



REHVA TRC BIM task force meeting

18 March 2021

Task force chairs: András Rónai & Ioan Silviu Dobosi

Agenda

1. BIM Task Force - Guidebook for HVAC professionals - SCOPE
2. BIM-SPEED survey - preliminary results
3. Content proposal for BIM Guidebook (AiCAAR, FR, BE, UK)
4. Other
 - BIM-SPEED competition

BIM Task Force - Guidebook for HVAC professionals - SCOPE

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BIM Task Force - Introduction

- ❑ The Task Force will focus on providing common principles to support HVAC professionals when implementing BIM into their projects and works.
- ❑ Building Information Modelling (BIM) is a new approach in the design, construction and operation of a building that, unlike traditional practices, allows the extensive and complex management of data and related information.
- ❑ BIM has the potential of increasing the level of coordination and collaboration between the members of all teams involved in a project (architects, engineers, constructors, clients) throughout the entire process (design, technical project, specific details, construction, maintenance).
- ❑ Coordination and collaboration refers both to the level of communication between people and to the exchange of data between the specialized software programs they use.

BIM Task Force - Guidebook for HVAC professionals - SCOPE

BIM – Important issues

- ❑ Although BIM is increasingly used at international level, there are still many barriers and challenges with the implementation.
- ❑ Different studies and research made on BIM, identified the following as the most significant issues associated with BIM adoption:
 - training of employees,
 - management of data
 - interoperability of the software
 - effect on the rate of payment
 - complexity of BIM, more time for high levels of details etc.

BIM Task Force - Guidebook for HVAC professionals - SCOPE

BIM – Important issues

- ❑ A primary point in the implementation of BIM is the interoperability, as a way of communication between people and between different types of software. When it comes to the software part, interoperability describes the capability of different programs to exchange data by using common set of exchange formats and to use the same protocols. It is well known that in the design process, architects and engineers often use different software tools. In order to have a proper BIM workflow, all used software tools must be interoperable. This allows freedom for each specialist to use the tools that best suits the needs of the discipline. However, interoperability is currently an issue because of the multitude of software companies. It is likely that software tools are not compatible unless they were created by the same company

BIM Task Force - Guidebook for HVAC professionals - SCOPE

BIM – guidebook for HVAC professionals – *András Rónai*

- a. REHVA should create a BIM guideline for Mechanical Engineers (Main goal)
 - BIM uses ME point of view
 - How we have to cooperate with other disciplines
 - Optimal BIM design level, if there is no client requirement (BIM should be the daily design method soon, also if its not required)
 - Mechanical designers minimum needs from other disciplines (also can be reflected to the construction teams)

BIM Task Force - Guidebook for HVAC professionals - SCOPE

BIM - guidebook for HVAC professionals - *András Rónai*

- ☐ b. To create BIM guideline, REHVA should create a special BIM survey only for Mechanical engineers, to research for the real needs
 - TF should create to survey points
 - Create it in man languages
 - Review the BIM-SPEED survey, to have a good overview (as I know, BIM-SPEED survey is general, not only for Mechanicals)

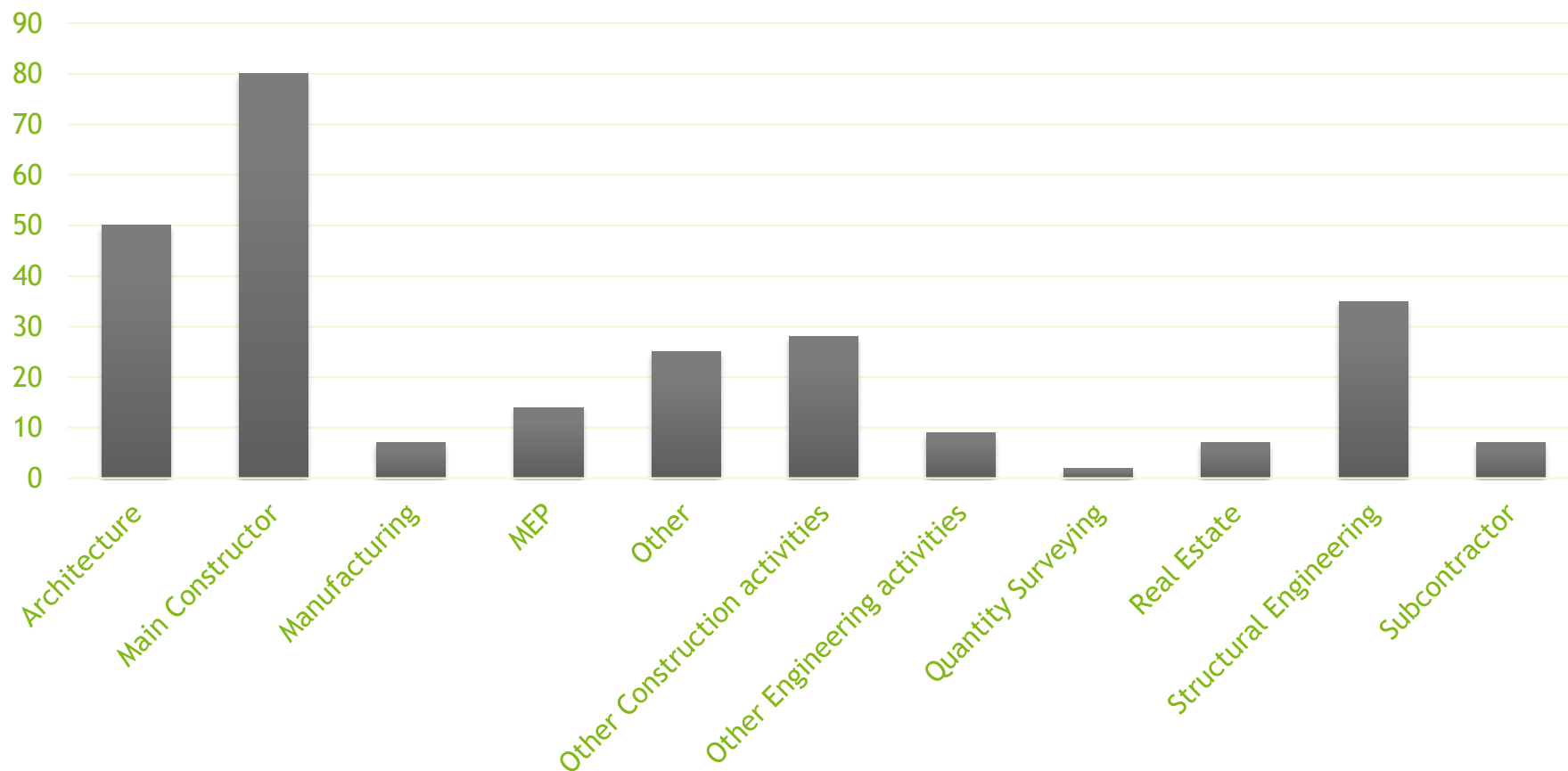
- ☐ c. Evaluate the result of the BIM survey
 - Create a report for REHVA
 - Based on the evaluation, create a BIM guideline contents

BIM-SPEED survey - preliminary results

BIM-SPEED survey insights

- BIM-SPEED survey between November 2020 - January 2021
- 370 responders
- Main focus on SMEs

What is the business sector of your company?

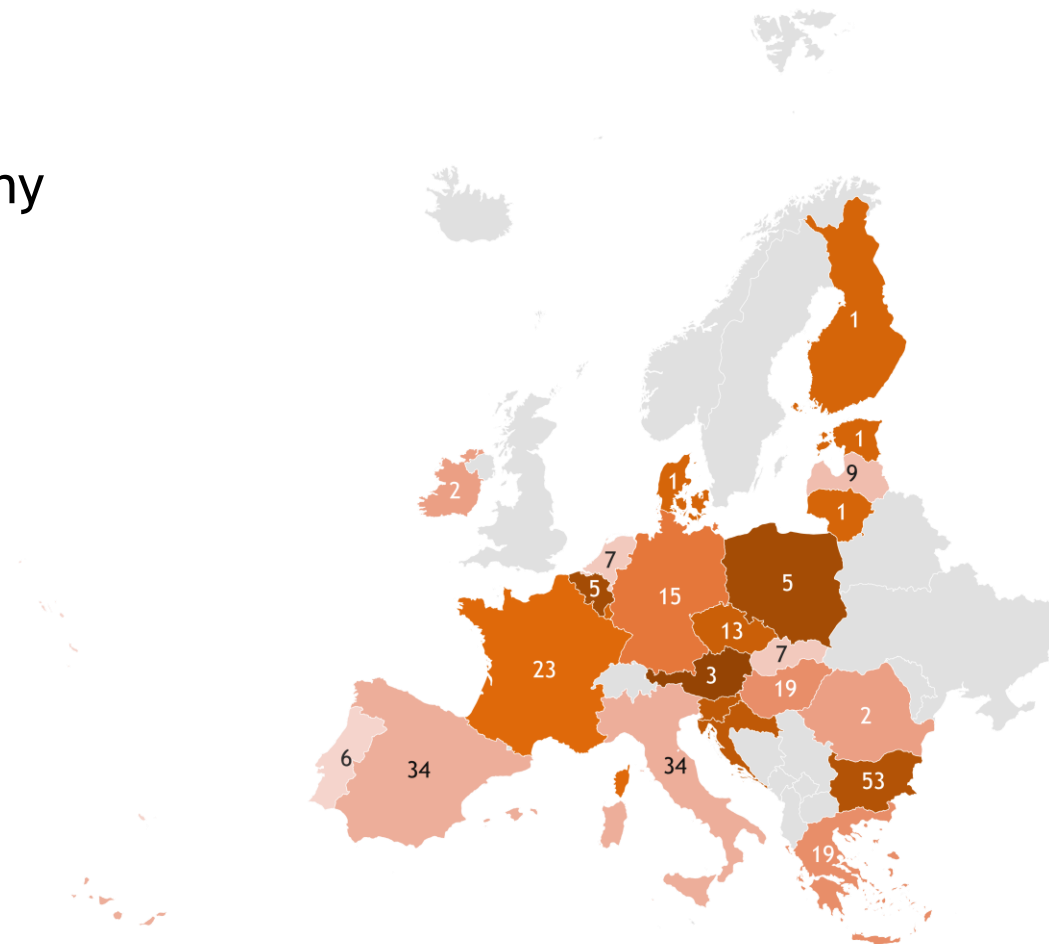


BIM-SPEED survey insights

Question

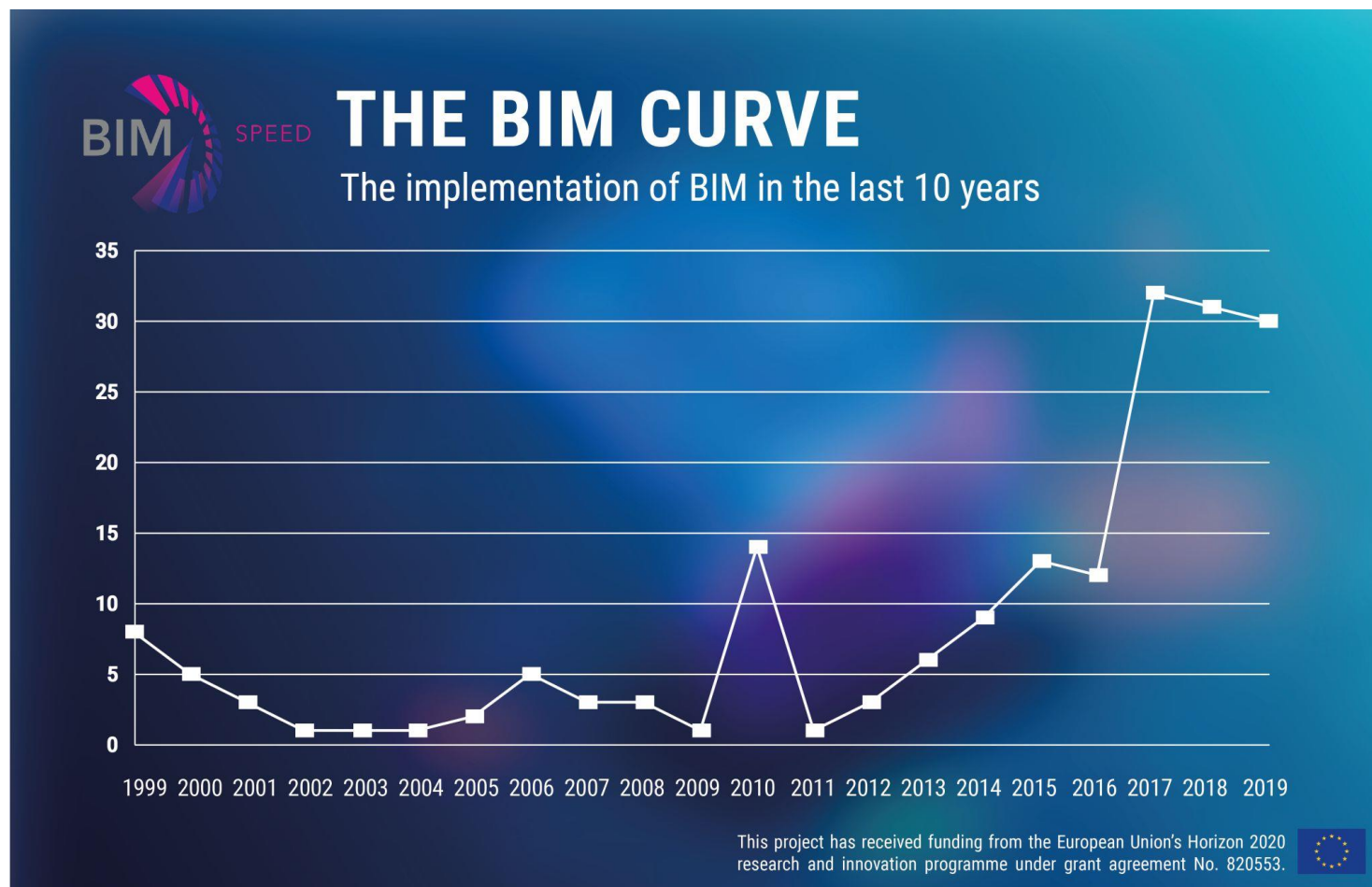
In which country is your company based?

- Bulgaria, Italy, Spain, France



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BIM-SPEED survey insights



Question

When did your company start to implement BIM?

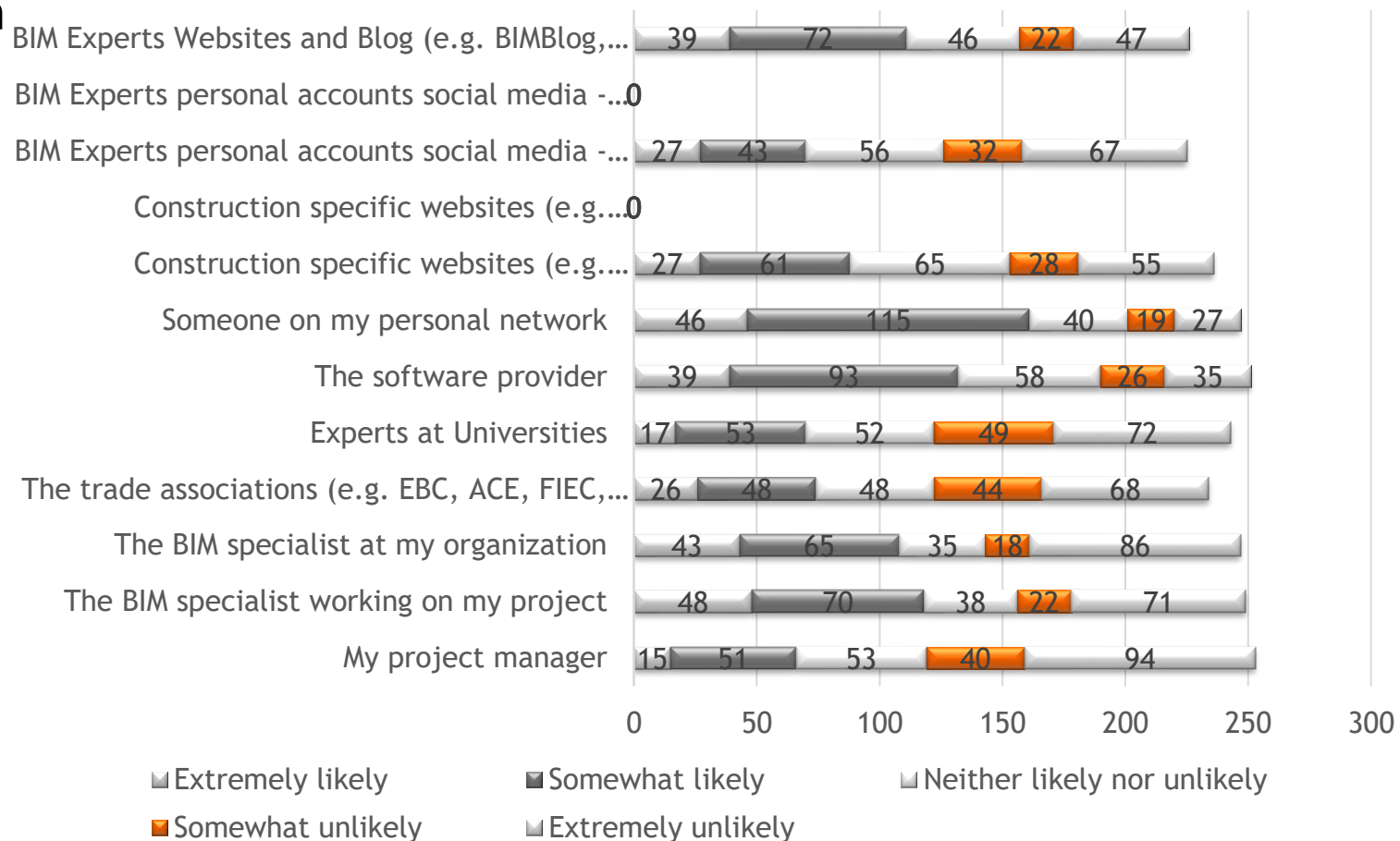
- There is an increase of new BIM users in the last 4 years

BIM-SPEED survey insights

Question

Where are you likely to seek information about BIM?

- Personal network
- Software provider
- BIM specialist
- BIM experts' websites
- Umbrella associations are not considered as a source of information on BIM (?)



BIM-SPEED survey insights

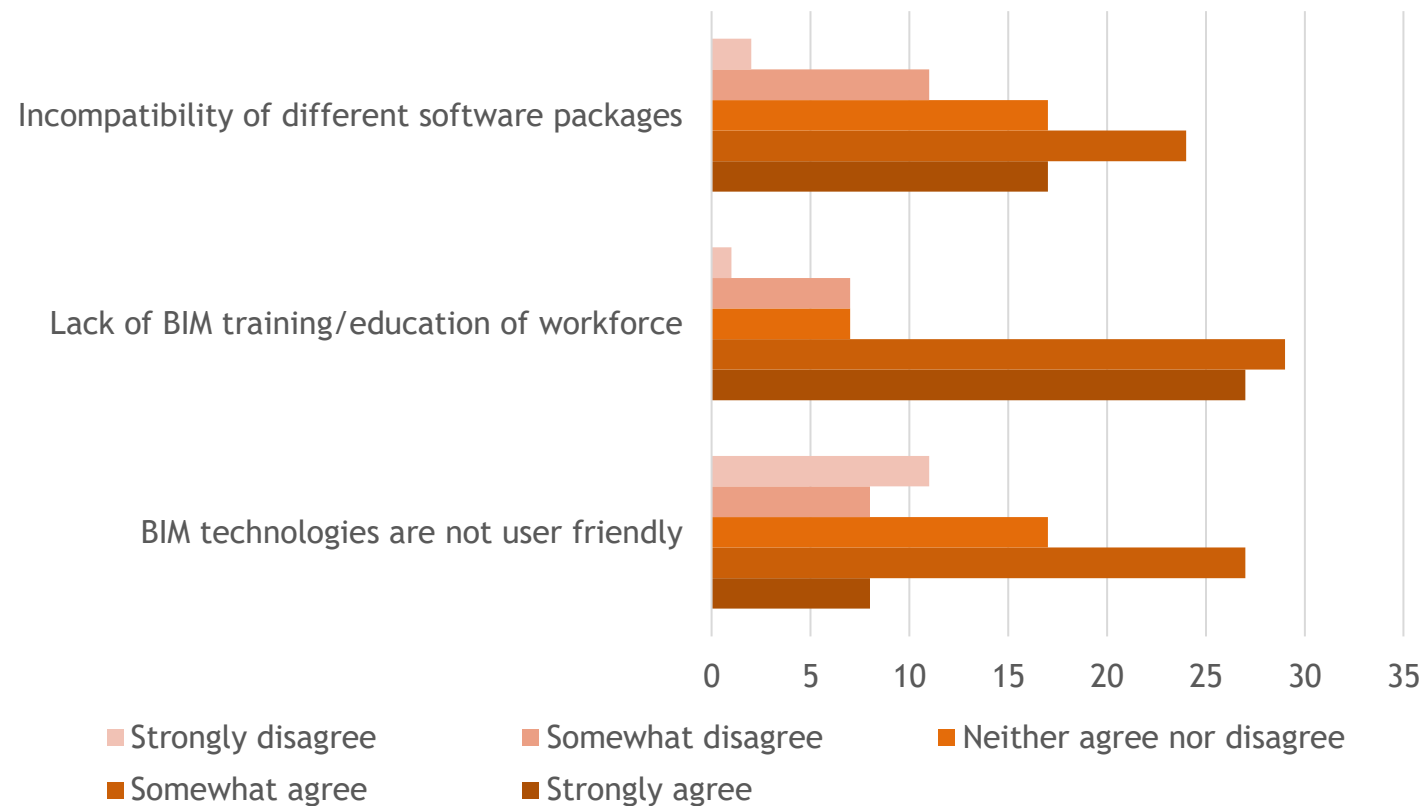
Question

What are the technical barriers for the adoption of BIM?

1st - Lack of training and skills

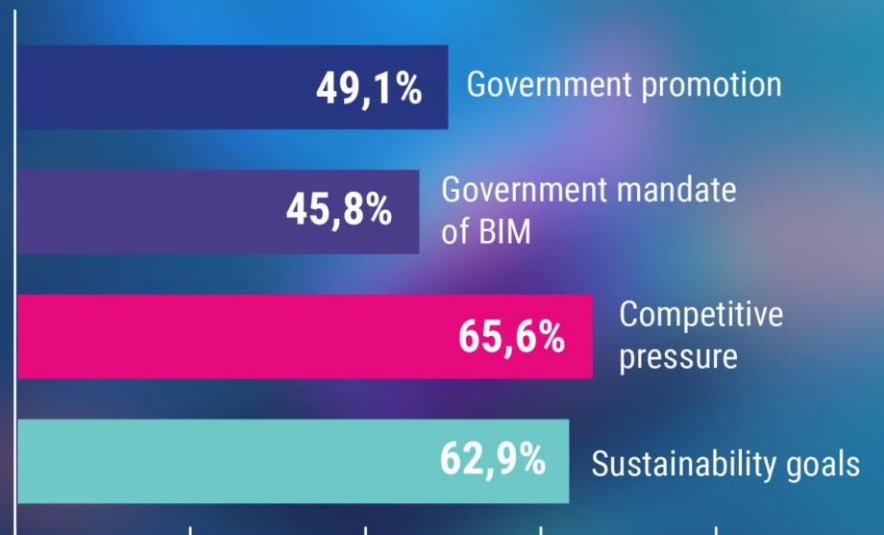
2nd - Software interoperability

3rd - User friendliness



The external drivers for the adoption of BIM

% of respondents **agree** these are external drivers for the adoption of BIM:



N = 370

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No. 820553.



Other information to be extracted:

- Technical, economic, social, regulatory barriers
- Motivations for BIM adoption
- SMEs digitalisation strategies
- Training and coaching personnel
- Data quality checking processes
- Public vs private projects
- Other

Content proposal for BLM Guidebook (AiCAAR, FR, BE, UK)

Content proposal for BIM Guidebook (AiCAAR, FR, BE, UK)

[BIM AiCARR EN.docx](#)

[BIM Belgium EN.docx](#)

[BIM FRANCE EN.docx](#)

Other - BIM-SPEED competition

BIM-SPEED competition

- The competition aims to invite **professionals and students active in the design and construction industry** to present a **residential building** renovation project that applies the **BIM tools and methods** developed by the BIM-SPEED partners
- The challenge is to **develop a renovation project** (using BIM-SPEED platform for collaboration) in a way that allows **energy saving for the occupants**, improves their **comfort** while **reducing the time and the cost** of the overall process

Eligible participants

Architects

Engineers (civil, HVAC, mechanical etc.)

Contractors

Surveyors

Students

Teams of
professionals/students



No individual applications



Application

Minimum requirements

Application via BIM-SPEED website

Multidisciplinary team (not individuals)

Renovation of Residential Buildings

Energy Savings category

Use BIM-SPEED platform

Use at least one of the BIM-SPEED tools



Categories



Professionals

- Multidisciplinary Team
- Use of their own renovation of residential building project

Students

- Multidisciplinary Team
- All building models will be provided for the development of the design proposal (BIM-SPEED demo cases)



Evaluation criteria

Evaluation criteria

Collaboration during the project: use of BIM-SPEED platform

Time and cost savings in the project by using the platform

Use of at least one of the BIM-SPEED tools

Renovation design applying sustainable strategies

Addressing issues and strategies related to user comfort



Available BIM-SPEED tools

- [CYPE Architecture](#)
- [IFC Builder](#)
- [Open BIM Construction Systems](#)
- [Open BIM analytical model](#)
- [CYPETHERM Eplus](#)
- [CYPETHERM Improvements Plus](#)
- GIS data collector service
- [3DASH plug-in](#)

- [Thingsboard](#) (IoT platform) proxy service
- [Thingsboard](#) (IoT platform) exporter
- ECOtool
- [BIMtoBEPS](#)
- Indoor environmental quality KPIs
- MEREEN weather service

Deliverables

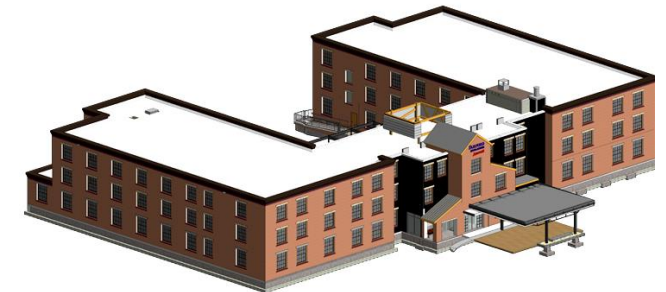
A report



IFC File



Infographic



Awards



PROFESSIONALS

EU-wide exposure through BIM-SPEED professional groups and dissemination channels

Monetary awards

Free educational licence for BIM tools

EU-wide exposure through BIM-SPEED dissemination channels and network of partners

Presentation of their project on ACE General Assembly

Presentation of renovation project during EUSEW2022

3 months internship in EU Research and Innovation projects

Monetary awards

STUDENTS



Timeline



STAY TUNED



COLOPHON

