BES500085

How Building Engineers Can Lead on Climate Change Reduction Actions

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Learning Objectives

- Discuss how building engineering can help reach net zero carbon for new buildings using existing, proven technologies
- Explore how engineering can support the circular economy by emphasizing renovation and refurbishment over new construction
- Discover how digital transformation at your firm can accelerate carbon reduction
- Join the conversation about how industrialized construction can assist in reaching climate change reduction goals

Description

The United Nation predicts that the world's population will grow from 7.5 billion today to nearly 10 billion by 2050. To keep up with this population growth, urban areas will need to construct on average more than 13,000 commercial buildings daily. In this context, it is important to consider the impact that buildings will have on climate change, and the depletion of natural resources. It's been estimated that building construction projects contribute 40% of the waste in landfills, and that buildings produce one-third of the world's greenhouse gas emissions, use 25% of global water, and use 40% of global energy.

The architecture, engineering, and construction (AEC) industry must fundamentally rethink how it designs, constructs, and operates the built environment for the world to meet its climate change reduction goals. Join us for this lively and inspiring panel discussion with key industry leaders to explore how the structural and MEP (mechanical, electrical, and plumbing) engineering industries can help address the climate crisis.

Speakers

Alain Waha - Chief Technology Officer, Buro Happold

Alain is the Chief Technology Officer at Buro Happold. Reporting to the CEO, he convenes the Technology Board and steers internal and external technology initiatives including Digital Services & Industrialised Construction. He is also co-founder of Cogital which supports Ventures in #proptech and #buildtech. Alain sits on a number of VC and Digital advisory boards, including HS2 Digital advisory panel, the Construction Innovation Hub's Digital Working group, 3Drepo.io, Kinship.io, Vu.City, Xinaps.com, Asite, and the Building Ventures Investment network. Alain joined the construction industry in 2008 after a career in Aerospace and Automotive. In the AEC sector, he has held roles as CEO of VC backed venture Atlas Industries and Satellier inc. His experience spans the AEC supply chain, across Europe, US and Asia.

Featured Buro Happold Projects:
UCL 22 Gordon Street (The Bartlett School of Architecture)
London, UK

EDGE Suedkreuz
Burlin, Germany

Andrew Victory - Global Digital Transformation Lead – D&E, Arcadis

Andrew Victory is the Global Digital Transformation Lead for D&E, a speaker at multiple external conferences on the topic of BIM and Digital Transformation. Andrew has over 22 years of professional experience, having worked in Landscape Architecture, Commercial Architecture, and the Design and Engineering field. Based in the UK, he works in a global role within the global solutions leadership team with a focus on executing the corporate 1-3 year vision. He strongly believes that use of computer vision and IoT to capture existing asset data, is vital as part of the digital twin use cases, the automation of non-value adding engineering tasks, as well as the use of generative design to support better informed design decision making for AEC and planned sustainability development goals.

Featured Arcadis Project:
Stormwater Managemnt in Berlin, Germany

Joop Paul - Director, Arup

Joop Paul is director of Arup, member of the Europe Region Digital Executive and co-leader of Advanced Digital Engineering Europe.

His goal is to be a trusted adviser to his clients by shaping solutions that deliver them best value - and having some fun while doing this.

Joop has a cross-disciplinary skillset of engineering, architecture, computer science and management.

His clients include national governmental organisations, multinationals, international integrated construction firms, private clients and international leading architects.

Most of his experience is in the design, procurement and construction of large building and infrastructure projects, leading international multidisciplinary teams. He has been based in Tokyo, London and Amsterdam. In Amsterdam and Groningen he set-up and led these multi-disciplinary design offices, including buildings, infrastructure and consulting.

As structural engineer, project manager and project director, Joop has been involved in many high profile projects in Europe and Asia including Tokyo Millenium Tower, Osaka Conference Center, Canton Tower Guangzhou, Amsterdam Nescio Bridge, Amsterdam Public Library, Stedelijk Museum, Amsterdam Rijksmuseum, Museum Voorlinden, Arnhem Station, Ministry of Finance, the Hague,Tax Office, Groningen, Hoge Raad der Nederlanden, the Hague and the Netherlands Parliaments Buildings, the Hague.

Since 2013, Joop is an adviser to NAM, CVW and NCG and has advised on the Structural Upgrading Strategy in mitigation of the earthquake risk in Groningen. He is leading an international team in 10 locations in areas of seismic risk, structural assessment and structural upgrading and implementation.

Tony Saracino - Senior Sustainability Success Manager, Autodesk

Tony Saracino is a Senior Sustainability Success Manager at Autodesk, where he helps Autodesk's customers use technology to achieve their sustainability goals. Prior to joining Autodesk, Tony worked at BASF's Center for Building Excellence working on the intersection between USGBC, the American Chemistry Council, and materials specifiers surrounding healthy materials in architecture and construction. He has a background in Architectural Engineering specializing in high performance building design, materials and energy productivity, and innovation in design and construction. He is active in ASHRAE, AIA, and USGBC and previously served on the USGBC Materials and Resources Technical Advisory Group and is currently on the board of Building Transparency the host organization for the Embodied Carbon in Construction Calculator (EC3).

Autodesk FY21 Impact Report