

New Civil Engineer
TechFest.
FESTIVAL OF INNOVATION AND TECHNOLOGY 2018

19 September 2018

Grange Tower Bridge Hotel, London

DAYTIME SCHEDULE – MAIN STAGE

TIME	PROGRAMME
08:20 – 09:00	Registration and refreshments
09:00 – 09:05	Welcome Alexandra Wynne , deputy editor, New Civil Engineer
09:05 – 09:35	Keynote talk, followed by Q&A Fostering innovation, embracing technology – a view from outside One of the biggest blockers to fostering innovation in the built environment is cultural. Are organisations prepared and able to adopt behavioural changes and embrace technologies such as AI, automation, data and beyond? The opening keynote will challenge us to think differently about innovation and technology, how it will shape the construction industry and the skills that will be required in the future. Hamid Mughal , director of global manufacturing, Rolls Royce

09:35	Question and answer session																						
09:40 – 10:15	<p>Discussion</p> <p>Collaboration, culture and change – how are major industry bodies driving the innovation agenda?</p> <p>Bringing together a panel of major industry organisations on stage, that are driving the innovation agenda, the session will delve into their respective priorities and explore how they are working together to bring about change and innovation across the industry.</p> <p>Shashi Verma, chief technology officer & director, customer experience, Transport for London</p> <p>Professor David Fisk, commissioner, National Infrastructure Commission</p> <p>Roger Bailey, chief technical officer, Tideway London</p>																						
10.15 – 10:45	Refreshments and networking																						
10:45 – 12:15	<p>TechFest Awards: Live judging hubs</p> <p>Five key categories, the Best Use of Technology awards, will be judged live at the Festival, as part of the daytime programme of activities. These awards recognise companies, projects or teams that are developing innovations, technologies, apps or technology led-products that are driving best practice in infrastructure design, delivery and operation with each category focusing on a specific industry change initiative.</p> <table border="1"> <thead> <tr> <th></th> <th><i>Carbon Reduction</i></th> <th><i>Driving Efficiency through Design</i></th> <th><i>Enabling Smart Infrastructure</i></th> <th><i>Health, Safety & Wellbeing</i></th> <th><i>Productivity in Delivery</i></th> </tr> </thead> <tbody> <tr> <td>10:45</td> <td> Parametric Scheme Design Tool Atkins </td> <td> Global BIM Maturity Measurement 1 Arup </td> <td> Trackbed Analysis and Modelling Performance application (TAMP) AECOM </td> <td> The BETA Building Bryden Wood </td> <td> UK Pathfinder UAV innovation Sensat </td> </tr> <tr> <td>11:05</td> <td> Concrene: The Graphene Reinforced Concrete Project Cast Consultancy and the University of Exeter </td> <td> COSBi: A BIM Solution Costain </td> <td> End to end Smart City design SenSat </td> <td> Ferrovial Agroman Laing O'Rourke JV (FLO) in collaboration with Hobs Studio Ferrovial Agroman </td> <td> Automatic System for Generating Semantically Enriched Bridge Information Models of Existing </td> </tr> </tbody> </table>						<i>Carbon Reduction</i>	<i>Driving Efficiency through Design</i>	<i>Enabling Smart Infrastructure</i>	<i>Health, Safety & Wellbeing</i>	<i>Productivity in Delivery</i>	10:45	Parametric Scheme Design Tool Atkins	Global BIM Maturity Measurement 1 Arup	Trackbed Analysis and Modelling Performance application (TAMP) AECOM	The BETA Building Bryden Wood	UK Pathfinder UAV innovation Sensat	11:05	Concrene: The Graphene Reinforced Concrete Project Cast Consultancy and the University of Exeter	COSBi: A BIM Solution Costain	End to end Smart City design SenSat	Ferrovial Agroman Laing O'Rourke JV (FLO) in collaboration with Hobs Studio Ferrovial Agroman	Automatic System for Generating Semantically Enriched Bridge Information Models of Existing
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					Laing O'Rourke JV (FLO)	Reinforced Concrete (RC) Bridges University of Cambridge
	11:25	Embodied Carbon Footprint Reduction Project Thornton Tomasetti	Platform Systems Bryden Wood	Enhanced Digital Twin of Roads Centre for Smart Infrastructure and Construction, University of Cambridge	Thames Estuary Asset Management 2100 Jacobs	Driving design efficiency through Machine Learning AECOM
	11:45	RMAS: Carbon Reduction Through Technology Costain	The Dynamic Masterplanning toolkit Ramboll		Land Rover R2R SIV Aspin Group	
11:00 – 12:00	<p>Welcome Emily Ashwell, associate editor, New Civil Engineer</p> <p>PechaKucha The Start-up session</p> <p>Back by popular demand, the Start-up session brings five shortlisted entries from the Start-up of the Year Award category to the spotlight, to pitch their innovations live to the audience in PechaKucha style. Following the pitches and a Q&A session, delegates will have the opportunity to rate the pitches, with results being combined with judges' scoring to determine the winning Start-up, which will be announced at the Festival gala dinner in the evening.</p> <p>Start-up shortlist:</p> <p>3D Repo Aphex Basestone</p>					

Converge
The Square Construction

**12:15 –
13:15**

Lunch and networking

**13:15 –
14:45**

TechFest Awards: Live judging hubs

Five key categories, the Best Use of Technology awards, will be judged live at the Festival, as part of the daytime programme of activities. These awards recognise companies, projects or teams that are developing innovations, technologies, apps or technology led-products that are driving best practice in infrastructure design, delivery and operation with each category focusing on a specific industry change initiative.

	<i>Carbon Reduction</i>	<i>Driving Efficiency through Design</i>	<i>Enabling Smart Infrastructure</i>	<i>Health, Safety & Wellbeing</i>	<i>Productivity in Delivery</i>
13:15		Digital Design Mott MacDonald	Automatic System for Generating Semantically Enriched Bridge Information Models of Existing Reinforced Concrete (RC) Bridges Centre for Smart Infrastructure and Construction, University of Cambridge	Innovation Wearable Technology (Ubiquitousware) Trial Northeast Regional Technology Maintenance Contract AMEY	A digital platform for decentralised project teams IAND
13:35	Use of fibre optic strain monitoring technology during construction to reduce carbon and cost	COFASTRANS Beckett Rankine	Remote Maintenance Access System (RMAS) Costain	See It, Sort It, Report It - Live Tracker & Trending Costain/CIM6	M1 Smart Motorways - Productionising Infrastructure Delivery

		CSIC				Costain
	13:55	Eric e:Mission whole life carbon planning tool Environment Agency	FirePods for efficient fire protection Project Fire Products	Automated digitisation of industrial assets Centre for Smart Infrastructure and Construction, University of Cambridge	The A14 A14 Integrated Delivery Team	BridgeCat- a revolutionary mobile bridge inspection system Gaist Solutions
	14:15	Fibre Optic Analysis of Dam to Avoid Core Replacement Mott MacDonald Bentley and Yorkshire Water		UKCITE – Highways England	Improving safety and wellbeing at Tideway BMB West BAM Nuttall, Morgan Sindall, Balfour Beatty JV	DataTouch DataScope System
	14:35	Full-scale Low Carbon Nereda® plant now operational for Anglian Water Royal HaskoningDHV		Making roads smart Valerann	Virtual reality safety training Galliford Try	COSBi: A BIM Solution Costain
13:15–14:45	<p>Fringe cafés (pre-registration only)</p> <p>Join one of the Festival fringe cafés to debate the industry’s biggest challenges to adoption of innovation and technology with your peers. Each café will have a facilitator to introduce and lead the discussion, rounding up with key conclusions at the end. To guarantee your place, pre-book your place on one of the follow cafés.</p>					

Session A: What are the blockers to...

- **Rolling out drones and robotics across construction sites**
Navigating regulation, mitigating risks onsite
- **The adoption of AI in construction**
Cultures, behaviours and skills to develop and manage artificial intelligence, managing human and artificial intelligence
- **Building offsite factories?**
Accelerating the offsite journey in construction – learnings from other industries

Facilitators:

Nick Boyle, technical innovation director, **Balfour Beatty**

Duncan Evans, head of digital, **Crossrail 2**

Adam Locke, partnership and innovation lead, engineering excellence group, **Laing O'Rourke**

Mike Moseley, knowledge transfer manager, Construction, **KTN**

Stacey Shepherd, innovation and culture coordinator, project services, **EDF Energy-Hinkley Point C (HPC)**

Phil Williams, knowledge transfer manager robotics and autonomous systems, **KTN**

Session B: What are the blockers to...


- **Embracing big data?**
Collecting, managing and keeping data secure
- **Enabling smart infrastructure?**
Designing, building and managing smarter cities
- **A better whole life approach?**
Designing assets for 30-year vs 100-year life spans

Facilitators:

Jonathan Abra, knowledge transfer manager, Water, **KTN**

Ian Bush, director, BIM, information management & analytics, **Black & Veatch**

Jim Norton, strategic account liaison, **Bentley Systems**

	<p>Casey Rutland, UK digital director, Royal HaskoningDHV Malcolm Taylor, head of technical information, Crossrail Mark Wray, knowledge transfer manager, buildings and infrastructure, KTN</p>
14:45– 15:15	Refreshments and networking
15:15 – 16:00	<p>Welcome Mark Hansford, editor, New Civil Engineer</p> <p><i>Keynote talk, followed by Q&A</i> Purpose driven innovation: Technologies of the Future Shivvy Jervis, Award-winning Futurist, Europe's Top 30 Women in Digital</p>
16:00 – 16:50	<div style="text-align: right;">  </div> <p>NCE's Accelerator – powered by Costain Civil engineering is an industry defined by innovators who frequently choose to pursue their creative vision through small companies. These are companies with big ideas and who could change the industry for the better. New Civil Engineer and Costain are delighted to announce the launch of NCE Accelerator to create opportunities for small innovative firms to pitch and be heard by major industry clients.</p>
16:00 – 16:10	<p>Costain's approach to driving technology-led innovation Darren James, managing director, infrastructure, Costain</p>
16:10 – 16:50	<p>NCE Accelerator Pitches An opportunity to hear from five of the most innovative small firms in the UK competing in this year's Accelerator.</p>
16:50	Question and answer session
17:00	<p>TechFest. Graduate Challenge – announcing the winning team The winning team of TechFest's Graduate Challenge mini-Hack, in association with Bentley Systems, will be announced on stage.</p>

17:05	Closing remarks Mark Hansford , editor, New Civil Engineer
17:10	Close of Main Stage
17:30	“Bridging the Gap” Networking Drinks Reception
	TECHFEST. AWARDS
18:30	VIP Drinks Reception
18:45	Main Drinks Reception
19:20	Call for Dinner
19:40	Welcome
20:10	Dinner
21:30	TechFest. Awards
22:30	After Party
02:00	Carriages