Platforms for EeB Renovation
BIM-Speed project

Timo Hartmann
timo.hartmann@tu-berlin.de
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- 5,310,875.34 EUR
- 2016 – 2020
- 54% SME; 28% IND; 13% HES; 5% PUB

- 6,997,781.25 EUR
- 2018 – 2022
- 36% SME; 18% IND; 23% HES; 12% RES; 11% PUB / non-profit
European Union (EU) (Meijer et al., 2012)(Artola et al., 2016)

- 40% of the total energy consumption and 36% of CO2 emissions
- 90% of the total stock was built before 1990 of which 40% before 1960 when building energy performance standards had not yet been published
- 75% of the total floor area of the existing stock belongs to residential buildings
- 85% of all renovation projects led to an energy reduction between 0 and 30%; 10% of the projects resulted in an energy reduction of 30%-60%; only 5% of the projects reduced energy consumption by 60-90%

**EU renovation wave**

- improving the energy efficiency of buildings,
- stimulate investments,
- boost job creation in the sector
- address social aspects related to the energy-poverty and living conditions.
2010 the renovation market has surpassed the construction of new buildings
Why is it so hard to scale deep renovation efforts?
Need a platform to support complex local business networks
And that supports large amount of use cases linking data / information with actors into complex eco-systems.
BIM-SPEED demonstrated how all stakeholders in the housing renovation market can be supported with a eco-system platform (TRL 6-7 = subsystem level):

1. An affordable cloud-base BIM platform

2. A set of inter-operable BIM tools

3. Validation and standardised procedures for implementing renovation solutions with guaranteed energy performance and inhabitants’ comfort
Paved the way by demonstrating how a cloud platform/architecture could look like
Integrated illustrative apps for supporting the renovation project life-cycle to start the race
Some stunts: Develop some innovative apps (for example AI support)
How can we establish the eco-system that is required around the platform?

We did:

- 12 demonstration projects (building renovation)
- 10+ illustrative apps and services integrated in the platform
- Formalization of 20+ BIM-Speed use cases for BIM for renovation
  - [uCM](https://ucm.buildingsmart.org/)
- Detailed training material
- BIM-Speed competition

But this will not be enough …
What does it take to establish a cloud platform and eco-system for building renovation?

What is the required scope for a platform – renovation, all projects, infra?

Who will provide, manage, maintain, market, finance it?

Can a solution compete with existing platforms?