

CHUBB®

# Constructing the Buildings for the Future & Emerging Challenges

June 2024

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## Construction Market

- The global Cross Laminated Timber (CLT) market, currently valued at US\$1.4 Billion, is on a steady ascent with predictions to escalate to US\$3.7 Billion by 2030, displaying a robust CAGR of 12.8% over the period from 2023-2030.
- The Europe construction market size attained a value of approximately USD 2.75 Trillion in 2023. The market is projected to grow at a CAGR of 4.9% in the forecast period of 2024-2032, reaching a value of around USD 4,2 Trillion by 2032.

# ‘The only constant is change’ said the Greek philosopher Heraclitus.

- The world of construction is constantly changing, driven by economics, innovation and sometime the thrill of the challenge.

- Trends

- Timber construction, Mass Timber, Cross Laminate Timber , Hybrid

- Benefits

- Sustainable
- Good strength to weight ratio
- Lighter than most alternatives
- Speed of construction



- Challenges ? (Discuss as a group)



- Modular construction

- Benefits:

- Costs,
- Speed of construction
- Quality control.

- Challenges: ? (Discuss as a group)





- In cumulative terms, rooftop solar is expected to increase its installed capacity from 174GW in 2023 to 355GW in 2027, Over 100% growth.
- (source Solar Power Europe)
- Casualty – are we looking through the wrong end of the telescope?
- Injuries - UK rate of reportable injuries (7 days) IMPROVING, better than manufacturing sector. Civil engineering performs better than house building trades. HOWEVER rate of fatal injuries is over twice that of the manufacturing sector.
- Trend – more Government / regulatory focus (Post Grenfell) on building safety & quality (particularly fitness for habitation) and defective workmanship
- Trend - More complexity in terms of design and contract procurement. Longer contract periods, more complex mechanical engineering linked to new technologies
- Trend - more complex engineering and operational maintenance of systems and technologies - life cycle management (e.g. rooftop solar)

## • Rooftop solar panel

- Benefits
  - Productive use of valuable space
  - Offsets the cost of energy consumption
  - Clean electricity
  - Financial incentives,

- Challenges: ? (Discuss as a group)

## • Battery Energy Storage (BESS)

- Benefits
  - Storage of excess power.
  - Greater flexibility in the use of solar power.
  - Maximising the benefit of a solar panel installation.

- Challenges

- What is next
  - Low Carbon cement.
  - Automation.
  - Increased regulation & duties
  - Digitisation



**Building Safety** A summary of the key points and definitions covered in or impacted by the Building Safety Act and the new Building Safety Regulator.

Register now for brand new CIBSE training on the Building Safety Act

**BUILDING SAFETY REGULATOR**  
 Created to replace the Health and Safety Executive, the new Building Safety Regulator will be responsible for the regulation of all buildings, with new powers to enforce compliance with the Building Safety Act and to manage the safety of buildings.

**BUILDING SAFETY ACT**  
 The Act is a major revision and reform to the Building Act 2016. It will make a major contribution to the safety of buildings, with new powers to enforce compliance with the Building Safety Act and to manage the safety of buildings.

**HIGHER RISK BUILDINGS OR BUILDINGS IN SCOPE**  
 The Act will only apply to higher risk buildings, which are defined as buildings that are at least 18 metres in height or have at least 7 storeys.

**HIGHER RISK BUILDINGS**  
 A higher risk building is a building that is at least 18 metres in height or has at least 7 storeys.

**THE GOLDEN THREAD**  
 Designed to be a tool for building owners to manage and improve the safety of their buildings, the Golden Thread will be a digital record of the building's safety.

**ACCOUNTABLE PERSON**  
 An Accountable Person will be responsible for ensuring that the building is safe and that the safety of the building is managed.

**DUTY HOLDERS**  
 The Building Safety Act introduces new duties for those who are involved in the design, construction and maintenance of buildings.

**CLIENT**  
 The person for whom the work is being done (often the building owner) has a duty to ensure that the building is safe.

**PRINCIPAL CONTRACTOR**  
 A contractor appointed to be in control of the whole project during the construction phase.

**PRINCIPAL DESIGNER**  
 Appointed to be in control of all design work.

**KEY** All Buildings Higher Risk Buildings