

# Digital Railway – The Future

July 2, 2020



Digital Railway – The Future Outlook was the third instalment of the Railway Industry Association’s popular Unlocking Innovation – Digital Railway – The Future webinar series, taking place on 1 July 2020.

## The Sector Deal

David Clarke, RIA’s Technical Director and host for day, opened the session by introducing the Rail Sector Deal, signed in 2018. The Deal is a collaboration between Government, Network Rail and the rail industry and will see the Department of Transport, Network Rail and HS2 Ltd produce a detailed 5-year plan and longer-term roadmap of Digital Railway (DR) interventions with a more certain sustainable investment profile for the industry, in return for the sector delivering whole industry, whole system unit cost reductions (that will be significantly lower than current UK conventional infrastructure only costs) by the end of 2025.

## Signalling Backlog

Martin Jones, Chief Control Command & Signalling Engineer at Network outlined the shared industry challenge of a backlog of signalling renewals that exceeds industry capacity. Even if the capacity existed, Jones said, the cost of conventional resignalling would exceed the available budget. As this situation is not

sustainable, the challenge for the industry is to do something different to make the programme both deliverable and affordable. The solution is delivering the Digital Railway programme.

### The Digital Railway Challenge

The first part of the challenge is to set out what needs to be done. Jones handed over to his colleague Pat McFadden, Head of Technical Policy & Strategy at Network Rail to explain the Long-Term Deployment Plan (LTDP) which takes account of the scale and complexity of fitting out in excess of 4,000 trains and the upgrading of more than 19,000 miles of network with digital signalling equipment. The LTDP shows how modern signalling and train control technology can be delivered in a way that makes the best use of renewals funding.

McFadden stressed that the plan is key as it meets the industry challenge of sustainability of renewals and it encourages the industry to work together. This was a theme that all the speakers agreed on, particularly by Susan Millington, Senior Programme Manager at Network Rail who stated that 'this is the change that we have needed for a long time and that industry is coming together'.

McFadden explained that the LTDP is the pipeline that the Rail Sector Deal asked for and concluded that 'the long term deployment plan has highlighted the unit cost that we need to get to make a future ETCS affordable'.

### Target190+

Jones continued the conversation by addressing the industry cost reduction challenge. A key part of this is the Target 190+ Research & Development programme which aims to provide the capability to enable safe, affordable and deliverable signalling to meet the future demands of the railway.

The project takes its name from European experience which indicates that an infrastructure benchmark rate of £190k (or less) per Signalling Equivalent Unit (SEU) could be achievable. He went on to explain how Target 190+ and the Rail Sector Deal are bringing the industry together collaboratively to deliver the LTDP affordably and gets the industry 'match fit' for Control Period 7.

### What next for the Rail Sector Deal Digital Pillar?

Rounding up the discussion on the Sector Deal, Rob Morris, Managing Director of Siemens Mobility and one of two Digital Rail Sector Deal Industry Champions, the other being Shaun Jones of Thales, stated 'there is no other option other than to make an absolute success of the Sector Deal, the industry and wider society will benefit from it greatly'. He urged the industry to come together to support the work being taken on the Deal.

### Elevator Pitches

The discussion continued with elevator pitches, where organisations pitch their ideas and thoughts to the audience. The first speaker was Rob Hopkin of Birmingham Centre for Rail Research and Education who focussed on the challenge of ramping up industry digital railway skills for CP7. Hopkin described the

different post graduate level courses which are available including CPD and Masters in various digital railway related courses, as well as a Digital Railway Leadership course.

Hopkin was followed by Simon Rodgers from OODL, experts in self-contained internet of things (IoT) sensors for railway applications. OODL aim to support industry in gathering data, bringing disparate data together, spotting patterns and forecasting operational performance. Current projects by OODL include monitoring ride quality and air quality. Topically for the Coronavirus outbreak, smart asset tagging could allow customers to understand how clean their train was.

The webinar series finishes with 'Digital Railway - Winning Work' on Friday, 3rd July, from 2pm. [You can register to attend here.](#)

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