# Benvenuti - Welcome

Fiera di Bologna
Digital&BIM Italia

22/11/2019

DigiPLACE
TOWARDS A EUROPEAN DIGITAL PLATFORM FOR CONSTRUCTION

DigiPLACE
Launch Conference

**Towards a European digital platform for construction**

This project has received funding from the European Union's H2020 programme under Grant Agreement N. 856943

# WELCOME MESSAGES

**Federica BRANCACCIO**
Presidente FederCostruzioni

**Gabriele BUIA**
Presidente ANCE

# Setting the scene
# The EU policies

**Ilektra PAPADAKI**
Commissione Europea

# Digitalisation of the construction sector

## the EU policy perspective

DigiPLACE launch conference, 22 November 2019, Bologna

**Ilektra PAPADAKI**

**Policy Officer**
Construction and Built Environment

Directorate General for Internal Market, Industry, Entrepreneurship and SMEs
European Commission

# Construction 2020

Strategy for the sustainable competitiveness of the construction sector and its enterprises (2012)

Construction 2020 Action Plan (2013)

## Thematic Objectives

1. Innovation & Investment
2. Skills & Qualifications
3. Resource efficiency
4. Regulatory framework
5. Internationalisation

BIM Task Group, EU industrial platform for construction, Digitalisation of construction SMEs, Buildings Digital Logbook

Blueprint for sectoral cooperation as part of the Skills Alliance, Build Up Skills, Apprenticeship pledges for construction, Health and Safety at work.

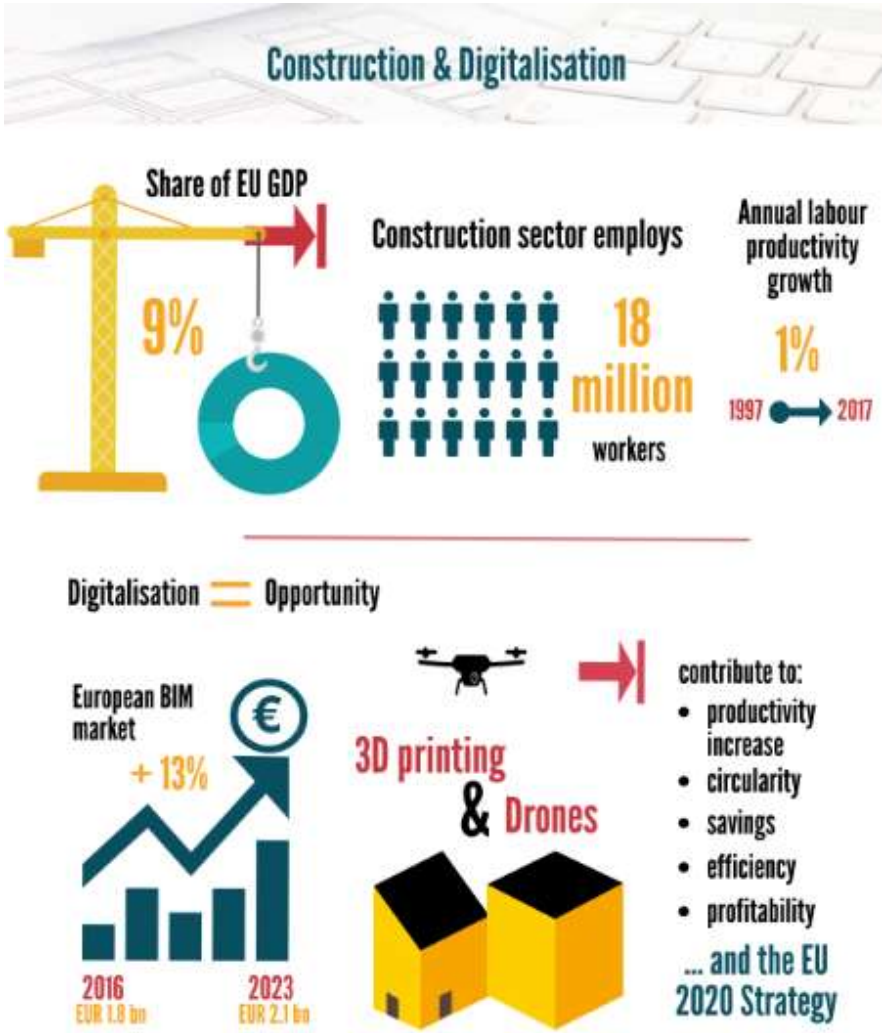
Level(s), Energy efficiency standards and labelling, Eco design, BAMB, EU construction and demolition protocol . Construction identified as key topic in the Circular Economy Package (2018), Build up portal, Energy Performance of Buildings Directive (EPBD), Energy Efficiency Directive (EED), and monitoring of energy performance by the EU building stock observatory.

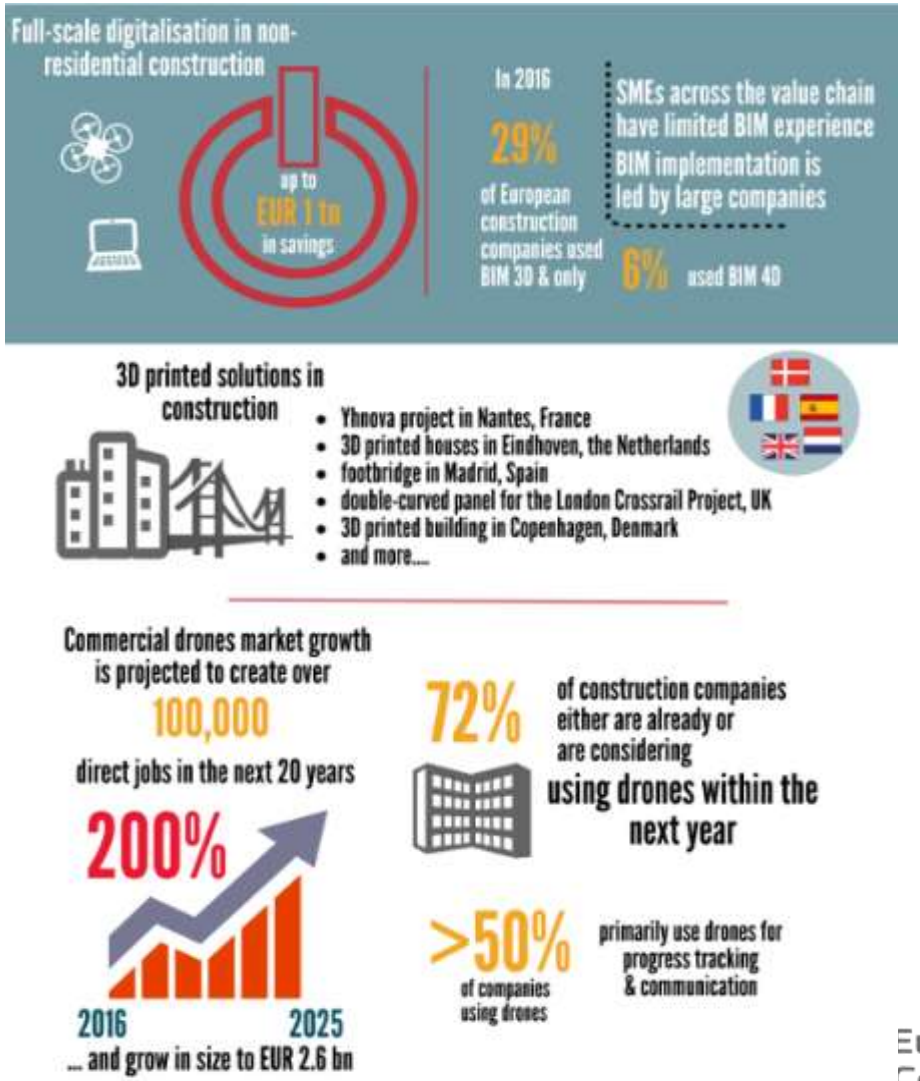
Construction Products Regulation (CPR) and the CPR implementation roadmap. On safety aspects, study on the toxicity of smoke and the Fire Information Exchange Platform (FIEP).

International competition: encouraging the uptake of Eurocodes and promoting the spread of new financial tools and contractual arrangements in non-EU countries. Assessment of Cross-border trade of Construction Products as well as analysis of production and trade data.

- ✓ Each thematic objective is supported by a stakeholder **thematic group** and the **High Level Forum.**
- ✓ The **European Construction Sector Observatory** measures the progress towards Con2020 targets.

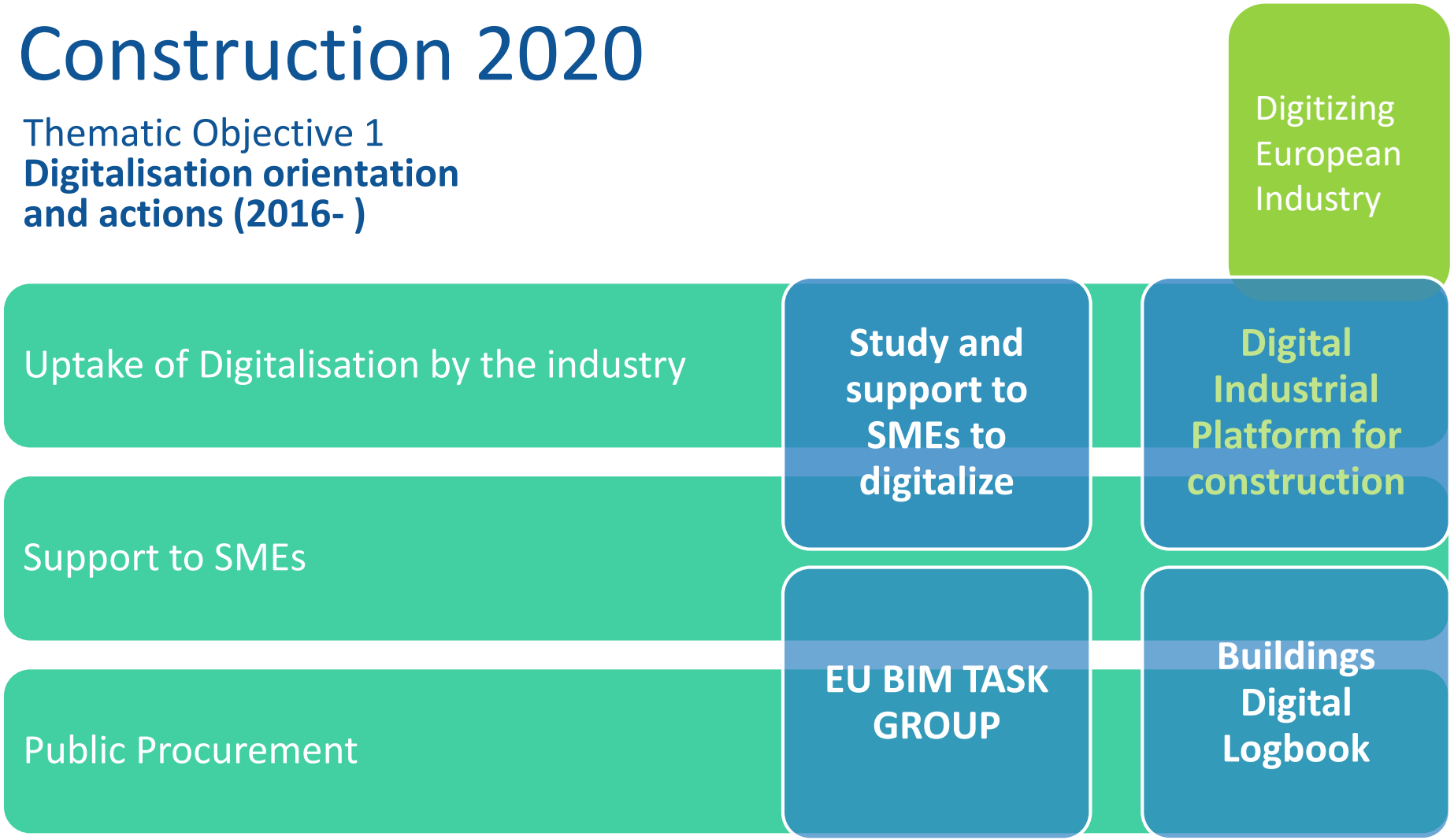
# Trends in the digitalisation of the EU construction sector



# Construction 2020

Thematic Objective 1
**Digitalisation orientation and actions (2016- )**



# 1/3

# Digital Industrial Platform for Construction and other Sectors

# ***DEI*** *– Digitising European Industry*

*"Europe needs to join forces under a common strategy that takes digitalisation of the EU's economy forward in order to unlock the full potential of the 4th industrial revolution."*

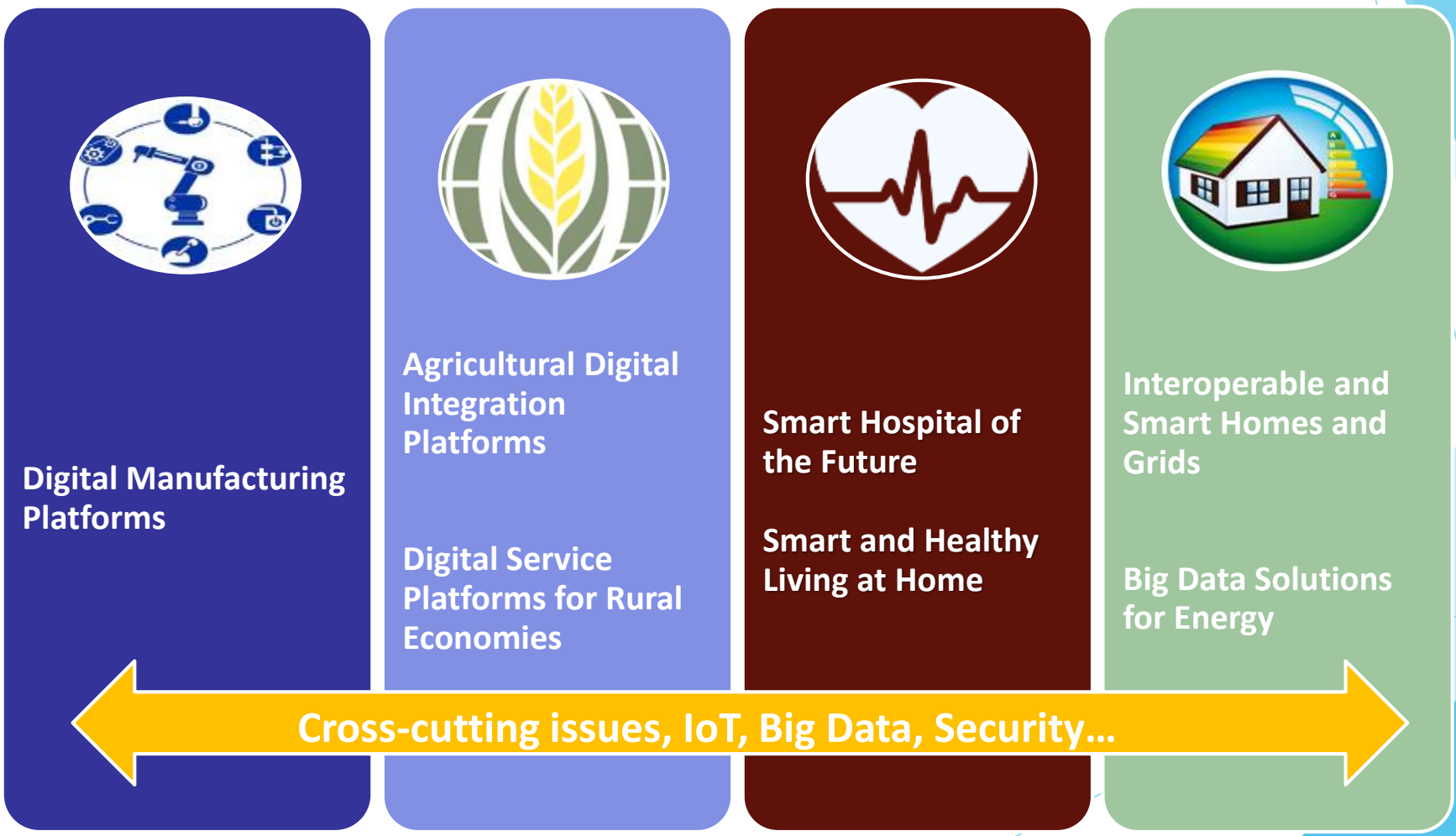
**Key points**

**DIH**: a structure serving the SMEs with a cluster of services to support/assist them in their move toward digitalisation – reference architectures and (standard) models, online digital catalogues, business & funding models, etc..

**Platforms, partnerships**: exhaustive partnerships should allow to exchange about DIH/platforms to be promoted – the DEI initiative providing a workplace for discussing terms & conditions for coordination between PPP, JU, EC & MS.

# Digital Industrial Platforms 2018-2020

Platforms and Piloting topics



## What do we see from the first experience with other Platforms

Construction might be considered as one of the most fragmented sectors. When it comes to the networks built among its stakeholders, policy and initiatives, it is not.
The expectations now, are high.

# 2/3

There are many ways of collaboration:
The example of the
**EU BIM Task Group**

European Commission

## What does the Group do?

- Deliver greater value for public money
- Increased openness, fairness, competitiveness and productivity
- Stimulating growth in the construction and digital economy
- Boosting innovation

General Assembly 10/2019

Public Procurement
=
a major share of total construction expenditure

Ex: Germany 44%
(BCG - 2012)

European Commission

- Public bodies,
  from 24 EU MS and 3 other european countries

Austria
Belgium
Bulgaria
Czech Republic
Croatia
Germany
Greece
Denmark
Estonia
Finland
France
Ireland
Italy
Latvia
Lithuania
Luxembourg
Netherlands
Poland
Portugal
Slovakia
Slovenia
Spain
Sweden
UK

- Norway
  Switzerland
  Iceland

Chair

Steering Group

EU Institutions

Advisory Board
(under discussion
to be established)

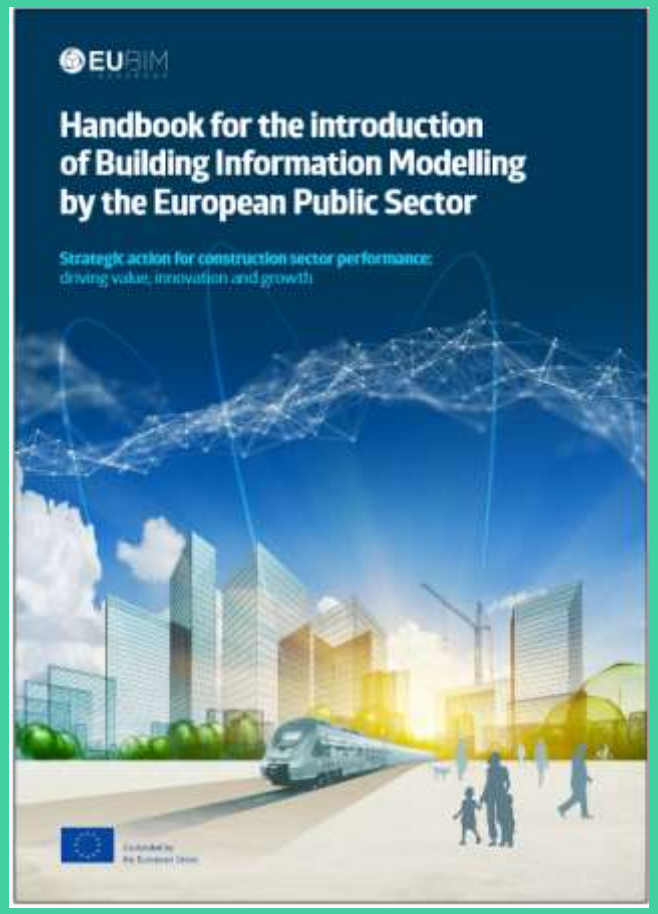
General Assembly:
2 meetings per year

Steering Group
4-5 meetings per year

European Commission

## Enabling actions that could only happen through pan-European Cooperation

- 250 public procurers trained on BIM in 10 workshops
- EU MS getting support through SRSS-Structural Reform Funds to introduce BIM
- Handbook for the introduction of BIM in PP in 21 languages
- Upcoming methodology to show (economic) benefits of BIM in public construction works
- MS led initiative on common classification




### Input for Policy Making

- Mapping of National BIM initiatives
- Contact points with authorities dealing with public works
- Insight into policies on digitalization adoption

EU BIM TASKGROUP

# STRATEGIC AND OPERATIONAL ROADMAP

05 key objectives
19 proposed activities

## A BENEFITS OF BIM

- **A1.** Cost benefits analysis
- **A2.** Pilot project results
- **A3.** Measurement

## B RELIABLE INFORMATION AND GUIDELINES

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

## C STANDARDISATION

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

## D 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

## E SUPPORT MEMBER STATES INITIATIVES

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

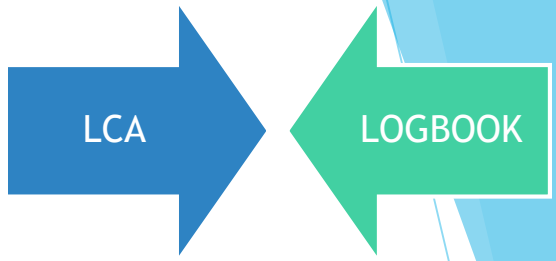
# 3/3

Other upcoming EC initiatives on Digital Construction:

**Building's Digital Logbook**

**Support to SMEs**

European Commission




- **A digital building logbook is a digital repository where a building's main can be compiled and updated when necessary throughout the life of the building, granting an easily accessible and comparable overview of a specific building.**

- **Ownership** of the information contained in the digital building logbook stands with property owners. However, this information could be made fully or partly accessible to third persons.

Digital building logbooks boost the availability of structured information to a broad range of market players, including property owners, tenants, investors.

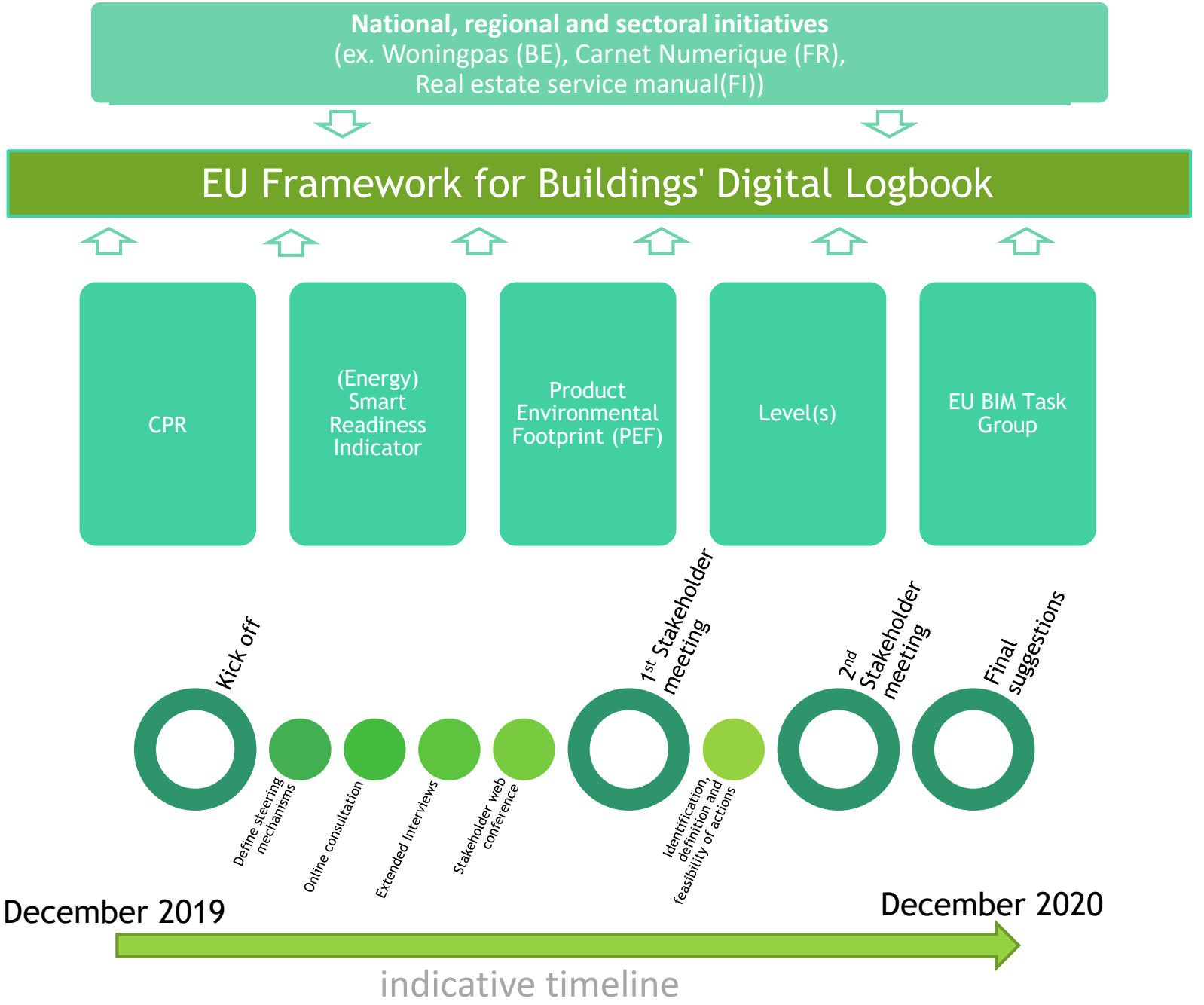
# Concept of the EC study

**Mapping and analysis of national/regional/sectoral/private initiatives**

- what works best in which circumstances
- remaining critical gaps in terms of data collection, management and digitalisation, data ownership

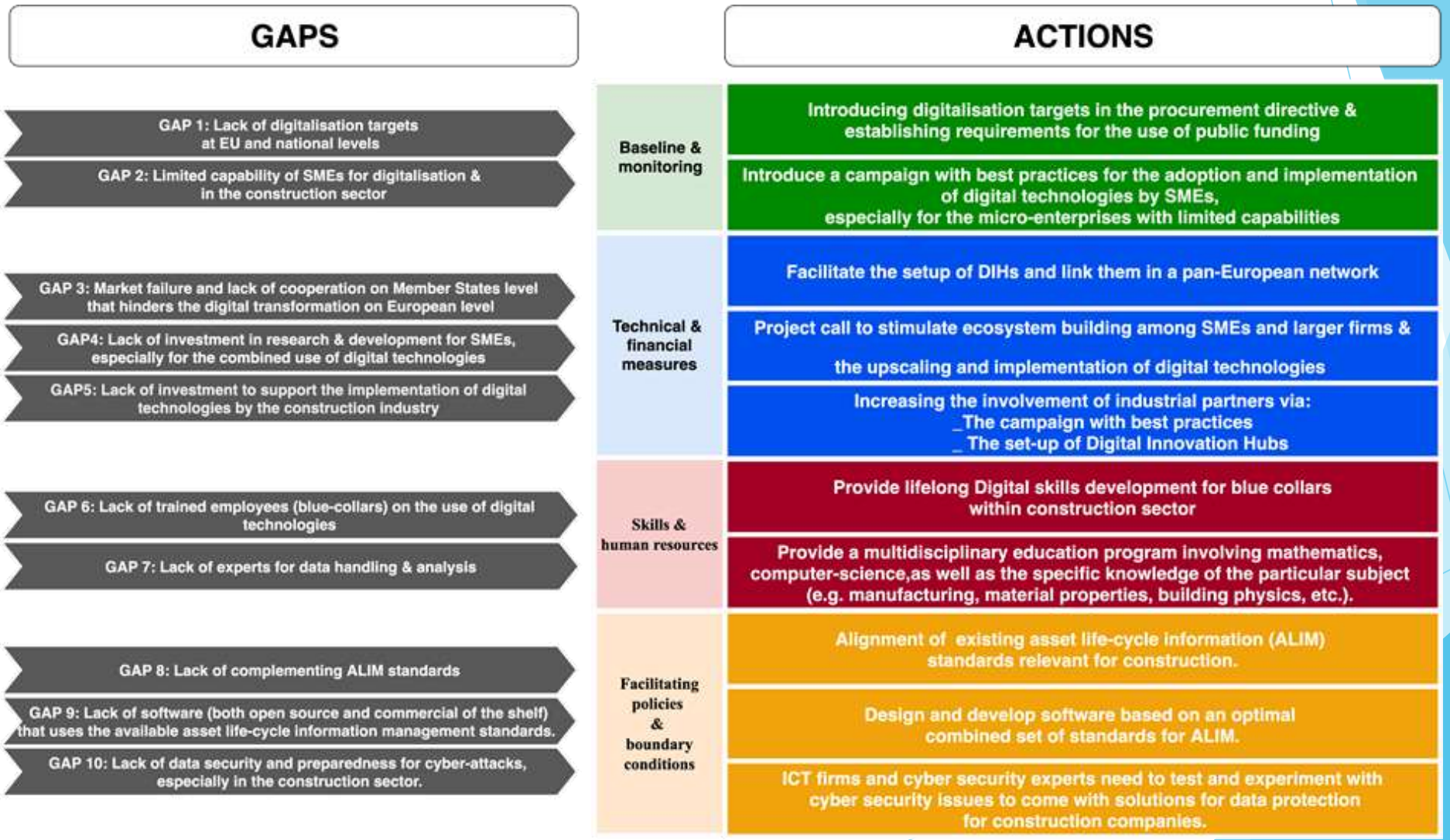
**Could an EU voluntary framework:**

- facilitate building logbooks initiatives, where such systems do not exist, without invalidating existing schemes?
- help to address the critical gaps identified?


National, regional and sectoral initiatives
(ex. Woningpas (BE), Carnet Numerique (FR),
Real estate service manual(FI))
EU Framework for Buildings' Digital Logbook
CPR
(Energy) Smart Readiness Indicator
Product Environmental Footprint (PEF)
Level(s)
EU BIM Task Group
Kick off
Define steering mechanisms
Online consultation
Extended Interviews
Stakeholder web conference
1st Stakeholder meeting
Identification, definition and feasibility of actions
2nd Stakeholder meeting
Final suggestions
December 2019
December 2020
indicative timeline

- **Why digitalization is important for SMEs in construction?**
  - 98% of construction sector is composed of SMEs and micro-enterprises
  - In Industry 4.0 era, various digital technologies have become available, but the rate of adoption in construction sector is very low
  - Digitalisation goes beyond the use of BIM
- **Context, main objectives and expected impact of this EU study**
  - Context: Part of the implementation of the "Construction 2020" Action Plan (strategy for the sustainable competitiveness of the construction sector and its enterprises and SMEs)
  - Main objectives: (1) To assess the needs for digitalisation among SMEs at EU level and (2) to devise a sustainable action plan and identify the means for it

- What are the particular challenges?
- How were the recommended actions and areas of intervention defined?



# Follow-up actions (2020-2021)

**Introduce an interactive handbook and a digital maturity scan for the adoption and implementation of digital technologies**

to resolve the challenge regarding SME capability and awareness to adopt digitalization

**Provide lifelong digital skills development for (blue collars) within the construction sector**

to resolve the challenge regarding critical mass of trained employees for digitalization

Collection of ideas/feedback to follow !

# What is next?

European Commission

# Von der Leyen Commission

- **A Europe fit for the digital age**
- ‘’I believe Europe can successfully manage the transformation into the digital age, if we build on our strengths and values. ‘’
- ‘’Digital platforms are actors of progress for people, societies and economies.’’
- ‘’I want Europe to strive for more by grasping the opportunities from the digital age within safe and ethical boundaries.’’

- Construction as an example for Decarborization Policies and upcoming Circular Economy Action Plan

# Horizon Europe

## Construction-relevant proposed partnerships and missions

- Partnership
  **Built4People:**
  **People Centric Sustainable Built Environment**

  If approved, expected launch: 2021
  Key words: Renovation, Circular Economy, Digital
  Stakeholder 'Plenary': 12 December, Brussels
  The event will be webstreamed
  https://ec.europa.eu/info/events/sustainable-built-environment-research-and-innovation-partnership-under-horizon-europe-2019-dec-12_en

- Mission
  Climate Neutral smart cities

- Partnership
  Sustainable Smart Cities
  MS proposal, linked to JPI Europe

European Commission

# Thank you!


## LinkedIn/Twitter: Ilektra Papadaki

ilektra.papadaki@ec.europa.eu


Useful links

- EU BIM Task Group www.eubim.eu
- Supporting Digitalization of construction and its SMEs https://ec.europa.eu/growth/content/report-supporting-digitalisation-construction-sector-and-smes_en
- Construction and Built Environment https://ec.europa.eu/growth/sectors/construction/competitiveness_en
- European Construction Sector Observatory https://ec.europa.eu/growth/sectors/construction/observatory_en

# Connecting national & international platforms

**Pietro BARATONO**
Ministero Infrastrutture e Trasporti

# DigiPLACE
# Presentazione

**Alberto PAVAN**
Politecnico di Milano
Coordinatore del
progetto DigiPLACE

01

# The Call

# DigiPLACE

**Horizon 2020** work programme 2018/20 - **Information and Communication Technologies**

Call: H2020-DT-2018-2020

**Digitising and transforming European industry and services: digital innovation hubs and platform**

Topic: DT-ICT-13-2019

**Digital Platform/Pilots Horizontal Activities**

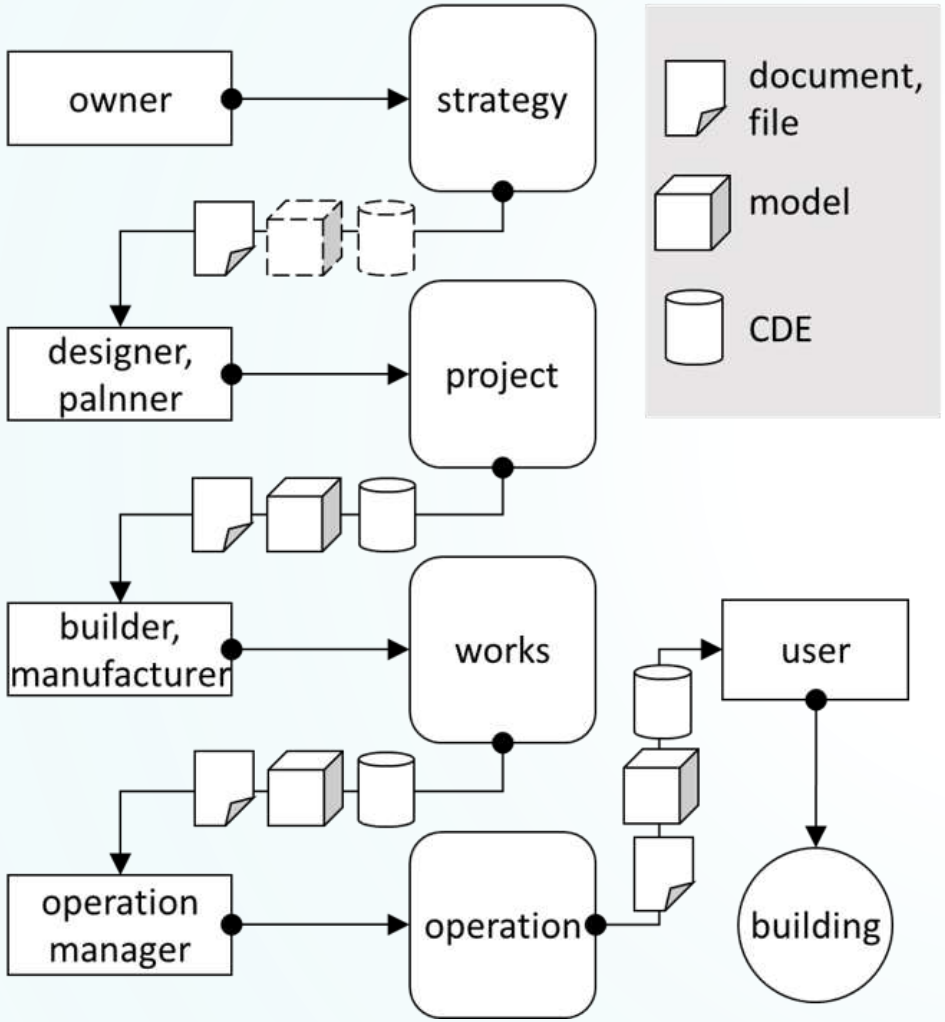
Project 1st classified:

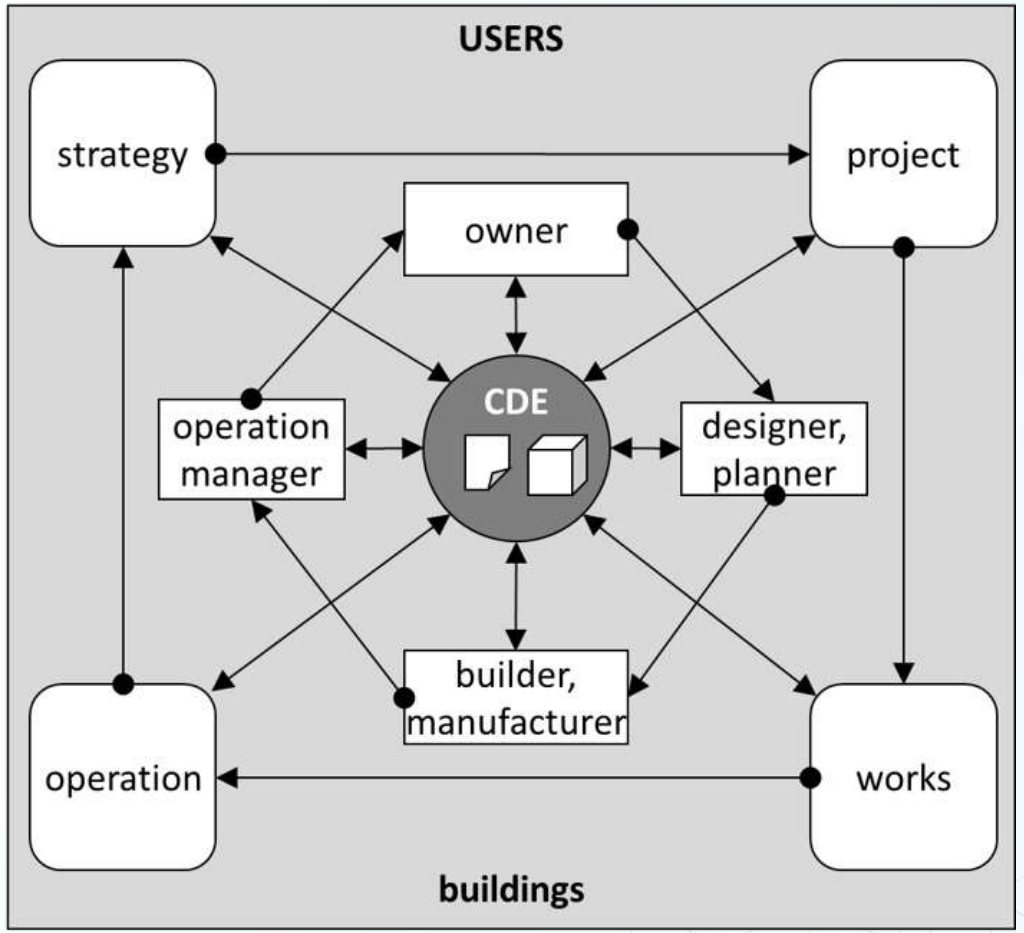
**DigiPLACE (Digital PLAtform for Construction in Europe)**

02

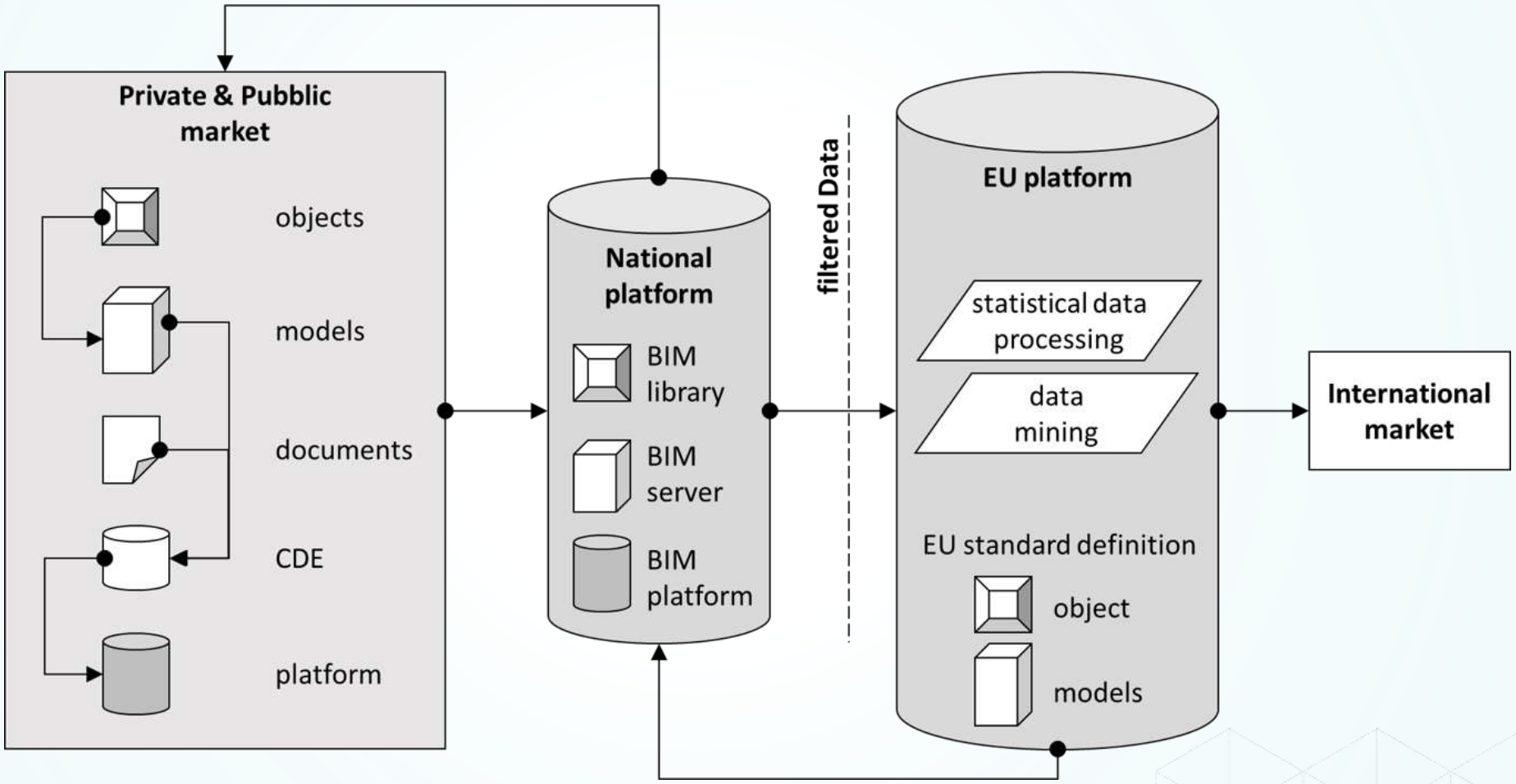
# The starting vision

# Construction information flow

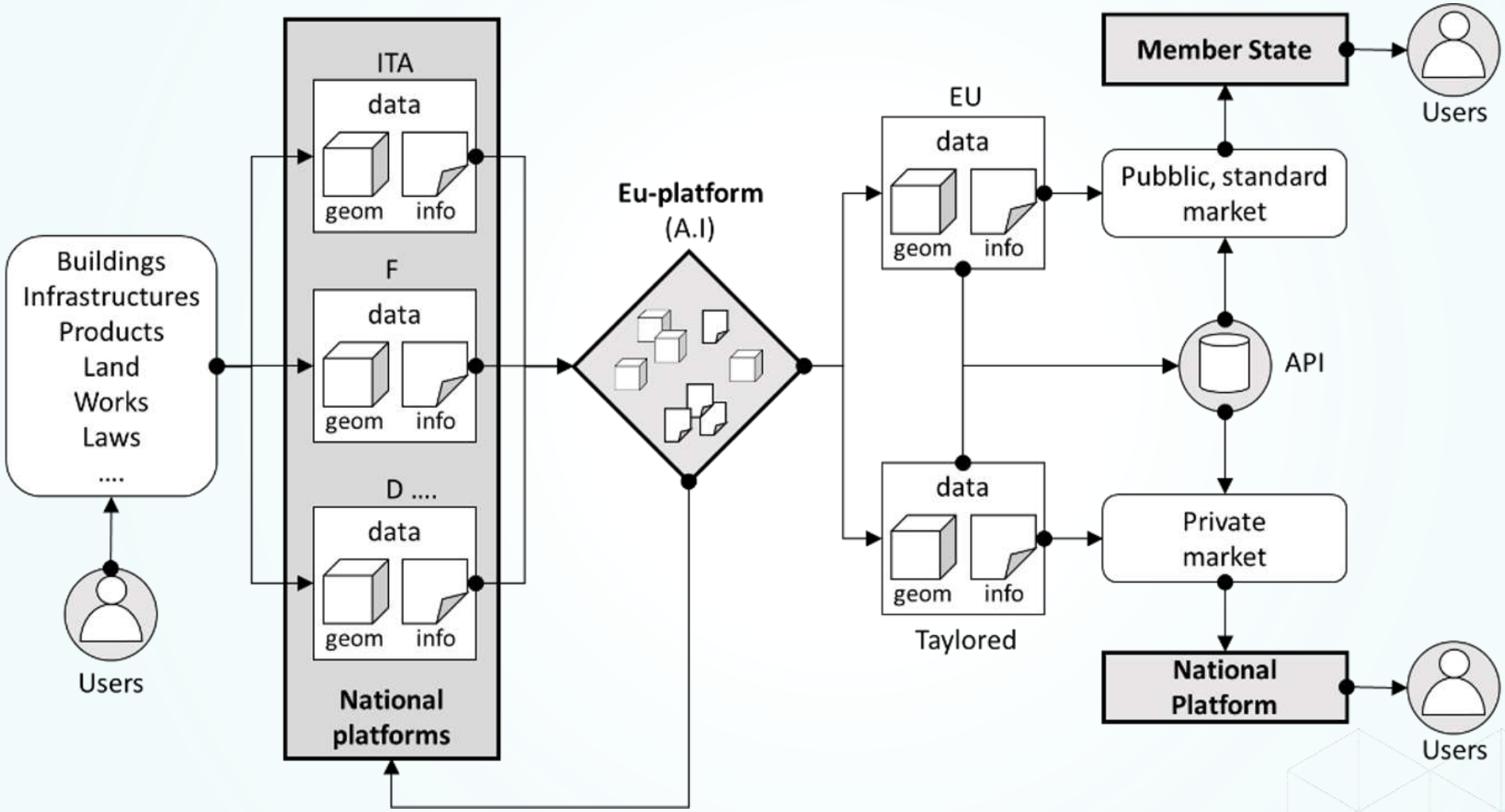


# Private, national, EU information repository and platform



# Construction information needs



03

# The project

# DigiPLACE project

The highest-level objective of the **DigiPLACE** project is to create a **Reference Architecture Framework (RAF)** for the **digital industrial platform** for the **construction sector** based on a shared consensus along the entire chain

# Expected Impact

01: Increased **productivity and sustainability** of European Construction Industry

02: Facilitate the diffusion of a **common language** in the construction sector

03: Pave the way for the growth of **smart cities** and **smart infrastructures**

04: Strengthening the role of **EU in Global Construction Ecosystem**

05: Accelerated and efficient **collaboration between public authorities and industry**

06: Validation in usage context of usability, **risk and security assessment …and sustainability**

07: Maintaining and extending an active **eco-system** of relevant stakeholders, **including start-ups and SMEs**

08: Promote the diffusion of **knowledge** and facilitate the introduction of **digital practices**…

09: Tangible contributions from European key players to actively engage with the platform building Process

10: Efficient **information sharing** across the programme stakeholders for horizontal issues of common Interests

11: Facilitate the introduction of …**Digital Transformation of the Construction sector**

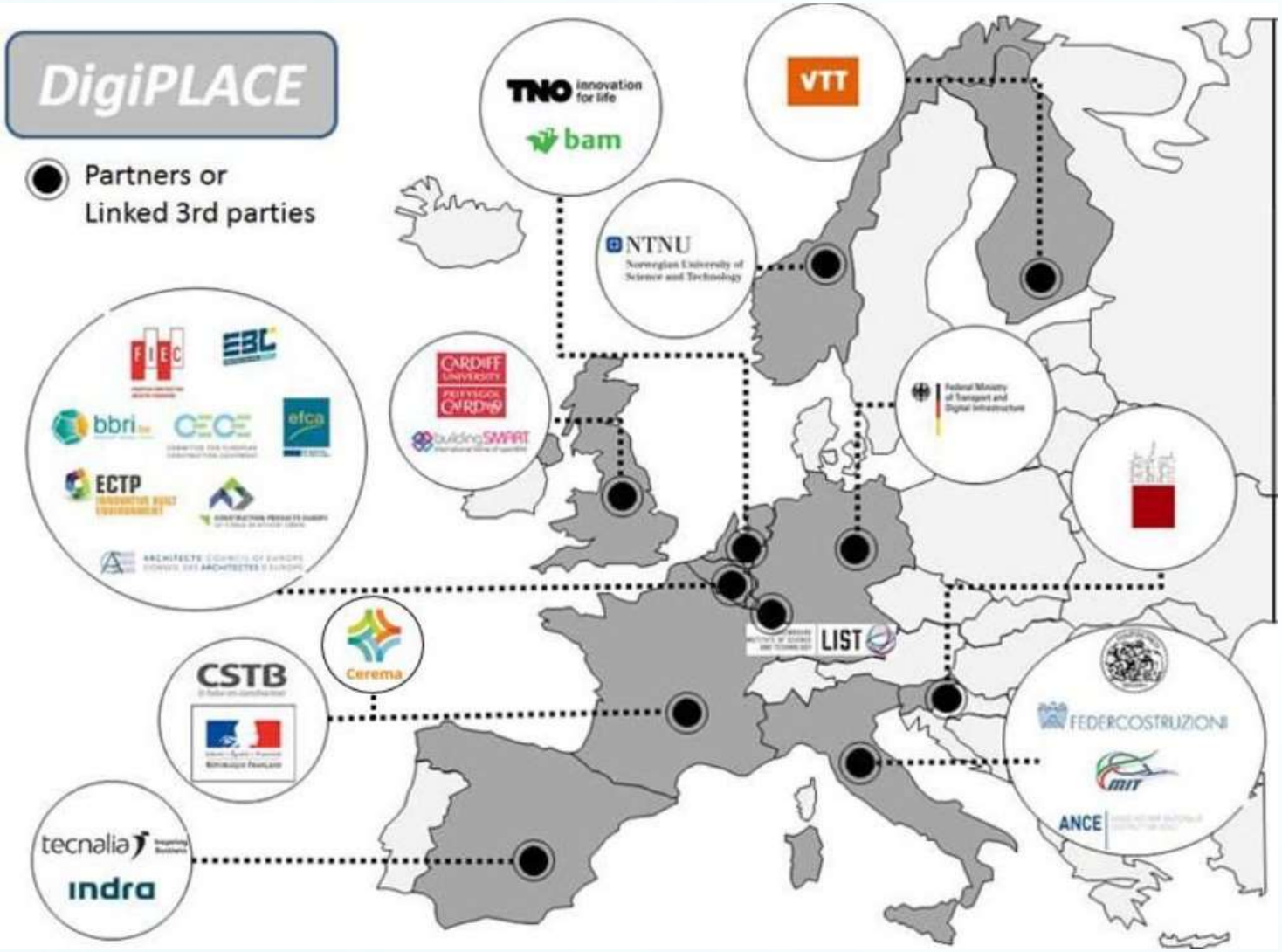
# DigiPLACE beneficiary

| N. | Name | Acr |
|---|---|---|
| 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 Construction Equipment | 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 |

# DigiPLACE beneficiary

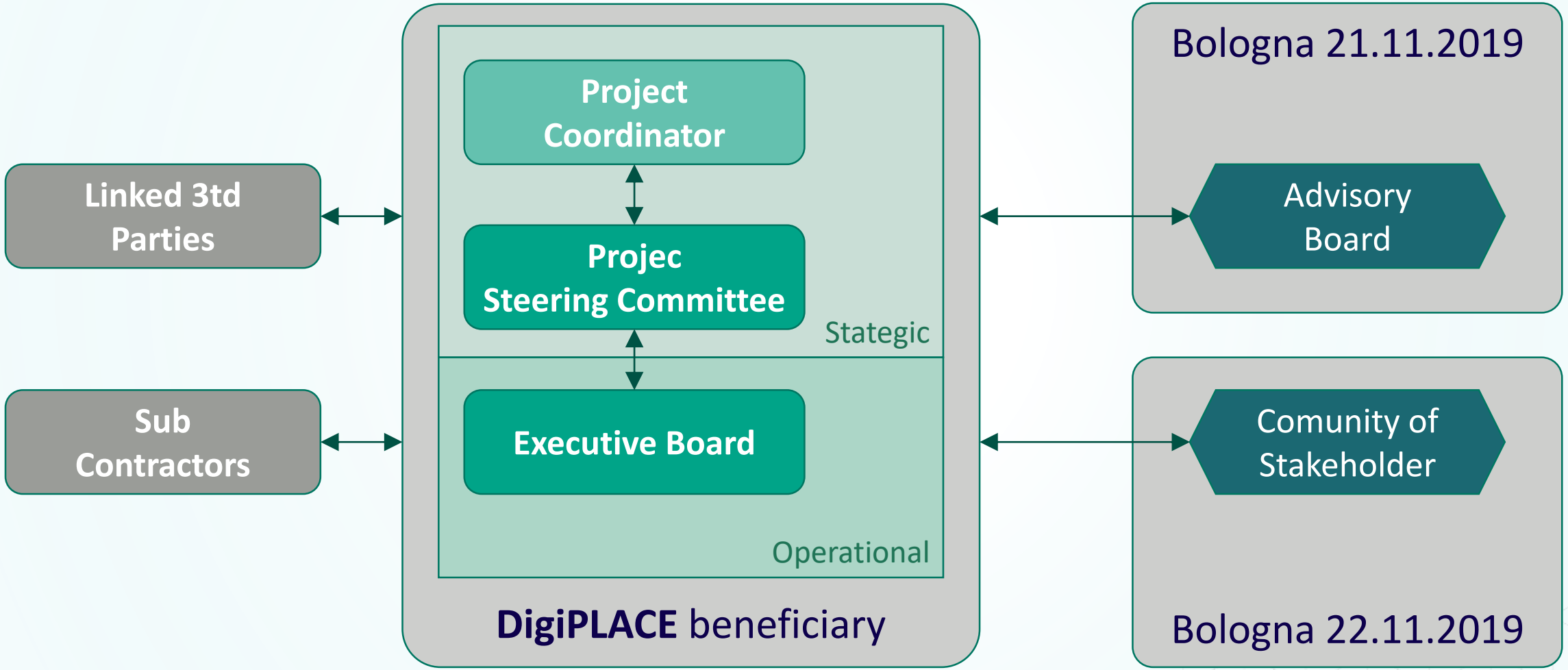
| N. | Name | Acr |
|---|---|---|
| 11 | Univerza V Ljubljani | UL |
| 12 | Federazione Delle Costruzioni | FederC |
| 13 | Centre Scientifique Et Technique De La Construction | CSTC |
| 14 | Construction Products Europe | CPE |
| 15 | Ministere De L'ecologie Du Developpement Durable Des Transports Et 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 Transports | MIT |

# DigiPLACE beneficiary map and LTP




| N. | Linked 3td Parties |
|---|---|
| 1 | VTT |
| 2 | CU/BRE |
| 3 | LIST |
| 4 | Tecnalia |
| 5 | NTNU |
| 6 | TNO |
| 7 | CEREMA |

# Project organizational structure



# DigiPLACE advisory board

| N. | Company name | Referent name |
|---|---|---|
| 1 | McKinsey & Company | Gernot Strube |
| 2 | Dassault Systèmes | Gianluca Gonella |
| 3 | Ente italiano di normazione - UNI informatica | Alberto Galeotto |
| 4 | ADN Construction | Benoit Senior |
| 5 | CoBUILDER International | Lars Christian Fredenlund |
| 6 | Acca Software s.p.a | Guido Cianciulli |
| 7 | Unismart Padova Enterprise S.r.l. | Stefano Carosio |
| 8 | International Data Space Association | Lars Nager |
| 9 | Estonian Ministry of Economic Affairs and Communications | Jaan Saar |
| 10 | Ministry of Construction and Physical Planning (Croatia) | Maja Marija Nahod |

# DigiPLACE advisory board

| N. | Compay name | Referent name |
|---|---|---|
| 11 | Czech agency for standardization (CESKA Agentura Pro Standardizaci) | Jaroslav Nechyba |
| 12 | BIM-architecture | Mr Peter Hyttel Sørensen |
| 13 | European Rental Association | Carole Bachmann |
| 14 | Platform of Trust | Toni Luhti |
| 15 | Finnish Association of Civil Engineers RIL | Miimu Airaksinen |
| 16 | European Concrete Platform | Francesco Biasioli |
| 17 | Chamber of Construction and Building Materials, Chamber of Commerce and Industry, Slovenia | Joze Renar |
| 18 | Neumarkt | Marcus Schreyer |
| 19 | Engineering Ingegneria Informatica S.p.A | Lafranco Marasso |
| 20 | IBM - International Business Machines Corporation | Paul Surin |

# DigiPLACE advisory board

| N. | Company name | Referent name |
|---|---|---|
| 21 | Vinci | Marie Claire Coin |
| 22 | Trimble | Jean-François Sourdoire |
| 23 | ENCORD | Norbert Pralle |
| 24 | Autodesk | Emmanuel Di Giacomo |
| 25 | Graphisoft (Nemetschek) | Miklós Szövényi-Lux |
| 26 | Ecole de Téchnologie Supérieur, Québec | Prof. Conrad Boton |
| 27 | Allplan (Nemetschek) | Kevin Lea |

# Project Work Packages

WP1 – **Project management** - Politecnico di Milano

WP2 – **Long term community building** - Federcostruzioni

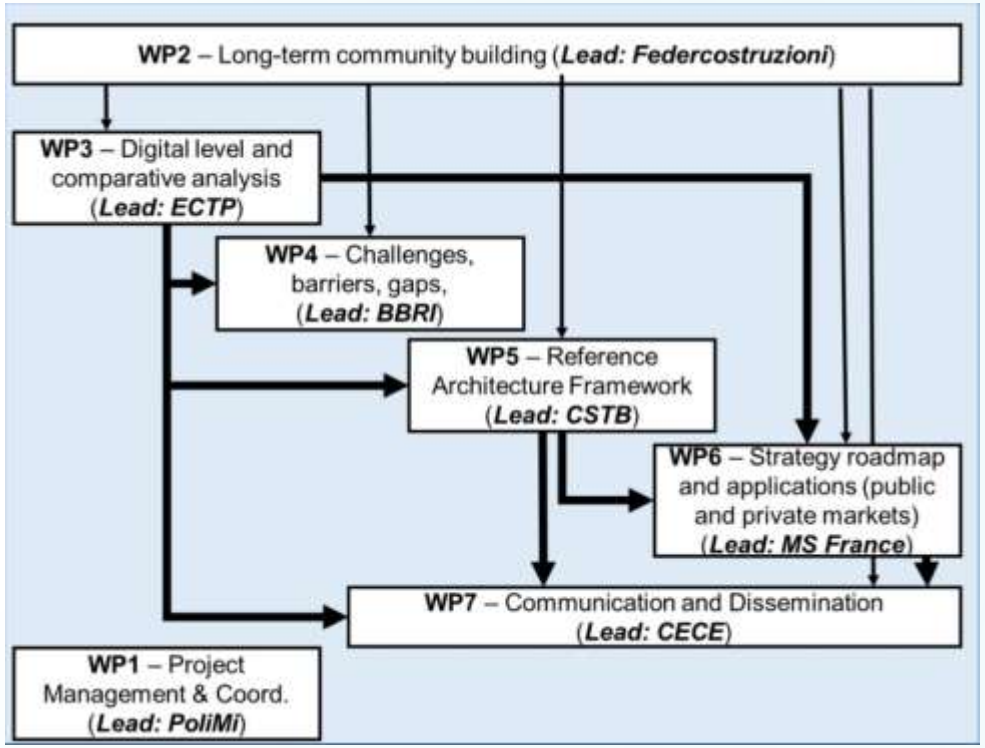
WP3 – **Digital level and comparison analysis** - ECTP

WP4 – **Challenge barriers and gaps** - BBRI

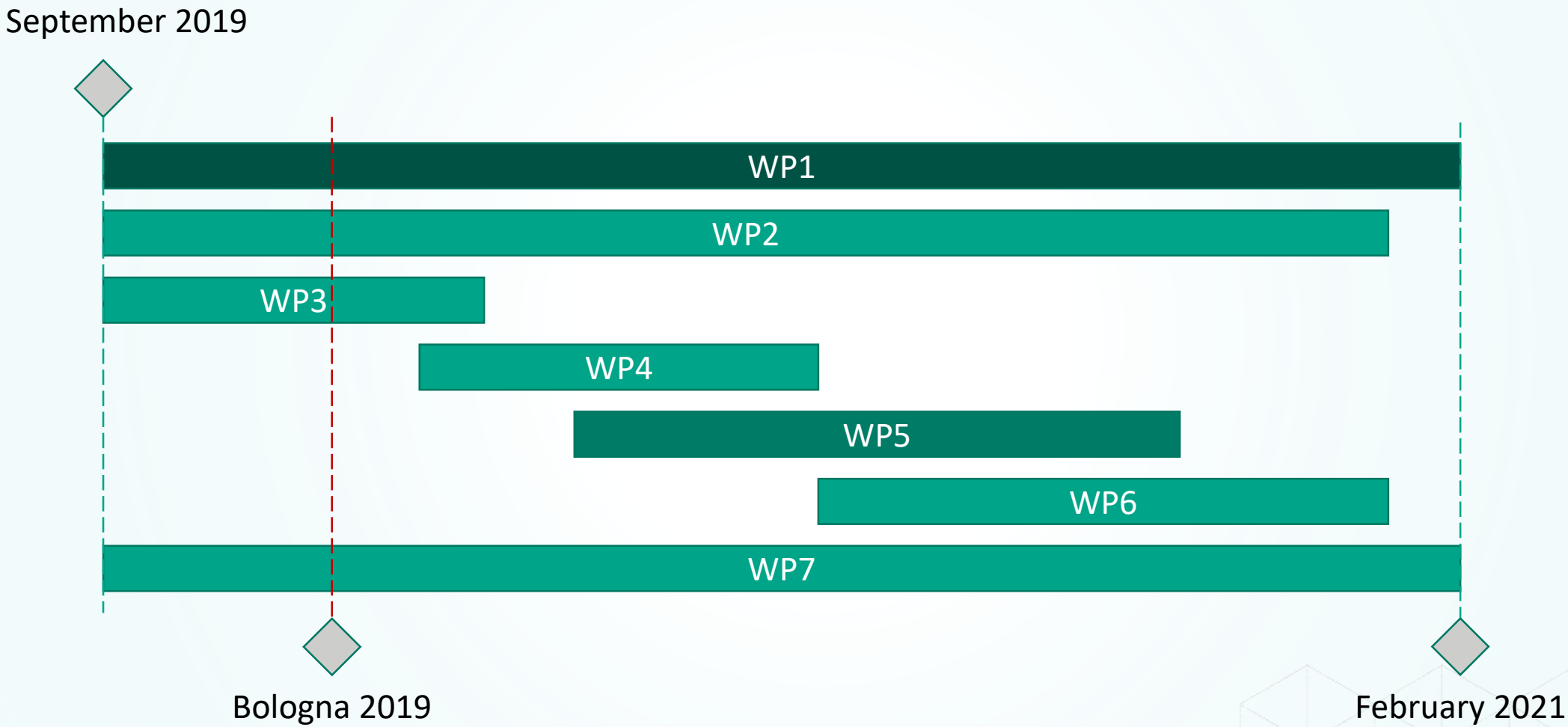
WP5 – **Reference Framework Architecture** - CSTB

WP6 – **Strategy roadmap** (private and public markets) - MEEM

WP7 – **Communication and dissemination** - CECE



# Project Gantt



# These are us

We wait you in the comunity of stakeholder:

Partecipa su Twitter
Follow on Twitter

@Digi_PLACE
#DigiPLACE

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TOWARDS A EUROPEAN DIGITAL PLATFORM FOR CONSTRUCTION

# PANEL DEBATE

# DIBATTITO

This project has received funding from the European Union's H2020 programme under Grant Agreement N. 856983

# Panel debate - Dibattito

**Paul SURIN** – Construction Products Europe / IBM

**Žiga TURK** – University of Ljubljana

**Nicolas NAVILLE** – CSTB

**Alain ZARLI** – ECTP

**Fabrizio BASSETTA** – Mario Cucinella Architects

# Saluti e conclusioni

# Ringraziamenti – Thank you

Ordine degli Ingegneri di Bologna

Feder Costruzioni

ANCE

**Un grazie speciale a chi è stato collegato in streaming**

**Grazie a tutti i partner del consorzio DigiPLACE**

## Community of Stakeholders

*Iscriversi è facile, gratuito e fondamentale per essere sempre informati del progetto DigiPLACE*

*Fatelo prima di andare via!*

@Digi_PLACE
#DigiPLACE

DigiPLACE
TOWARDS A EUROPEAN DIGITAL PLATFORM FOR CONSTRUCTION

# Grazie della partecipazione

# Thanks for participating

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