Building Simulation: 2009 to 2029
Where will the next 10 years take us?

Stephen Lisk
CIBSE President 2018-2019
The Times they are a Changing....
THE PARIS CLIMATE AGREEMENT

Country emissions pledges

196 parties

52.4 billion
 tonnes of emissions*

100%

99.0%
of territorial emissions covered under current pledges

0%

*of greenhouse gases in 2012 excluding international aviation and shipping

- Has submitted climate pledge
- Yet to submit pledge
- Submitted but exiting the deal

Tonga
St Kitts & Nevis
Timor-Leste
Nepal
North Korea
Brunei
Uzbekistan
Venezuela
Angola
Nigeria
Tuvalu
Palau
Jamaica
Malaysia
Niue
Kuwait
Bahrain
Micronesia
Cuba
Yemen
South Sudan
Guyana
Iran

CIBSE
EU COP21 commitments

At least a 40% domestic reduction in greenhouse gases by 2030 compared to 1990 levels

Climate Change Act 2008

Commits UK to significant emissions reductions to 2050 – 80% relative to 1990 emissions levels
Global Warming of 1.5°C

An IPCC Special Report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty

Summary for Policymakers
Construction is under pressure to change.
Six Challenges to the Future of Construction

**Project Delivery** – Creating certainty of timely delivery, to budget; improving the productivity, quality and safety of the construction sector

**Life cycle Performance** – Reducing life cycle costs of assets and designing for re-use

**Sustainability** – Achieving carbon-neutral assets and reducing waste in the course of construction

**Affordability** – Creating high-quality, affordable infrastructure and housing

**Disaster Resilience** – Making infrastructure and buildings resilient to climate change and natural disasters

**Flexibility, Liveability and Well-being** – Creating infrastructure and buildings that improve the well-being of end-users
Figure 8: Digital Technologies Applied in the E&C Value Chain

Note: The figure displays the main application areas of the respective digital technologies along the E&C value chain.
Source: World Economic Forum; The Boston Consulting Group

Shaping the Future of Construction: A Breakthrough in Mindset and Technology
Figure 9: Applications of BIM along the E&C Value Chain

Source: The Boston Consulting Group
The “Smart City”
Digital Technologies
Building a Safer Future

Independent Review of Building Regulations and Fire Safety:
Final Report

May 2018
Dame Judith Hackitt DBE FIIe

Cm 9607

Building a Safer Future
An Implementation Plan
CIBSE announce
CIBSE Building Simulation Awards 2019
president@cibse.org