



**CONSTRUCTION
PRODUCTIVITY
CONFERENCE**

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28.01.25

CENTRAL LONDON

**FOCUSING ON INNOVATIVE
STEPS REVOLUTIONISING
THE INDUSTRY**

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Sam Ward: The Digital Gamechanger for Productivity

Critical to 'get Britain building again' the construction sector must significantly increase productivity. According to government statistics, since 1997 the annual rate of improvement has been circa 21% lower than the wider economy.

The Construction Productivity Conference will take a forensic look in to the challenges affecting efficiency and growth. The conference will interrogate the issues frustrating productivity but most importantly, will also analyse success stories. Taking place on 28 January 2025 at 30 Euston Square, central London, the hard-hitting conference programme will scrutinise the sum of the parts and address the productivity challenges head on.

When Construction Productivity Conference speaker **Sam Ward, Technology for Innovation Operations Leader – Laing O'Rourke**, was asked what advances will boost productivity, he was massively enthusiastic in his response.

The really exciting thing about digital construction is that it is moving so fast and evolving quickly. There's a hell of a lot of great things happening across a number of organisations.

The challenge is how to adopt all this great work and turn it into real, practical experiences for people on construction sites. Construction as an industry is typically slow on the uptake of any technology, not least digital innovations.

Hugely Disparate

I'm excited where this will take us but one of the issues we face is that most digital technologies are hugely disparate and do not connect up properly. The work that designers do at the front end of a project does not necessarily link into a manufacturing or subcontract ecosystem. This then does not necessarily link into the construction build sequence. The problem with having disparate pieces of technology in each of those phases is we have massive productivity issues because we're effectively having to redo or go over work.

We might receive 2D information through one door and then have to turn it into 3D before it goes out the door to the next person in the chain. The other thing that digital technology enables is automation and robotics. We've seen massive strides in where that's going in other industries. You do not need to look very far to see how the automotive industry has really taken hold of that, as has shipbuilding and aeronautical.

Robotics Can Actually Help

Robotic automation, certainly from a manufacturing standpoint, is a really exciting place. We talk about moving people from a construction site into a safer working environment in a manufacturing

space, but how do we enhance that space further with the likes of semi-automation and robotics that can actually help people with a relatively mundane and repeatable set of activities.

The way that we build buildings in the main hasn't changed a lot in many years, MMC has moved the game on, but we have a real issue with skills shortages across key trades.

You don't want people to move to a factory to do jobs that robots can do; you want the robots to help the highly skilled people who want to come and work in a captivating industry.

One thing that all of those things enable is the offsite construction-fabrication methodology. This idea that we can move towards constructing buildings where we're able to standardise the invisible and customise the visible.

For the parts of a building which lend themselves to repeatability, for example, a structural floor, or a bathroom pod, we could standardise those products to get efficiencies in design, manufacture, fabrication and then assembly on site. That way, we're able to still give architectural flexibility and enable project to remain unique and built for purpose.

That's only possible if we engage with clients in the supply chain early.

There are projects and frameworks designed for repeatability. This isn't about reverting to the typical image of 1960s 'modular buildings', where many buildings had uniform, utilitarian designs, and were often low-quality. Instead, we should be focused on creating diverse, high-quality structures that meet contemporary standards and aesthetics.

This is about taking, for example, a hospital programme where there are repeat elements of each of the design aspects, or prisons or schools, and understanding what are the unique aspects of each of those projects?

What are the bits that lend themselves towards standardisation, where you can unlock the manufacturing aspect and start to look at digital configuration up front?

I'm excited about the use of parametric and generative digital design for a building or an asset, using pre-configured digital components, and what if those digital components had applications cross numerous sectors, then we can collaborate and maybe even move towards a world where you can just 'Ctrl+P' in the factory and get it delivered to site!

There is clearly no 'silver bullet' but improving speed and quality of output through repeatability and standardisation, backed by robotics and digital innovations will be a gamechanger in raising productivity.

About

A Civil Engineer, Chartered with the Institution of Engineering and Technology, Sam Ward is passionate about innovation. Having worked for Laing O'Rourke for 15 years, spanning operational delivery across a multitude of sectors, before Sam transitioned into the Digital Engineering team in 2012. Here, he focused on growing an industry leading capability across the group, providing innovative digital solutions for pre-construction and delivery teams, eventually leading the UK pre-construction Digital Engineering team. Since 2019 he has been working as Operations/Programme Leader for the Technology and Innovation function, responsible for developing, commercialising and delivering truly transformative technology to our industry.

Secure Your Place

Taking place on 28 January 2025 at 30 Euston Square, central London – the Construction Productivity Conference pulls no punches and looks to address the ‘productivity puzzle’ head on. Tickets are £245 + VAT which includes access to the conference, pop-up exhibition and networking area, lunch and refreshments throughout the day. To hear more from Sam Ward, for the full speaker lineup and to secure your place, head to: www.constructionproductivity.co.uk