



European Public Leadership Driving Innovation In Construction and Operations

Name

Organisation

Date



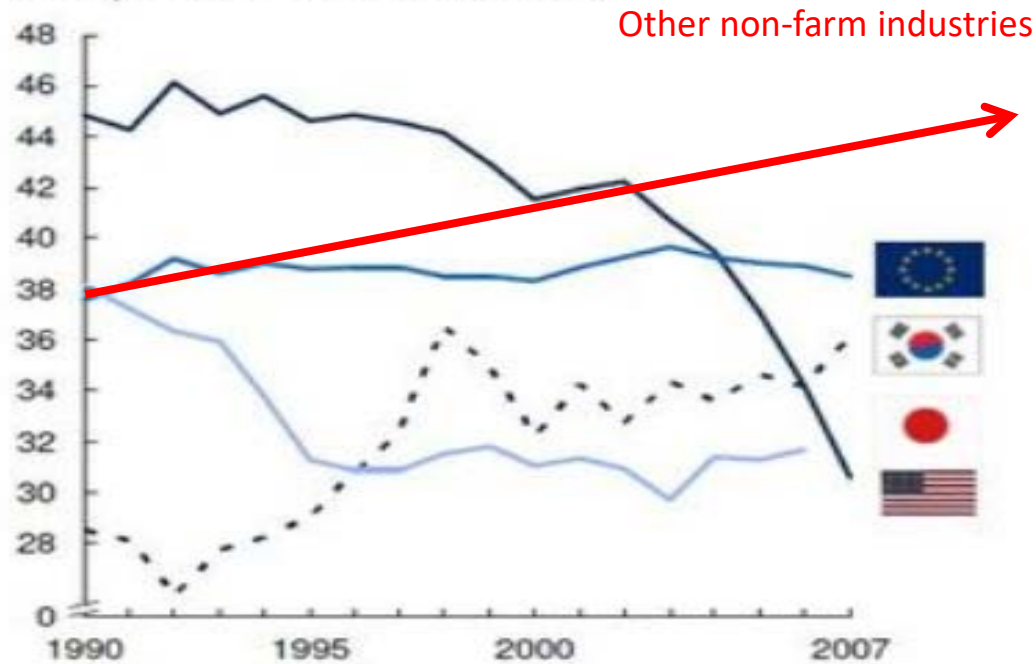
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Construction: declining productivity and low digitalisation

Productivity

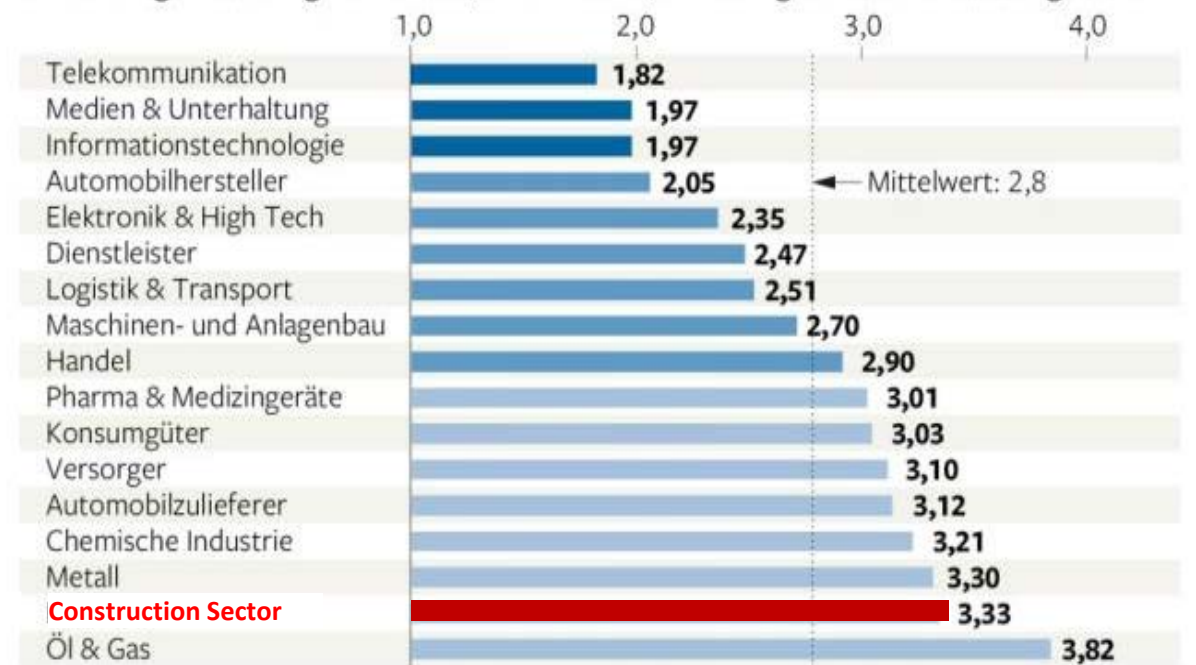
Construction productivity
GVA per hour worked in 2007 PPP \$



SOURCE: EUBIM; Associated General Contractors of America, 2011; U.S. Bureau of Labor Statistics

Digitalisation

Bewertungsskala 1 = größtenteils, 2 = teilweise, 3 = wenig, 4 = ansatzweise digitalisiert



QUELLE: TOP 500 STUDIE 2014/ **accenture**

European Construction Market – Key figures and drivers for change



Key figures:

- € 1.2 trillion (10^{12})
- 9% GDP
- 18 million jobs
- 3.1 million organizations
(95% SMEs)

Drivers for Change:

- Urbanisation and housing crisis
- Non-skilled workforce
- Resource scarcity
- Climate change
- Globalized markets
- Ageing infrastructures
- Improving existing stock

EU: Public Procurement Directive

DIRECTIVE 2014/24/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL
of 26 February 2014
on public procurement and repealing Directive 2004/18/EC
(Text with EEA relevance)
(OJ L 94, 28.3.2014, p. 65)

Article 22

Rules applicable to communication

- (1) Member States shall ensure that all communication and **information exchange** under this Directive, in particular **electronic submission**, are performed **using electronic means of communication** [...].

The EU BIM Task Group

Deliverables and Planning

- 2-year program co-funded by the EU Commission, started Feb 2016
- Create a Common Framework for BIM in public works
- Handbook, Video, Website and Materials
- Launch and Closeout Conference

Target Groups

- EU Public estate owners
- EU Public procurers
- EU Policy makers

Audience:

- Demand, Enablers, Supply



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

*European
Parliament
*European
Commission



Italy
Luxembourg
Lithuania
Netherlands
Norway
Poland
Portugal
Slovakia
Slovenia
Sweden
UK



The public sector: driver for innovation



As large public procurers we are;

- Non-competitive
- Transparent
- Non-discriminating
- *Driven by necessity of change*

Investing Public Money;

- Leading the market through procurement
- Creating fertile environment

Risks of not collaborating

- Adding cost burden
- Slowing economic growth
- Confusing the market
- Closing markets
- Losing competitiveness





Handbook for the introduction of Building Information Modelling by the European Public Sector

Strategic action for construction sector performance:
driving value, innovation and growth



Co-funded by
the European Union



Establish a Common Framework / Handbook



The ‘why’ – key incentives for acting now :

- Drivers for Change
- The value proposition of digitalization and BIM
- The value proposition for EU Alignment on BIM

The ‘what’ – key principles required by public clients

- Establish a common conceptual approach to BIM
- Clarify the framework of standards on international level
- Practical recommendations from shared case studies

The ‘how’ –

Guidance for introducing BIM at


- National/strategic level
 - Understand status quo, consensus and current activities
 - Develop, align and communicate framework for public sector BIM programs
- Operational level
 - Increase consistency in procuring and delivering projects across the sector
 - Development of a common EU performance level: focus on procurement / technical / skills / processes

BIM Common Strategic Framework Methodology

Value & Impact

High	Recommended	Highly recommended
Medium	Encouraged	Recommended
	Medium	High

Consensus from survey and standards



European Committee for Standardization

CEN COMMUNITY

TECHNICAL BODIES

STANDARDS EVOLUTION AND FORECAST

SEARCH STANDARDS

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[Technical Bodies](#) > **CEN/TC 442**

CEN/TC 442 - Building Information Modelling (BIM)

General

Structure

Work programme

Published Standards

EN




FR

DE

CEN/TC 442 Subcommittees and Working Groups

Working group	Title
CEN/TC 442/WG 1	Strategy and Planning
CEN/TC 442/WG 2	Exchange information
CEN/TC 442/WG 3	Information Delivery Specification
CEN/TC 442/WG 4	Support Data Dictionaries
CEN/TC 442/WG 5	Chairperson's Advisory Group

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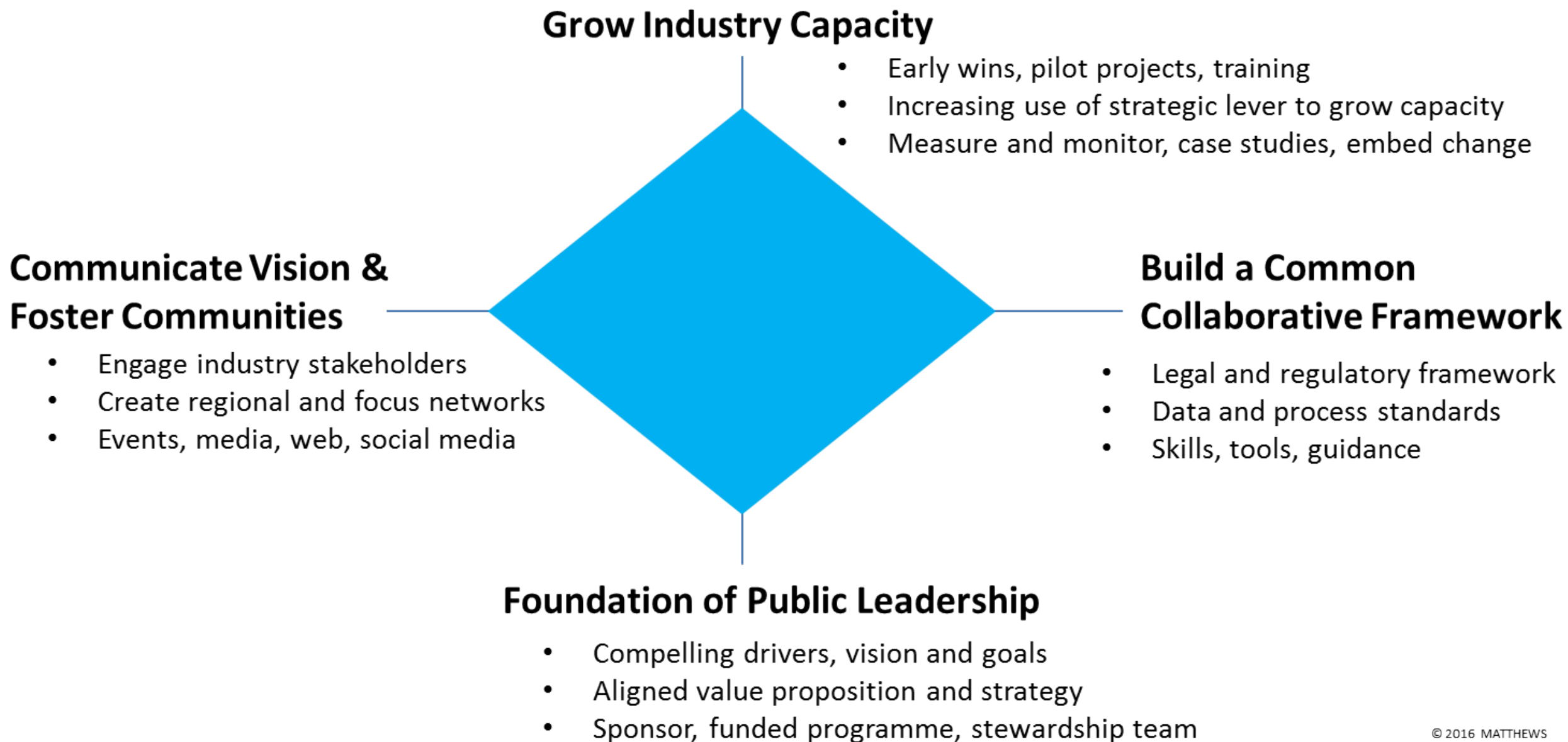
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Establish a Common Framework / Handbook



The Strategic Level

Strategic Framework for Public Sector BIM Programs



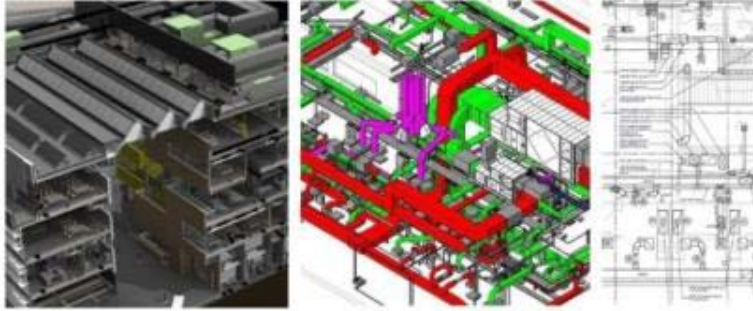
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The Operational Level

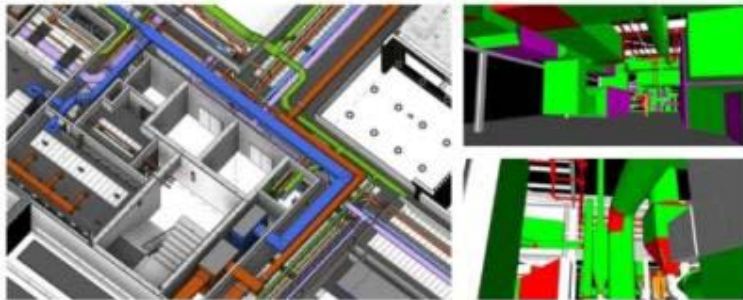
What is a BIM Project?

A BIM project | Design & documentation



- 3D object modelling software
- Agreed methodology and standards
- Embedded information generates tags and datasheets
- Creation of 2D and 3D output

A BIM project | Coordination



- Use of shared setting-out and coordinate data
- Direct referencing of other disciplines 3D information
- Coordination of discipline zones
- Virtual design reviews and clash detection workshops



A BIM project | Clash avoidance



- Coarse – Clashing between different building zones or spaces
- Medium – Clashing between building components
- Fine – Soft clashing for builderswork and maintenance access

A BIM project | Operation



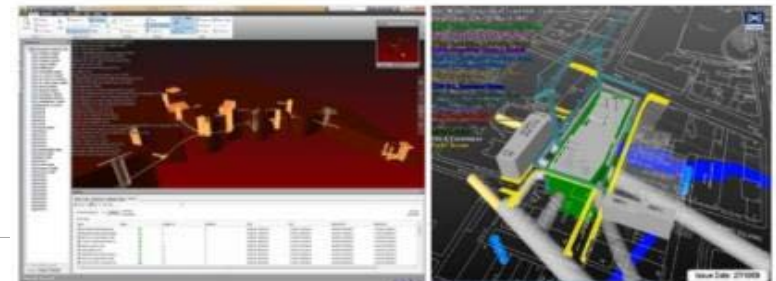
- Facilities and operations management model
- Equipment lists, specifications and maintenance information
- Monitoring and feedback systems
- Portable hardware

A BIM project | Build



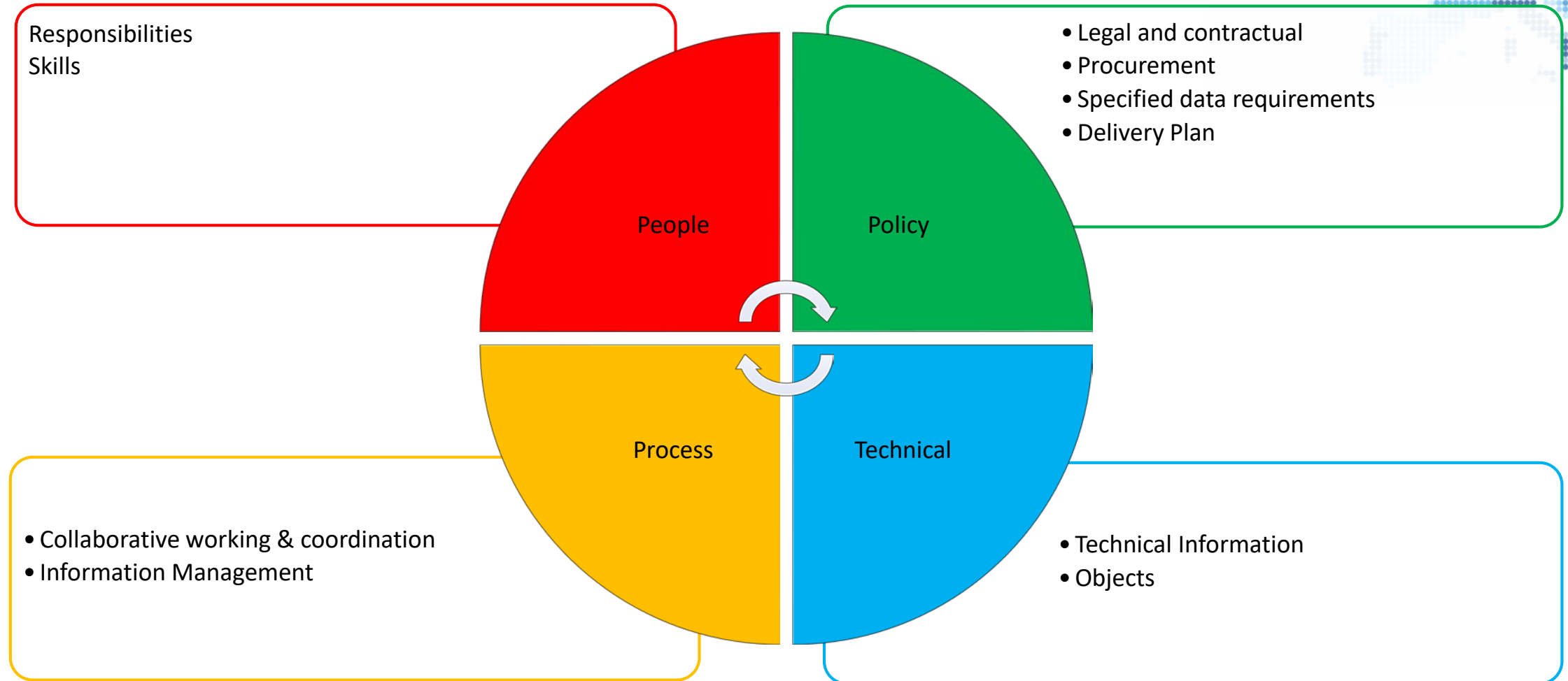
- Virtual construction and coordination
- Data driven setting out and monitoring
- Improved understanding of models over drawings

A BIM project | 4D Modelling



- Linking the construction programme to the project model
- Overall site phasing
- Detailed construction sequencing

Applying the BIM Method in a consistent way across Europe on projects





EUBIM
T A S K G R O U P

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

EU BIM Task Group

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www.eubim.eu/handbook/



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