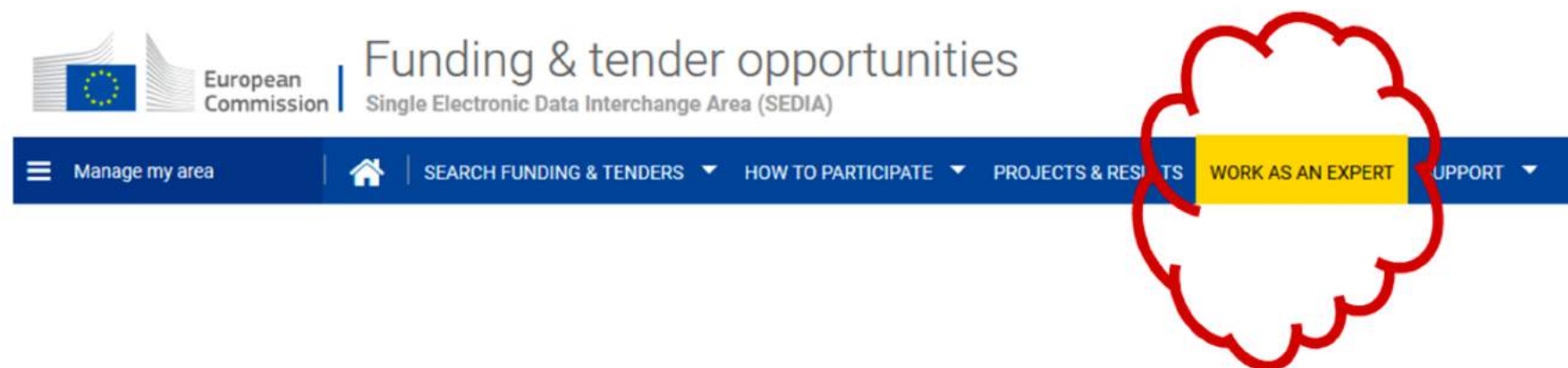
Future EU budget **proposals** 2021-27

EU funding of energy efficiency:

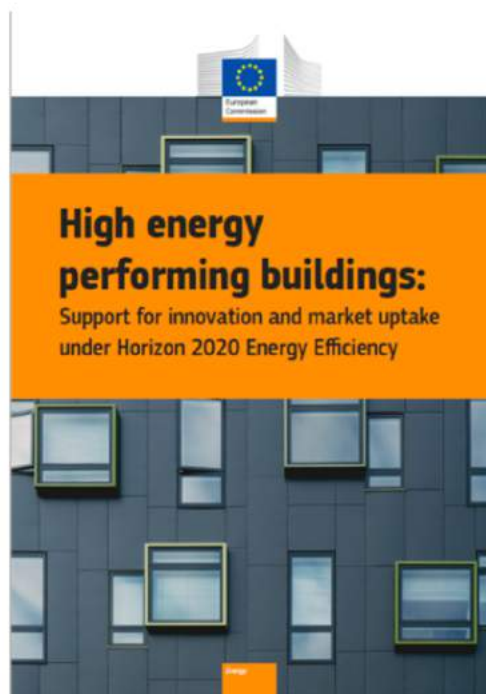
- Capacity building and policy support- LIFE/Clean Energy Transition
- R&I and technology development- Horizon Europe
- Direct support towards clean energy investments- ESIF/ERDF
- Mobilising private investments through de-risking- InvestEU
 - expand the successful model of the Investment Plan for Europe, the Juncker Plan

Horizon 2020 Funding & Tenders Portal

<https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/home>



EASME Publication (1)



- 24 projects supported by Horizon 2020 Energy Efficiency:
 - Deep Renovation
 - New NZEB
 - Smart Buildings
- <https://ec.europa.eu/easme/en/news/making-eu-s-building-stock-energy-efficient>

EASME Publication (2)



- « Results Pack » on 7 Deep Renovation projects
- Available in EN, ES, FR, DE, IT, PL
- https://cordis.europa.eu/article/id/401127-deep-renovation-new-approaches-to-transform-the-renovation-market_en.html

Energy-efficient Buildings PPP



- 174 EU projects (H2020 and FP7)
- Technology, advanced materials, construction processes, energy performance, BIM
- <https://bit.ly/2YEyOd0>

EeB PPP
Project review
2019

May 2019

buildup.eu: the EU portal for energy efficiency in buildings

The screenshot displays the buildup.eu website interface. At the top, there is a navigation bar with links for LOGIN, SIGN UP, PROPOSE CONTENT, and a language dropdown set to English. Social media icons for Twitter, YouTube, LinkedIn, and Facebook are also present. Below this is the BUILD UP logo and tagline: "The European Portal For Energy Efficiency In Buildings". A secondary navigation bar includes Home, News & Events, Practices, Learn, Explore, Topics, Skills, Topic Of The Month, and a search bar.

The main content area features a large news banner with the headline: "Public workshop on digital construction skills: enabling the energy transition in Europe's building stock". The banner includes a date stamp "16 May 2019" and a "Public workshop" label. To the right of the banner, there are three event cards: "Public workshop on digital construction skills: enabling the energy transition in Europe's building stock" (with subtext "The new call for energy efficiency is open!"), "Webinar on STUNNING: Innovative business models and smart financing for the deep renovation of buildings" (with subtext "Decarbonising the non-residential building stock"), and "Webinar on Assessing the energy performance of a building, put energy efficiency first".

Below the news banner, a blue box states: "This month our topic is 'Renovation and retrofitting of existing Public and non-residential buildings'" with a link "Click here to know more.".

On the right side, there is a "Tweets by @EU_BUILDUP" section showing a tweet from H2020EfficientEnergy (@H2020EE) dated 16 May, mentioning a workshop in Barcelona. Below the tweet are "Embed" and "View on Twitter" options.

At the bottom, there are two red boxes: "NEWS" with the headline "The new call for energy efficiency is open!" and "EVENTS" with the headline "★ Webinar on STUNNING: Innovative business models and smart financing for the deep renovation of European".



EASME

Thank you for your attention

Olav Luyckx

**Project Advisor, Executive Agency for SMEs (EASME)
Horizon 2020 Energy Unit**