For immediate release

East West Rail's Trackathon proves an innovation hit with suppliers

- **More than 50 suppliers and innovators pitched solutions to innovation, engineering and environmental challenges facing EWR and the rail industry**
- **Inaugural event aimed at lowering costs, reducing construction impact and enabling faster delivery of EWR**

A trailblazing event to help find innovative, environmentally-friendly and cost-saving solutions to the way East West Rail is designed and built that aims to set a blueprint for the future of UK rail delivery, has been praised by suppliers.

EWR Co's first ever Trackathon was attended by more than 50 suppliers and innovators who were tasked with exploring solutions to six industry-related innovation challenges, such as increasing the quality and use of recycled materials, enabling efficient earthworks, reducing the cost of concrete construction and mitigating supply bottlenecks.

The challenges were chosen as those that are among the most important in reducing cost and carbon impact at EWR in its ambition to deliver the benefits of a sustainable new railway more quickly than previous rail projects, while ensuring the best value for the taxpayer.

During the event, SMEs specialising in recycling, concrete construction, supply chains, earthworks and infrastructure maintenance, were split into groups according to pre-selected challenges, supported by EWR experts.

They created a short pitch document describing the problem, their proposed solution and its potential benefits before later pitching their solutions to EWR's Innovation Team.

Will Reddaway, Head of Innovation at EWR Co, **said:** "One of our innovation goals is to enable faster and cheaper delivery of East West Rail and we are keen to work in partnership with suppliers to achieve this in a sustainable way.

"The Trackathon is a fantastic way of finding solutions to some of our innovation and design challenges as it brings together supply chain and engineering experts with a wide range of knowledge and experience of the rail and construction industry.

"Harnessing this knowledge, we can work collaboratively to generate ideas which will give a real boost to our future customer experiences, helping us to design and construct a first-class railway to suit the communities it will serve while saving public money at the same time."

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The supplier pitches included:

- A cable management system manufactured from 100% recycled plastic, offering a 50-year design life and significant safety, efficiency and project carbon savings
- 3D concrete printing which can be 30% faster and 20% cheaper than traditional methods by using less material, creating less waste and enhancing safety through less manual handling
- "Self-healing technology" that mimics the vascular system in the human body by embedding a vascular system in infrastructure to autonomously deliver a healing agent for cracks, minimising the need for actions associated with repairs and maintenance
- Automated rolling stock inspection equipment and services using a mixture of high-speed cameras, lasers and acoustics to minimise vehicle down time and extend the life of safety critical components, resulting in significant savings.

John Ryan, Director at SymTerra, the site management tool connecting the supply chain, said: "There is enormous potential for innovation to bring greater efficiency to the delivery and maintenance of our rail infrastructure, particularly when the entire supply chain is pulling in the same direction. Collaboration is the key to better adoption of new solutions and industry practices, and it's great to have been part of this forward-thinking initiative."

Dr Mani Entezami, Chief Technology Officer of MoniRail, which specialises in railway track and train ride quality monitoring, said: "Trackathon provides an excellent platform for industry partners to collaborate, learn, and achieve collective goals. This event effectively engages SMEs and fosters innovation, ensuring high-quality collaboration. By identifying challenges, developing suitable solutions, and gaining insights into the market and appropriate products, we pave the way for successful rail projects."

ENDS

Notes to editors

- Trackathon was open to suppliers, SMEs and rail membership organisations and was held across two days at Milton Keynes Gallery in partnership with growth consultancy Sparksfly.
- It was an information-gathering event only and any subsequent commercial activity will be the subject of a formal procurement exercise.

Trackathon challenges

The six innovation challenges posed to suppliers:

- **Challenge 1: Increasing quality and use of recycled materials**
  EWR's civil engineering and building programme will generate large volumes of construction by-products. EWR is interested in solutions which will upgrade the quality of these by-products or increase the use of recycled materials in EWR construction.

- **Challenge 2: Enabling efficient earthworks**
  EWR's earthworks programme will excavate ~16Mm3 material and is one of the largest

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items of EWR's capital spend. EWR is interested in solutions which speed up earthworks design decisions, improve information sharing and increase the usability of cut material. EWR is also interested in solutions which lower the cost of earthworks plant, including fleet optimisation tools and use of low-cost alternative energy (e.g. hydrogen, electrification).

- **Challenge 3: Mitigating supply bottlenecks**
  Delays in the EWR scheme may cost upwards of £1-3m per week. Supply bottlenecks, such as a lack of locomotives (to transport building materials) or constraints on plant availability, significantly increase the likelihood of delay. EWR is interested in the use of innovative digital or AI solutions to manage materials transportation and plant sourcing more efficiently, thereby reducing the need for stockpiling and associated cash and land requirements.

- **Challenge 4: Reducing cost of concrete construction**
  Constructing the railway will use ~230,000m3 of concrete, mostly within structures (e.g. viaducts, bridges), stations and temporary works. EWR is interested in solutions which optimise concrete design, increase the proportion of pre-casting, replace concrete structures with lower cost prefabricated or 3D-printed items and use alternative concrete mixes.

- **Challenge 5: Enabling efficient infrastructure maintenance**
  EWR is interested in exploring solutions which reduce infrastructure maintenance costs for earthworks, track, electrical equipment, structures & bridges, stations and power equipment. EWR is interested in innovative data collection devices, analysis platforms and BIM to support lower cost predictive maintenance processes and reduce manual inspections.

- **Challenge 6: Enabling efficient rolling stock maintenance**
  EWR is interested in exploring digital solutions which enable automated inspection and predictive maintenance of rolling stock. EWR is interested in solutions which derive benefit from on-track or in-depot sensors and therefore have near-to-medium-term impacts on the construction of the railway.

Suppliers who attended:

Rosehill Polymers
Scott Parnell Ltd
Sicut Enterprises Ltd
Trackwork Ltd
Trough-Tec Systems
CFMS
Huesker Ltd
Reinforced Earth Company (RECo)
The Australian Turntable Co. Pty Ltd
Cubic Offsite Limited

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Frazer-Nash Consultancy Ltd
Infinitive Group
Valuechain
Anderton Concrete/Ibstock
ChangeMaker 3D Ltd
First Graphene Ltd
Mimicrete
Sika
Silael
Aingura IIoT, S.L.
Civil Automation Group – Department of Civil and Environmental Engineering - University of Strathclyde (Spin-out in progress)
CrossTech
Fugro
hyperTunnel
MoniRail Ltd
RailSense Solutions Ltd
SymTerra
Thales GTS
Atmo Technology
Infinitive Group
PolyChord Ltd
Reliable Insights Ltd
VIVOTEK
Wabtec KinetiX

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Media assets

- **Short videos** explaining Trackathon by EWR's Innovation Manager and reaction to the event by the Rail Industry Association and Rail Forum are available to use.
- **Images** taken at the event are available on request.
- **Route Update Announcement webpage:** http://www.eastwestrail.co.uk/routeupdate
- **Route Update Announcement Report**: www.eastwestrail.co.uk/routeupdatereport

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About the East West Rail project

East West Rail intends to create a new direct connection between Oxford and Cambridge. Serving communities across the area, it intends to bring faster journey times and lower transport costs as well as ease pressure on local roads.

East West Rail is planned to be delivered in three Connection Stages:

- Connection Stage One: Oxford to Bletchley and Milton Keynes
- Connection Stage Two: Oxford to Bedford
- Connection Stage Three: Oxford to Cambridge

Network Rail was responsible for developing the first part of the East West Rail, connecting Oxford with Bicester, and is a partner in a construction alliance to deliver Connection Stage 1 of the project, where East West Railway Company (EWR Co) and Network Rail are acting as the Department for Transport's joint sponsors.

EWR Co is now developing the route to enable services to run to Cambridge via Bedford and plans to seek statutory powers under the Planning Act 2008, following a period of extensive consultation.

About East West Railway Company

East West Railway Company (EWR Co) was set up by the Secretary of State for Transport in 2018 to develop East West Rail, a railway with customers and communities at its core.

We have a mission to innovate and challenge the status-quo in the rail and construction industries, leading to a more efficient and cost-effective project delivery, and a great experience for passengers and the communities we serve. Our vision is delivery of a safe and secure railway that is better for the customer; cheaper for the taxpayer; delivered quicker than before and is greener for the environment.

Our distinctive outlook and commitment to doing the right thing for our customers and local communities runs through everything we do and every decision we make.

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