

30
YEARS
ANNIVERSARY



CONSTRUCTION PRODUCTS EUROPE
LET'S BUILD AN EFFICIENT EUROPE

Construction & digital innovation

BUILD UP digital construction skills workshop

Barcelona 16th May 2019

Construction Products Europe

Established in 1988;

Association re-launched in June 2013;

Work towards **consensus** on generic issues;

Membership made up of over 50 national and EU associations.

Purpose:

Lobby on CE marking & sustainable construction



European construction industry

Essential facts

Greatly impacted by financial crisis;

Sector employs 6.4% of EU workers;

Construction delivers 8.9% of European GDP;

95% of the companies are SMEs;

Long and very diverse value chain.



Europe & housing: market reality

WORLD NEWS SEPTEMBER 22, 2018 / 9:17 PM / 17 DAYS AGO

Protesters denounce gentrification in Lisbon as housing prices soar

Catarina Demony, Goncalo Almeida

2 MIN READ



LISBON (Reuters) - Anti-gentrification groups from across Europe joined hundreds of Portuguese activists on Saturday in a rally against soaring rent prices in Lisbon as the city experiences the biggest tourism boom in its history.

QUERO
VIVER ONDE
QUISER
DIREITO
À
HABITACAO

DIREITO
DE PREFERENCIA
=
A CASA
A QUEM
A HABITA





CONSTRUCTION PRODUCTS EUROPE
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Headlines

Why rising rents across Spain are causing a new crisis

AFP

news@thelocal.es
@thelocalspain

26 September 2018
10:06 CEST+02:00

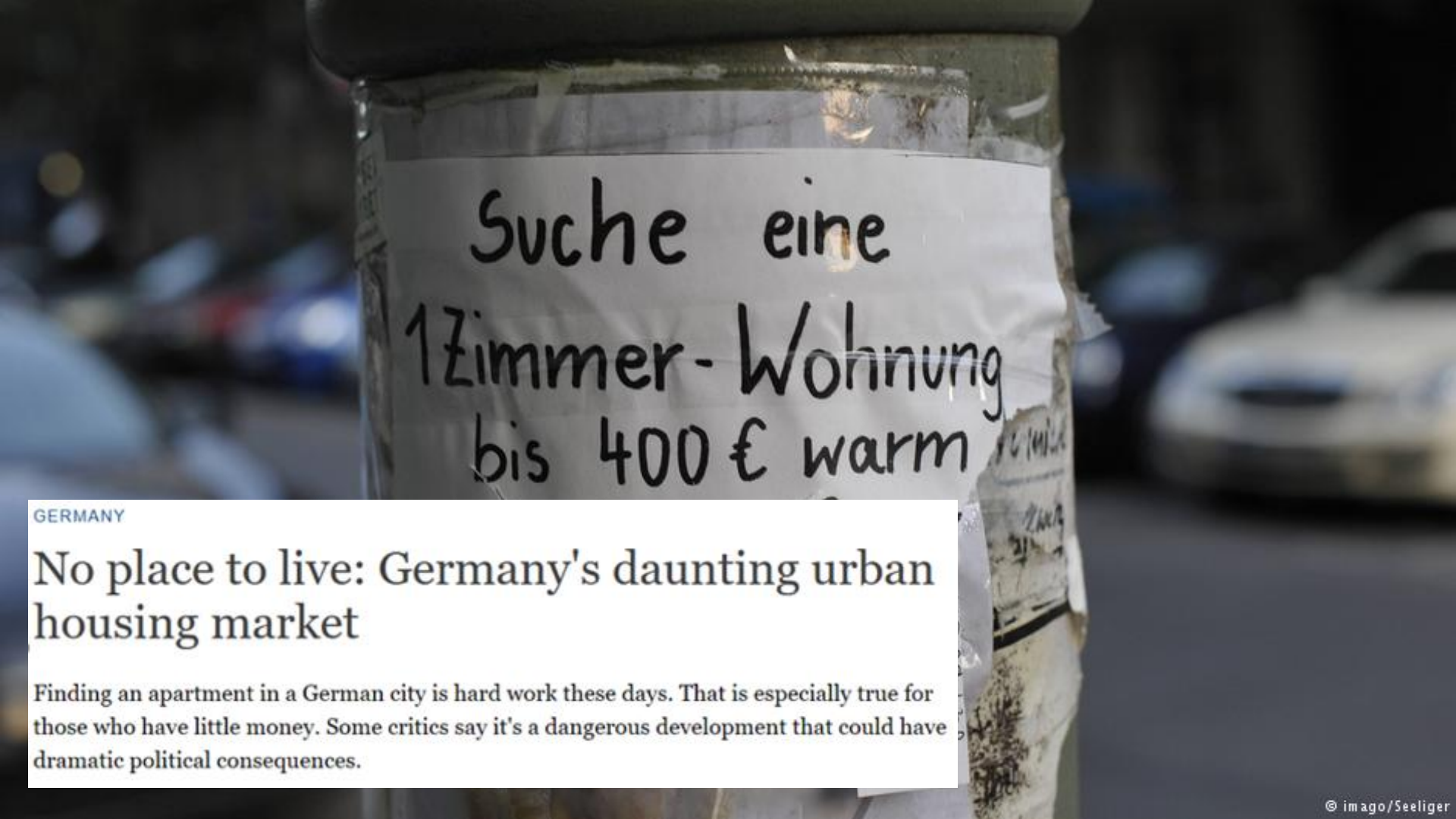
property

rent

Share this article



All photos by by Gabriel Buoyis/ AFP

A hand-drawn poster is taped to a utility pole. The poster is written in black marker on a piece of white paper. The text reads: 'Suche eine 1 Zimmer-Wohnung bis 400 € warm'. The background is a blurred city street at night with lights and a car.

Suche eine
1 Zimmer-Wohnung
bis 400 € warm

GERMANY

No place to live: Germany's daunting urban housing market

Finding an apartment in a German city is hard work these days. That is especially true for those who have little money. Some critics say it's a dangerous development that could have dramatic political consequences.

Will you ever be able to afford to buy a home? This is how long it will take you to get on the property ladder

Depending on where you live in the city, you could have a long wait before buying your first home

Getting on the property ladder is harder than ever

New data suggests that across Merseyside, the average couple would need to save for around seven years to be able to buy a two-bedroom house.

Irish Times view on housing: No time for political caution

Providing cheap State-owned land for developers will not remedy a broken system

Richard Curran: Real questions over plan to tackle housing crisis with land agency

POLITICS 18/09/2018 22:30 BST | **Updated** 19/09/2018 15:14 BST

Landowners Pocket £13bn Profit In One Year Just For Getting Planning Permission

'In the face of a disastrous housing crisis, it is clear that the broken housing market is simply not delivering.'

Housing Minister Eoghan Murphy at the launch of the Land Development Agency which he has described as 'incredibly significant'

More than one homeless person dies every day in the UK, study finds

'This is a wake-up call to see homelessness as a national emergency,' said Crisis CEO Jon Sparkes

More than one homeless person died every day in the UK over the last 12 months, according to a new study.

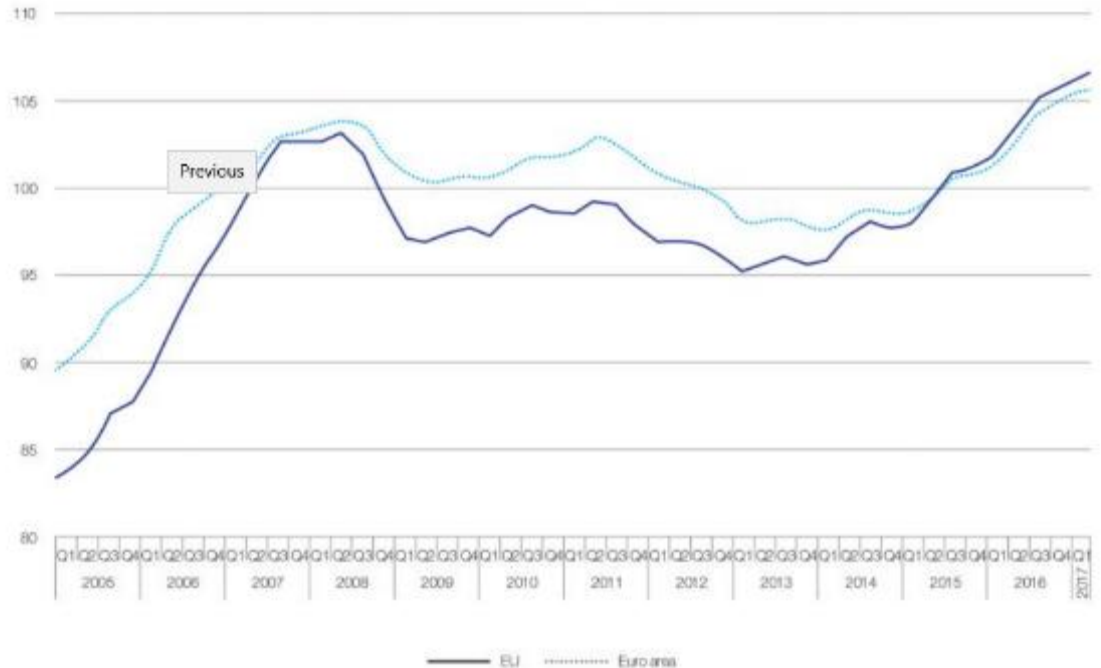
A physicist, a former soldier and a travelling musician were among the 449 **deaths** recorded since October 2017, including 14 in one week alone.

It's official, the housing market has cooled off, but it will take some time for it to become a buyers' market.

YAHOO!
FINANCE

It's official, the housing market has cooled off, but it will take some time for it to become a buyers' market.

HOUSE PRICE INDICES, 2005 - 2017
Euro area and EU aggregates. Index levels (2015=100)
Source: Eurostat





Welcome Slovenia
to the Euro!

2007

Slovenija,
dobrodošla v
euro območju!



European Commission

European Commission DG Environment



TEST LEVEL(S)

NEWSLETTER

Level(s), the new EU framework for assessing and reporting on the sustainability performance of buildings, is going through a test period and [registration](#) is now open for any building project to take part. Registration closes on 30 September.

Technical documentation (laying out the indicators and guidance on how to use them) were published on the [Level\(s\) webpage](#) in English last year, and they are now available in five additional languages. The page also features short notes to help interested organisations navigate the process, a [report presenting Level\(s\)](#) for beginners, which also describes the benefits of Level(s) according to different building professionals, other documents such as the recently developed [guidance](#) on how to choose indicators, and [frequently asked questions](#).

Support to testers

A technical helpdesk to support organisations testing Level(s) is now up and running. Testers will shortly have access to an [e-learning platform](#) where they can exchange information and experience, and build discussions linked to specific topics. A first [workshop for testers](#) will be held on 10 July. To access all of this, register your building project to test Level(s).

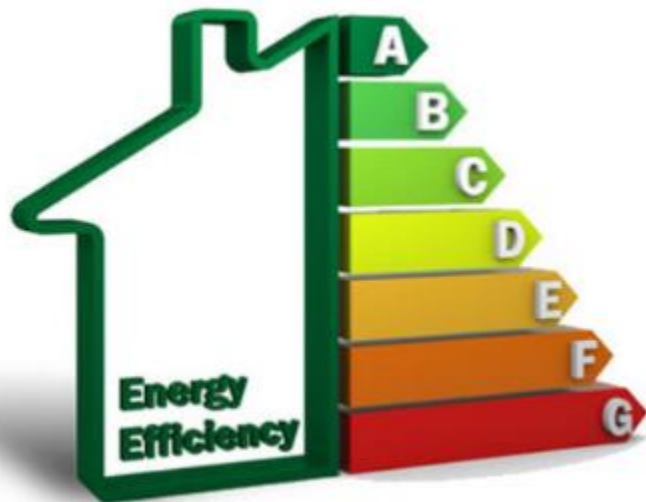
1 of 3

Environment

Level(s):

- voluntary framework to improve the sustainability of buildings;
- Test phase underway;
- Conference 18th December, Brussels.

European Commission DG Energy



Energy Performance of Buildings Directive (EPBD):

- Transposed into national legislation;
- Third attempt to promote energy efficiency in buildings.



The EU Strategy on adaptation to climate change

Strengthening Europe's resilience to the impacts of climate change

Is resilience the new sustainability?

The EU Adaptation Strategy has three objectives.

1. Promoting action by Member States:

The EU will encourage all Member States to submit national adaptation plans and funding to help them build up their adaptation capacities and take action. The Commission will also support requests to follow by facilitating voluntary commitments towards the Council of Ministers initiative.

2. Promoting better informed decision-making by addressing gaps in knowledge about adaptation and further developing the European Climate Adaptation Platform (Climate-ADAPT) as the one-stop shop for adaptation information in Europe.



Climate Action

European Commission DG Climate Action

EU Adaptation Strategy:

- Resilience to natural disasters;
- Flooding, temperature variation, earthquakes ...;
- Evaluation published in November 2018, it outlines how Europe is still vulnerable.

Smart cities:

- Promotion of digital & telecommunication technologies.

Artificial intelligence and robotics:

- EU AI development coordinated action plan published on 7th December 2018.





EU Construction & Demolition Waste Management Protocol

September 2016

European Commission DG Growth

Deconstruction:

- Construction Demolition Waste protocol;
- Buildings as material banks;
- Circular economy principles in construction.



What do we build?

Sustainable/green?

Near-zero energy?

Energy efficient?

Energy-positive?

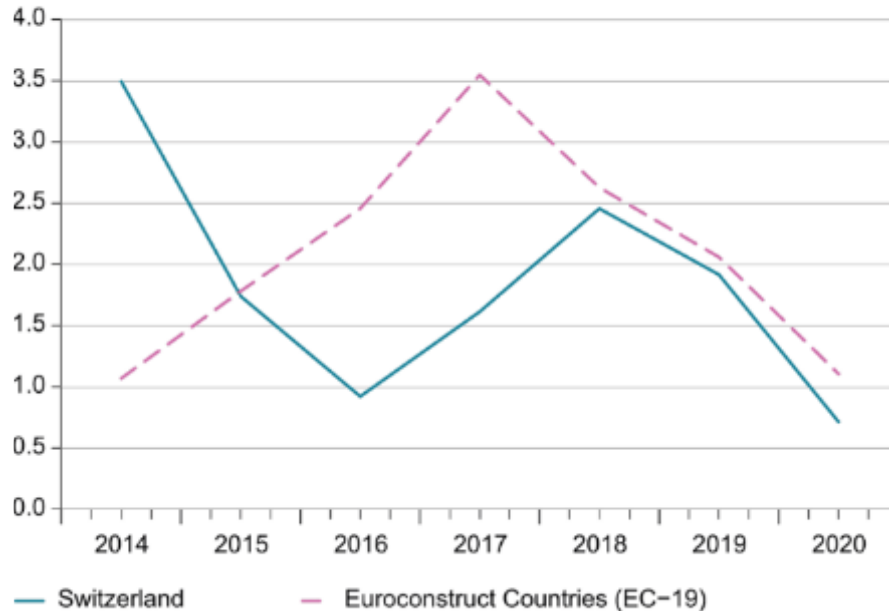
Resilient?

Smart?

Economics & investments

Construction Volume 2014 to 2020 in Europe and Switzerland

(year over year percentage change)



Source: EUROCONSTRUCT, November 2017

Cutting costs for
competitiveness;

New build = 1 to 3% of EU
market;

Infrastructure needs;

Investment policies?



Investments & technologies



CONSTRUCTION PRODUCTS EUROPE
LET'S BUILD AN EFFICIENT EUROPE

Once upon a time ...

\$725⁰⁰ and Our FREE-BUILDING PLANS
WILL BUILD, PAINT AND COMPLETE, READY FOR OCCUPANCY,
THIS INVITING \$1,100.00 SIX-ROOM COTTAGE.

We send you an page 3 book. We furnish, too, the price for the book. Or you can the early 8-page shown in this book.



MODERN HOME No. 115
With Wood Foundation. Not Enclosed.

On the opposite page we illustrate a few of the materials we specify on this, our \$725.00 house.



GOOD MATERIALS MAKE GOOD HOUSES

When planning our houses it is a question of how good, not how cheap. This statement is easily proven by referring to some of the materials we have presented describe on opposite page. In using our plans, you take no risk of getting poor materials, such as might occur if the work were done by some unscrupulous contractor. The full work specified is the best in each grade. You take no risk when building from our plans, as we positively guarantee every piece of material we furnish, and if each piece is not entirely satisfactory, it may be returned and your money will be refunded, together with all transportation charges.

Sears Modern Homes;
Kit houses for sale via ~~online~~
catalogue as of 1908;
These now valued over \$1M;
Innovation is nothing new.

In a galaxy (not) so far away ...



Bricklaying robot works five times faster than a human

In a galaxy (not) so far away ...



Japanese plasterboard robot

In a galaxy (not) so far away ...



Exoskeletons make the wearer stronger and safer

Digital construction investments

\$18 billion in cumulative investment over last 5yrs;

\$1 billion invested in start-ups 1st half 2018, 30% above 2017;

119 start-ups deals in 2018, up from 104 in 2017 & 97 in 2016;

More M&A activity foreseen as larger software firms acquire co. rather than reinventing the wheel.

More tech

Drone for data collection and more;

3D printing for rapid prototyping, shorter production runs;

Blockchain, first real estate deal in EU Oct. 2018;

Netherlands to build world's first habitable 3D printed houses

Developers say project will cut costs and environmental damage and offer solution to shortage of bricklayers



Internet Of Things (IoT)

Interconnected devices and sensors that communicate via web;
Tools and equipment tracking for servicing and repair;
H&S support through connected wearables.



Introducing...

Trimble Connect for HoloLens

Trimble Connect for HoloLens utilizes mixed reality for project coordination by providing precise alignment of holographic data on the job site, enabling workers to review their models overlaid in the context of the physical environment.

With two-way communication to the Trimble Connect cloud, users always have the most up-to-date data on their site, literally.

And also ...

Big data explosion driving Artificial intelligence (AI) prompting businesses to track and make use of more and more data;

Augmented Reality (AR) integrated into equipment visors and vehicle windshields.



Building Information Modelling (BIM)



A technology - in use for a decade;

A process - spans generation and management of construction project;

An industry - value \$11.7 billion by 2022.

Funded by the European Commission

Launched in February 2016

Objective to set up European BIM network for public works

Published BIM handbook for public procurers

Available online in 20 languages

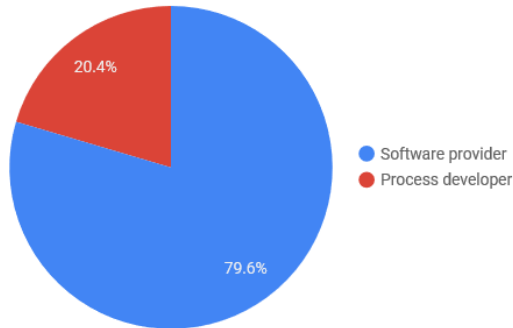
Organisations & digitalisation construction in Europe

Exploratory study

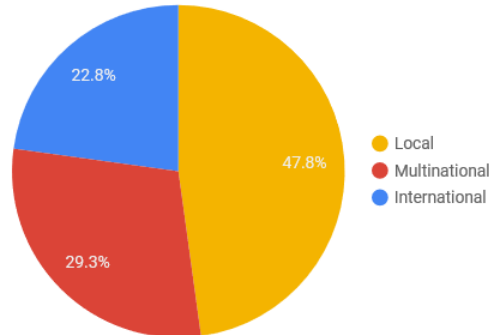
1st version to be published online in June

93 BIM initiatives & 185 associated software products

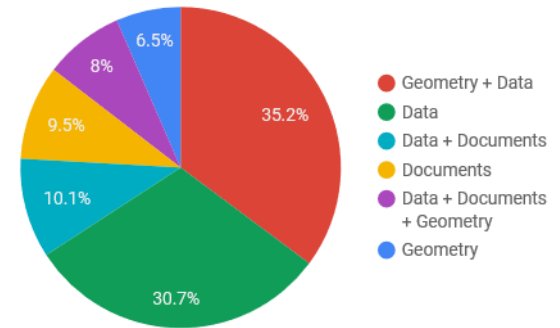
Software providers make up the vast majority of the studied companies identified as influencers to the digitalisation effort in Europe



The grouping between companies' influence at the geographical level shows almost even distribution



Fragmentation in the components of the information model that are addressed by software



What next?

Understanding needs and constraints/liability of construction industry;
Mutual benefits/targets;
Common language;
Data ownership;
Standardisation;
Political framework.





EU digital construction initiatives



Manifesto

In June 2018, 23 EU associations co-signed digital manifesto;

It recommends that:

- EU take political lead on digital construction;
- To focus new EU budget on digital skills, R&D and deployment of IT infrastructure;
- For data policy regulatory framework.

European standardisation

CEN Technical Committee 442 Building Information Modelling (BIM);

Artificial Intelligence (AI) Focus Group with roadmap and milestones;

Blockchain & Distributed Ledger Technology (DLT) Focus Group which produced White Paper.



EU digital construction platform

European Commission Horizon 2020 funding;

DigiPLACE digital platforms pilot project;

Project duration: 18 months, starting in September;

21 partners, including European associations, research institutes, national government officials, BUILDINGSMART and *Politecnico di Milano*.

CEN
WORKSHOP
AGREEMENT

CWA 17316

July 2018

ICS 08.120.20; 35.240.67; 91.010.01

English version

Smart CE marking for construction products

This CEN Workshop Agreement has been drafted and approved by a Workshop of representatives of interested parties, the constitution of which is indicated in the foreword of this Workshop Agreement.

The formal process followed by the Workshop in the development of this Workshop Agreement has been endorsed by the National Members of CEN but neither the National Members of CEN nor the CEN-CENELEC Management Centre can be held accountable for the technical content of this CEN Workshop Agreement or possible conflicts with standards or legislation.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPEISCHES KOMITEE FÜR NORMUNG

CEN-CENELEC Management Centre, Rue de la Science 23, B-1040 Brussels

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Ref. No. CWA 17316:2018

Smart CE marking

CEN Workshop Agreement
freely available online;
Ready to be implemented;
Not BIM but “gate” to BIM for
construction products data.





Looking ahead

Summary

Multiple challenges for built environment: extreme weather conditions; rising energy costs, demographic changes...

Specialised jobs/skills to emerge linked to digital transformation;

Surge in investment in digital technology;

Industry spends 1% or less of annual sales on digital tools;

Summary

Industry - potentially entire built environment - to be reshaped;

Technology for all actors, from architects and owners to workers;

“Digital construction” is 5-10 yrs off but standardisation required;

Need for (EU) political guidance?

Recommendations

Communication between tech and construction industries;

Interoperability/common language;

Common goals;

Guiding political framework;

“Digital construction” priority for New Skills Agenda for Europe & Digitising European Industry initiatives

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