



The European Union's comprehensive & innovative strategies to create jobs & foster industry related to Zero Energy Buildings

Gordon SUTHERLAND

Head of Sector – Buildings & Heating/Cooling

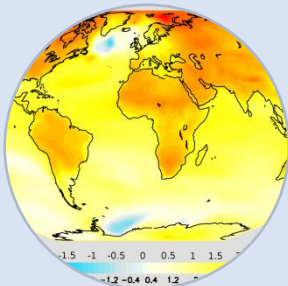
Horizon 2020 Energy Unit

European Commission - Executive Agency for SMEs

2020 EU-Korea Zero Energy Building
Convergence Alliance Forum

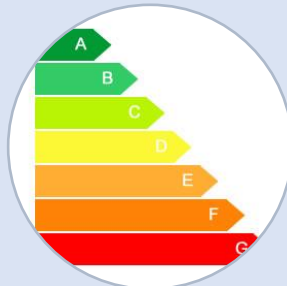
27 October 2020

Challenges in the Building Sector



Climate change

- Energy consumption
- Renewables



Higher standards

- Energy efficiency
- Air tightness



Technological change

- BIM, IoT and connected grids
- Prefabrication, 3D printing



Fragmented industry

- SME's
- Separated disciplines



Legislative Framework: the Energy Performance of Buildings Directive

The overall architecture of the EPBD is working

- **Nearly Zero-Energy Buildings (NZEB)** set a 'future-proof' vision
- **Cost-optimality** is an efficient approach to set energy requirements
- **Energy Performance Certificates (EPCs)** is a useful demand-driven market tool

There is still significant potential to be exploited

Set ambitious **targets for new buildings** and **increase renovation of existing buildings**

Wider benefits of NZEB and highly energy performance buildings

- Health, comfort, indoor air quality, increased property value, increased productive (for offices), etc.
- Better support of indoor environment quality, life-cycle performance and resource-efficiency

Strengthen the implementation of **EPCs** (quality, creditability, usability, including as a tool for finance mobilisation)

Better data - upgrade EU buildings data and analytics, including through **big data approaches**

- Databases can be a key instrument for reinforced compliance

Energy Performance of Buildings Directive: Strengthened in 2018

- ✓ **Support building renovation by linking policy and financing**
- ✓ ***Modernisation by ensuring the use of ICT and modern technologies***



Smart Finance for Smart Building



Smart Finance for Smart Building Initiative aims at unlocking investments and private financing through:



Effective use of public funding



Technical Assistance and Aggregation of projects



De-risking

- The De-risking Energy Efficiency Platform (DEEP) <http://deep.eefig.eu>
- EEFIG Underwriting toolkit <http://valueandrisk.eefig.eu>

The Concerted Action on the Energy Performance of Buildings Directive

- National bodies (EU27 + NO +UK) responsible for implementing the Directive
- Confidential bi-annual meetings
- Thematic and country progress reports on implementation of the EU buildings performance legislation

www.epbd-ca.eu



The Energy efficient Buildings Public Private Partnership (EeB PPP)



EeB PPP
Project review
2019

May 2019

174 EU projects
(64 H2020 and 110 FP7)

- Technologies
- Advanced materials
- Construction processes
- Energy performance monitoring
- Data and ICT

<https://bit.ly/2YEyOd0>

Sustainable built environment projects under Horizon 2020

**Energy-efficient
Buildings PPP**
64 projects

SC5
Circular
Economy

**Horizon 2020
SC3 Energy Efficiency**

87 projects on buildings,
heating & cooling
since 2014

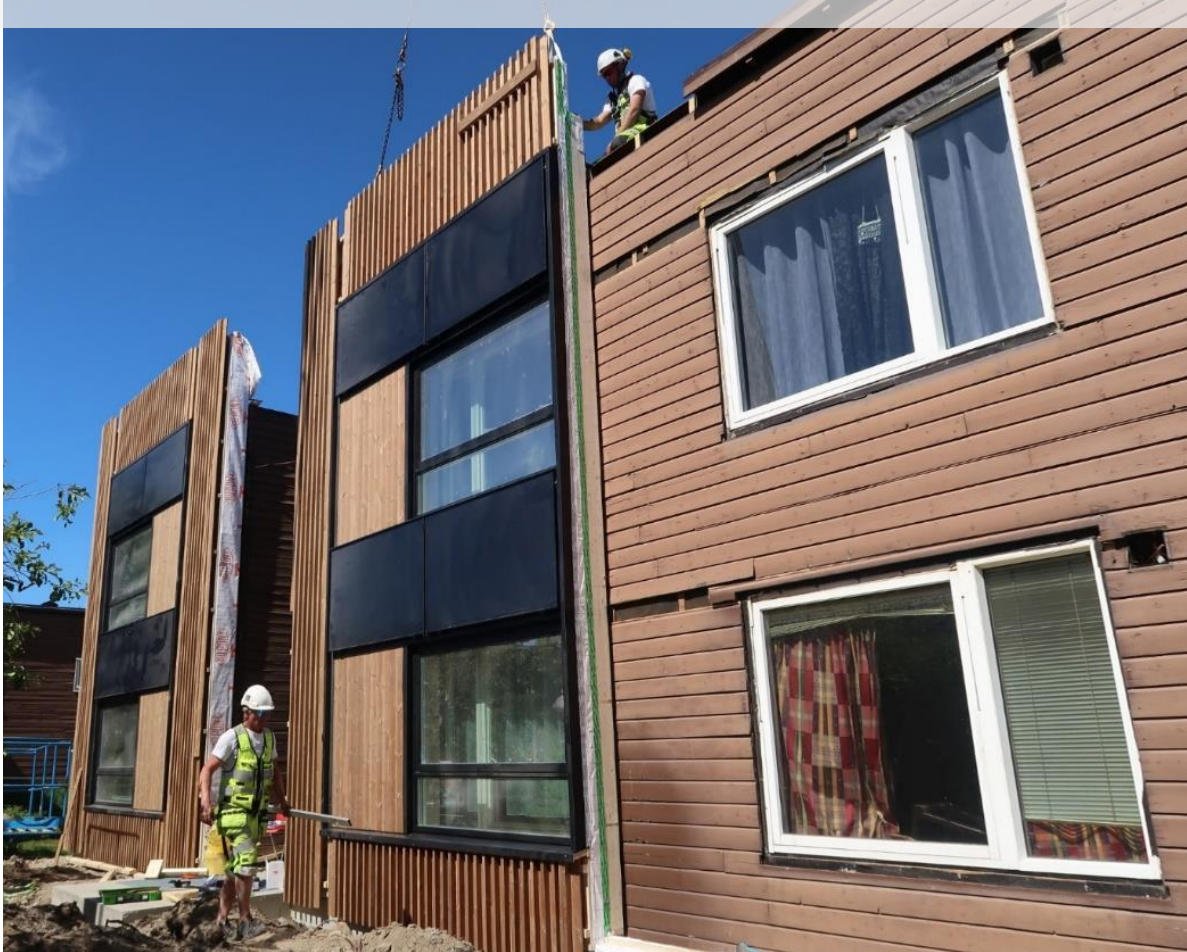
SC5
Climate
Action

SC5
Cultural
Heritage

Industrialising Deep Renovation



Industrialising Deep Renovation



<http://4rineu.eu>

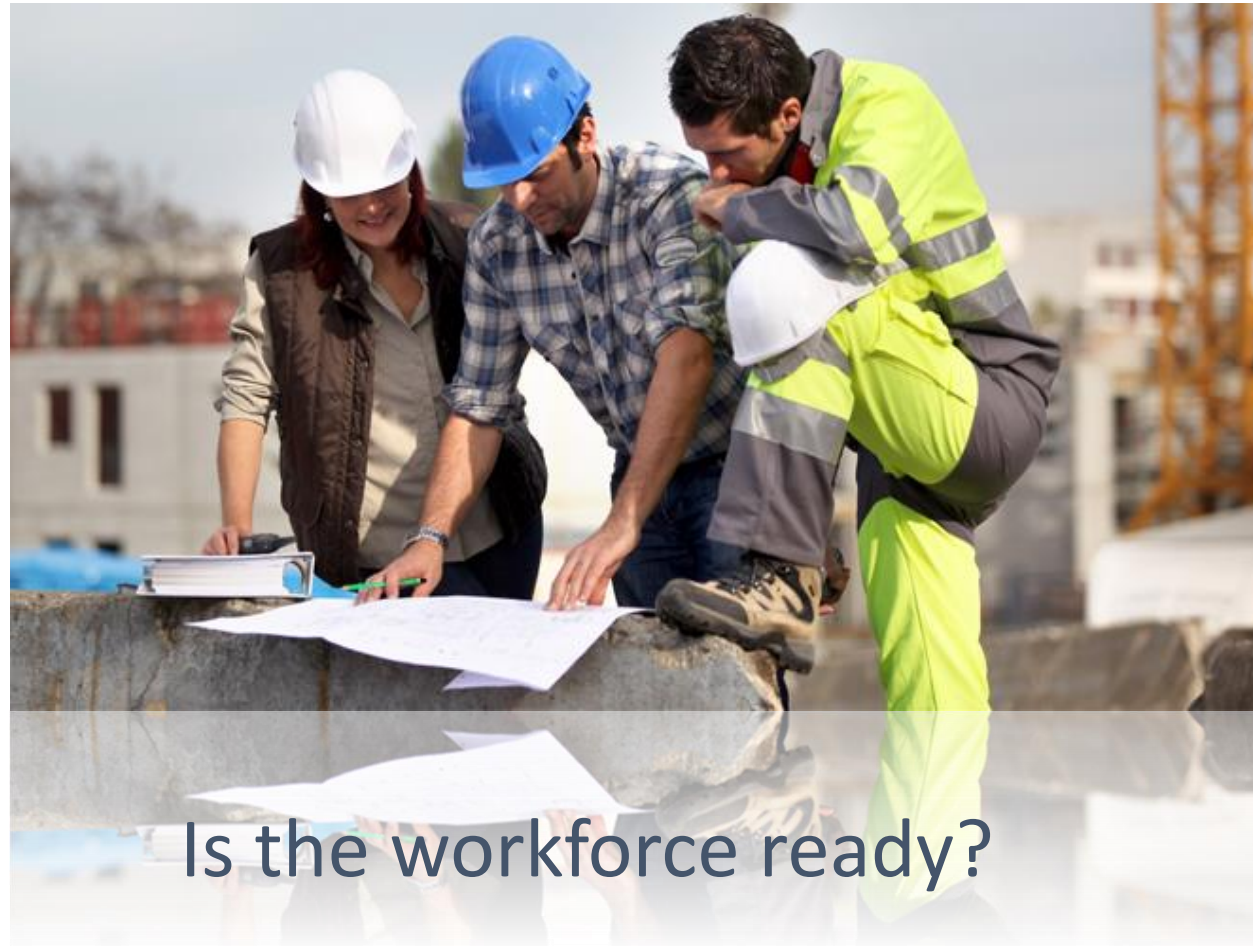
Demonstrated Norway's first ever deep renovation using prefabricated components



Co-funded by the Horizon 2020 programme
of the European Union



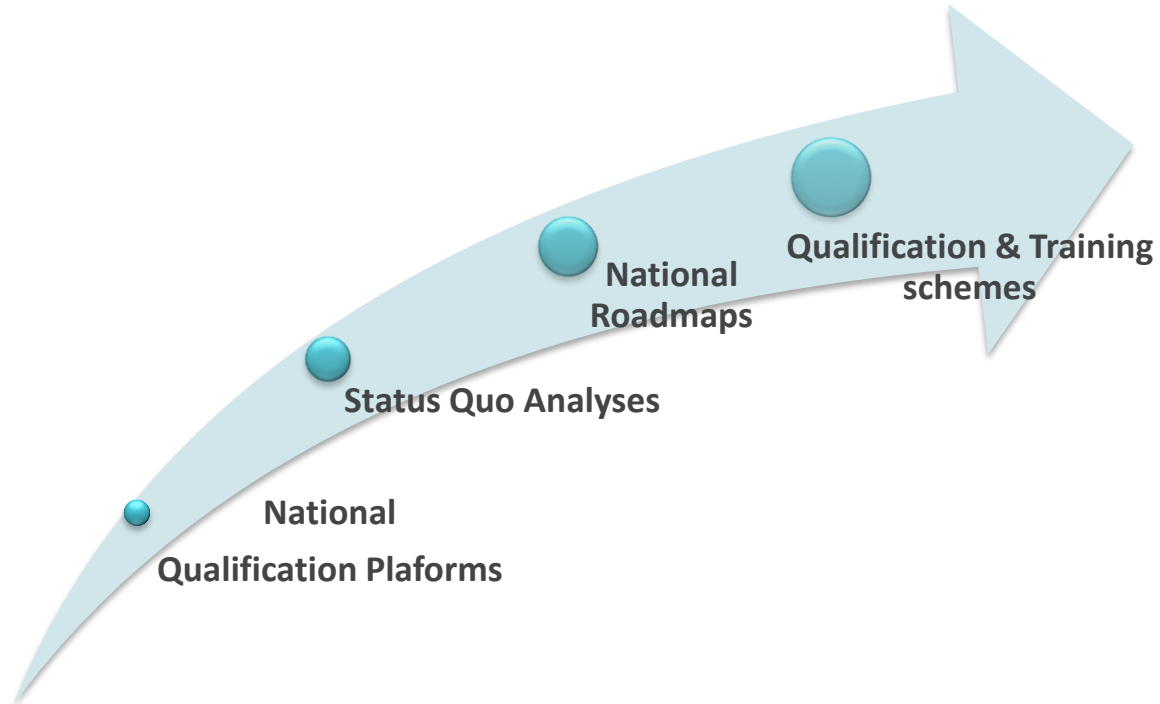
Construction skills for energy efficient buildings: The BUILD Up Skills initiative



www.buildupskills.eu

Is the workforce ready?

Construction skills for energy efficient buildings: The BUILD Up Skills initiative



<http://www.buildup.eu/en/skills>

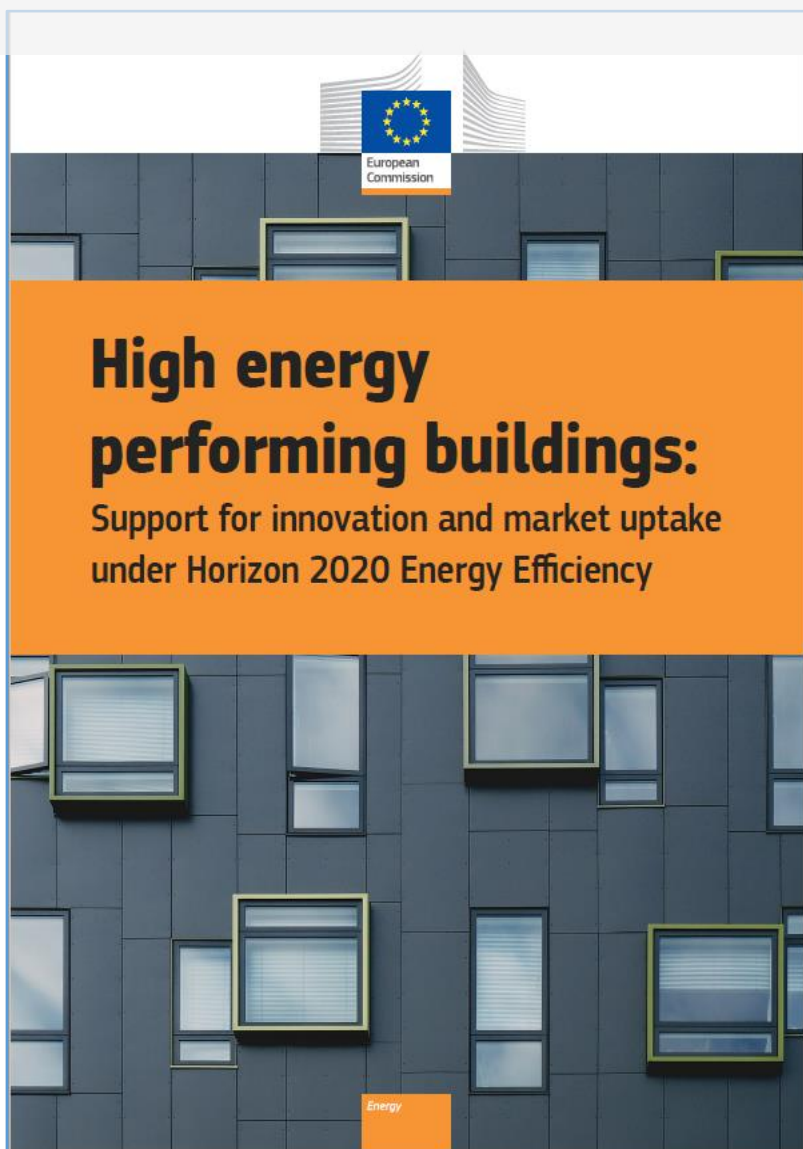


research^{eu}

RESULTS PACK ON CONSTRUCTION SKILLS



Publications: Industrialising Deep Renovation



- 24 projects supported by Horizon 2020 Energy Efficiency:
 - Deep Renovation
 - New NZEB
 - Smart Buildings
- <https://ec.europa.eu/easme/en/news/making-eu-s-building-stock-energy-efficient>

Publications: Deep Renovation



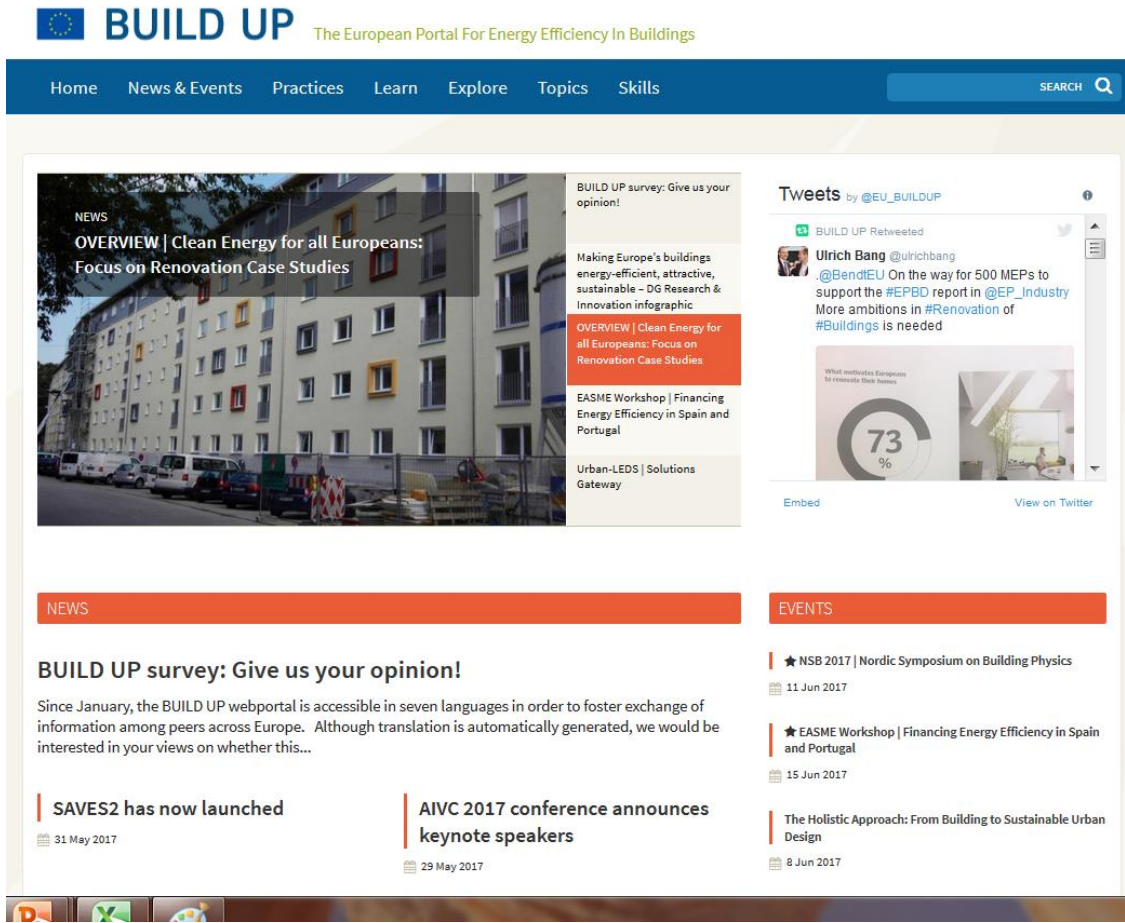
- « Results Pack » on 7 Deep Renovation projects
- Available in EN, ES, FR, DE, IT, PL
- https://cordis.europa.eu/article/id/401127-deep-renovation-new-approaches-to-transform-the-renovation-market_en.html

Bringing our projects together: Contractors' Meetings



- At least one meeting per year for the buildings projects
- Chance for projects to meet & exchange
- EU policy messages are communicated
- Recent meetings: digital skills (2019), smart buildings (2018), data tools (2017)

BUILD UP: the European Portal for Energy Efficiency and Renewable Energy in Buildings



The screenshot shows the BUILD UP website homepage. At the top is a blue navigation bar with the BUILD UP logo and tagline "The European Portal For Energy Efficiency In Buildings". The navigation menu includes Home, News & Events, Practices, Learn, Explore, Topics, Skills, and a search bar. The main content area features a large image of a multi-story building with a renovation site. To the right of the image is a sidebar with links to "BUILD UP survey: Give us your opinion!", "Making Europe's buildings energy-efficient, attractive, sustainable - DG Research & Innovation infographic", "OVERVIEW | Clean Energy for all Europeans: Focus on Renovation Case Studies", "EASME Workshop | Financing Energy Efficiency in Spain and Portugal", and "Urban-LEDS | Solutions Gateway". Below the main image is a "NEWS" section with a red header. It contains a "BUILD UP survey: Give us your opinion!" announcement dated 31 May 2017, a "SAVES2 has now launched" announcement dated 31 May 2017, and an "AIVC 2017 conference announces keynote speakers" announcement dated 29 May 2017. To the right of the news section is a "Tweets by @EU_BUILDUP" section showing a tweet from Ulrich Bang (@ulrichbang) dated 11 Jun 2017. Below the tweets is an "EVENTS" section with a red header, listing the "NSB 2017 | Nordic Symposium on Building Physics" (11 Jun 2017), the "EASME Workshop | Financing Energy Efficiency in Spain and Portugal" (15 Jun 2017), and "The Holistic Approach: From Building to Sustainable Urban Design" (8 Jun 2017).

- Upload and collaborate
- Exchange best practice
- Latest news, research, policies
- Find data tools, financing schemes, project case studies
- >12,000 registered users

www.buildup.eu

EASME

Executive Agency for Small and Medium-sized Enterprises

Thank you
for your attention

Gordon SUTHERLAND
Unit B.1 Horizon 2020 Energy
<https://ec.europa.eu/easme/en/energy>

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