EU BIM TASKGROUP

European Leadership in BIM

Adam Matthews
Chair, EU BIM Task Group
International Director, UK BIM Task Group

1 December, 2017

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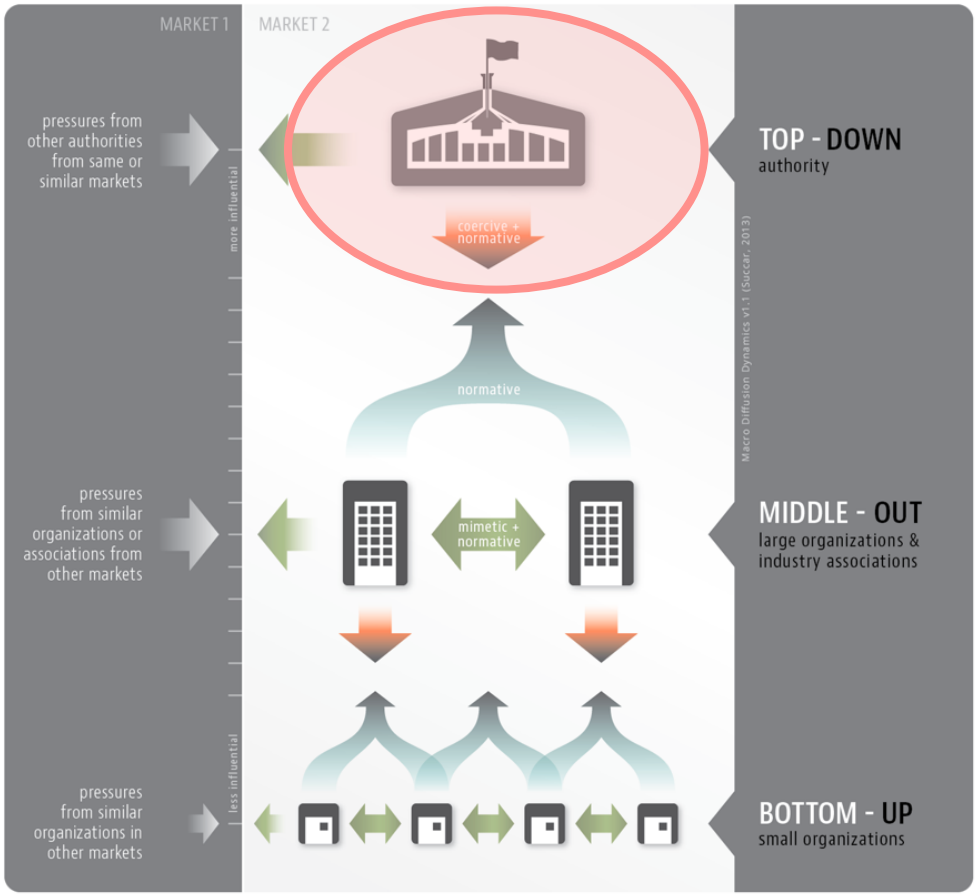
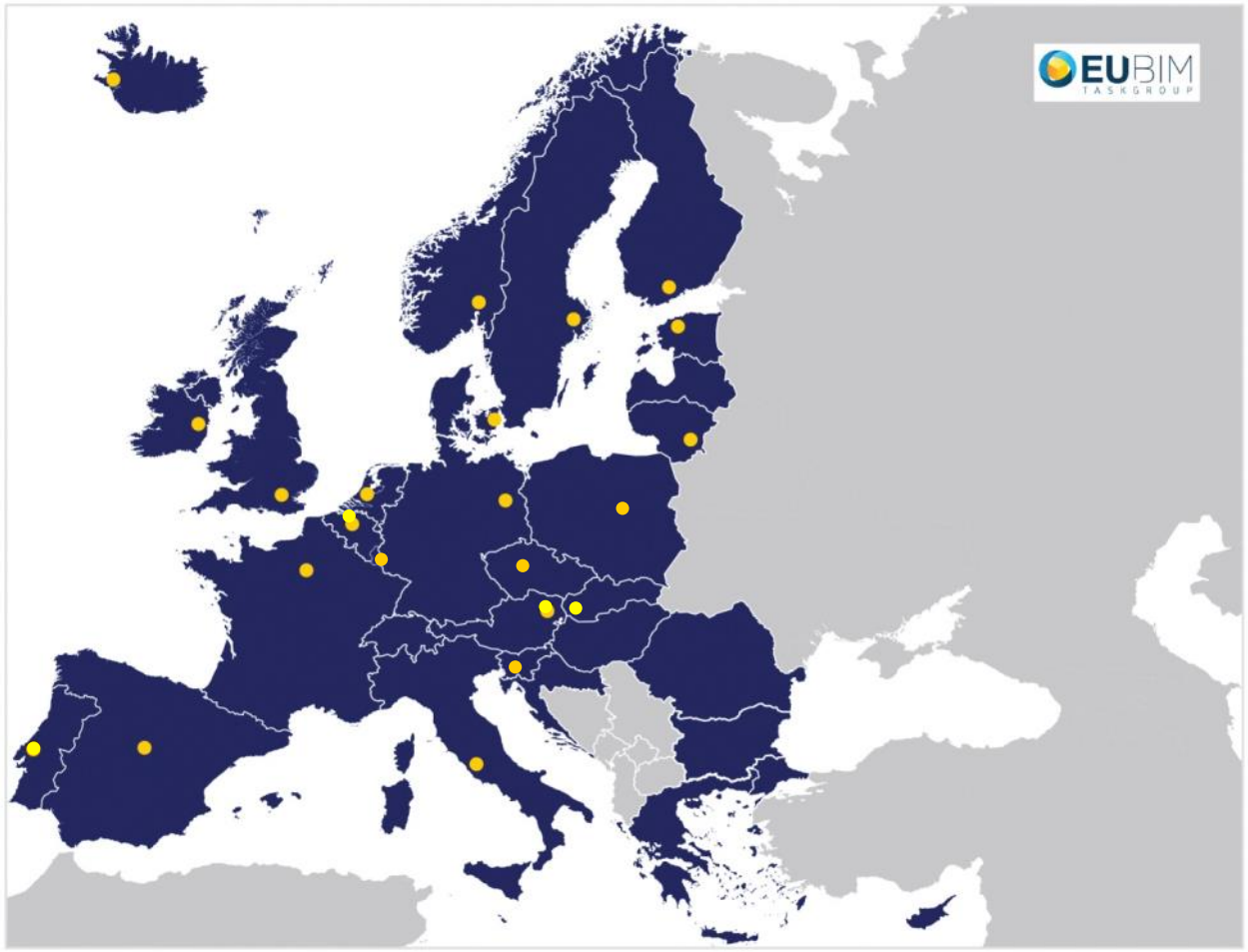

MARKET 1
MARKET 2
pressures from other authorities from same or similar markets
more influential
coercive + normative
TOP - DOWN
authority
normative
Macro Diffusion Dynamics v1.1 (Succar, 2013)
pressures from similar organizations or associations from other markets
mimetic + normative
MIDDLE - OUT
large organizations & industry associations
pressures from similar organizations in other markets
less influential
BOTTOM - UP
small organizations



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Rapidly evolving national digital programmes

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Germany	Bundesministerium für Verkehr und digitale Infrastruktur	Norway	STATSBYGG
Finland	Senaatti	Spain	es.BIM Implantación del BIM en España
France	Plan Transition Numérique dans le Bâtiment	UK	BIM Building Information Modelling (BIM) Task Group
Netherlands	Rijkswaterstaat *Ministry of Infrastructure and the Environment*	Denmark	BYGNINGSSTYRELSEN

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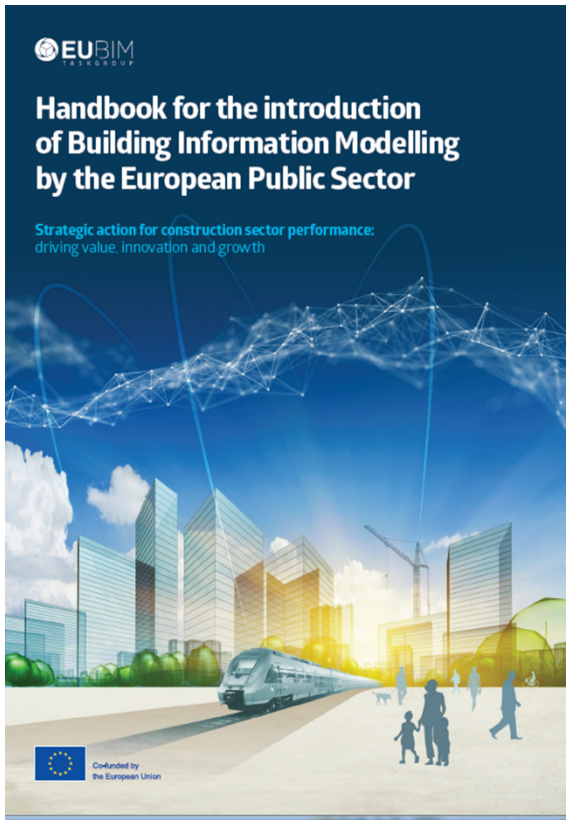
Risks of not collaborating

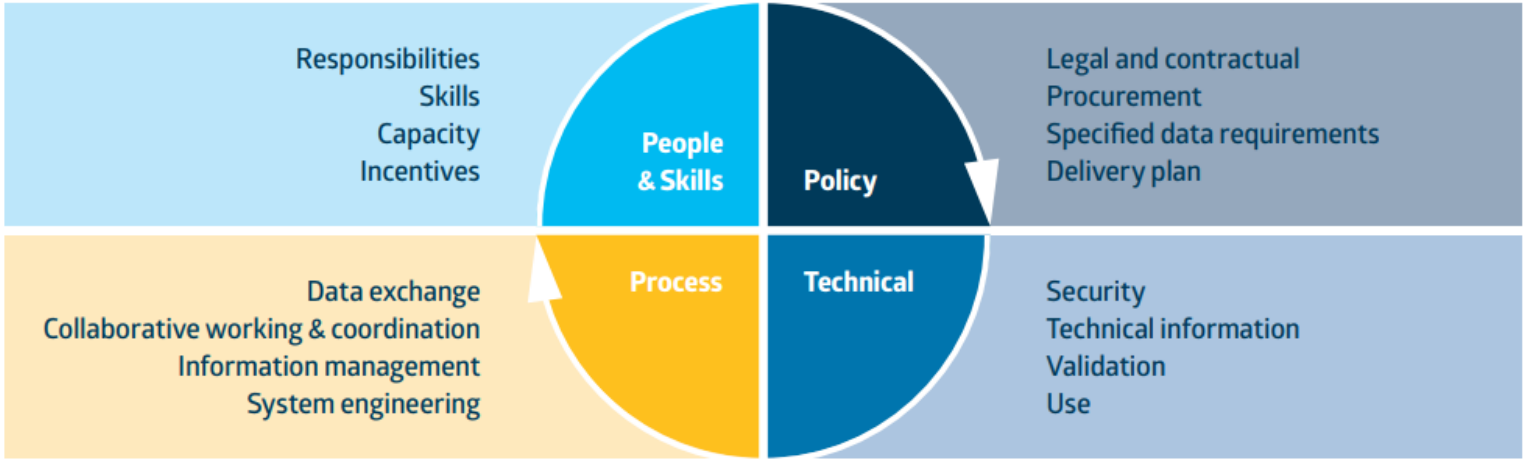
Why collaborate?

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

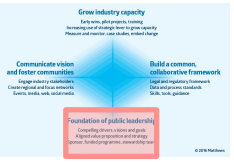


Four Pillars of Government BIM Programs

Common definition



Public Leadership



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

Italy
Luxembourg
Lithuania
Netherlands
Norway
Poland
Portugal
Slovakia
Slovenia
Sweden
UK

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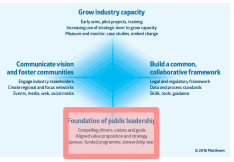
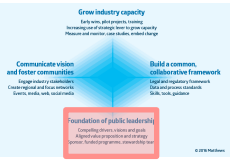
Shared Vision



- Deliver **greater value** for public money: build more for the same
- Increased **openness, fairness, competitiveness** and productivity
- Stimulating **innovation and growth** in the construction and digital sectors
- Grow **digital construction market** for trading regionally and with the rest of the world

Global business case for BIM

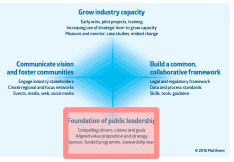
- **Economic**: increase productivity, potential for growth, enhance position of European industry on international markets (construction, IT), …
- **Environmental**: less waste, lean supply chain, lower energy demands, lighter carbon footprint, …
- **Social**: facilities aligned with societal needs, job creation



What kind of savings are possible on the € 1.2 trillion?

What does BCG forecast?

Chair, leadership, project management



Steering committee members

Skills, People development

Procurement, Legal

Technical, process standards

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Communication and Communities: Engaging People

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Engage clients and industry

Communicate targets

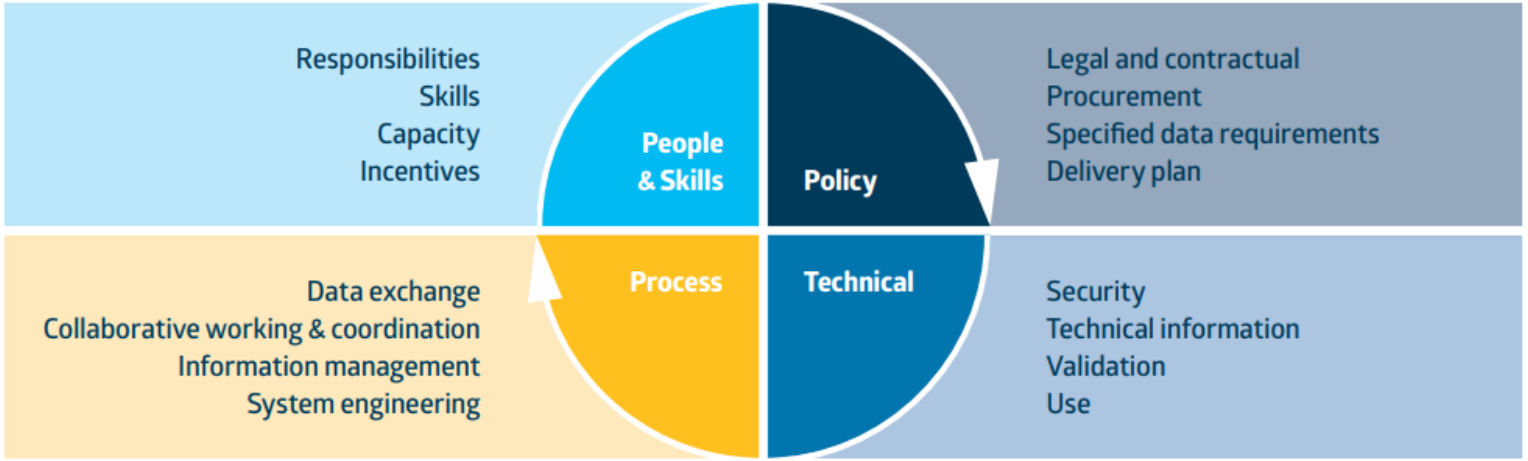
Build awareness (e.g. press, media)

Attend industry events

(national & Brussels)

Defining BIM: Standards, tools and guides

Common definition



Legal Issues

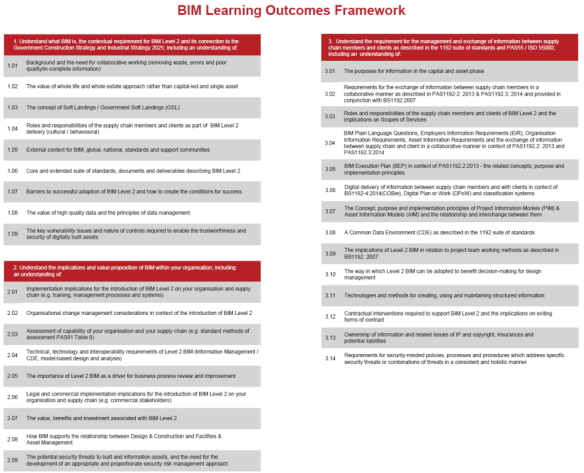
- Obligations of the Employer
- Information manager
- Intellectual property
- Limitations and liability

Technical and Process

- Information Management
  - PAS1192:2 Capital Delivery (ISO 19650)
- EIR, BIM Execution Plan, Data delivery plan
- Data Exchange format
- Common data environment

Upskilling and people development

- Learning outcomes
- Industry response
- Client skills
- Certification



BIM Learning Outcomes Framework

1. Understand what BIM is, the contextual requirement for BIM Level 2 and its connection to the Government Construction Strategy and Industrial Strategy 2025, including an understanding of:	
1.01	Background and the need for collaborative working (removing waste, errors and poor quality/in-complete information)
1.02	The value of whole life and whole estate approach rather than capital-led and single asset
1.03	The concept of Soft Landings / Government Soft Landings (GSL)
1.04	Roles and responsibilities of the supply chain members and clients as part of BIM Level 2 delivery (cultural / behavioural)
1.05	External context for BIM, global, national, standards and support communities
1.06	Core and extended suite of standards, documents and deliverables describing BIM Level 2
1.07	Barriers to successful adoption of BIM Level 2 and how to create the conditions for success
1.08	The value of high quality data and the principles of data management
1.09	The key vulnerability issues and nature of controls required to enable the trustworthiness and security of digitally built assets

2. Understand the implications and value proposition of BIM within your organisation; including an understanding of:	
2.01	Implementation implications for the introduction of BIM Level 2 on your organisation and supply chain (e.g. training, management processes and systems)
2.02	Organisational change management considerations in context of the introduction of BIM Level 2
2.03	Assessment of capability of your organisation and your supply chain (e.g. standard methods of assessment PAS91 Table 8)
2.04	Technical, technology and interoperability requirements of Level 2 BIM (Information Management / CDE, model-based design and analysis)
2.05	The importance of Level 2 BIM as a driver for business process review and improvement
2.06	Legal and commercial implementation implications for the introduction of BIM Level 2 on your organisation and supply chain (e.g. commercial stakeholders)
2.07	The value, benefits and investment associated with BIM Level 2
2.08	How BIM supports the relationship between Design & Construction and Facilities & Asset Management
2.09	The potential security threats to built and information assets, and the need for the development of an appropriate and proportionate security risk management approach

3. Understand the requirement for the management and exchange of information between supply chain members and clients as described in the 1192 suite of standards and PAS55 / ISO 55000, including an understanding of:	
3.01	The purposes for information in the capital and asset phase
3.02	Requirements for the exchange of information between supply chain members in a collaborative manner as described in PAS1192-2: 2013 & PAS1192.3: 2014 and provided in conjunction with BS1192:2007
3.03	Roles and responsibilities of the supply chain members and clients of BIM Level 2 and the implications on Scopes of Services
3.04	BIM Plain Language Questions, Employers Information Requirements (EIR), Organisation Information Requirements, Asset Information Requirements and the exchange of information between supply chain and client in a collaborative manner in context of PAS1192.2: 2013 and PAS1192.3:2014
3.05	BIM Execution Plan (BEP) in context of PAS1192.2:2013 - the related concepts, purpose and implementation principles
3.06	Digital delivery of information between supply chain members and with clients in context of BS1192-4:2014(COBie), Digital Plan or Work (CPoW) and classification systems
3.07	The Concept, purpose and implementation principles of Project Information Models (PIM) & Asset Information Models (AIM) and the relationship and interchange between them
3.08	A Common Data Environment (CDE) as described in the 1192 suite of standards
3.09	The implications of Level 2 BIM in relation to project team working methods as described in BS1192: 2007
3.10	The way in which Level 2 BIM can be adopted to benefit decision-making for design management
3.11	Technologies and methods for creating, using and maintaining structured information
3.12	Contractual interventions required to support BIM Level 2 and the implications on exiting forms of contract
3.13	Ownership of information and related issues of IP and copyright, insurances and potential liabilities
3.14	Requirements for security-minded policies, processes and procedures which address specific security threats or combinations of threats in a consistent and holistic manner

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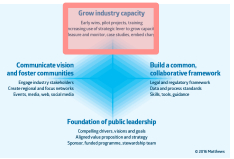
Building Capacity: Clients and industry



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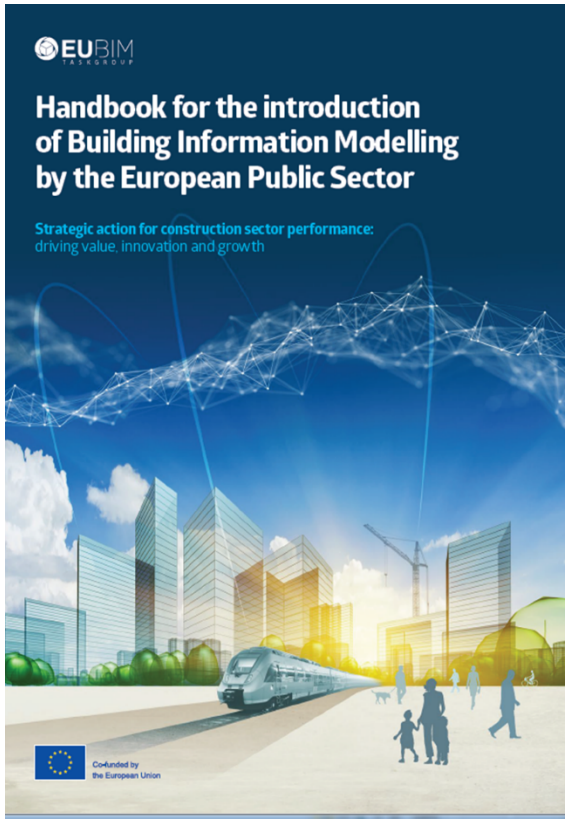
So far… Phase 1

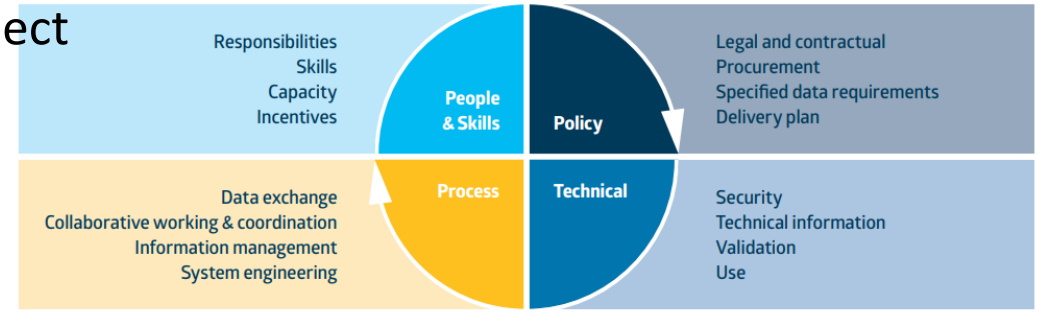
Strategy

www.eubim.eu/handbook

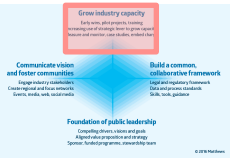
- 20+ nations
- 15+ languages

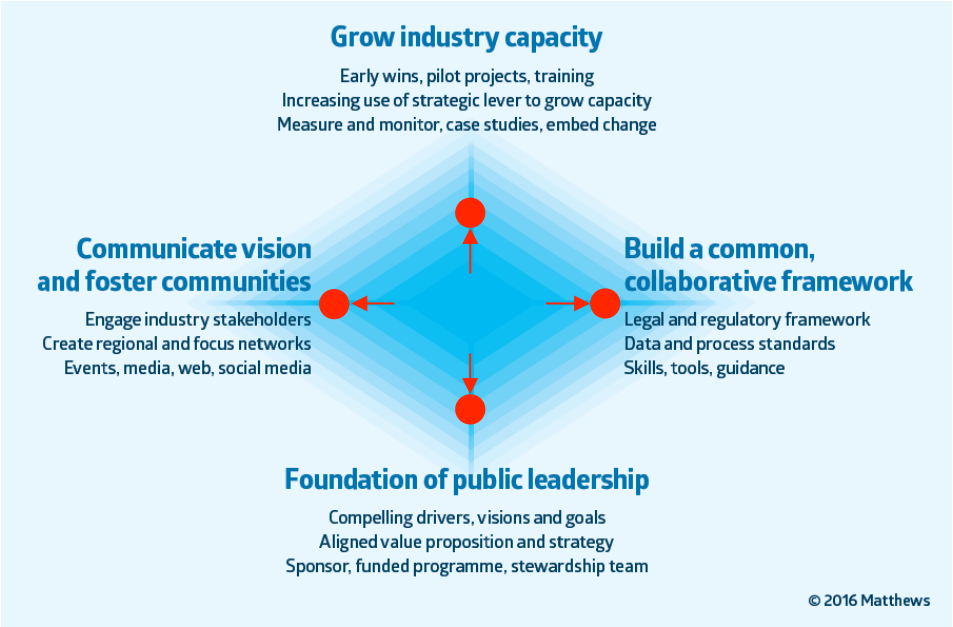


Project



Phase 2… 2018+




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
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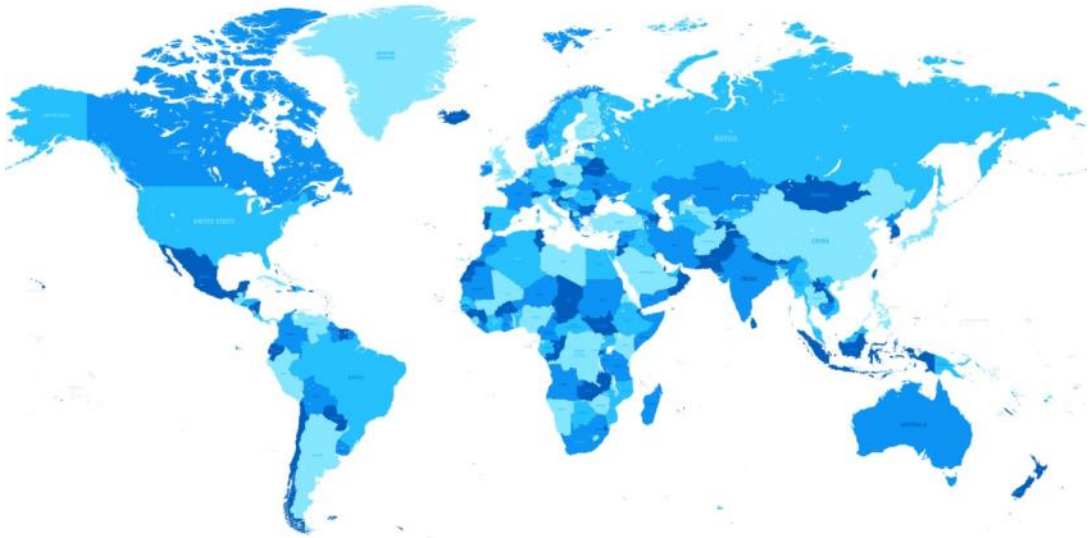
Leadership in Europe

- Public leadership growing
- Accelerating national adoption
- Growing demand for standards



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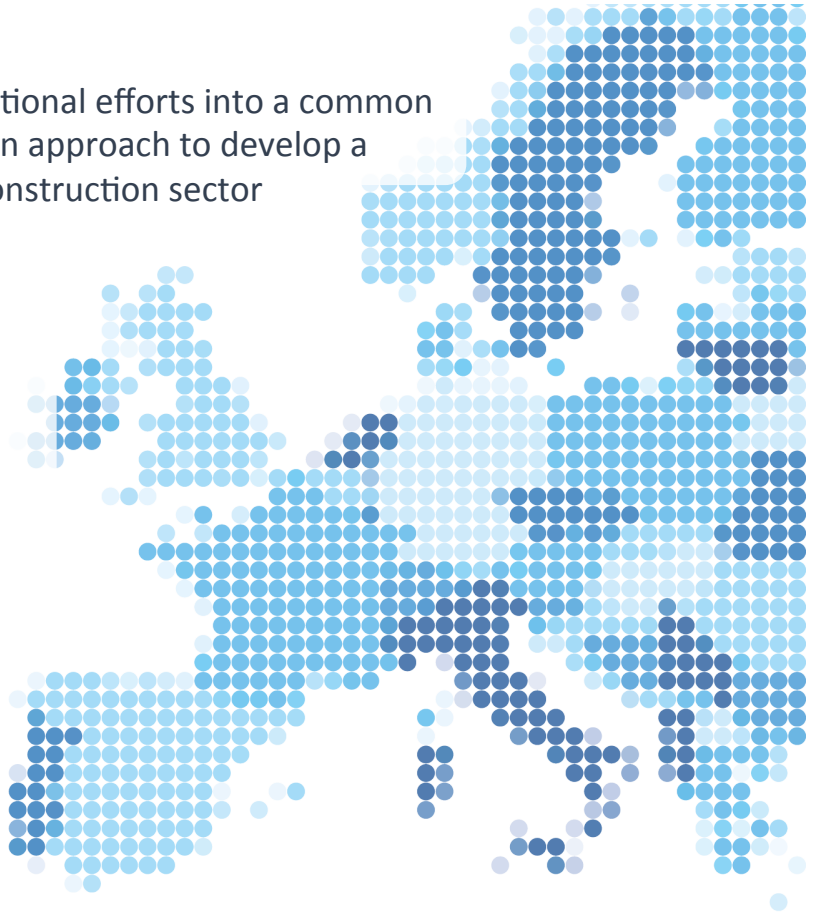
Bringing together national efforts into a common and aligned European approach to develop a world-class digital construction sector



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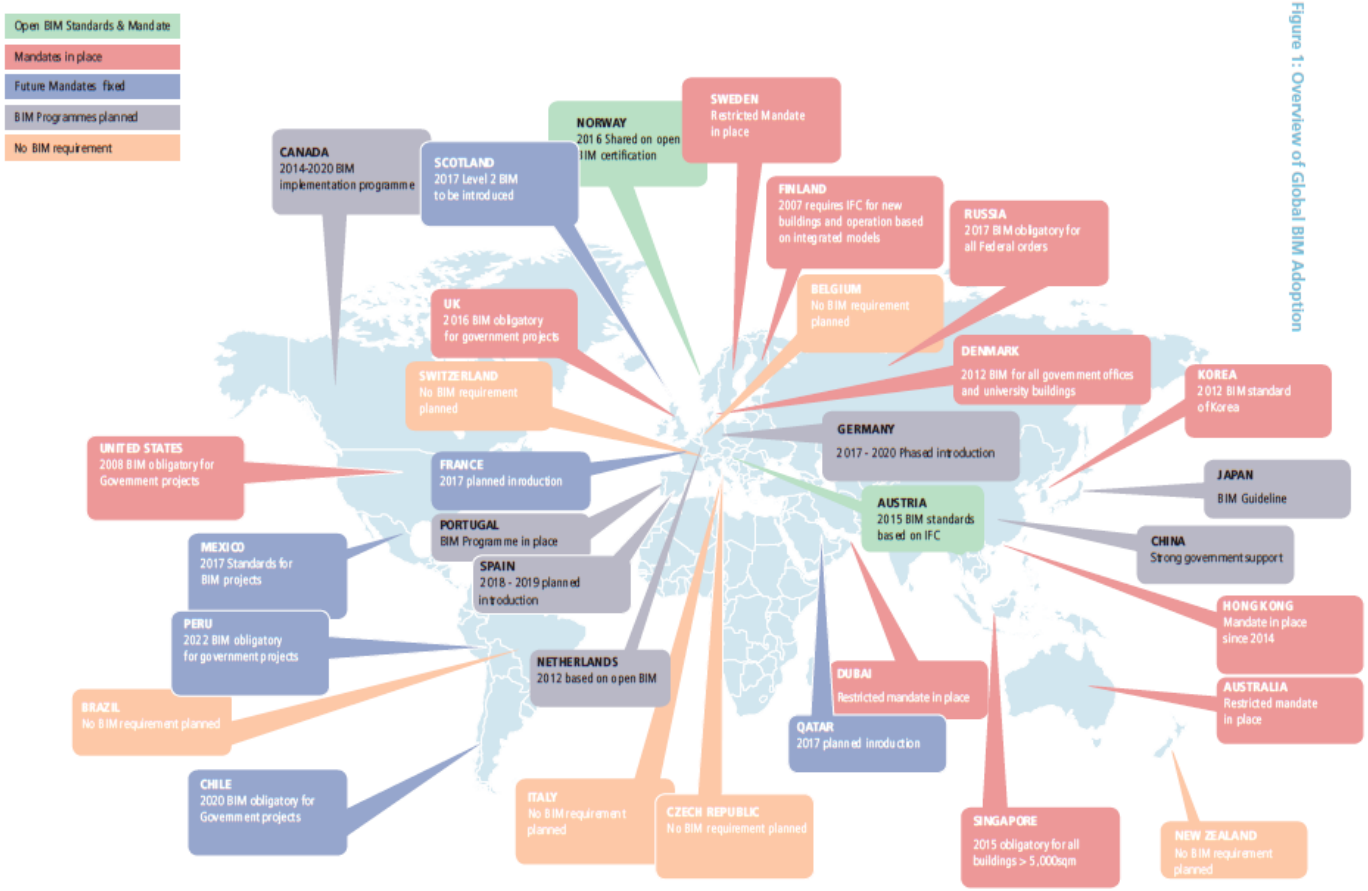

Figure 1: Overview of Global BIM Adoption

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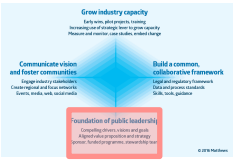
Public Policy User

National Or Local Public Client/ Procurer User

Operator User



European Commission

EU BIM Task Group

Steering Committee

Small group of 5-8 representatives of region

General Assembly

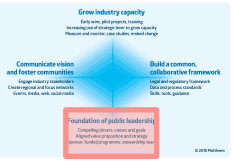
All countries review recommendations, contribute ideas

Sponsor

European Commission with support from home nations

Strategy

Public sector group to gather European expertise to evaluate and develop an aligned introduction and definition of BIM



Goal

By 2017: Build understanding and common framework for BIM in the public sector

Implementation Plan

1. Survey existing European practice
2. Grow the public sector community and knowledge sharing
3. Develop a handbook
4. Increase capacity of the public client