

General Assembly

2nd of October 2019 Brussels



Part 2 – Progress report on the Roadmap

General Assembly – 2 October 2019 - Brussels

••



STRATEGIC AND OPERATIONAL ROADMAP

05 key objectives19 proposed activities



В

BENEFITS OF BIM

A1. Cost benefits analysisA2. Pilot project resultsA3. Measurement

RELIABLE INFORMATION AND GUIDELINES

- **B1.** Guidelines for public procurement
- **B2.** Advise EC on PPD
- **B3.** EU BIM webside development
- B4. BIM innovation reward

STANDARDISATION

- **C1.** Liaison communication plan
- C2. Open BIM
- **C3.** Common classification system

KNOWLEDGE TRANSFER

- **D1.** Regular meetings between members
- **D2.** BIM conference for public procurers
- D3. Legal entity
- **D4.** Network of who is who with expert pool

SUPPORT MEMBER STATES

- **E1.** Unified Digital Platform
- E2. Better Funding
- E3. Data Security
- **E4.** Built environment Data privacy
- **E5.** Knowledge transfer workshops



Key objective A

BENEFITS OF BIM

A2

Pilot project results

Collect the results of individual case studies and pilot projects from around Europe that demonstrate the benefits of BIM for procurers.

Cost benefits analysis

A1

Commission and evaluate a cost-benefit-analysis for the use of BIM.

Make a differentiated study for small and bigger projects and for each phase, in order to specify the corresponding benefits of BIM.



Measurement

Find a viable methodology for periodically measuring the use of BIM in all European countries.

Publishing the results openly will create pressure for change and help to track improvement over time.





Cost Benefit Analysis for BIM

A) A methodology for a cost benefit analysis for using BIM during a publicly procured project

The outcome should enable EU public clients to calculate the estimated advantages for their specific projects on their own, following the developed methodology



A1 Cost Benefit Analysis for BIM

B) Case studies for using BIM for different types of projects, in different steps of the construction lifecycle and in different geographical locations, for planning, construction and operation of publicly procured buildings and infrastructure projects (new and refurbishment projects):

- with a budget up to 5 Mio. Euro;
- with a budget between 5 and 15 Mio. Euro;
- with a budget higher than 15 Mio. Euro.

A presentation and introduction of the outcome is planned for the General Assembly in 2020







 Publish on the EUBTG website and handbook v2 in a standardized format/structure that would allow interested parties to find and compare similar projects. All projects should also have a BIM maturity level indicator.

NOW: looking for advocates/promoters to collect project data

NEXT: define template, distribute to advocates, promotion campaign





 Find a viable methodology for periodically measuring the use of BIM by public procurers in all European countries. There is no "official" measuring methodology used across Europe. EUBTG is in the position to select the "official" benchmark. Ideally it should align with the principles of the Handbook.

NOW: existing methodologies found - B. Succar, CDBB Northumbria

NEXT: collaborate with Norhumbria, measure pilot projects, publish methodology and results on eubim.eu



Key objective B

RELIABLE INFORMATION AND GUIDELINES

B1

Guidelines for public procurement

Develop unified guidelines and support tools for public procurers regarding BIM requirements and how to manage BIM processes during project execution.

B2

Advise EC on PPD

Setup communication channels for advising the European Commission regarding how to implement open-BIM requirements in the next revision of the Public Procurement Directive.

B3

EU BIM website development

Publish and maintain a website providing an overview of European Union - legislation, standards and guidelines related to procurement using BIM.

B4

BIM innovation reward

Creating an annual "public client BIM reward" for the best innovative use of BIM.



B1 Guidelines for Public Procurement

• The aim is to analyse the potential implementation of BIM within the Public Procurement, in order to develop unified guidelines and provide supporting tools for the public procurers.

NOW: General scope defined, requesting support from the Structural Reform Support Programme (SRSP) on the basis of Regulation (EU) 2017/825

NEXT: Application will be submitted to the EC by October 31





- The aim is to develop the EUBTG website <u>eubim.eu</u> into a European website containing national subsites with a standardized structure of the information.
- The website should give all stakeholders, national initiatives and industry stakeholders information about national markets and activities around BIM.

NOW: general scope and activities defined, collecting contacts. **NEXT:** find source for funding, tender, detail spec & development



Key objective STANDARD-ISATION

C2

Open-BIM

Analyse the current situation and propose activities to ensure an open BIM market. Develop guidelines for the correct use of open standard.

Liaison communication plan

C1

The EU BIM Task Group will send ambassadors and liaison officers to some of the following organisations:

Institutional bodies European Commission Non institutional bodies Lobbies

C3

Common classification system

Develop a Common Classification system.





Context

- The use of Open BIM standards in public procurement is recognized as useful in order to comply with:
 - rules on free access to public orders and equal treatment of the candidates
 - Securing value from public money tough the continuity of public data on the whole lifecycle...
- But, in real life projects, it seems Open BIM is seldom put into practice whereas software editors' solutions are generally the rule...



C2 Open BIM

- Need for a study that :
 - Quantify current use of Open BIM Standards in Public procurement across member states
 - Analyze best practices and barriers
 - Develop guidelines for the correct use of open standards, regarding standardization work (e.g. ISO 19650), specificities of public procurements and current situation in member states.

NOW: general scope and activities defined, requesting support from the Structural Reform Support Programme (SRSP)

NEXT: find source for funding, SRSP Application will be submitted to the EC by October 31



C3

Common classification system

- We need a common language to describe the built environment to better facilitate and automate the exchange of machine readable data.
- This should be based on open and international standards, cover the whole built environment, free for end-users, support lifecycle asset management and cost calculation

NOW: collaboration in Nordics and Easter Europe around CoClass INT **NEXT:** define core classification and governance/management model

Letter of Intent

Signed by EE, FI, SE, CZ on May 28th

All signatories agree to work together to make an effort to develop a governance and management model for the CS by January 1st 2020.

CS principles:

- + Based on relevant international standards
- + Cover the whole built environment
- + Maximise access and use of the CS
- + Support lifecycle asset management and lifecycle cost calculations

Read more at: https://eehitus.ee/timeline-post/coclass_seminar/

atter of Inter

28th of May 2019, Tallin

? undersigned, (each also referred to as a "Party"), have decided to discuss and explore

The Parties might later enter into A

ly liability for any types of damages of peration and/or othe

s failure to act as set out in th

int of the CS, the e

ublities to contribute to the development of a common built environment classification system (CS) such as CoClass and to the establishment of the necessary support structures in our countries. without con

tter of Intent ("LOI") the Parties, can be jointly promoted and developed.

ened is to develop this classification system, ensuring its stable functioning an ual upgrading, which would contribute to increasing the international competitiveness of our truction and real estate sectors, improving cooperation, and enhancing digital working methods construction and real estate markets of our countries. These matters will be governed by nent" later to be negotiated between the undersigned.

- Cover the whole built environment, both buildings and civil engineering wor
- Maximise access and use of the classification system
- port lifecycle asset management and lifecycle cost calculation

the signatories will make an effort to:

- Adopt a common core CS along with the inherent relationship to
- Develop common guidelines for using the CS
- Develop common rules for national extensions to the core CS Co-operate on a common technical solution to support CS adoption Provide guidelines and incentive for software vendors to implement the CS in their
- Share knowledge regarding classification system development

All signatories agree to work together to make an effort to develop a governance and manage

model for the CS by January 1st 2020.

Letter of Intent

To achieve the above goal the signatories will make an effort to:

- + Adopt a common core CS along with the inherent relationship to international standards
- + Develop common guidelines for using the CS
- + Develop common rules for national extensions to the core CS
- + Co-operate on a common technical solution to support CS adoption
- + Provide guidelines and incentive for software vendors to implement the CS in their solutions worldwide
- + Share knowledge regarding classification system development

atter of Inter

28th of May 2019, Tallin

? undersigned, (each also referred to as a "Party"), have decided to discuss and explore the undersigned, togot not release to a a composition of the underside to underside the underside to underside the underside to the development of a common built environment classification system . The Parties might later enter into Ar

sults of cooperation and/or other rela ny liability for any types of damages or arty's failure to act as set out in this LC

ent of the CS, the establis

(CS) such as Cocclass and to the establishment of the necessary support structures in our countries. With this Letter of Intent ("LOI") the Parties, without com

can be jointly promoted and developed.

ned is to develop this classification system, ensuring its stable functioning an ual upgrading, which would contribute to increasing the international competitiveness of our struction and real estate sectors, improving cooperation, and enhancing digital working methods construction and real estate markets of our countries. These matters will be governed by ment" later to be negotiated between the undersigned.

adhere to the following princip

- Cover the whole built environment, both buildings and civil engineering wo
- Maximise access and use of the classification system
- port lifecycle asset management and lifecycle cost calculat

I the signatories will make an effort to:

- Adopt a common core CS along with the inherent relationship to
- Develop common guidelines for using the CS
- Develop common rules for national extensions to the core CS Co-operate on a common technical solution to support CS adoption
- Provide guidelines and incentive for software vendors to implement the CS in their

Share knowledge regarding classification system development All signatories agree to work together to make an effort to develop a governance and manage

model for the CS by January 1st 2020.



Key objective D

KNOWLEDGE TRANSFER

D1

Regular meetings between members

Facilitate meetings and workshops for the members of the EU BIM Task Group.

D2

BIM conference for public procurers

Organize a BIM conference dedicated to public procurement in EU.



Legal entity

Explore possibilities to establish legal entity for EU BIM Task Group.



Network of who is who with expert pool

Create a network of who is who along with an expert pool.



D2

BIM Conference for Public Procurers

Context:

- Need to share best practice and improve the visibility of the EUBTG as a leader on the topic of BIM in public procurement
- Through the organization of an annual conference

NOW:

- Contacts taken with BIM World organizers to include a dedicated session in BIM World 2020 in Paris:
 - 6 or so presentation and a round table discussion
 - Infrastructures and buildings
 - Ideas for presentations (now or by email)

NEXT:

• Announcement in BIM World for the launch in 2021 of the « Annual Public Client BIM innovation reward » (action B4)

BIMWORLD







Context:

- Necessary to have long-term and stable resources to carry out actions;
- Flexible structure allowing the participation (at different levels) of Member States and other entities;
- Study of different structures in 4 Member States:
 - ✓ International Association of Belgian Law (CEDR)
 - ✓ Association under French Law (PIARC)
 - ✓ Association under Dutch Law (EUSkills)
 - "Public Agency" under Lithuanian Law



Conclusion = great similarities

• **Objective**: support for a public policy of general interest

• Organisation (with different names):

- a governing board/general assembly + a President/Chair
- an executive committee/board
- a (General) Secretariat
- Members: representatives of national governments + possibility of other types of members
- **Budget**: mainly composed of membership fees
- Location: in one state without this being an obstacle to the participation of other countries



NOW:

- Do you have any comments?
- Would you like to present additional examples?

NEXT: mandate given to the Steering committee for the creation of the legal entity with <u>an address in one of the Member State</u> (mandatory) with a <u>resource</u> <u>person</u> from it (if possible).



Key objective E

SUPPORT MEMBER STATES INITIATIVES

Unified Digital Platform

Support the creation of a common digital platform for the built environment that would enable the automation of building lifecycle processes in the public and private sector.

E2

Better Funding

The EU BIM TG can help accelerate the development and implementation of BIM technologies.

EB

Data Security

Analyse and propose a framework for Data Security as a general guideline that can be adopted to each open platform or collaborative working environment for BIM users.

E4

Built environment Data privacy

Define built environment data privacy levels. What should be public across Europe and what is private?

E5

Knowledge transfer workshops

Digital Twins / IoT / Smart Cities knowledge transfer in the form of workshops for EUBTG members.





- The aim is to support the creation of a common digital platform for the built environment. The platform should be able to open up to public data & public services.
- **NOW:** The activity from EU BIM Task group shall be closely linked to the DigiPLACE project:
- EU-funded project (H2020)
- Budget of €1 million
- Starting in September 2019 for 18 months

NEXT: Bring our vision and expertise at the key stages of the project

Digiplace EU BIMTask Group

Brussels, October 2nd, 2019 Luigi Perissich- Federcostruzioni







This project has recived founding from European Union's H2020 reaearch and innovation Programme under grant agreement N.856943

The content of this agenda reflecs only the author's view only and the Commission is not responsable for any use that may be made of the information it contains.



WP 2018-2020 Platforms and Piloting topics









DT-ICT-07-2018-2019: Digital Manufacturing Platforms

- 2018: Agile Value Networks: Lotsize One

- 2018: Zero-defect Processes and Products

- 2019: Machines & Human Competences

- 2019: Sustainable Value Networks

2018: 48 M€ 2019: 47 M€ DT-ICT-08-2019: Agricultural Digital Integration Platforms 30 M€

DT-ICT-09-2020: Digital Service Platforms for Rural Economies 30 M€ DT-ICT-12-2020: Smart Hospital of the Future 25 M€

DT-TDS-01-2019: Smart and Healthy Living at Home 60 M€ DT-ICT-10-2018-2019: Interoperable and Smart Homes and Grids 30 M€

DT-ICT-11-2019: Big Data Solutions for Energy 30 M€

Cross-cutting issues, IoT, Big Data, Security...

DT-ICT-13-2019: Digital Platforms/Pilots Horizontal Activities, 4 M€ Including Preparation of a digital industrial platform for the construction sector, 1 M€



EU Conference «Common European Data Space for Smart Manufacturing 16/09/2019

Common European Industrial IoT, Data and AI Ecosystem





Support

Industry and MSs

Vision of European Data Space Association at conference 16/09/2019



IdentityManagement Certification Data Transaction Logging Data Transformation Data Provenance Brokering of Data Demand and Supply Vocabulary Management Dynamic Trust Management Open Data Source Integration

4

3

TECHNICAL INFRASTRUCTURE

CONNECTED PHISICAL PRODUCTS



The DigiPLACE consortium





Partnership

- **1. POLITECNICO DI MILANO (POLIMI)**
- 2. CENTRE SCIENTIFIQUE ET TECHNIQUE DU BATIMENT (CSTB)
- 3. EUROPEAN CONSTRUCTION, BUILT ENVIRONMENT AND ENERGY EFFICIENT BUILDINGS TECHNOLOGY PLATFORM (ECTP)
- 4. INDRA SOLUCIONES TECNOLOGIAS DE LA INFORMACION SL (INDRA)
- 5. CONSEIL DES ARCHITECTES D'EUROPE (ACE)
- 6. BUILDINGSMART INTERNATIONAL LIMITED (BSInt)
- 7. COMMITTEE FOR EUROPEAN CONSTRUCTIONEQUIPMENT (CECE aisbl)
- 8. EUROPEAN BUILDERS CONFEDERATION (EBC)
- 9. EUROPEAN FEDERATION OF ENGINEERING CONSULTANCY ASSOCIATIONS (EFCA)
- **10. FEDERATION DE L'INDUSTRIE EUROPEENNE DE LA CONSTRUCTION (FIEC)**
- 11. UNIVERZA V LJUBLJANI (UL)
- 12. FEDERAZIONE DELLE COSTRUZIONI (FederC)
- **13. CENTRE SCIENTIFIQUE ET TECHNIQUE DE LA CONSTRUCTION (CSTC)**
- 14. CONSTRUCTION PRODUCTS EUROPE (CPE)
- 15. MINISTERE DE L'ECOLOGIE DU DEVELOPPEMENT DURABLE DES TRANSPORTS ET DU LOGEMENT (MEEM)
- **16. ASSOCIAZIONE NAZIONALE COSTRUTTORI EDILI (ANCE)**
- 17. BUNDESMINISTERIUM FUER VERKEHR UND DIGITALE INFRASTRUKTUR DIG (BMVI)
- **18. BAM BOUW EN TECHNIEK BV (BAM)**
- 19. ITALIAN MINISTRY OF INFRASTRUCTURE AND TRANSPORT (MIT)



Objectives and scope

The highest level objective of the DigiPLACE project is to create a reference architecture framework for the digital industrial platform for the construction sector.

Topic Scope

c) Preparation of a digital industrial platform for the construction sector:

[SCO#1] proposals should bring together relevant stakeholders and define a reference architecture for a digital industrial platform for the construction sector that increases productivity and optimises material usage in the construction sector, including for SMEs.

[SCO#2] It needs to take into account the recently developed framework with core indicators to assess the environmental performance of buildings, including circular economy aspect. Proposals should take stock of other ongoing initiatives, promote mutual learning and coordination, and identify knowledge and intervention gaps.

[SCO#3] Widespread use of Building Information Modelling and building passports will promote information sharing about different resources and their life cycles, re-use of materials, productive processes, including improved engineering, procurement and supply chain management and are therefore part of the scope.



Objectives and scope

[O#1] Individuate the digitalization level of the construction sector identifying and clarifying the gap between SMEs and big companies in the sector domain. Identify possible areas of interaction between the construction sector and other industrial sectors focusing on knowledge transfer.

KPI and target values:

Number of sectors analyzed (areas of interaction): n. 4 (agriculture, manufacture, healthcare, energy)

[O#2] Support the development and nurturing of a stakeholder community addressing the visions, requirements, and design of a Reference Architecture of Digital Construction Platforms in EU27.

KPI and target values:

Number of subjects involved in the Advisory Board (key players stakeholders): n. 20 Number of subjects involved in the community network (public and private market stakeholders): n. 1000

[O#3] Define barriers and limitations in the introduction of digital technologies and techniques in the construction sector. Identify possible factors to overcome actual limitations.

KPI and target values:

Number of interviews and/or questionnaire (barrier and limitations analysis): n. 200 Number of best practices defined (Factor to overcome limitations): n. 4



[O#4] Definition of the reference architecture framework for the development of European Industrial Digital Construction Platforms.

KPI and target values:

SWOT analysis for each scenario of the reference architecture Review of the proposed scenarios by 20 characteristic stakeholders including software developers, cloud providers, construction, facility management, consulting, engineering, architecture companies product and machine manufacturers, and the Academia.

[O#5] Identification of a strategic roadmap for the future research and public policies.

KPI and target values:

Number of questionnaires and/or interviews with public bodies: n. 25 Number of expressions of interest to the strategic roadmap from public bodies: n. 10



CDE principles









WPs organization









WP 2 - Task 2.3 Set up of the DigiPLACE Community of Stakeholders

Main objective:

- The DigiPLACE CS will be created according to the methodology based on 4 steps (that will be detailed in deliverable D2.1)
 - Stakeholders exhaustive definition and their role over the digital construction life-cycle
 - Construction of a matrix of stakeholders;
 - Stakeholders' mapping and engagement mechanism;
 - Draft list of stakeholders.
- CAWI Questionnaire with support from AB to collect feedbacks from CS
- Dissemination of info from project to wider audience through their networks
- CS Invited to Project Workshops
- **Partners:** FederC; all WP2 participants
- **Deliverable:** D2.3 Community of Stakeholders: This deliverable starts in Month 6 and is concluded in Month 17 with a progressive enrichment of the stakeholder network to reach a foreseen value of +1000 stakeholders
- Duration: month 3-17



WP 2 - Task 2.4 Consolidation of the DigiPLACE stakeholder community – including beyond the completion of the project – and to support the future instantiation of the strategic innovation roadmap

Main objective:

- Make sure that the group constituted by the beneficiaries and LTP plus the AB members and the CS will remain connected after the project as part of a multilevel network for digital construction to facilitate and support an active dialogue between key players in residential and non-residential building, engineering construction, other industries and professional groups, government agencies connected to a wider ecosystem of stakeholders.
- The first tier of this Forum could be made of industry associations from the construction technology and profession sectors, representatives from member states and public agencies, competence centers that would cooperate to monitor and influence the development of the strategic innovation roadmap for the digitalization of constructions; this Forum will also keep the connection with the wider audience of the CS through the internet site and social network tools that will be developed by the project.
- **Partners:** FederC; ECTP (+ LTP) FIEC; ANCE
- **Deliverable:** D2.2 Advisory Board Consolidation: This deliverable consists in the consolidation of the Advisory Board structure and members also including a Kick off meeting
- Duration: month 15 -17







A) The EU BIM TG could play a key role in ensuring better linkage between identified needs and adequate funding.

NOW: the action has yet to begin





B) The aim is to find adequate funding to implement several actions of the roadmap

NOW: resources are:

- Pooling of resources from Members
- Close cooperation with Horizon 2020 DigiPLACE project (E1)

NEXT:

- Pending funding for actions A1 (EU instruments), B1 and C2 (SRSP)
- Preliminary contacts with the EIB