

BIM & CONSTRUCTION 2050: Building tomorrow's Europe today

Kjetil Tonning, FIEC President



FIEC

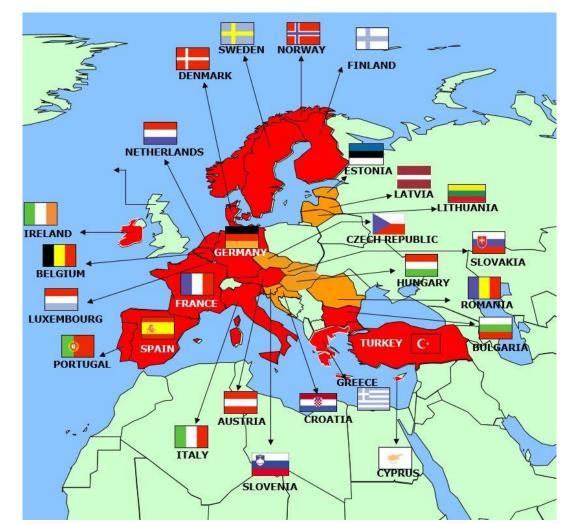


entreprises of all sizes active in all fields of building and civil engineering

1905 1st meeting

27 Countries

31 Federations



Member Federations

Latvia Denmark **Czech Republic** Netherlands Estonia Germany Romania France Slovenia Spain Croatia Luxembourg Lithuania **Bulgaria** Austria Finland Italy Norway **Cyprus** Sweden Greece Ireland Hungary **Belgium** Slovakia Portugal Turkey

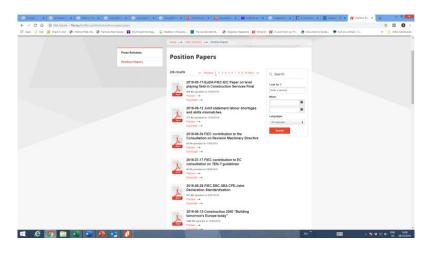


Policy Member



Importance of Representation









European Commission



New EU Political Term



Copyright European Commission





Copyright European Parliament



Copyright Irish Times



FIEC Manifesto 2019-2024

INVESTING IN A COMPETITIVE EUROPE

- Investment to needed for the well-leting of obtains and the statistic development of the European economy, transport, aneigy, education, housing, etc.
- The cast of non-investment is much higher than the cast of investment. A during se accounting provide in the short terms and compatitiveness in the long term.

IT UR MESSAGES AND REODIESTS TO THE EVENISTITUTIONS

- Presence public and private funding triaditional and innovative instruments, incl. IPPE as well, as user/publice pays' actemes – to facilitate projects with European added value.
- While safeguarding sound public finances, allow greater flashibitive the Stability and Grewith Part when Member States implement (Up offices and investi in intrastructure and Instituting masses).
- Brown that we were a care in warden a must be been information of in the melevant Est registration. Noticing programmers and the Cosarity Specific Recommendations.
- For better effectiveness of the United mount is a start the giving financial, facel and regulatory environment accordingly, ing, basenes toors, motgarges, induced WAT, problemar rules for basis and insure s.
- ReservitionEuropeertPartiament Intergroup on Long-term investment and Reindustrialisation".

2 ENSURE A LEVEL PLAYING FIELD

100177

 In public procurament, "heyerg cheap" by awarding to Absormally Low Tenders UK, Trican utilimatoly be expensive.

OUR NESSAGES AND REQUESTS TO THE EVINETITUTIONS

- Improve the 2014 Public Procurement Directives, and hall all BU and have BU contractors - bath private and state-even and companies - Rispect the same rules. In particular, Right against the award of contractors to ALTs with mand atory thresholds for identification and verification, with the ultimate and of administrating such offers.
- Second recipitation your period want of a second recipitation of the second recipitation

3 CONSTRUCTION 4.0: ACCELERATE THE DIGITAL TRANSFORMATION OF THE CONSTRUCTION INDUSTRY

WORT?

- Digital construction with help to achieve many of the BU's manipole gause digital economy every efficiency, circular economy, climate change mitigation and adaptation, result and safety etc.
- Objects can structure to an enablem for more efficient processes and objects can structure and disky, as well as for a substantiable ballic only operation. In order to accurate and the maintain, new mathed one of to be adopted. Data estimatements to deplatial on anothese challowing as an error gray, or when plotth appoint as to estand risks, for texts correction of their chosts.
- The development of Smart Crise, which are recommary/or the orgoin ginur uses in City dwelling, depends on a lowit and complete uptake of digital combination along the value chain.

OUR HESS AGES AND REQUESTS TO THE EX INSTITUTIONS

- Make "construction" a priority sector for relevant (L) programmes, e.g. the Clipbing Exception industry initiative, so that digits construction can be acceler whethat its potential contribution to when EU policy goals achieved.
- Develop data problem that it must empty access to data fourby set to 50 data protection regulation stand interruperable systems.
- Continue programmers almed at stimulating the ormition of Smart Cates and ensure that there is optimized by went Ellipsiticy and legislation on Smart Cities and all insteamt BJ policy and legislation that has an impact on digital construction.

4 CONSTRUCTION PRODUCTS REGULATION (CPR): ENSURE THAT IT WORKS IN PRACTICE

WHY?

- CPRIdue end, achieve legal certainty/for contractors, because them are regulatory gigts encreasing contractors. 1 adults/risks.
- Werie trave 100 harmonised European standards wilder Uni CPH Association Model discritization in the Official Journal unities Europy an Union to the European Commission. This is conting require acciliance for usaris.

DURI MESSING IS AND REODESTS TO THE EU INSTITUTIONS

- The Commission, together with the Member States, in the Standing Committee on Construction must ensure that negotiate types are commissional for, these many by national rules.
- The Correctioner meets to find rapid solutions to eliminate the Backlog of unside standards so that they can be refer dupon, ensuring to get an manty.

5 COMMITTING TO THE SOCIAL DIMENSION OF THE CONSTRUCTION INDUSTRY

WHY?

- Construction comparises in several Mandoe Dates cannot find enough workers with the required skills for now and the future in splin of the high level of time employment in the Eu, particularly among it young people.
- Program implementation and enhancement of the associate people does a critical, to emore a level playing field amongst comparises on if the application of the mission entranciation and waveleng canditions, for those wardown.
- The "serie accidents" harget in the held of Occupational Solety and Health must remain the main objection for a well-handburing labour market.
- Jointo officially recognised EU and a partner for the construction industry, management ampliques. FES bit yown in a construction EU sectoral Social Dialogue with the EFEWW, representing the workers, respecting national labour market conditions and the actionary of the industrial accessibilities.

IN IT IN ISSAELS AND REQUESTS TO THE ED INSTITUTIONS

- Premate and support cooperation with and lettween concerned stakeholders, in index to update an isong training activation or any distribution bases to take account of lectins of developments and invovation, including digital setion.
- Promote and segrent tools and instantives the strong the ring the emutual recognition of guide cations, whick i over ingularide due, in order to tack to an elemental two evens, students and workers within the internal Market.
- Forter investment in initial and Unlong training, an well as a generationship schemes, whenget other things by means of the EU Sementer.
- Contrast the fight apprend to adduce a adduce instanting the connect application and enforcement of EU-legislation regarding areas -locker provision of services and by facilitating administrative coore retroit hetere en administrative.
- Support initiatives aimed at asymptotic contraction collains of preventions arrivingst construction compares and evolvers and at each optiming Occupant optimized Scheduler, being into account optimized in sectoral concumulations.
- Facilitate and support Social Partners' initializes.
- The EUmuting onceasity respect the principle of sectors is an intervent presences of the Member States in labour related reserves in particular registricity collective targement;

6 BUILD A SUSTAINABLE EUROPE

 Opmeter than growers a sign if can't this to buildings and efford watch an environment with several probability that the An operation compression as to the section with the table balances and this activative meet to be climate a roofed.

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- The switchts a Gersian fourierry exectistical accolution, because many diversities, many of which are offer used to construct any even and any diversities. The searce terms, takes and/yer an-exclude art allocation manned the tacks of which is recycling facilities class in using the tacks of which is recycling facilities class in using the tacks of which is recycling facilities class in using the tacks of which is recycling facilities class in the partitive data tables in each of action or opeler.
- Energy efficiency measures have dominate directors by plant wower kpring arrives, this the emplana money have taken such a priority, that other building improvements - served measuremental have been eglected. Recent such agencies have measured in departments of the remeasure the take of the store do benefits of the remeasure in.

DURINESSAGES AND REGIES TS TO THE EVINETITOTIC NET

- Contract that is exactly into it made charge also control this disvolution of interview webwice and a state method as a media to (Innote - provide fullidings) and with extractors in Retrieven 3D proop entrops should also control we to have 4D in register and when of make and messades when the divide application.
- When introducing manakao yita gatain wanta tegisi atan and other relevant. Crock of Borrowy adicins, their into account glowen in a de-affe televe on aminoteni genorabid, when the amporting demol tom weeks to available recycling Parcities later located for formities and and the actual benefit of morphing. Take into a count-factority adults with a firm opting. Take into a count-factority that were permitted at the time of counties with that were permitted at and meet to be trace and of maning.
- Instead of focusing unity on energy efficiency, which to believe new value, that ensures that other problems are solved during degiremoviden, resulting in Virucharally wound, healthy, account on energy efficient buildings.

SINGLE POINT OF COORDINATION

 Construction related issues and being addressed in many different DDs of the BU Commission, which from makes coordination very difficult.

OUR MESSAGES AND REQUESTS TO THE EV INSTITUTIONS

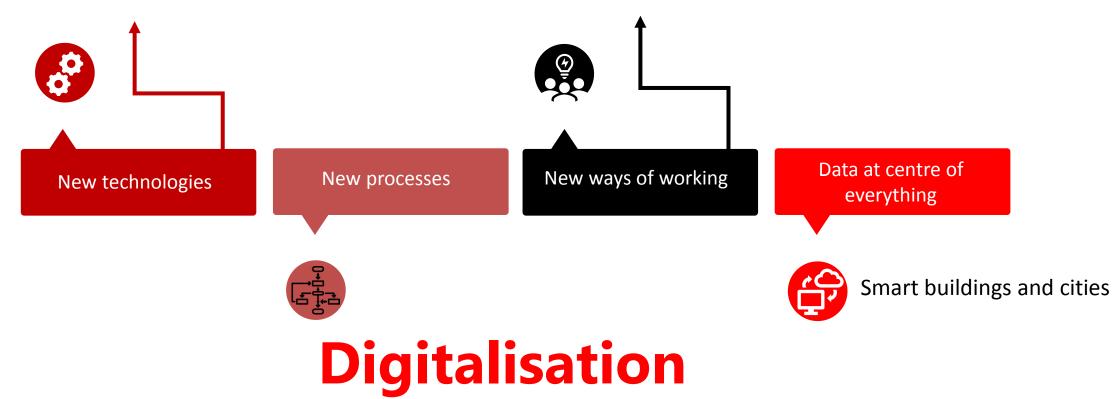
 Mandate a Vice-President of the European Commission with this task of ensuring efficient and co-ordinate doublate in the of all. Dos concerned across the entire Commission.

Construction 4.0



- Building Information Modelling (BIM)
- Virtual and augmented reality
- Digital Twins
- Robots and drones

- Collaboration
- Value chain becoming ecosystem





BIM – Trends

FIEC Question- naire		Denmark ENBRI / SBi – Nils Lykke Sørensen - <u>nls@sbi.aau.dk</u>	Switzerland FIEC / SBV – 08.05.2018 - Zafer Bakir	Sweden Swedish experts - BIM Alliance ENBRI / RISE kristina.miomell@ri.se	Germany FIEC / ZDB – Regine <u>Maruska.</u> <u>Maruska@zdb.de</u>	Belgium ENBRI / BBRI <u>bi@bbri.be</u> - <u>ivy@bbri.be</u> niki.cauberg@bbri.be	Poland ENBRI / ITB <u>m.zakrzewska@itb.pl</u>
1.	Meter BUL All States Country? Country? URL	Value Voorseerste die Voorseerste die Voorseerste die Voorseerste voorse voorseerste die Voorseerste die Voorseerste voorse voorseerste die Voorseerste die Voorseerste voorse voorseerste die Voorseerste die Voorseerste voorse voorseerste die Voorseerste die Voorseerste voorse voorseerste voorse voorseerste vooorseerste voorseerste voorseerste voorseerste voorseerste voors	 On Swiss national level there are no public platforms, means supported by the government. Private IT Companies to offer so called "open BIM Data Platforms". But even this ones are only accessible for the connected users. E.g. http://allplan- bimplus.ch/ Further there is a private Company called: https://ch.buildup.group/ which could be called an open BIM Data Platform for product description 	http://nrb.sbplatform.se/#/start based on http://www.sbplatform.se/ and based on https://gitlab.com/swe-nrb	Open systems (ser up by outilic authorities) planen bauen 4.0 (company founded by opticelerations and sportarions) develops a glatoxon. http://planen-bauen40.de/projekte/#exam see.projects digitati/NNN and SVARM Open system, international consortium) https://blimobled.com/de Den system, international consortium) https://blimobled.com/de Propristary variants. Propristary variants. Propristary variants. Propristary variants. Propristary variants. Image: Company variants.	Not much, (yet). Just (auno)ted: www.neanex.com source.com biblicarpa.sex.Autodex Birl/360, biblicarpa.sex.Autodex Birl/360, biblicarpa.tmithe Connect Biblicarpa.tmithe Connect Biblicarpa.the Birl/Joshinary Biblicarpa. and uber.offs.sex.dis.sex.bits.ex.mo source.composite advance Biblicarpa.the Biblicarpa.the Biblicarpa. biblicarpa.the Biblicarpa.the Biblicarpa.the source tables advance Biblicarpa.the advance Biblicarpa.the advance Biblicarpa.the advance Biblicarpa.the advance Biblicarpa.com to advance Biblicarpa.com to advance Biblicarpa.com to advance Biblicarpa.com Biblic	http://www.bimklaster.org.pl/
	Starting date	Byggeweb, was one of the first providers of a BIM platform in Denmark – the company was established in year 2000	No information	April 1st 2018	Please ask Software providers	TC BIM & ICT was launched in 2018	02.04.2012
	Language & Services	Varies (dependent upon software provider) Danish, English, Icelandic, Deutsch, Norwegian	German	Swedish for now, but will be available in English	German	ENG (FR and NL for the working document of TC)	Polish and English
2.	Were platforms created by the industry; public sector; jointly?	Industry	Industry	jointly	Mainly by commercial software providers	Industry	BIMKLASTER is an initiative of several small and medium Polish enterprises from construction and ICT industry.
3.	What is the structure/mod el of governance and partnership of the platform?	-	No information	Open source and managed by a not-for profit association		-	BIMKLASTER is officially registered as an association
4.	What kind of business model in place? What i likely model?	Service free	No information	Crowd-based business model. No fees.		Membership, to be defined for most platforms	Memberbip fees
5.	Are software providers involved in platform?	Yes	 Currently only provided by software providers. 	Yes	Yes		Yes
6.	What links abes the platform have with other, international platforms7	Basecamp and project-wise are international platforms	No information			Not yet, to be included. BBRI is studying the possibilities to integrate links to local tools and technical data.	BIMKLASTER gathers (Ja, polish branches of International enterprises which provides e.g. BIM cloud libraries available internationally.
7.	What (If any) fechnical obcuments have been issued?	 Protocols Classification systems Database of BIM objects Specific services 	 Protocols Classification systems Database of BIM objects Specific services (building components https://ch.buildup.group/) 	 Protocols - yes Classification systems - no Database of BIM objects - no Specific services - terms, processes, methods, delivery specifications 	Please ask software providers	BERI Protocol was developed recently and is gradually being implemented. Available in English soon. Being and the state of the state of the state of the state of the state of the state of the state of the state of the Different research projects have been set up recently on the topic of time.	Scientific publication concerning BIM technology.
8.	What regulation (if any) is in effect, for the functioning of the platform?	https://www.retsinformation.dk/For ms/R0710.aspx?id=145421	No information	The platform is managed by a user board. Any user can make a contribution which is then managed with a standardized review and approval process.		-	Statute of Association Cluster of Information Technologies in Building Industry



Examples - Norway







BIM & CONSTRUCTION 2050: Building tomorrow's Europe today

Sue Arundale Director, Technical Commission



Digital Transformation: the institutions' response



Digitising European Industry Initiative





Massive cloud capacity and quantum computing needed



New programme will need to support digitalisation

The EU Policy Response



European Data Sovereignty Act?



Bring control and sovereignty over data back into EU



▋

Avoid IT companies locking in users with lucrative contracts



Limit use of personal data (such as whereabouts/energy consumption)



Deal with data generated and collected by sensors and machines



Protect privacy and legitimate commercial interests and sensitive (exploitable) information

Ensure access to essential data for legitimate purposes

Massively upgrade EU cloud capacity



CONSTRUCTION IS THE SOLUTION INDUSTRY

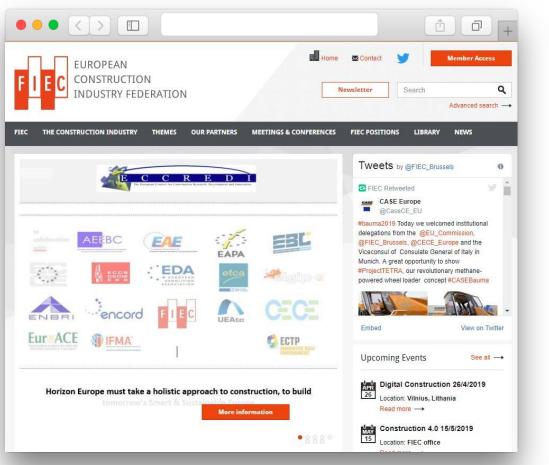
YOUTH EMPLOYMENT RESOURCE EFFICIENCY **SOURCE EFFICIENCY** ENERGY PRODUCTION STANDARDISATION BINFRASTRUCTURE INNOVATION INNOVATION



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