



Keynote: Horizon Europe and the Green Deal

Opportunities for the building sector

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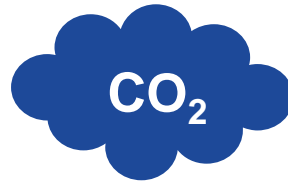
Key facts for EU buildings



Buildings
account for 40%
of EU energy
consumption



90% of our
time indoor



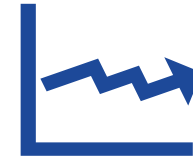
Buildings
account for
36% of CO₂
emissions



75% of EU
citizens live in
cities



75% of EU
buildings is
energy inefficient



1% renovation rate



***The European Green Deal** is our new growth strategy – for a growth that gives back more than it takes away. It shows how to transform our way of living and working, of producing and consuming so that we live healthier and make our businesses innovative.*

Renovation wave

The renovation wave will **address currently low decarbonisation and renovation rates** and tackle the underlying barriers for **improving the energy efficiency of the EU building stock**. Renovation is a major opportunity for **economic growth** as it **provides jobs and boosts the construction sector**, which is largely dominated by local businesses, while **strengthening Europe's industrial competitiveness**.



- Roadmap published in May 2020
- Public consultation closed on 9 July 2020
- Strategic communication and an action plan to be published in Autumn 2020
 - concrete legislative and non-legislative measures and enabling tools, financing and non-financing aspects



https://ec.europa.eu/energy/topics/energy-efficiency/energy-efficient-buildings/renovation-wave_en

HORIZON EUROPE – MISSION ON CITIES

R&I Missions



R&I Missions

Relating EU's research and innovation better to society and citizens' needs; with strong visibility and impact

A mission is a portfolio of actions across disciplines intended to achieve a **bold and inspirational and measurable goal** within a set timeframe, with **impact** for society and policy making as well as relevance for a significant part of the European population and wide range of European citizens.

Horizon Europe defines mission characteristics and elements of governance, and 5 missions areas.

Mission on Climate-neutral and smart cities

Mission Aim

Support, promote and showcase **100 European cities*** in their **systemic transformation towards climate neutrality by 2030** and make these cities into **experimentation and innovation hubs** for all cities, thus leading on the European Green Deal and on Europe's efforts to become **climate neutral by 2050**.

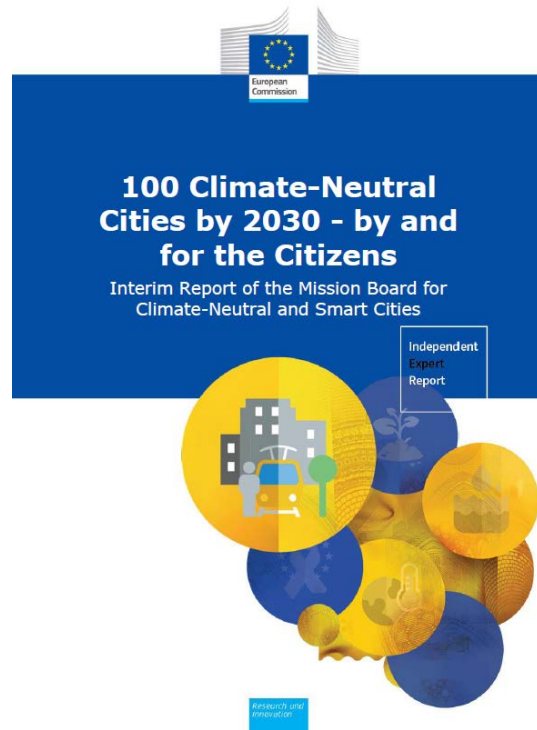
3% of land – 72% of global GHG – 85% of European living in cities by 2050

OBJECTIVES

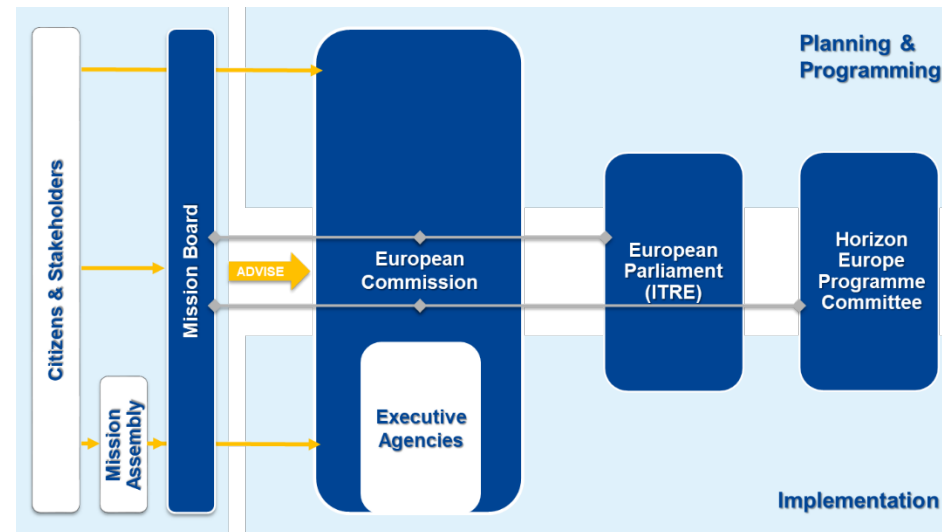
- Built a multi-level and co-creative process formalized in a Climate City Contract that will aim at the shared goal of the mission
- Help cities access the financial means to achieve the mission aim
- Create synergies with and between existing European climate initiatives and stakeholders

*A City can be a city district, neighbourhood, zone of interest (airports, ports, university, etc.)

Mission on Climate-neutral and smart cities



- Interim report of the mission board published in June 2020
- Final report to be presented during European R&I Days 2020 (22-24 September 2020)



HORIZON EUROPE – BUILT4PEOPLE PPP

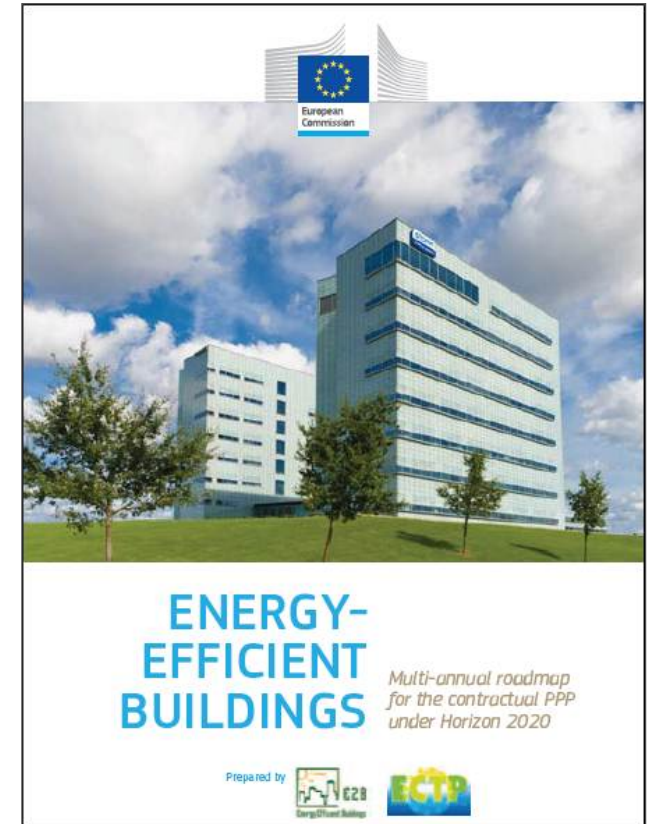
Current (Horizon 2020) contractual PPP on Energy efficient buildings (EeB cPPP)

➤ Partners are mainly construction sector industry

Scope: Energy performance of buildings

Approach: Technology-driven innovation focusing on:

- ✓ Design
- ✓ Advanced materials and nanotechnology
- ✓ Technology Building Blocks Construction Processes
- ✓ Energy performance monitoring & management
- ✓ Information and Communication Technologies (ICT)
- ✓ BIM, Data, and interoperability



Future (Horizon Europe) co-programmed partnership on People-centric sustainable built environment

➤ Partners represent various actors across the building value chain

Scope: Decarbonisation, sustainability and better living

Approach: People (user)-centric holistic innovation aiming at lasting behavioural change to deliver under the long-term goals set by the Green Deal

Focus: Primarily on the renovation of existing buildings



HORIZON EUROPE – A NEW WAY TO BUILD

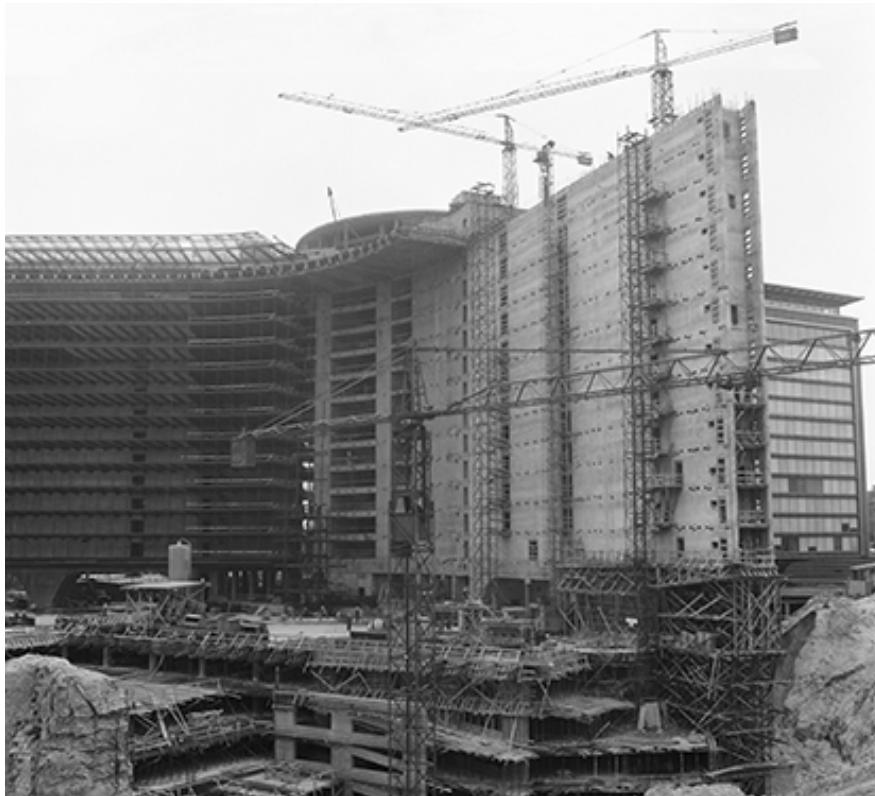
Construction sector in the EU

- 9% of the EU GDP
- 18 million direct jobs
- 95% consisting of SMEs
- Several MSs are facing a labour shortage
- Low degree of digitalisation/industrialisation of construction sector
 - **93% of construction industry firms believe that digitalisation will affect every process**
 - **6% of construction companies make full use of digital planning tools**
 - **100% of building materials firms believe they have not yet exhausted their digital potential**

*Sources: "DG GROW, Construction"
"Roland Berger, Digitization of the construction industry, 2016"

The evolution of the construction site

1967

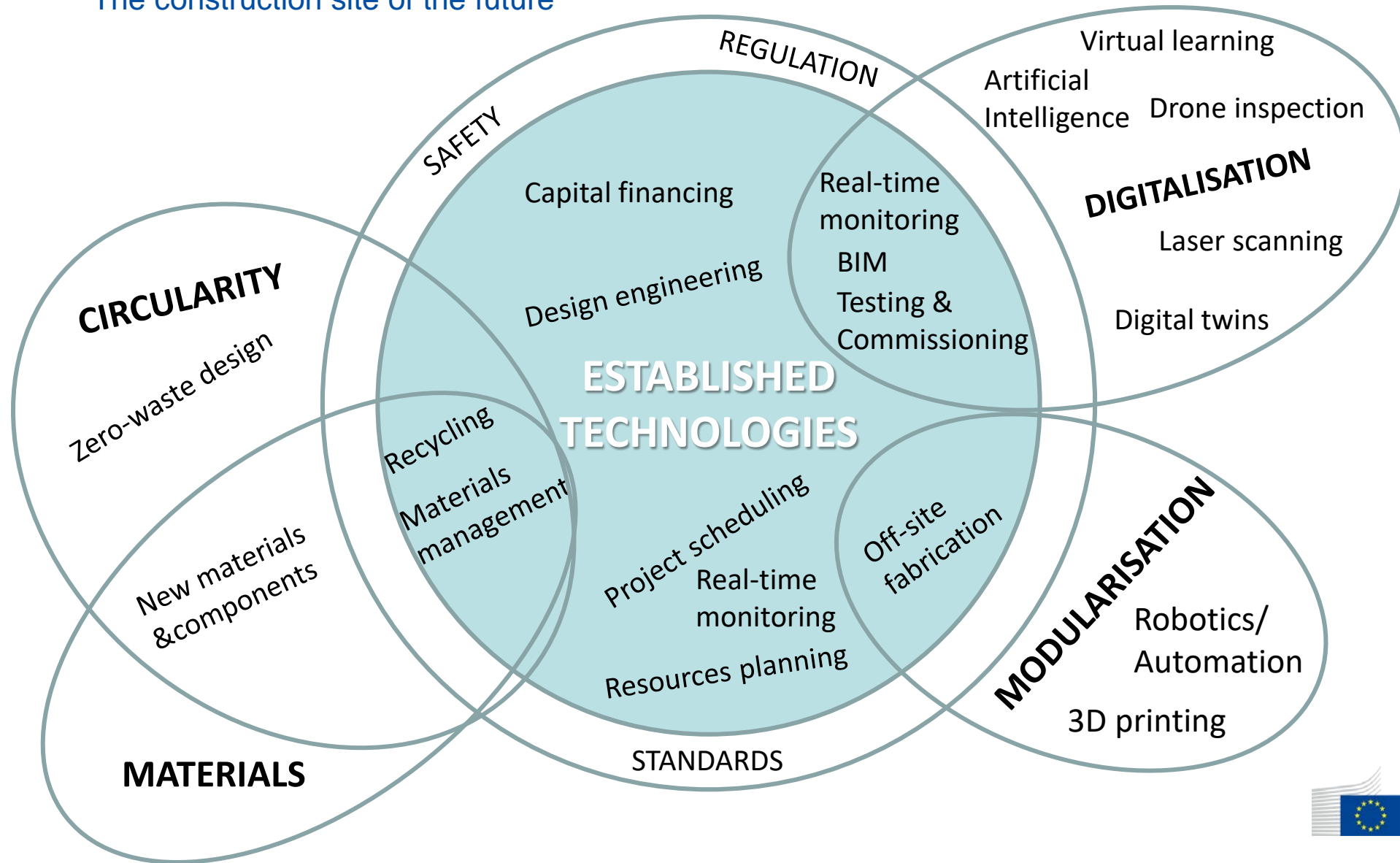


2019



REINVENTING A NEW WAY TO BUILD

The construction site of the future



A new way to build

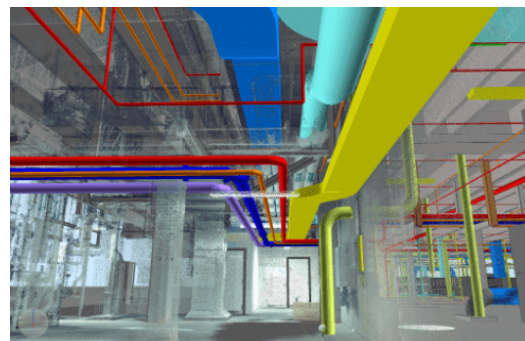
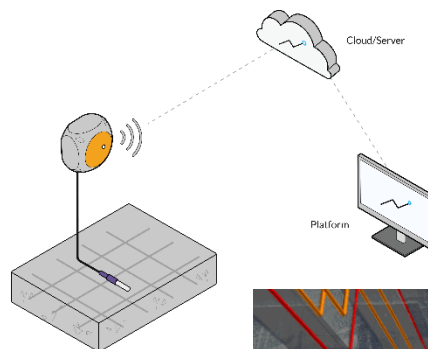
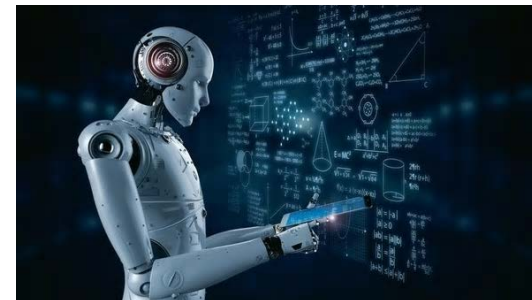
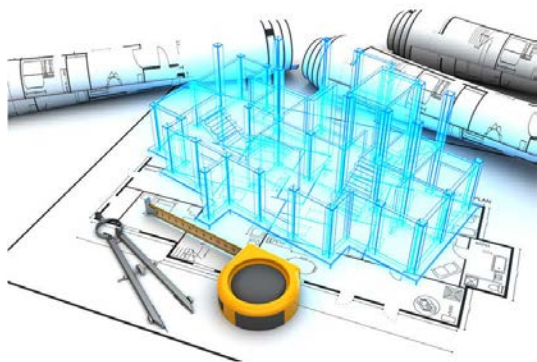
Scope: European competitiveness and climate neutrality of the construction sector through deeper digitalisation and automation

Approach: Support the introduction of disruptive technologies in the construction site and demonstrate their impact on the sector

Focus: Primarily on new constructions

- ✓ Higher productivity
- ✓ Higher automation
- ✓ Higher degree of digitalisation
- ✓ Decarbonisation
- ✓ minimisation of labour accidents
- ✓ Make the sector attractive to younger generations

Digitalisation

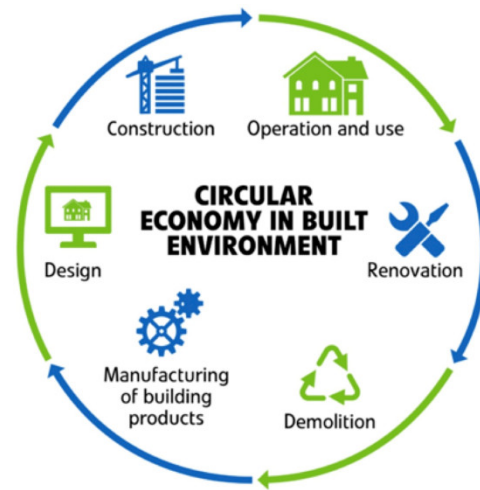


Modularisation



Image sources: www.all3dp.com, www.constructionreviewonline.com,
www.metalbuildingman.com

Circularity - Materials



Thank you

#HorizonEU

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