LC-EEB02-2018: Building information modelling adapted to efficient renovation

The Building Information Modelling (BIM) tools developed so far are adapted mainly to new buildings (all types). In order to offer easy, practical, operational tools for all stakeholders, including constructing companies, designers, architects and service companies, we need to deploy attractive tool kits also for existing buildings. A particular important challenge will be to produce compatible tools that would allow collecting of data from existing buildings (e.g. geometric data) and exploit data from different sources. This will also contribute to more accurate knowledge of the existing building stock by providing methods and tools to generate data for existing buildings. Such BIM tools will be exploited first and foremost in existing residential buildings.

Europe cannot meet its EE targets without addressing the retrofit of existing buildings

BIM is great – but it is mainly used for new buildings

BIM is great – but it is mainly used on big projects

BIM is great – but it is mainly by big companies

99.9% of EU Construction Companies have less than 250 people
91.9% fewer than 10 people
BIM4REN: Innovative & accessible BIM tools for all the building renovation value chain

Duration: 4 Years
Funding: 7 million euro
Partners: 24

Other Interesting Partners
TNO
IES
CSTB
Tecnalia
LOGIREP
Fraunhofer
WISEBIM
ENERBIM
European Builders Confederation
Nostra Risposta

There is no need for a “one size fits all” solution because different jobs will have different needs. We can have a “One Stop Access Platform” that provides a common point of entry to all stakeholders.
BIM4REN

Nostra Risposta

BIM 4 Design

BIM 4 Construction Management
BIM4REN

Nostra Risposta

BIM 4 Design

BIM 4 Construction Management

BIMBOTS

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Milan

Venice

Paris

Levallois

Astigarraga

San Sebastian

BIM TWIN Concept
Brining in BUILT2SPEC

TOOLS FOR THE 21ST CENTURY
CONSTRUCTION WORKSITE
Bringing in BUILT2SPEC
BIM4REN

Bringing in BUILT2SPEC

*HoloLens in action (video)*
Supporto lungo tutto il ciclo vita dell’edificio
BIM4REN

Bringing in ZUTEC

Progress Breakdown
- Accepted by MPX
- Accepted by MPX with
- Handover Accepted
- Work in Progress

Fitout Completion
- 135

% Completion

Level
- Seleziona tutto
- (Vuoto)
- Level 02
- Level 03

Apartment
- Seleziona tutto
- (Vuoto)
- B2.2.1

Subcontractor
- Astins
- Briggs and Forrester
- Multiplex

Review Status
- Seleziona tutto
- Accepted by MPX
- Accepted by MPX with
- Handover Accepted
- Work in Progress

Delayed Activities

Activities in Progress

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Bringing in ZUTEC

Progettazione
- Definizione requisiti
- Cattura dei dati di progetto utili alla fase di commissioning (definizione asset register)

Costruzione
- Gestione degli scostamenti e dei difetti
- QA e gestione del piano di commissioning
- Definizione struttura O&M Manuals
- Comunicazione del progress a tutti gli stakeholder
- Gestione Cicli di sottomissione e approvazione (compresa approvazione LEED AP e CxA)
- Gestione verbali di cantiere e action list
- Gestione ispezioni LEED (ESC e IAQ) e relativi cicli di approvazione

Commissioning
- Supporto per la compilazione delle check list e relativi cicli di approvazione

Project Handover
- Asset Register e upload dati as built
- Gestione automatizzata della fase snags & defects, Garanzia del Costruttore
- Calendarizzazione del piano di manutenzione programmatà già in fase di consegna

Operations
- O&M Manuals compressivi di tutto lo storico per ogni asset
- Gestione manutenzione programmatà e reattiva, front desk e tickting
- Portale contractors e accesso da mobile

Dismissione dell’asset
- Custodia documenti titolarità, compliance, registri manutenzione
Conclusions

• We have a nice project – and 4 years to discuss it’s themes in GBC Italia
• We need more projects – we have a flyer. Spread the word. Invite GBC Italia into your proposals.
• We also have a flyer to help promote (free) student membership. Spread the word.
Buon lavoro a tutti.

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