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**BIM4Ren**

**BIM4Ren:  
One Stop Access  
Platform for Digital  
Information in  
Renovation**

# BIM4Ren Overview



Easy-to-use BIM tools and workflows for collaborative and energy-efficient renovation of residential buildings

- **Consortium:** 23 partners from 10 European countries
- **Coordinator:** Nobatek/INEF4
- **Duration:** 48 months
- **Start:** 1st Oct 2018
- **Budget:** 7M€
- **H2020 G.A. 820773**



# BIM4Ren Innovation Pillars



## 01 Digital Driven Workflows

Development of BIM based workflows dedicated to the renovation of residential buildings adapted to the complexity of targets of construction sector and put into a systematic and integrated workflows.

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## One Stop Access Platform 03

All the services are integrated altogether, accessible from a single entry point granting access to all end users offering the most adequate solutions to its needs and objectives.

## 02 BIM4Ren Tools & Digital Environment

Workflows are backboneed by a novel, state of the art, open and decentralized environment, and BIM solutions on data collection, data management and data driven design are integrated into it.

## Pilots as Living Labs 04

Project pilots are used as a user-centered, open-innovation ecosystem with co-creation, exploration, experimentation and evaluation of the deployed tools.

## Data Management



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## Data collection

### WHAT IS THE EXISTING DATA ?

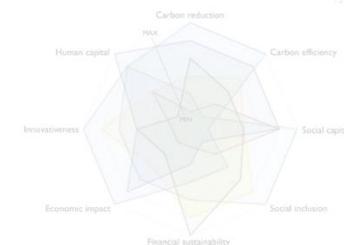
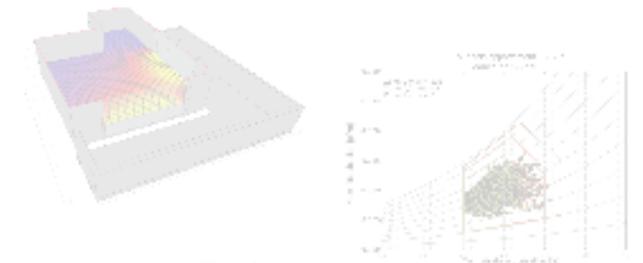


- Year?
- Local regulation?
- Cost € ?
- Energy performance?
- Geometry?
- Stakeholders expectations?
- Type of occupants ?
- Renovation potential ?
- State of the existing infrastructure ?



Stakeholders involved in the renovation

## Data-driven design

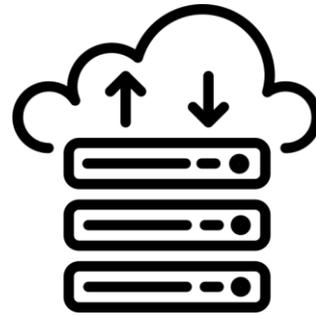


# BIM4Ren CONCEPT



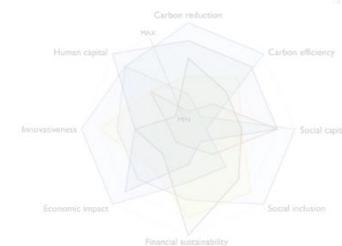
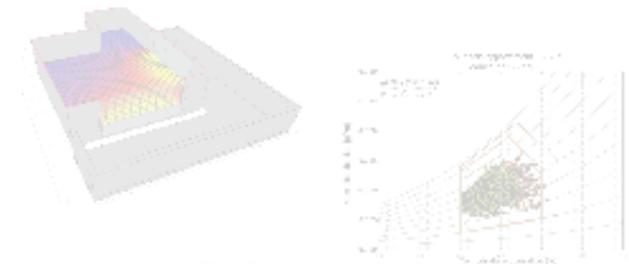
Data collection

WHAT IS THE EXISTING DATA ?



- H2020 G.A. 820773
1. To create the BIM model
  2. To organize, consolidate, secure
  3. To exploit the BIM model

Data-driven design



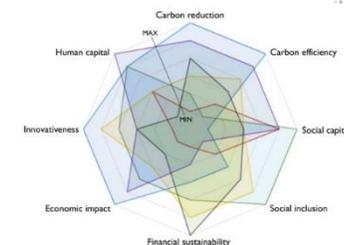
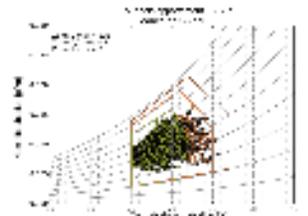
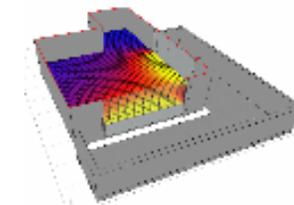
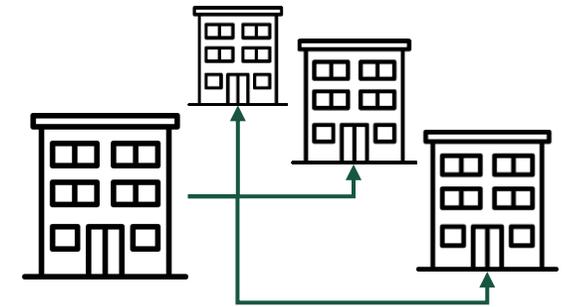
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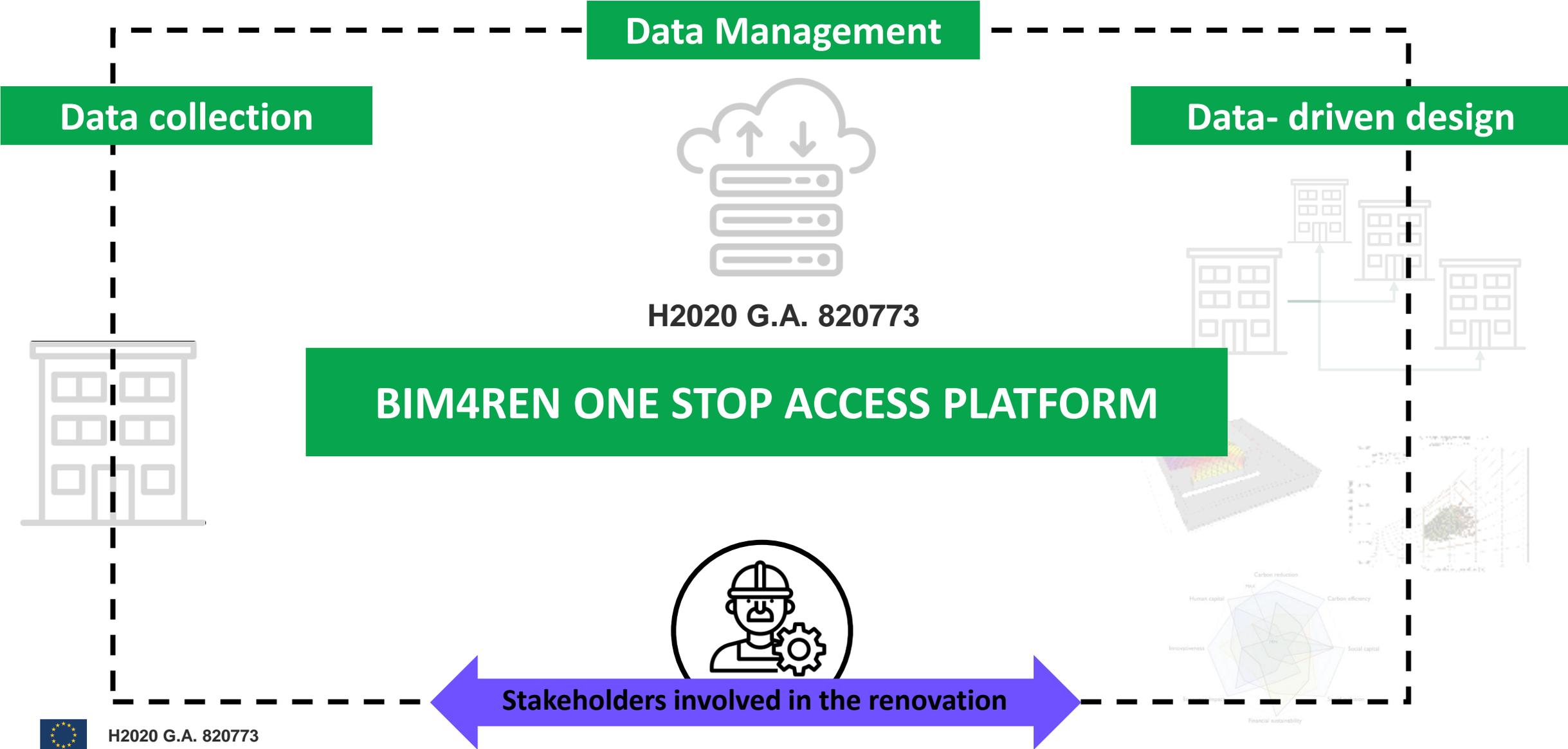
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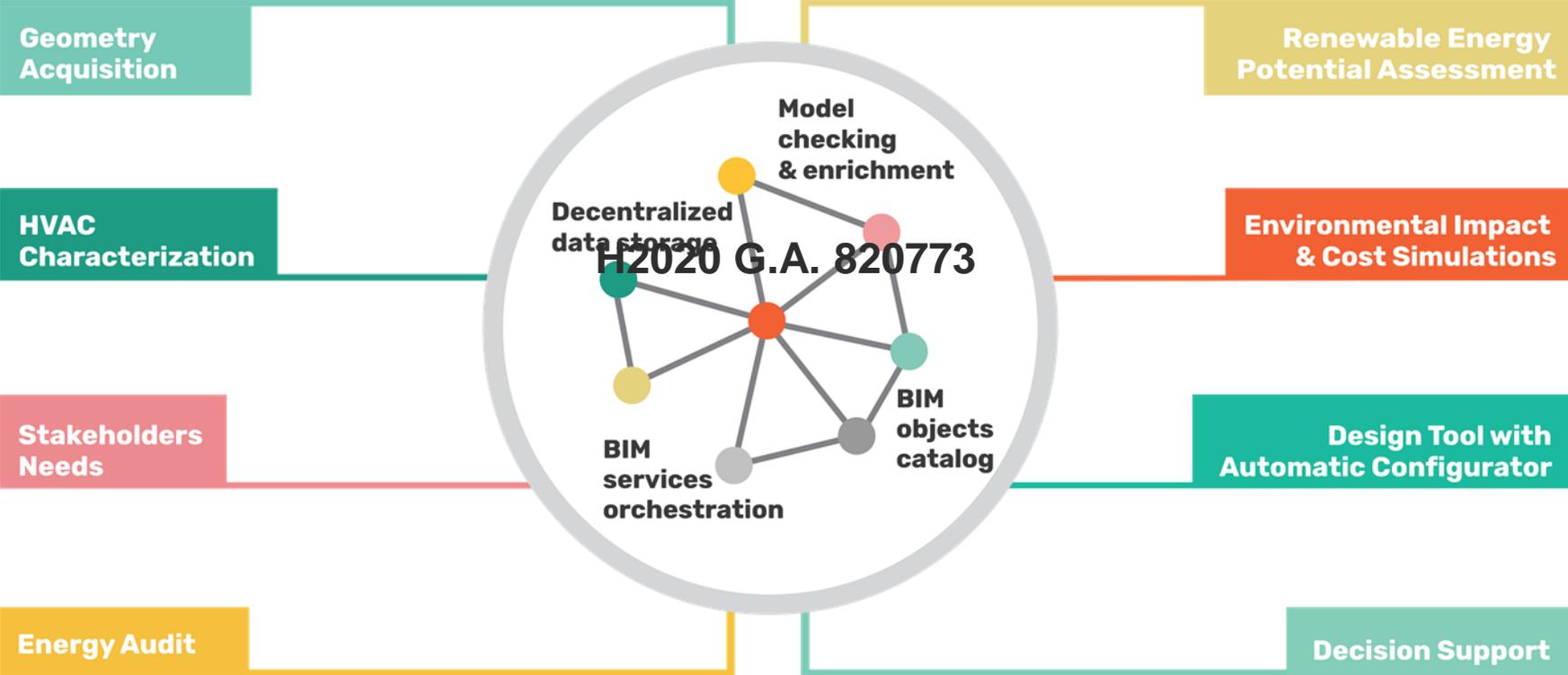
# BIM4Ren CONCEPT



# BIM4Ren CONCEPT - LOD 0



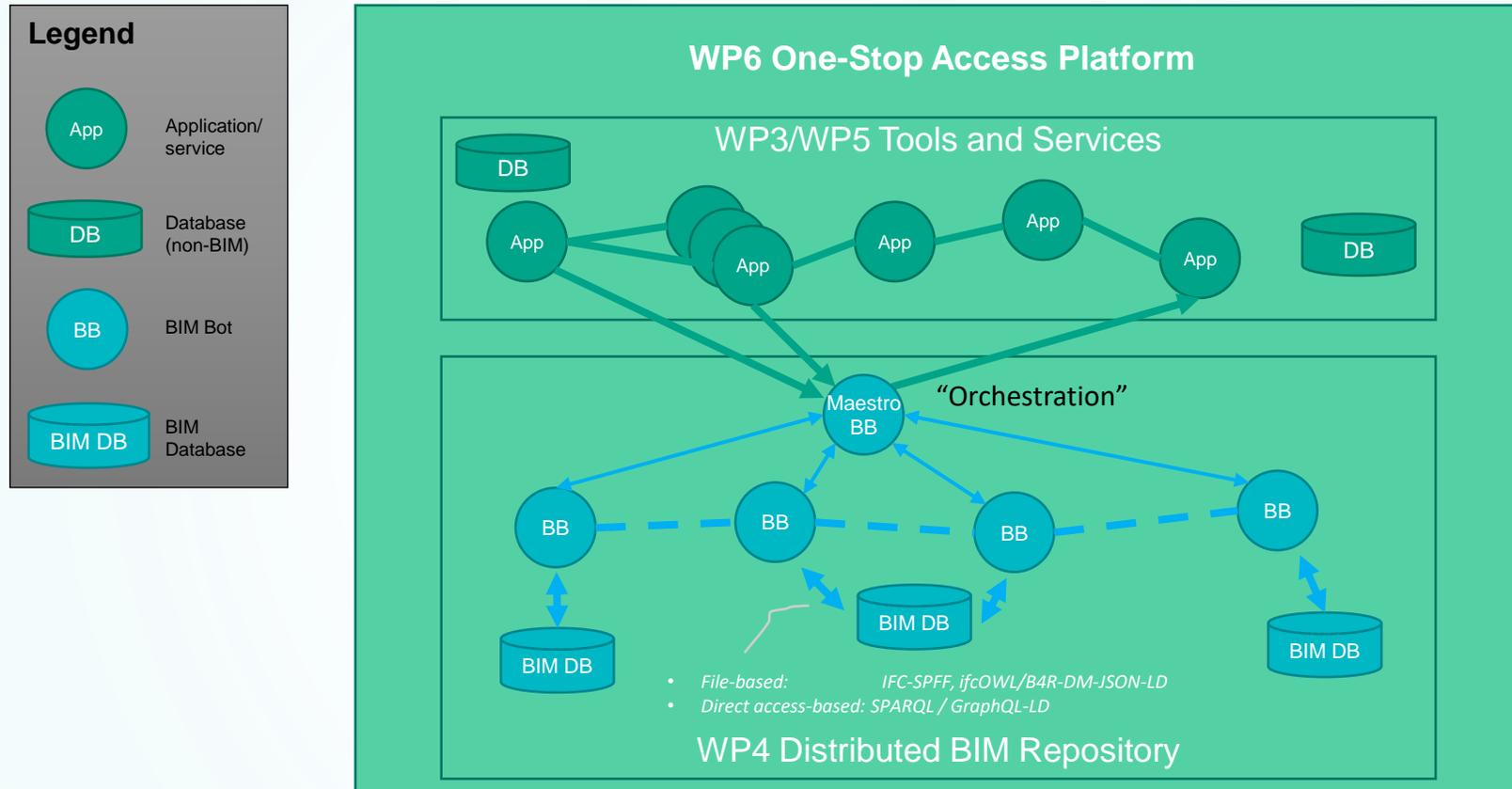
**Data Collection**      **Data Management**      **Data-driven design**



**BIM4REN One Stop Access Platform**



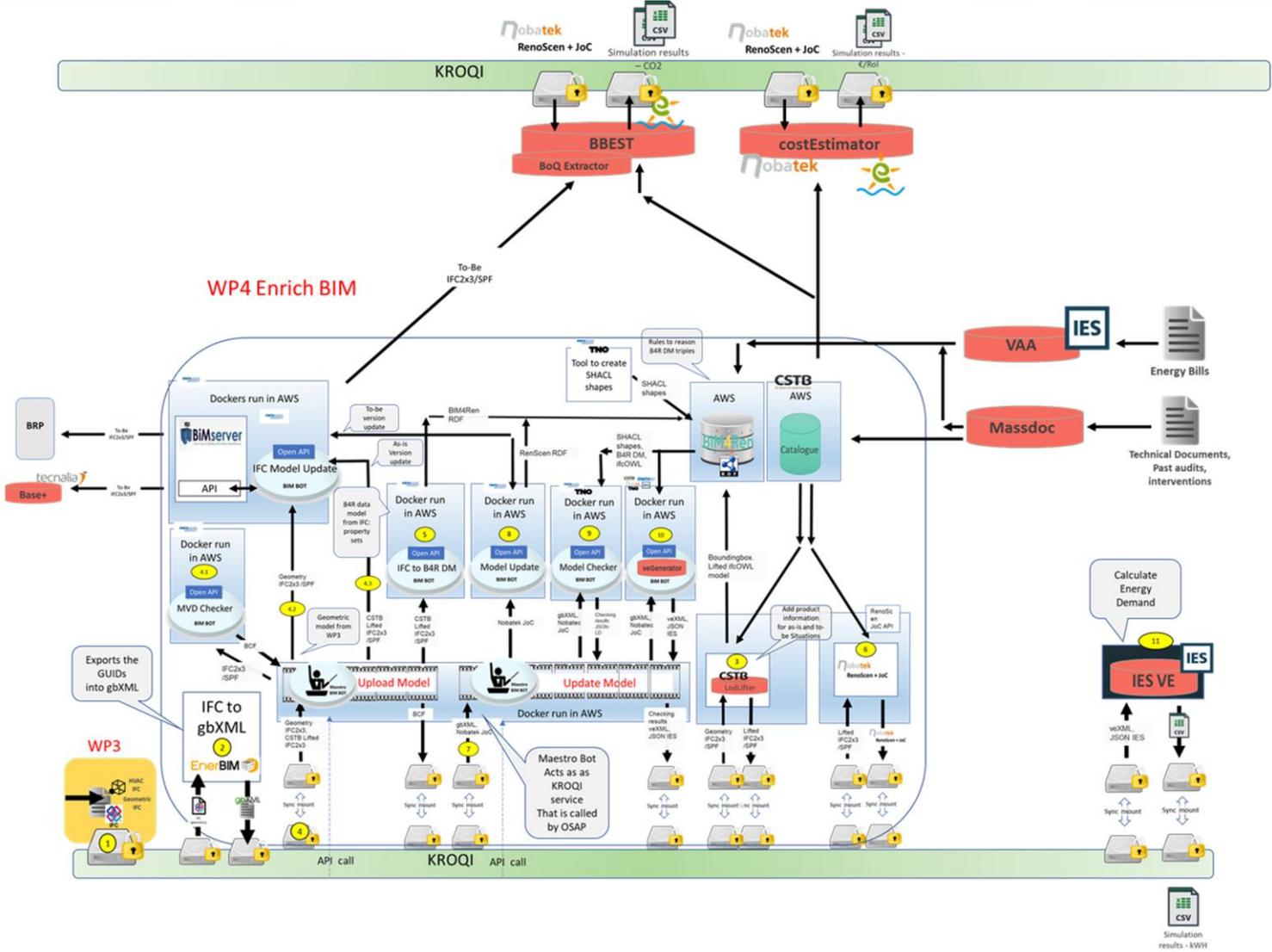
# BIM4REN Architecture - LOD 1



## Applications/services & BIM Bots

- implemented as “OpenAPI micro services”
- deployed in Amazon Web Services (AWS) & CSTB KROQI cloud platforms

# BIM4REN Architecture – LOD 2



This project has received funding from the European Union's Horizon 2020 programme under Grant Agreement No. 856943

- Need for open standards in CDEs beyond DIN SPEC 91391 or generic GAIA-X
- Many examples from the past – history repeating?
  - ESPRIT III-IV ToCEE 1997, FP5 E-CONSTRUCT, FP6 InteliGRID ...
- Islands of Automation → Islands of Standardization
- mandate by public institutions