FIEC

EUROPEAN CONSTRUCTION
INDUSTRY FEDERATION

MAKING BIM A GLOBAL SUCCESS

OBJECTIVES

- **To establish the (digital) construction industry as a main player in developing key concepts and policies such as smart cities, efficient infrastructure and smart homes (and as a key player in their delivery), using an integrated information platform that gives a holistic view of the construction project in question**
- **To improve the sector's productivity, competitiveness, customer satisfaction and image, by advocating both:**
  - **Top down digital transformation, facilitated by the EU and national governments through policy and investment/EU funding**
  - **Bottom up digital transformation driven by the construction industry itself (as opposed to other interested players such as the IT industry).**

POLICY AREA	CHALLENGES	WHAT THE INDUSTRY CALLS FOR
1. Competitiveness/ Industry 4.0	• Improve collaboration, efficiency and growth in the entire construction value chain, including clients, material and equipment producers, etc. • Commonly accepted principles and guidelines for collaboration. • Error rates, clashes and delays. • Costs. • Promote innovation. • Construction 2020. • Contracts and public procurement. • Intellectual property rights (IPR). • Modernisation. • Integrated smart construction.	• Recognise the construction sector as an important pillar of "Industry 4.0" and support BIM as a central part of it. • Promote/ facilitate such collaboration throughout the value chain. • Commonly accepted principles and guidelines for collaboration. • Standards for data transfer to enable open BIM. • Enable public procurement authorities to manage BIM (train personnel and implement BIM skills). • Develop standard contracts with fair distribution of risks and opportunities as an incentive to use BIM. • Ensure that legislative requirements for contracts and public procurement are realistic and feasible also for SMEs ("BIM competence").
2. Digital Agenda (Information Society)	• Data protection. • Innovation. • Intellectual Property Rights (IPR). • Responsibility for data protection and accuracy as for hard copies of documents.	• Data protection is necessary and has to be conflict-free with open and transparent collaboration. • Ensure that BIM always remains open to innovation. • Protection of contractors' competitive advantages, in particular where they cannot be protected by IPR rules. • Easy and full access to high-speed broadband and cloud in the entire EU/ EFTA.
3. Workers	• Education and training. • Skills Agenda. • Up-to-date curricula. • Job creation. • Young people. • Diversity and inclusion. • Health and Safety.	• Ensure regular updating of curricula in view of skills needs identified for the future. • Financial means to enable schools to teach IT skills (IT equipment and teachers) and to enable vocational training; and universities to offer BIM training. • Prepare active workers for changing skills needs. • Include Health and Safety aspects into BIM.
4. Consumers/ clients	• Product safety and efficiency (CPR/ Ecodesign/ Ecolabel. Chemicals, dangerous substances.) • Early involvement in preparations, decisions and design. • Better construction quality, less problems, more customer satisfaction, better image.	• All technical information has to be available in compatible digital format, for use by BIM. • This is necessary for both existing and future elements. • Involvement in preparations, decisions and design as early as legally possible. • Complete virtual clash-free construction - then start physical construction.
5. SMEs	• Access to BIM and inclusion in BIM-based construction. • Capacity/ resources in SMEs. • Full compatibility of all software solutions. Avoid specific, inflexible, closed systems. • Establish size and nature of projects for which the use of BIM is realistic.	• Ensure seamless data exchange throughout the entire value chain, including all suppliers and service providers. • Proof of BIM competence has to be feasible. • Enable/ facilitate co-financing (funds) for hardware, software, qualification, consulting in SMEs. • Separate calls for bids: 1) for planning 2) for construction.

> *"FIEC can share best practice and link contractors with other sector players, to help reduce fragmentation in the construction industry"*
>
> Kjetil Tonning,
> FIEC Vice President/TEC President

> *"BIM is everywhere and supports all the big policies"*
>
> Jean-Louis Marchand,
> FIEC President

POLICY AREA	WHAT BIM WILL IMPROVE	WHAT THE INDUSTRY CALLS FOR
6. Climate change mitigation/ adaptation	• Scenario modelling (impact of flooding, overheating etc.). • Climate-proof buildings and infrastructure. • Emissions. • More transparency of complex systems.	• Ensure compatibility of two-way data exchange. • Ensure updating of data according to practical experience.
7. Energy efficiency	• Energy Union/ Clean Energy Package. • Energy Performance in Buildings Directive (digitalisation/ smart systems/ buildings).	• Ensure compatibility. • Ensure holistic approach. • Favour realistic and affordable solutions.
8. Circular Economy	• Recycling and re-use. • Design for Deconstruction. • Resource efficiency. • Decrease in waste.	• BIM to capture data on the whole life-cycle of buildings and infrastructure. • Ensure that the necessary data are part of the information provided.
9. Critical Infrastructure Protection	• Protection of infrastructure and surroundings against disaster. • Reaction to disaster (rescue, securing buildings following disaster). • Climate-/ nature-related disasters. • Terrorism.	• Ensure that the necessary data are part of the information provided. • Ensure that critical information is protected against illegal access.
10. Urban Agenda	• Smart, interconnected cities. • Strategy on urban environment.	• Realistic estimations about the market volume to be expected would help to adapt curricula and number of skilled workers to the needs of reality.
11. Research and Development	• Better design and testing. • Deeper insight into available solutions. • Virtual evaluation of test scenarios. • Relevant programmes required. • Funding.	• Results of EU funded R&D that are compatible, not in competition with each other and subsequently widely disseminated to encourage application in the market. • Funding of relevant programmes under Horizon 2020, open to partners from the construction industry, including SMEs.

EUROPEAN CONSTRUCTION
INDUSTRY FEDERATION

FIEC is the European Construction Industry Federation, representing via its 29 National Member Federations in 26 countries construction enterprises of all sizes, i.e. small and medium-sized enterprises as well as "global players". FIEC is the recognised "Sectoral Social Partner" (employers) in the construction industry social dialogue.

WHAT IS BIM?

Some fundamentals to be kept in mind (not ranked by priority):

1. BIM stands for Building Information Modelling and/or "Management"/ "Model".
2. BIM is pragmatic database-centred working, the scope of which has been considerably extended by today's ICT means to use and share hitherto unimaginable quantities of data and the crucial information about the interdependency of construction products.
3. BIM is part of the overall digitalisation of the construction sector and "Industry 4.0".
4. BIM is a process driven working and management method based on genuine collaboration and sharing data throughout the entire construction value chain, including clients and final users.
5. BIM is not a revolution, but an evolution.
6. BIM is a developing system, which each enterprise can introduce in a transformation procedure, step by step, at the speed most appropriate for its activity, its size, its capacities, its competences and its working methods.
7. Making best use of BIM requires seamless access to the latest information and databases with product documentation, as well as full compatibility between the software packages, avoiding closed proprietary systems.
8. BIM enables better quality, as well as reduction of errors, disputes, risks, cost and time for most kinds of construction projects, whether building or civil engineering, whether new construction or renovation, provided contracts are not systematically awarded to the lowest tender.
9. BIM will become a standard requirement, at least in big public procurement projects covered by the EU procurement directives.
10. BIM covers all phases of the life-cycle of a construction project, from the first ideas of a client to those following the completion of the works: … design, build, operate, facility management, renovation, change of use, demolition, recycling, efficient use of resources, … with all information always accessible.

BIM
SOCIAL INFRASTRUCTURE
COMPETITIVENESS
WATER NETWORKS
GROWTH
ENVIRONMENT
ENERGY NETWORKS
TRANSPORT INFRASTRUCTURE
EMPLOYMENT
ENERGY EFFICIENCY
IT-NETWORKS

CONSTRUCTION IS THE SOLUTION INDUSTRY

YOUTH EMPLOYMENT
RESOURCE EFFICIENCY
JOBS
SKILLS TRAINING/EDUCATION
CLIMATE CHANGE
RECYCLING
ENERGY PRODUCTION
STANDARDISATION
INFRASTRUCTURE
INNOVATION

FIEC - European Construction Industry Federation
Avenue Louise 225, BE-1050 Brussels
Tel. +32-2-514 55 35 / Fax +32-2-511 02 76
e-mail: info@fiec.eu @FIEC_Brussels
www.fiec.eu

Transparency Register: 2221016212-42

Design: www.inextremis.be - Printed on FSC certified paper