BIM-SPEED

Harmonized Building Information Speedway for Energy-Efficient Renovation

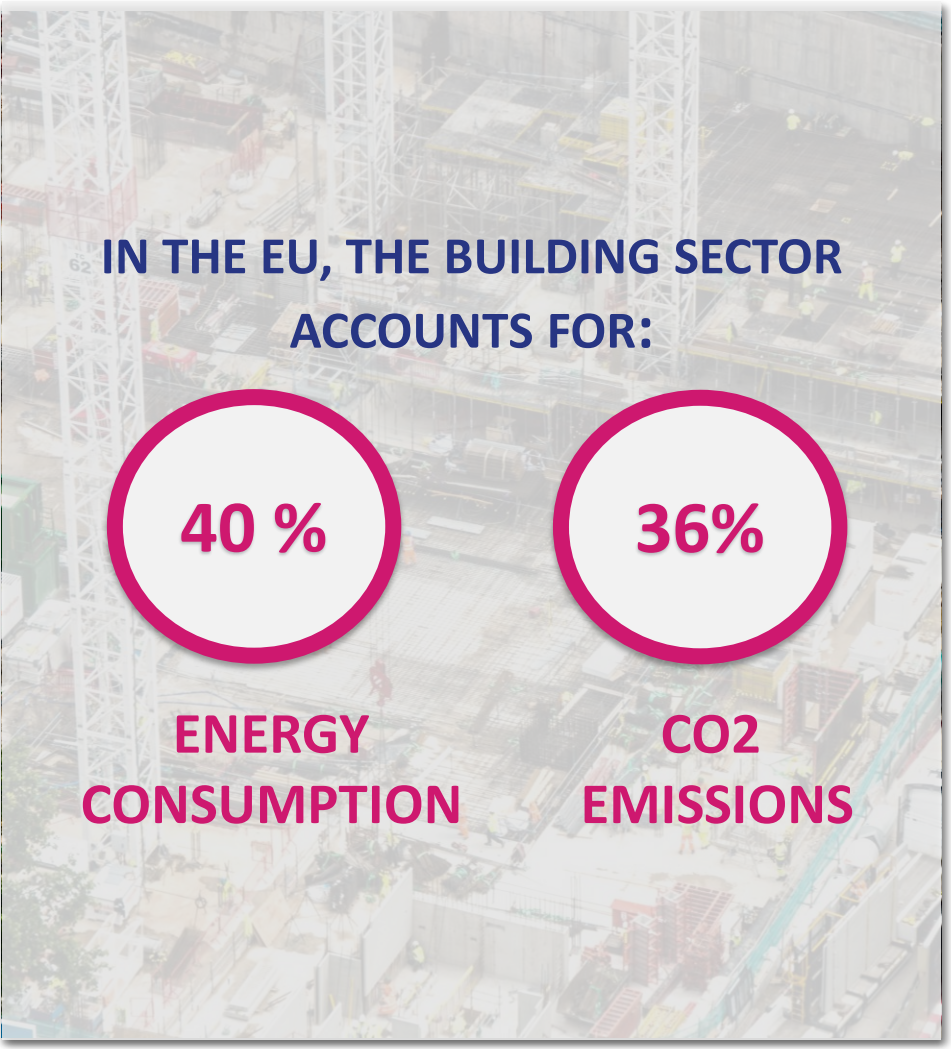
Train the trainer

BIM-SPEED CONSORTIUM AS A WHOLE

22 partners, including:

- 8 SMEs
- 3 Large Industry
- 2 Research Organisations
- 3 Higher Education Institutions
- 1 Public Body
- 4 EU Non-profit Professional associations

BACKGROUND & RATIONALE

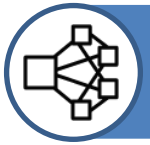


Most of our existing residential buildings have reached the age for renovation:

- 90% were built before 1990
- 40% built before the issue of building energy performance standards
- 75% are residential buildings

BIM- SPEED OBJECTIVES

Objective 1: Enabling all stakeholders to adopt BIM to reduce the time of deep renovation projects by 30%



Objective 2: Providing an affordable BIM cloud platform, tools, and standardised procedures

Objective 3: Creating and implementing renovation solutions with a guaranteed energy performance

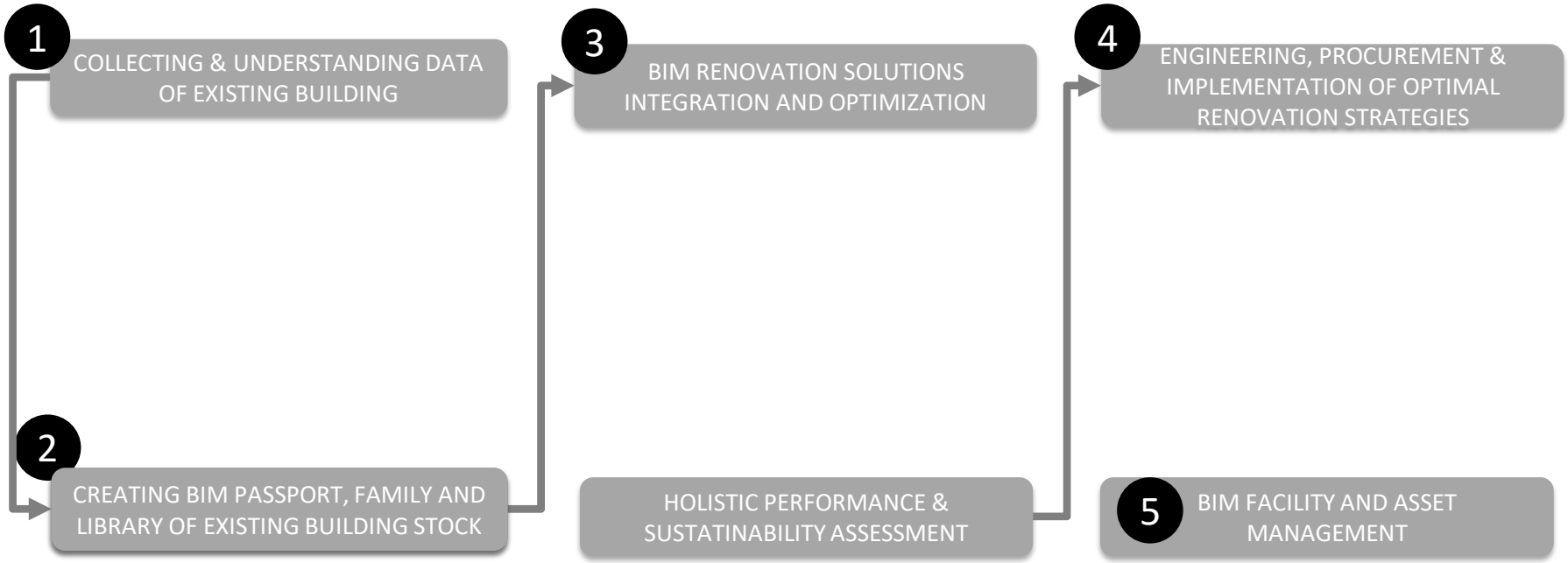
BIM-SPEED VISION

BIMSPEED Proposes Harmonized Building Information **Speedway** for Energy-Efficient Renovation.

An ecosystem for the tools to work together!

CONCEPT & APPROACH

BIM-SPEED promotes a credible trans-disciplinary approach to a renovation process where BIM is adopted in a cost-effective, flexible and modular way by all key stakeholders



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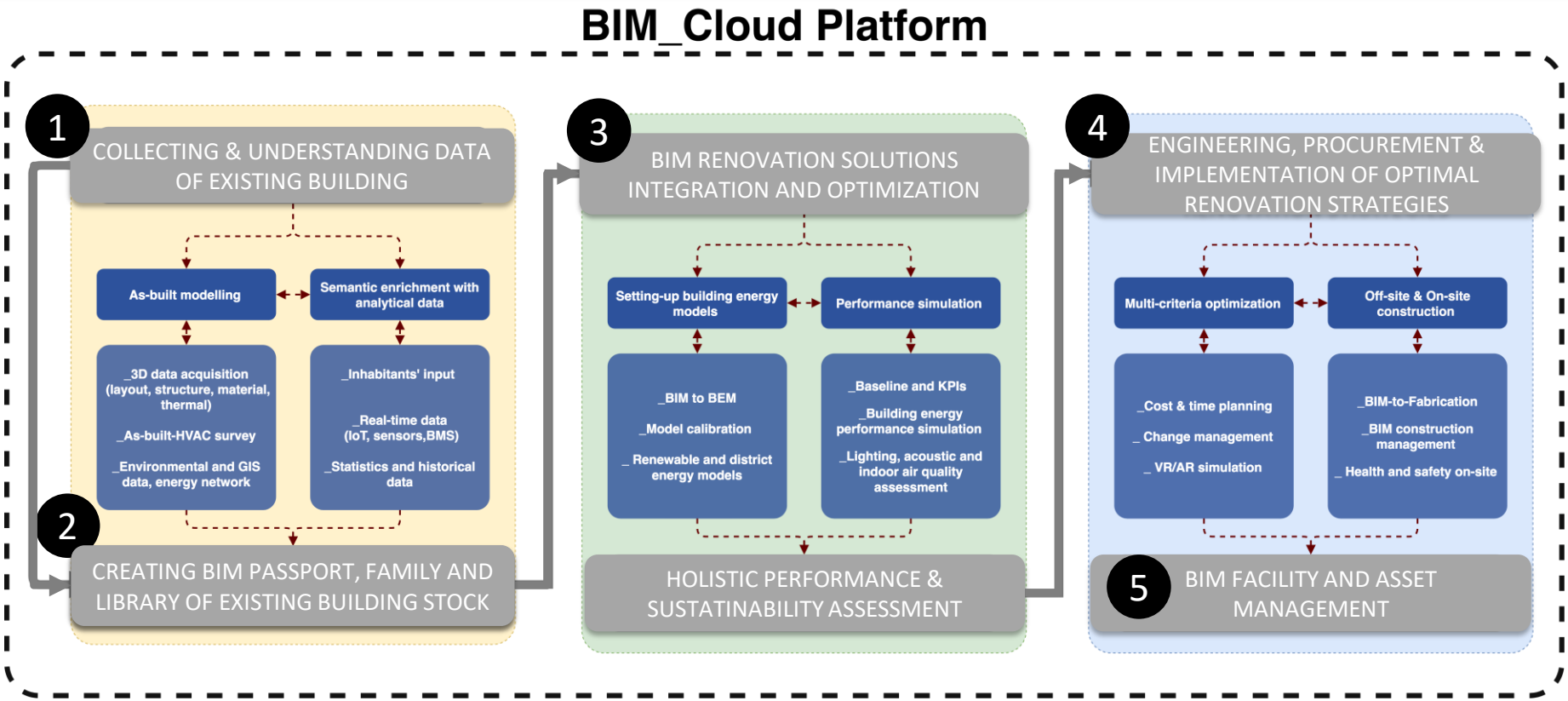
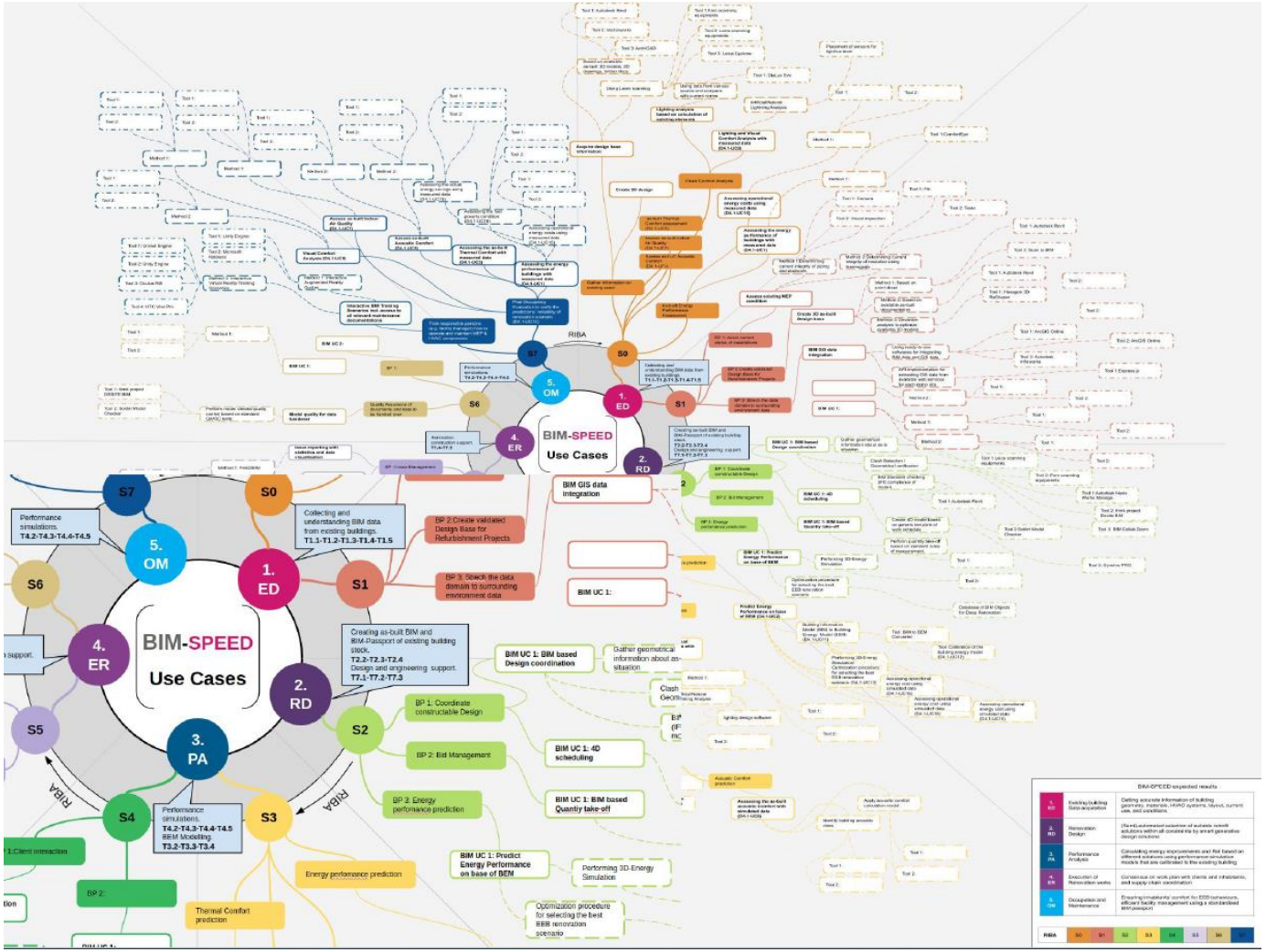
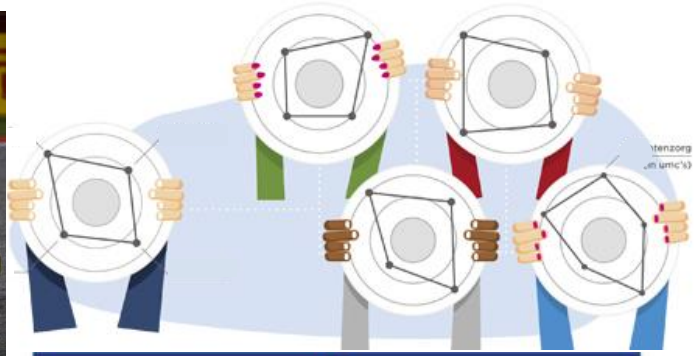
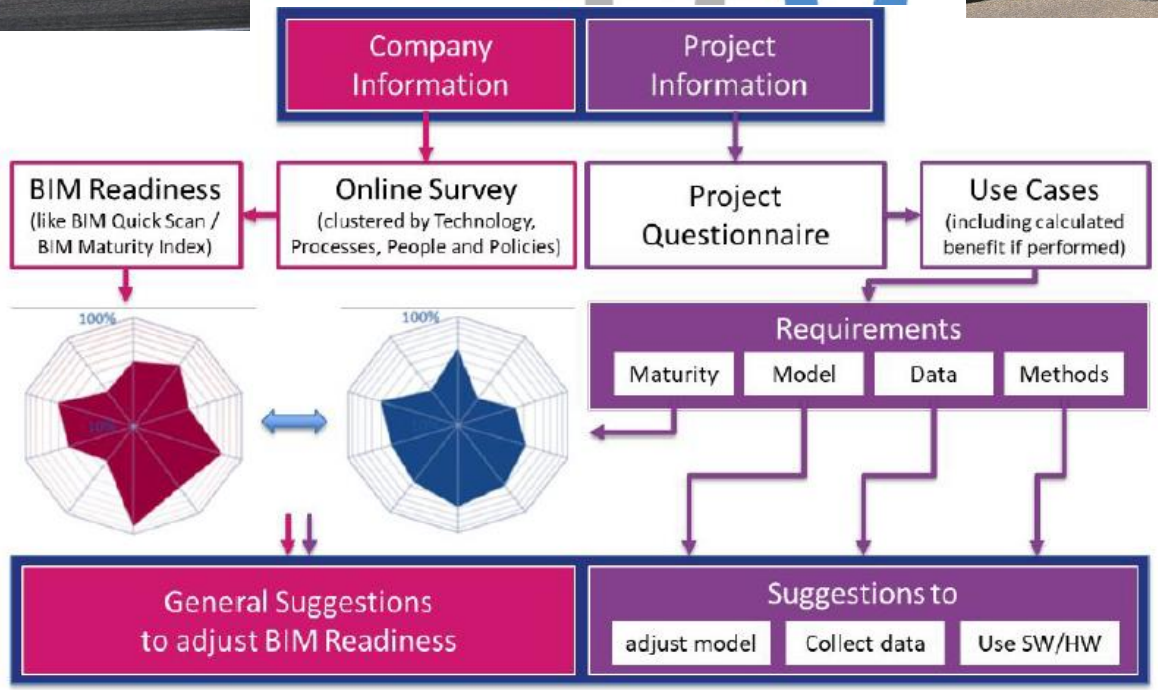


USECASE TREE: what can you use BIM for?



MATURITY LEVEL: who can use the tools?





INTEROPERABILITY: how tools work together?

Ontologies

Reno-Inst Ontology:
An ontology for installation of components in building renovation projects

LCA-C Ontology:
An ontology for LCA/LCC assessments in renovation projects

BEM-Reno Ontology:
An ontology for BEM development in renovation projects

Industry Standard & Protocols

ThingsBoard

Device Connectivity Via Industry Standard IOT Protocols

Industry Foundation Classes

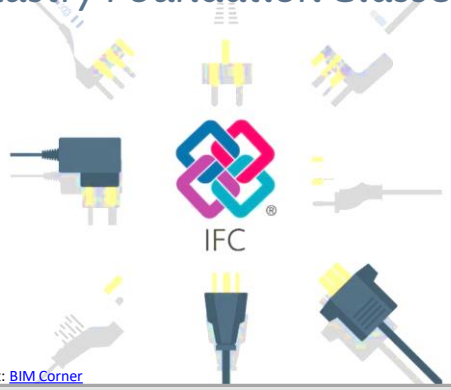


Image credit: BIM Corner

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gbXML

Communication of building data stored in BIMto engineering analysis tools

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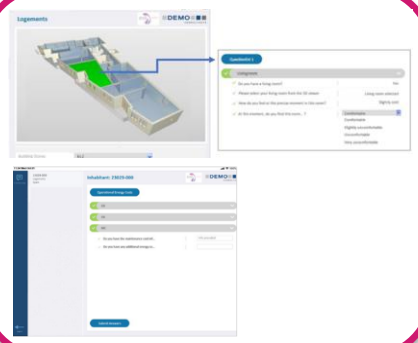
CityGML

Open data model and XML-based; common definition of 3D city model

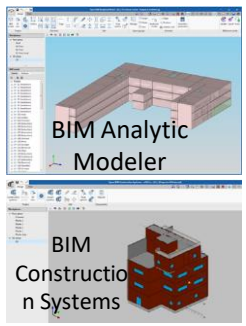
BIM-SPEED HIGHWAY

INHABITANT'S APP

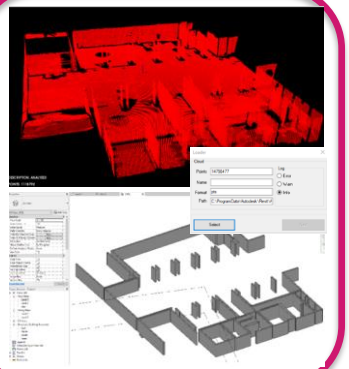


GIS DATA PROVIDER

CYPE TOOLS

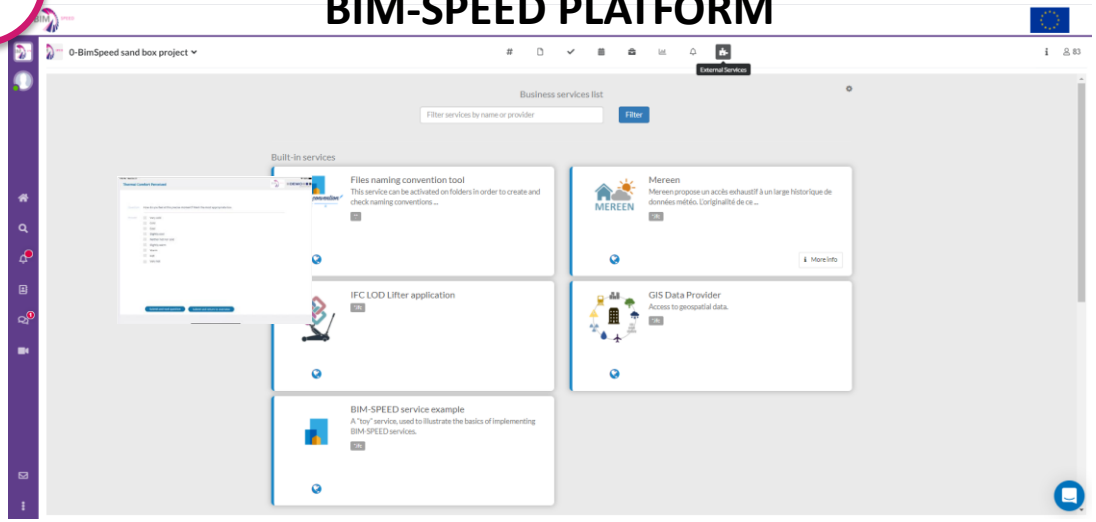


3DASH TOOL



DSS TOOL

BIM-SPEED PLATFORM

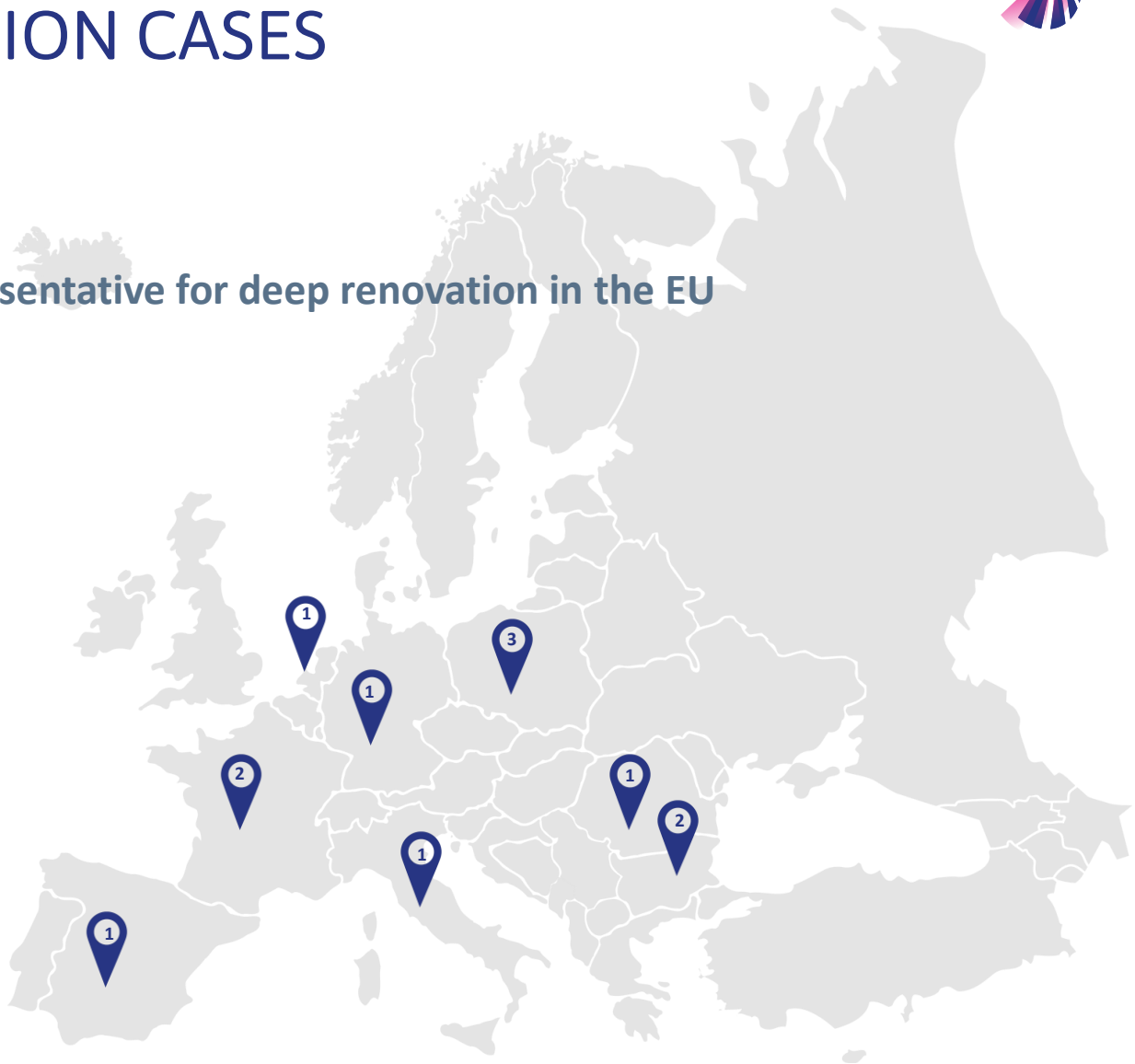


DEMONSTRATION CASES

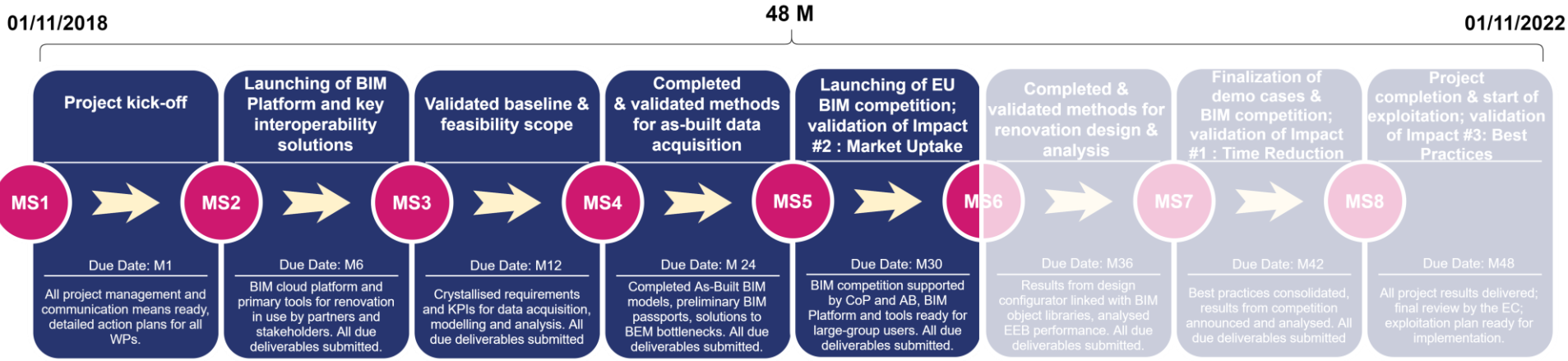
Typology baseline representative for deep renovation in the EU

The planned real demonstration activities based on BIM

1. **As-Built data acquisition and BIM modelling**
2. **Renovation design**
3. **BEM and performance simulations**
4. **Renovation execution (off-site and on-site construction)**
5. **Post-renovation evaluation and long-term maintenance planning**



TIMELINE & MILESTONES (MS#)



COLOPHON

21.04.2021

General Presentation

DMO

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