

CONSTRUCTION SKILLS ENERGY EFFICIENCY

REGULATING SUPPLY CHAINS

TACKLING CLIMATE CHANGE

# BIM CERT



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 785155





# The future of BIM in Europe

## Role of the EU BIM Task Group

*Chairman: Dr. Souheil Soubra*



Co-funded  
by the  
European Union



# Construction is a major economical sector...

- **Key figures (EU / Worldwide):**
- 1.3 trillion (10<sup>12</sup>) / 10 trillion
- 8,9% GDP / 6% GDP
- 18 million direct jobs + indirect jobs
- 3.1 million organizations (95% SMEs)

## TOTAL NUMBER OF ENTERPRISES 2017 (X1000)

Germany	370
United Kingdom	209
France	440
Italy	511
Spain	403
Netherlands	161
Sweden	104
Poland	160
Belgium	113
Austria	35
Finland	41
Denmark	32
Ireland	50
Czech Rep.	172
Portugal	44
Romania	77
Greece	85
Slovakia	3
Hungary	93
Bulgaria	20
Luxembourg	4
Latvia	3
Estonia	10
Lithuania	8
Croatia	13
Slovenia	18
Cyprus	7
Malta	6
<b>Total EU</b>	<b>3,192</b>
Switzerland	48
Turkey	350
Norway	57

EUROPEAN CONSTRUCTION INDUSTRY FEDERATION

EU 28  
**95%**  
WITH <20  
WORKERS

EU 28  
**3.1**  
MILLION  
ENTERPRISES

EU 28  
**8.9%**  
OF GDP

MULTIPLIER  
EFFECT:\*

**43.6**  
**MILLION**  
**WORKERS**

IN THE EU DEPEND,  
DIRECTLY OR INDIRECTLY,  
ON THE CONSTRUCTION  
SECTOR

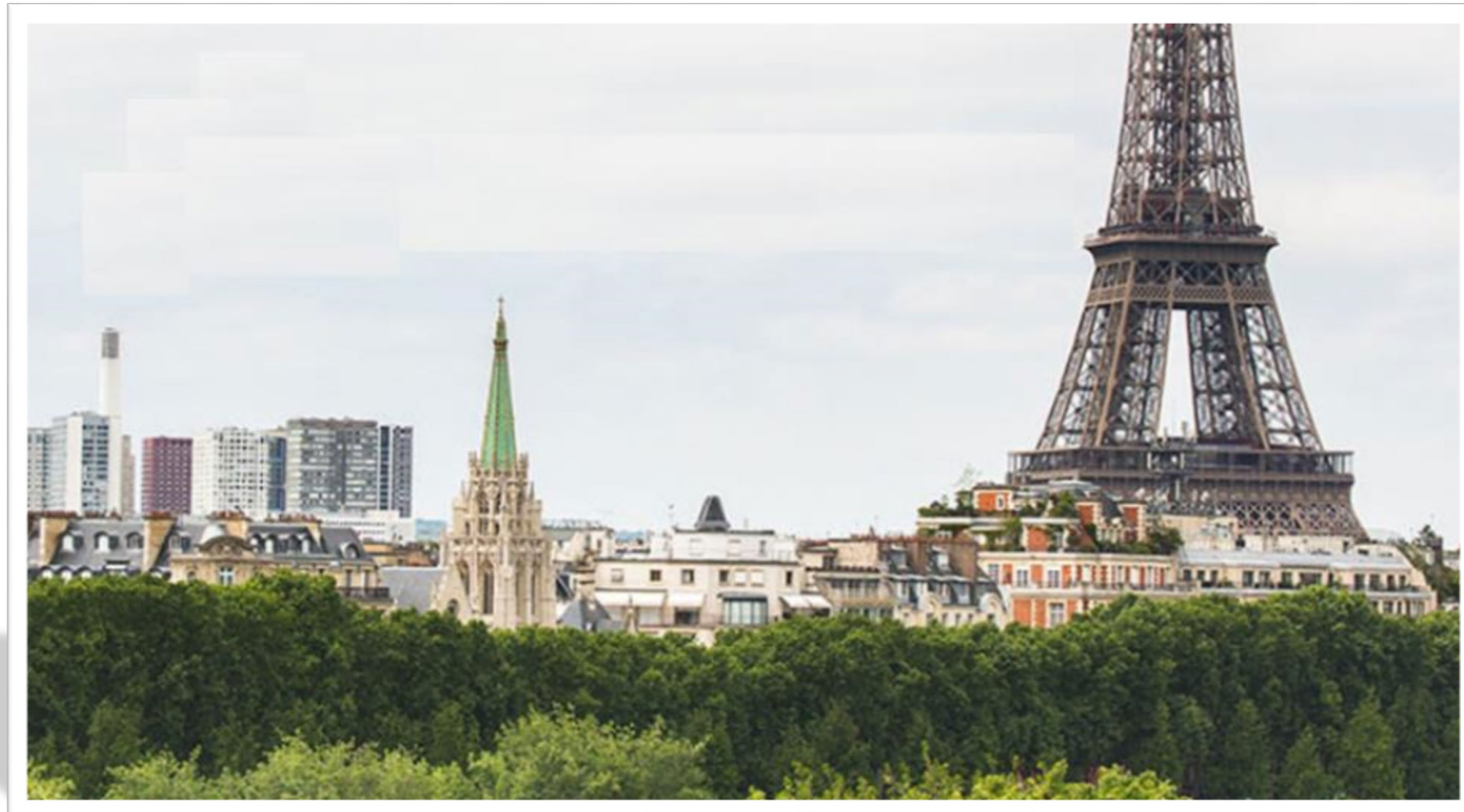
\* Source: Communication from the Commission  
"The Competitiveness of the Construction  
Industry" COM(97)539 of 4/11/1997, chapter 2.

## ...and it's not only about economic impact

The built environment (all human-made space in which people live, work, and recreate) it strongly affects the economic, environmental and social development as a whole...

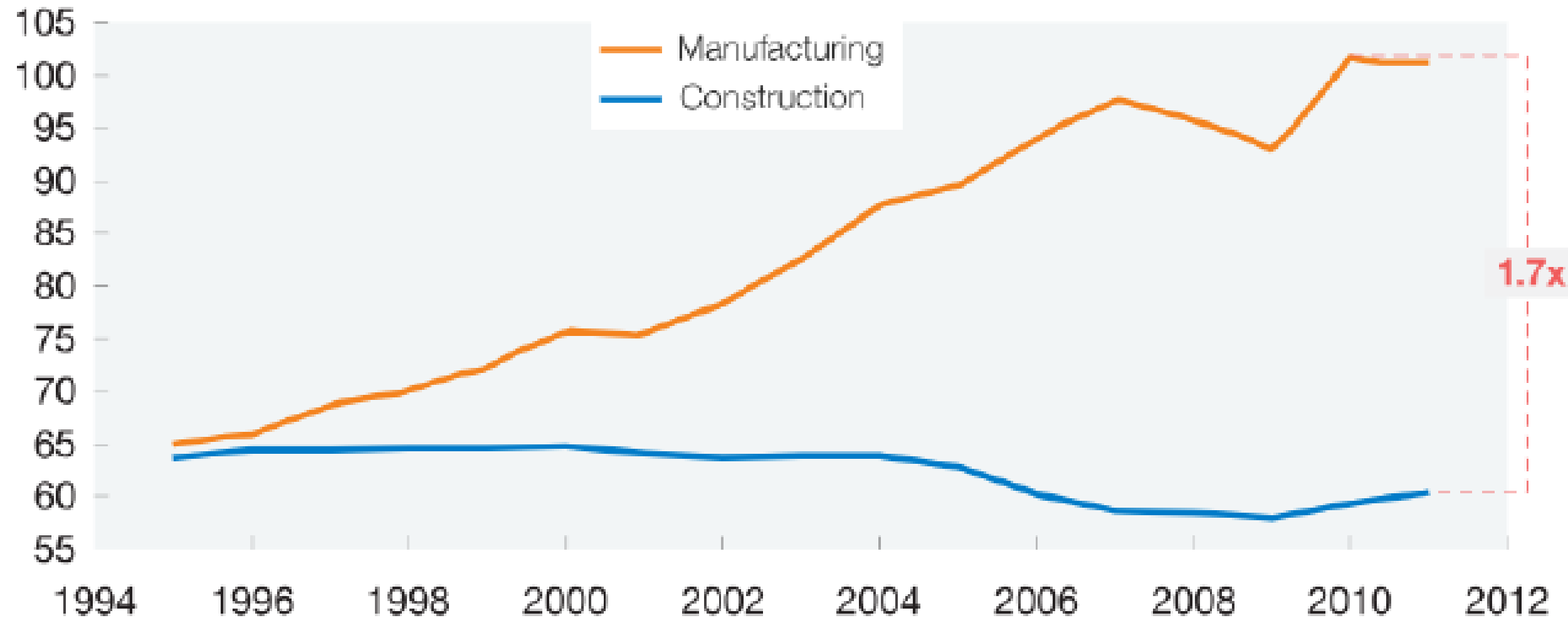
It needs to be:

- Healthy
- Comfortable
- Safe
- Affordable
- Flexible
- Sustainable
- ...



# But the sector has a long record of poor performances...

\$ thousand per worker



Source: Expert interviews; IHS Global Insight (Belgium, France, Germany, Italy, Spain, United Kingdom, United States); World Input-Output Database

McKinsey&Company

Over the past two decades, productivity in manufacturing has nearly doubled whereas in the construction sector it has remained flat (and in some areas has even dropped)



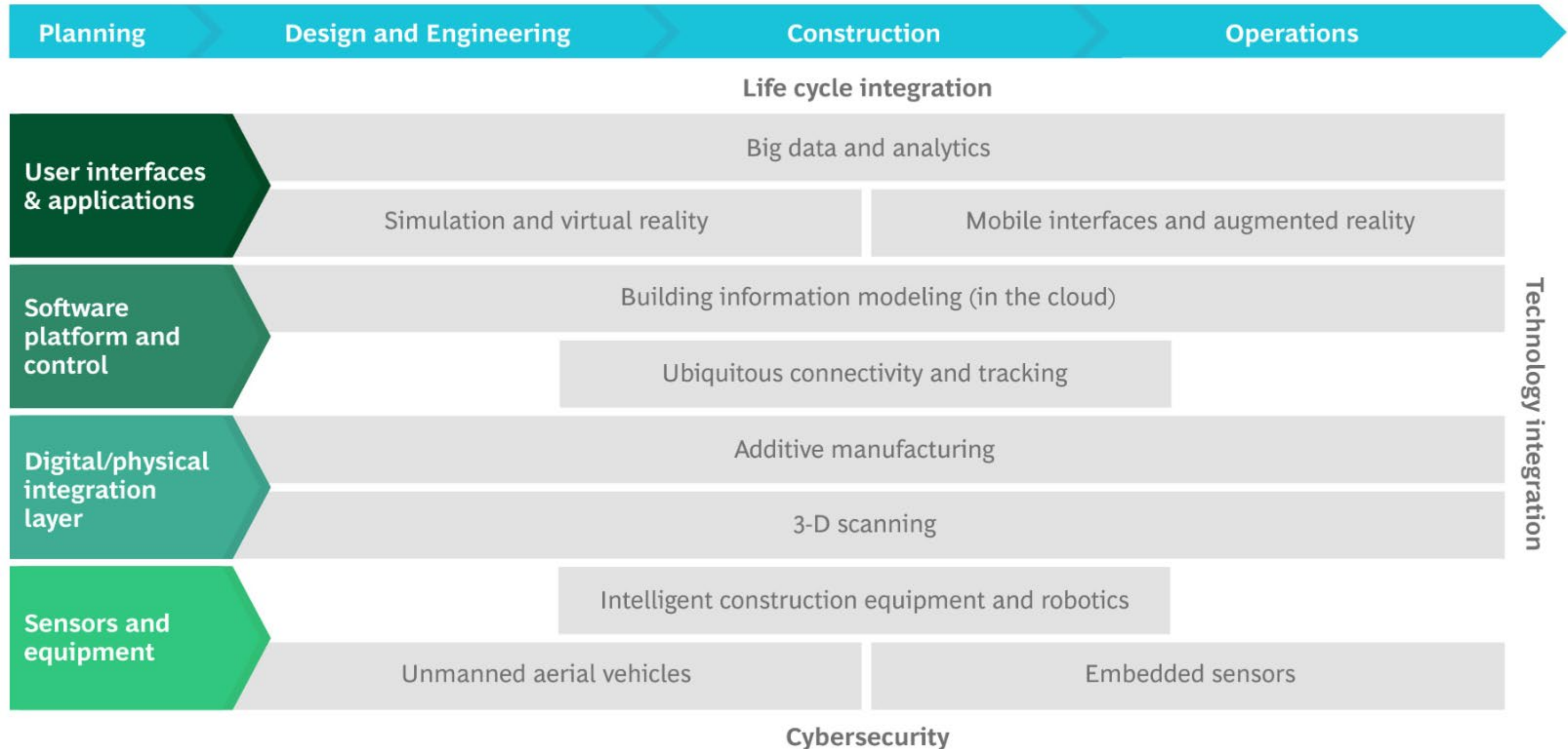
# Digital construction is an opportunity

IT spendings in construction do not exceed 1% and only agriculture and hunting seem to spend less...

**Enterprises with high or very high digital intensity index by economic activity, EU, 2017  
(% enterprises)**

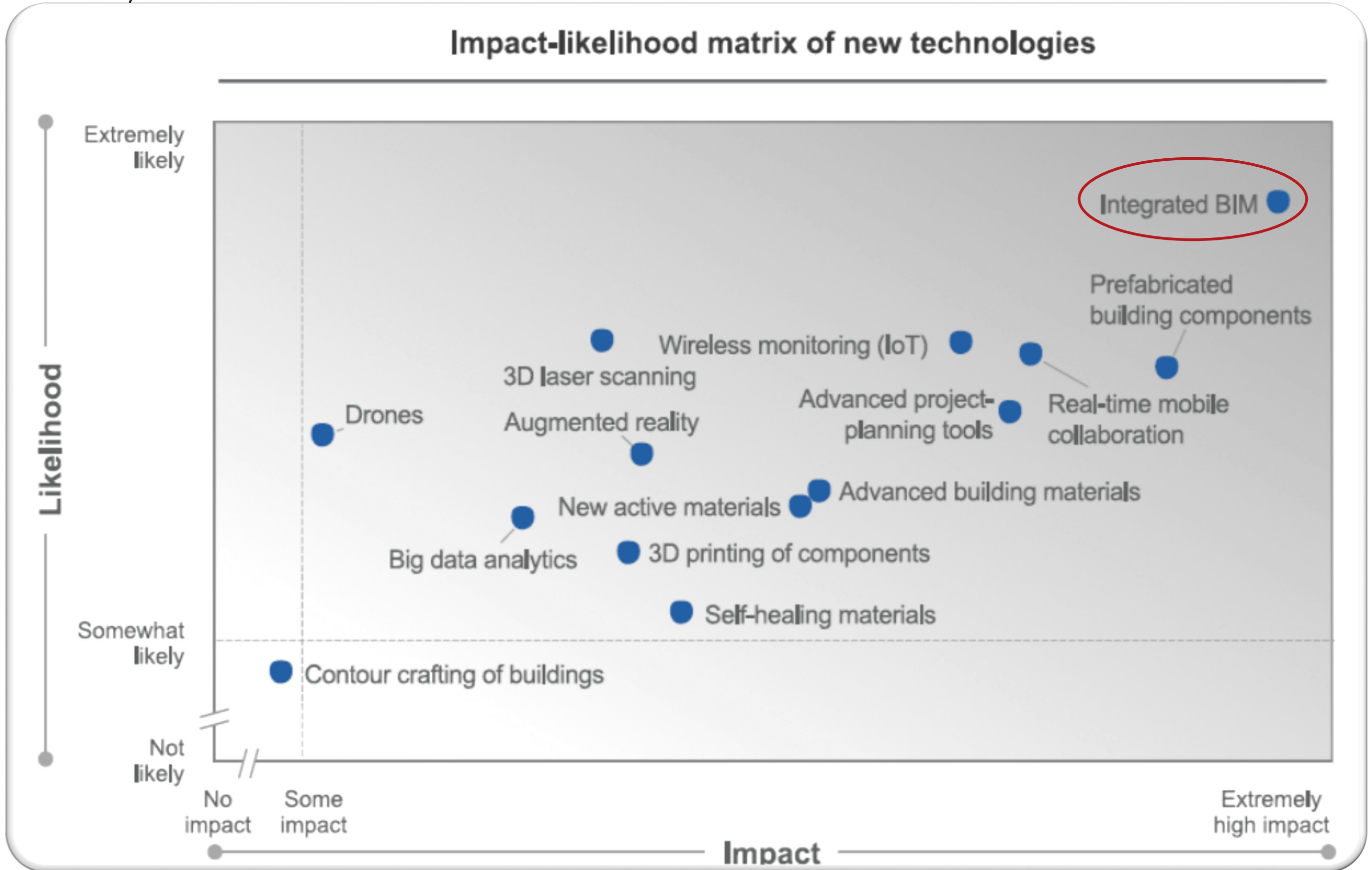


# Digital technologies emerging...



# Impact-likelihood of new technologies

Impact-likelihood matrix of new technologies







**Bringing together national efforts  
into a common and aligned  
European approach to develop a  
world-class digital construction  
sector**



# Several European BIM programs



Germany



Norway



Finland



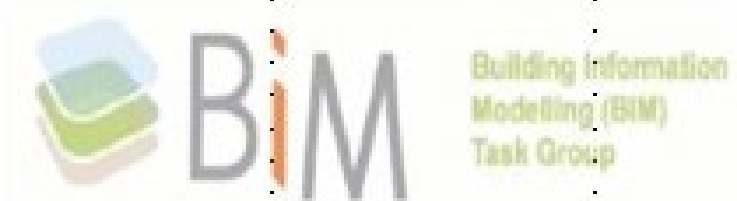
Spain



France



UK



Netherlands



Denmark



# Four Pillars of Government BIM Programs

## Grow industry capacity

- Early wins, pilot projects, training
- Increasing use of strategic lever to grow capacity
- Measure and monitor, case studies, embed change

## Communicate vision and foster communities

- Engage industry stakeholders
- Create regional and focus networks
- Events, media, web, social media

## Build a common, collaborative framework

- Legal and regulatory framework
- Data and process standards
- Skills, tools, guidance

## Foundation of public leadership

- Compelling drivers, visions and goals
- Aligned value proposition and strategy
- Sponsor, funded programme, stewardship team

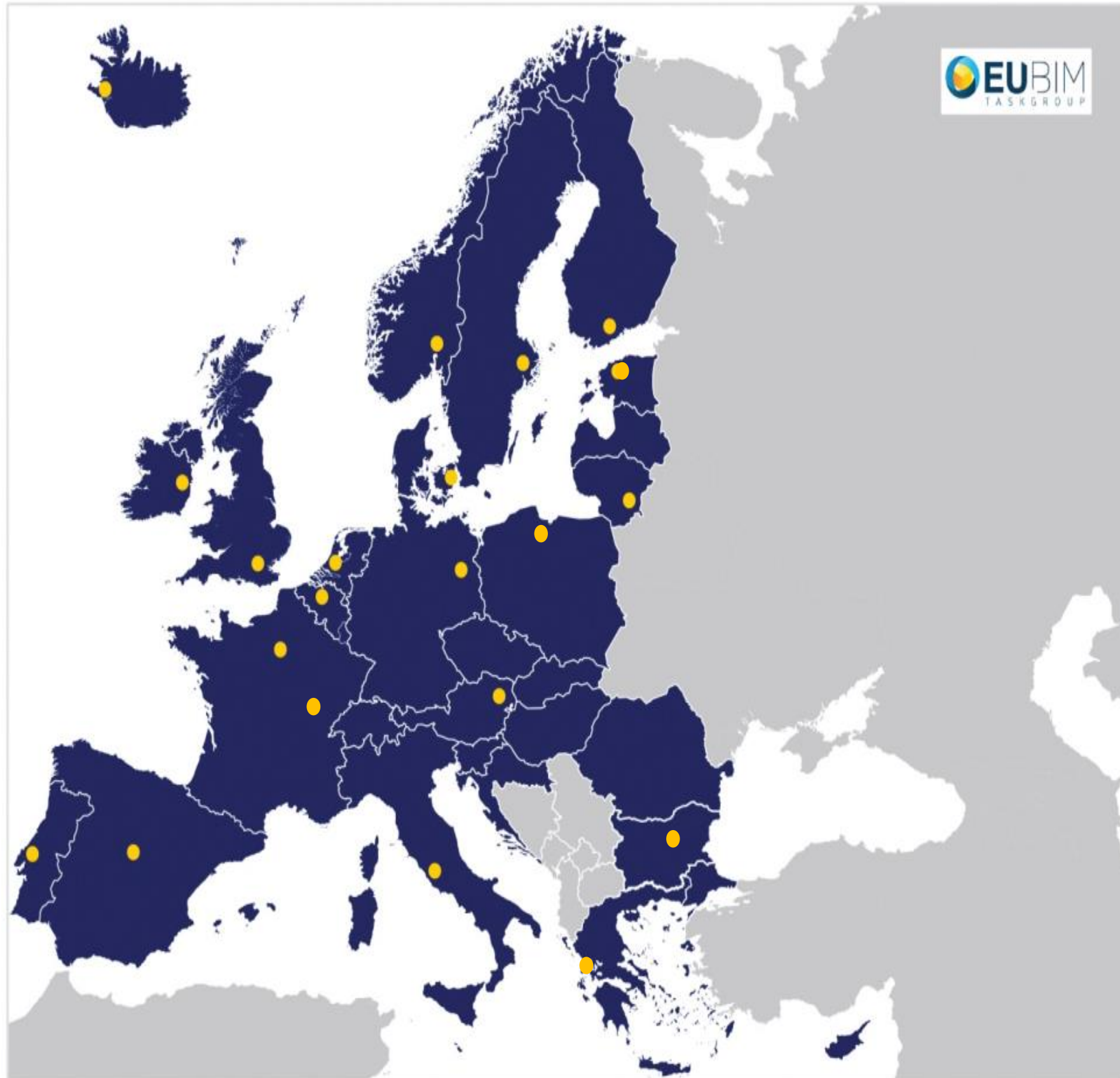


Representing **Public Bodies** from  
**27** European Countries



Create a **Common framework**  
for **BIM** in public works





Austria  
Belgium  
Bulgaria  
Czech Republic  
Croatia  
Germany  
Greece  
Denmark  
Estonia  
Finland  
France  
Iceland  
Ireland

Italy  
Latvia  
Lithuania  
Luxembourg  
Netherlands  
Norway  
Poland  
Portugal  
Slovakia  
Slovenia  
Spain  
Sweden  
Switzerland  
UK

European Commission  
European Parliament







# Why collaborate ?



- Accelerate national efforts
- Create alignment
- Minimize costs and duplication
- Build impactful and robust programs
- Open to trade and enable growth
- Encourage international standards developments and software integration



# What does the EU BIM Task Group do?



- Share **best-practice experience**, identify **common goals** and exchange knowledge on how to successfully implement BIM based on open standards
- Deliver **practical guidance** to public procurers and policy makers with a clear set of requirements in order to optimize the lifecycle of the public built assets
- **Bridge the gap between demand side, supply side and enablers** (including standardization and innovation)



**Demand side**  
1. Public authorities (and EC)  
2. Public procurers



**Enablers**  
(CEN, ISO, bSI, OGC, ...)



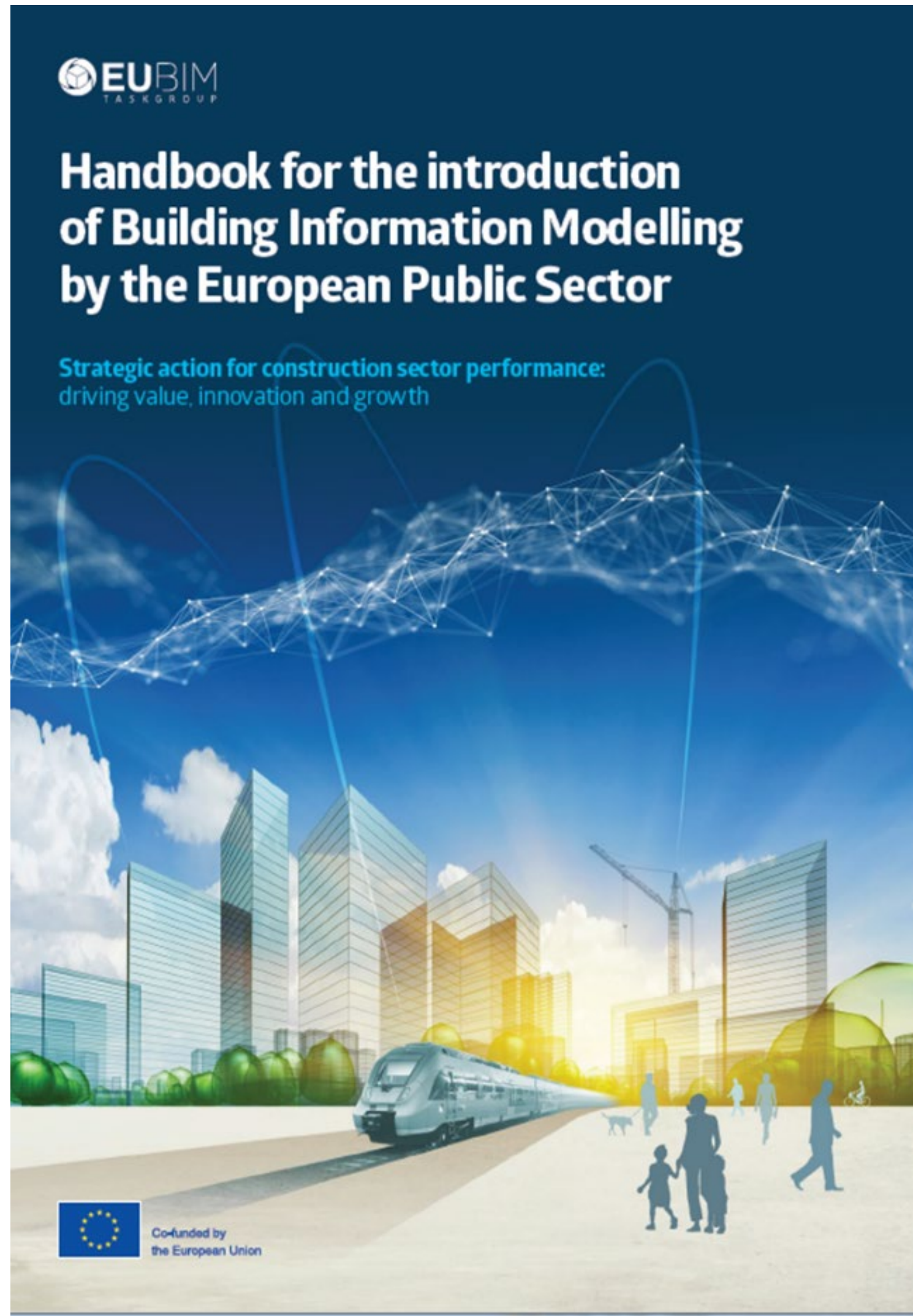
**Supply side - Construction lifecycle sector**





# Phase 1 and beyond

<http://www.eubim.eu>



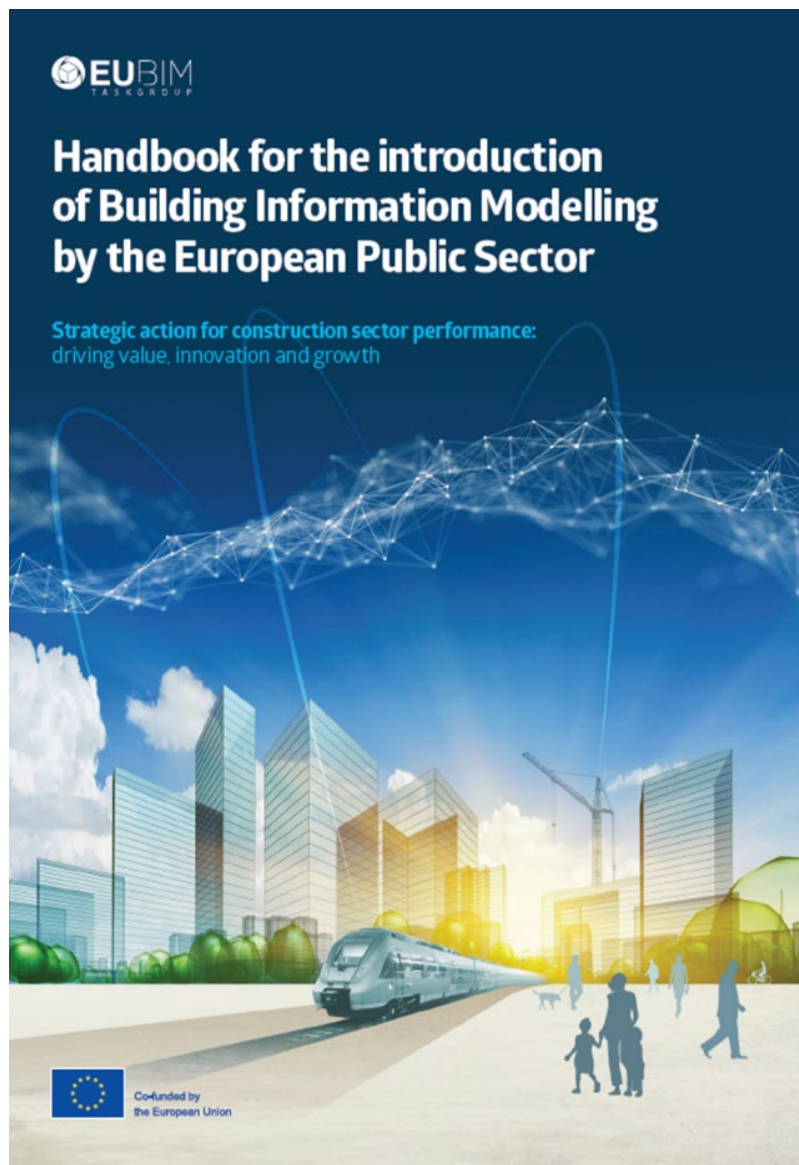




**Pietro Baratono, Angelo Ciribini:** Italian BIM Commission and Ministry of Infrastructure and Transport  
**Mark Bew MBE:** UK Government's BIM Task Group and Digital Built Britain  
**Barry Blackwell:** UK Government's Department for Business, Energy and Industrial Strategy  
**Diderik Haug:** Norway Statsbygg, Special Adviser to the EU BIM Task Group  
**Benno Koehorst, Hester van der Voort:** Netherlands' Rijkswaterstaat  
**Richard Lane:** Project manager for the EU BIM Task Group  
**Ingemar Lewen, Jennie Carlstedt:** Trafikverket, Swedish Transport Administration  
**Adam Matthews:** Chair of the EU BIM Task Group  
**Ilka May:** Deputy-chair of the EU BIM Task Group  
**Souheil Soubra:** CSTB on behalf of France's PTNB  
**Virgo Sulakatko:** Estonia's Ministry of Economic Affairs and Communications  
**Jorge Torrico, Elena Puente Sanchez:** Ineco on behalf of the Spanish Ministerio de Fomento

The Steering Committee would like to thank the General Assembly members of the EU BIM Task Group for contributing their time and expertise to this handbook:

<b>Belgium</b> .....	Belgian Buildings Agency	<b>Netherlands</b> .....	Rijkswaterstaat (Ministry of Infrastructure and the Environment); Rijksvastgoedbedrijf (Government Real Estate Company)
<b>Czech Republic</b> .....	Ministry of Industry and Trade	<b>Norway</b> .....	Statsbygg; Norwegian Building Authority (DiBK)
<b>Denmark</b> .....	The Danish Building and Property Agency	<b>Poland</b> .....	Ministry of Infrastructure and Construction
<b>Estonia</b> .....	Ministry of Economic Affairs and Communications; Estonian State Real Estate LTD	<b>Portugal</b> .....	University of Lisbon
<b>Finland</b> .....	Senate Properties and Finnish Transport Agency	<b>Slovakia</b> .....	Slovak University of Technology in Bratislava
<b>France</b> .....	France PTNB; MediaConstruct; AIMCC	<b>Slovenia</b> .....	Ministry of Infrastructure
<b>Germany</b> .....	Federal Ministry of Transport and Digital Infrastructure; Federal Institute for Research on Building, Urban Affairs and Spatial Development	<b>Spain</b> .....	Spanish Ministerio de Fomento (represented by Ineco)
<b>Iceland</b> .....	FSR (Government's Construction Contracting Agency)	<b>Sweden</b> .....	Trafikverket (Swedish Transport Administration)
<b>Ireland</b> .....	The Office of Public Works	<b>UK</b> .....	Department for Business Energy and Industrial Strategy; UK Government's BIM Task Group and Digital Built Britain
<b>Italy</b> .....	Italian BIM Commission – Ministry for Infrastructure and Transport; ANAS (Road Administration); Italian Railways Italferr (FS Group)	<b>European Parliament</b> .....	European Parliament; General-Directorate of Infrastructure
<b>Lithuania</b> .....	Ministry of Environment, Lithuanian Road Administration; JSC Lithuanian Railways; State Enterprise Turto bankas	<b>European Commission</b> .....	Office for Infrastructures and Logistics
<b>Luxembourg</b> .....	Centre de Ressources des Technologies et de l'Innovation pour le Bâtiment (CRTI-B)		





# One of our General Assemblies..





# STRATEGIC ROADMAP

## 5 Key Objectives and 19 Actions

*For meeting the key challenges and objectives  
the EU BIM Task Group will act on 5 strategic  
targets during 2019 – 2021*



# **5** KEY CHALLENGES AND OBJECTIVES



- Ensure the best value for public money
- Improve transparency and outcome of public procurement
- Increase competitiveness and productivity of the European Single Market
- Ensure seamless exchange of digital information
- Foster public authorities dedication to BIM



**Ensure the best value for public money by providing a clear indication on benefits of BIM for public authorities**

**A1) Cost-benefit-analysis for the use of BIM**

**A2) Individual case studies and pilot projects**

**A3) Methodology for measuring the use of BIM**

**B**

Intensify the use of BIM in order to **enhance the process of public procurement** and to improve its transparency and outcomes

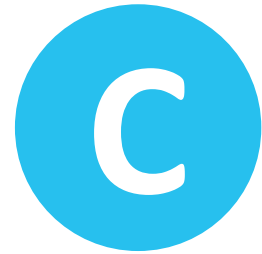
**B1) Guidelines for public procurement**

**B2) Advise EC on PPD and use of BIM**

**B3) EU BIM website and links to national subsites**

**B4) Annual public client BIM innovation reward**





Increase the competitiveness and productivity of the **European Single Market** by ensuring **harmonized conditions** for the digitalization of the EU construction sector and sharing best practices

C1) Liaison with international organizations dealing with BIM

C2) Support development of open standards for BIM

C3) Support development of a common classification system



# Enable **knowledge transfer** and exchange of best practices between the members of the EU BIM Task Group

D1) Regular meetings between members

D2) BIM Conference for public procurers

D3) Network of who is who with expert pool

D4) EUBTG as legal entity



## Support member states initiatives for the development of a unified **long-term strategy** for BIM

E1) Unified Digital Platform

E2) Better funding for BIM initiatives

E3) Framework for data security

E4) Framework for data privacy

E5) Digital twin workshops



# Where do we go from here ?

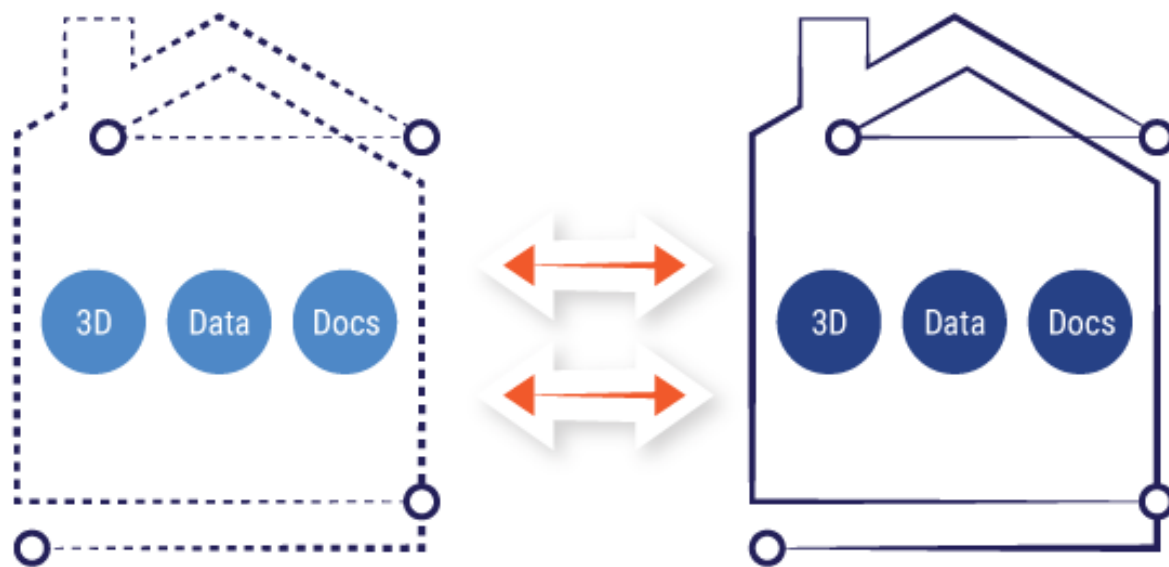
## BIM

DIGITAL WORLD

## DIGITAL TWIN

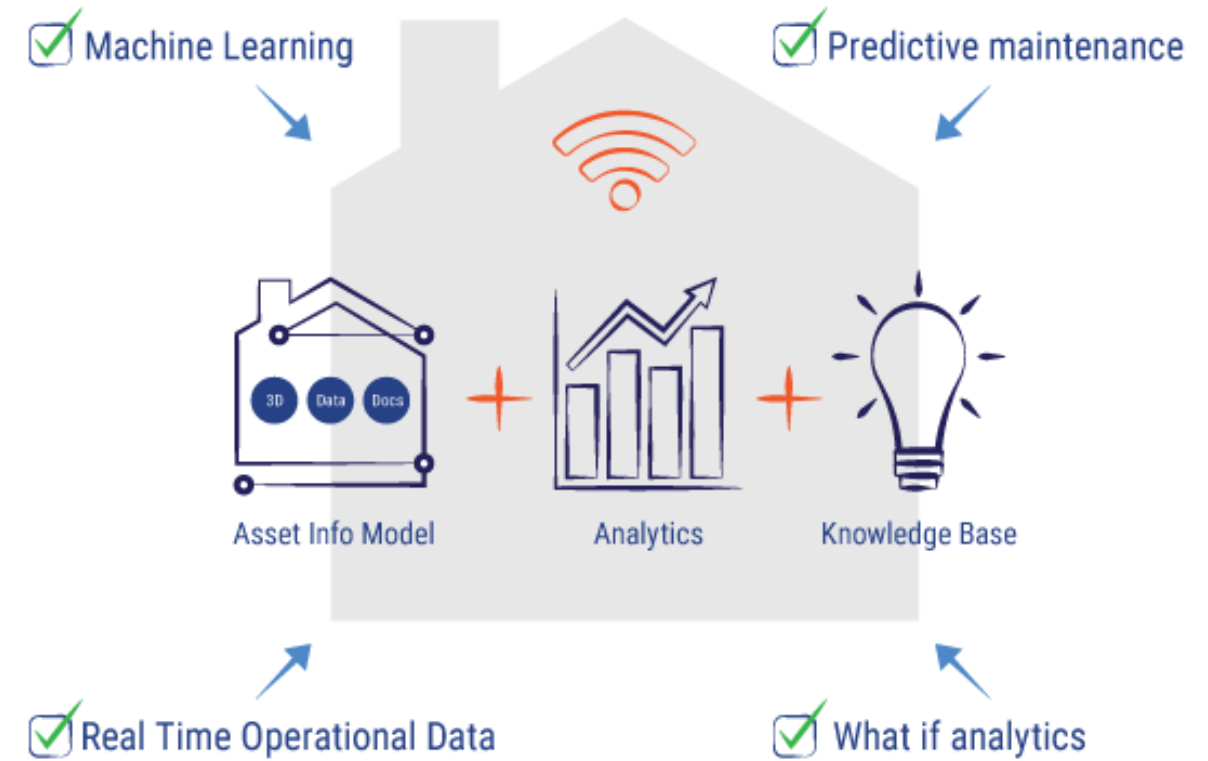
DIGITAL WORLD + PHYSICAL WORLD

STRUCTURED INTEROPERABLE DATA

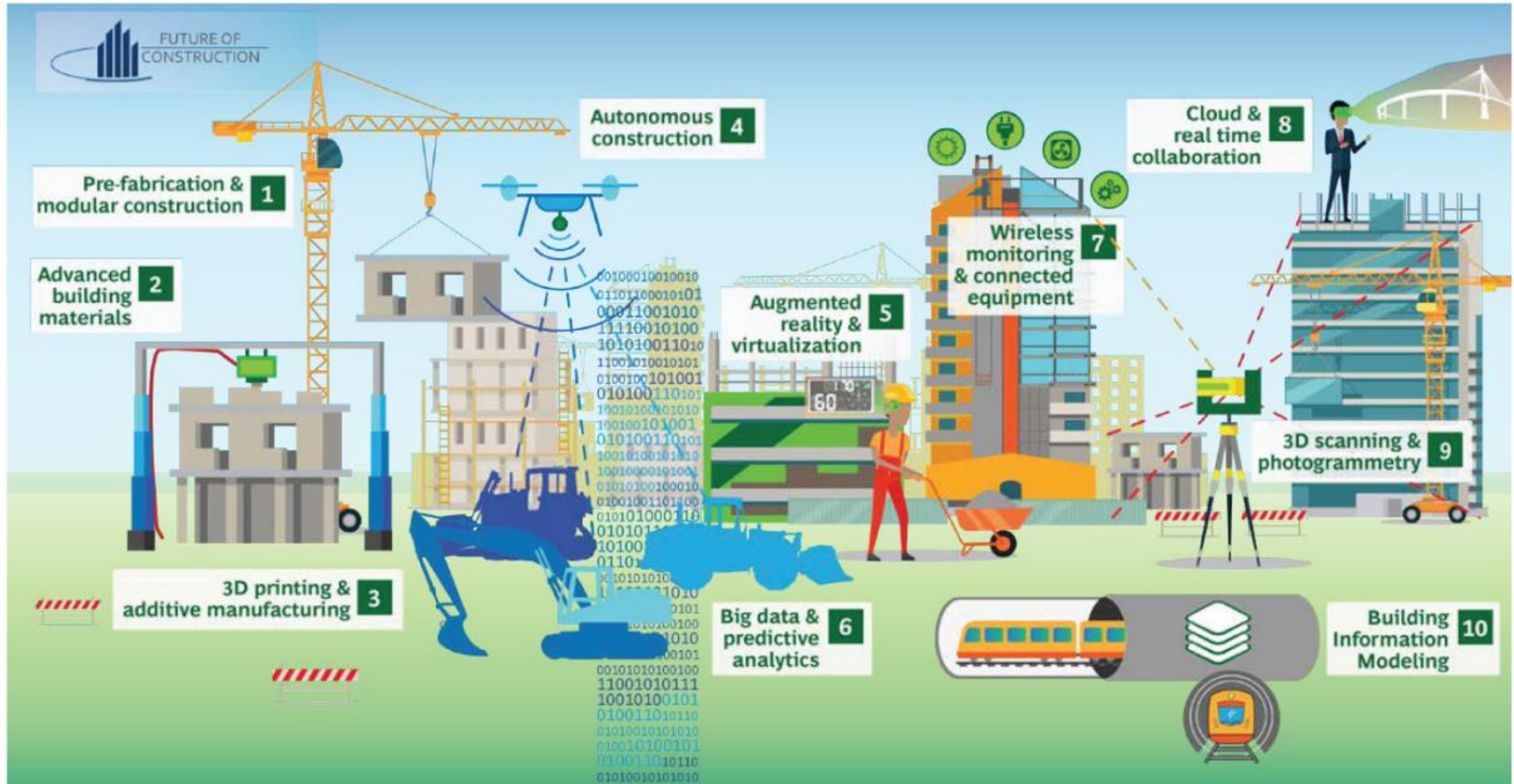


as - DESIGNED model

as - BUILT model



# The future of construction



Source: World Economic Forum, The Boston Consulting Group





EU BIM Task Group

[www.eubim.eu](http://www.eubim.eu)

<https://www.facebook.com/eubimgroup/>

[admin@eubim.eu](mailto:admin@eubim.eu)

[souheil.soubra.cstb.fr](http://souheil.soubra.cstb.fr)



Follow us on



Construction 4.0  
Europe



[www.eubim.eu](http://www.eubim.eu)



Supported by  
the European Union