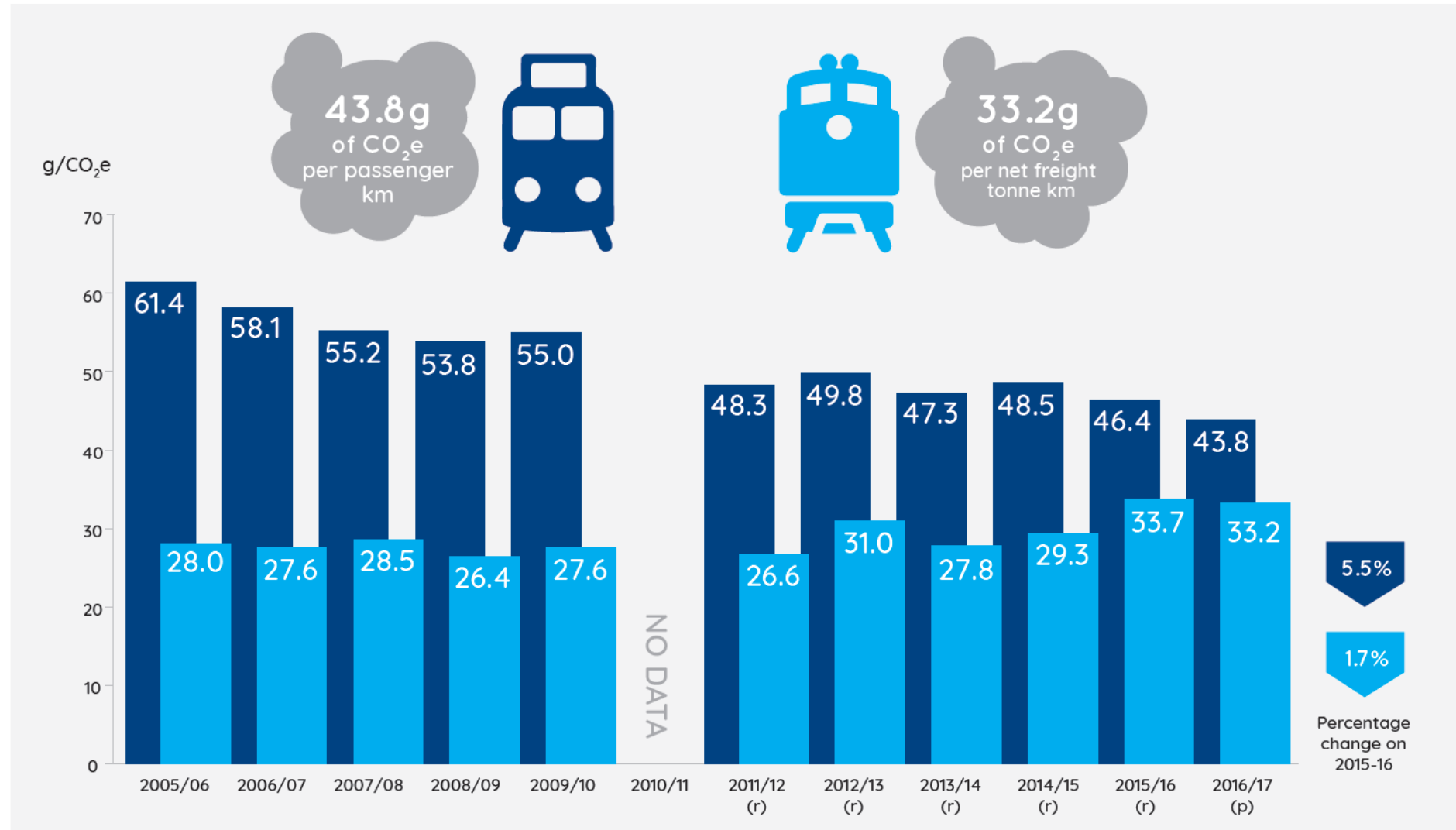


Decarbonising the railway

Mark Gaynor

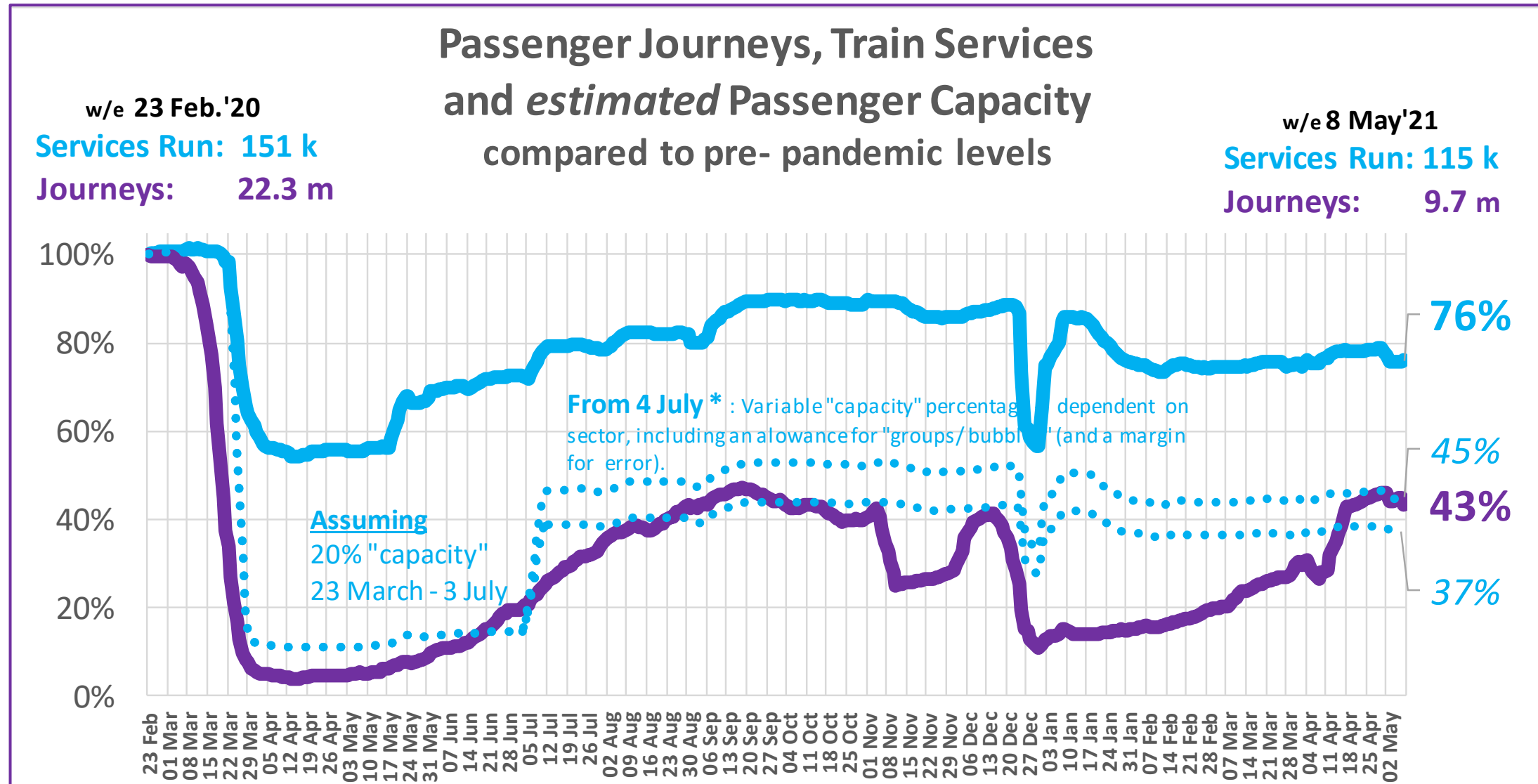
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Rail's carbon performance

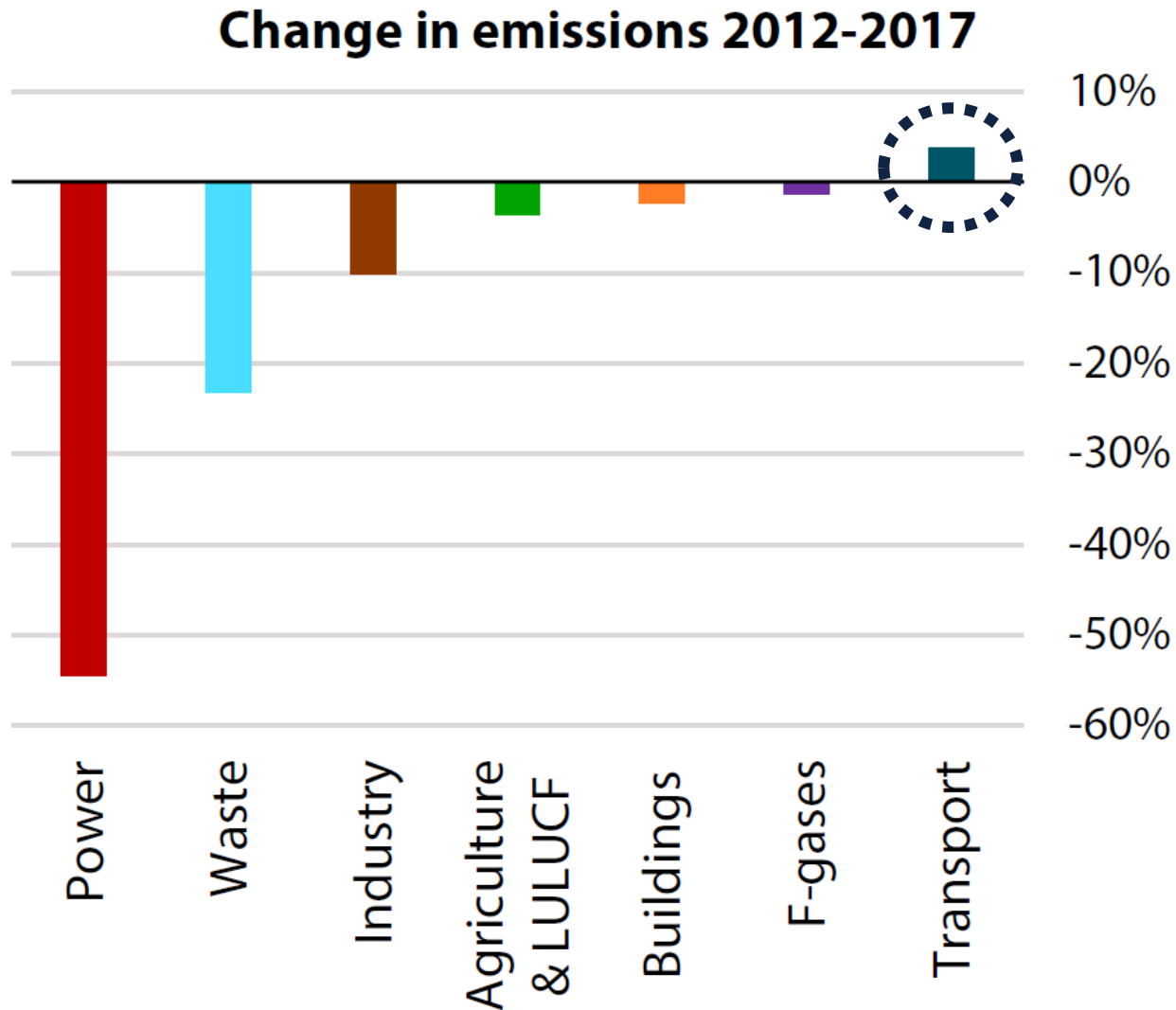


Source: Rail Industry Decarbonisation Task Force final report, RSSB

Where are we now?

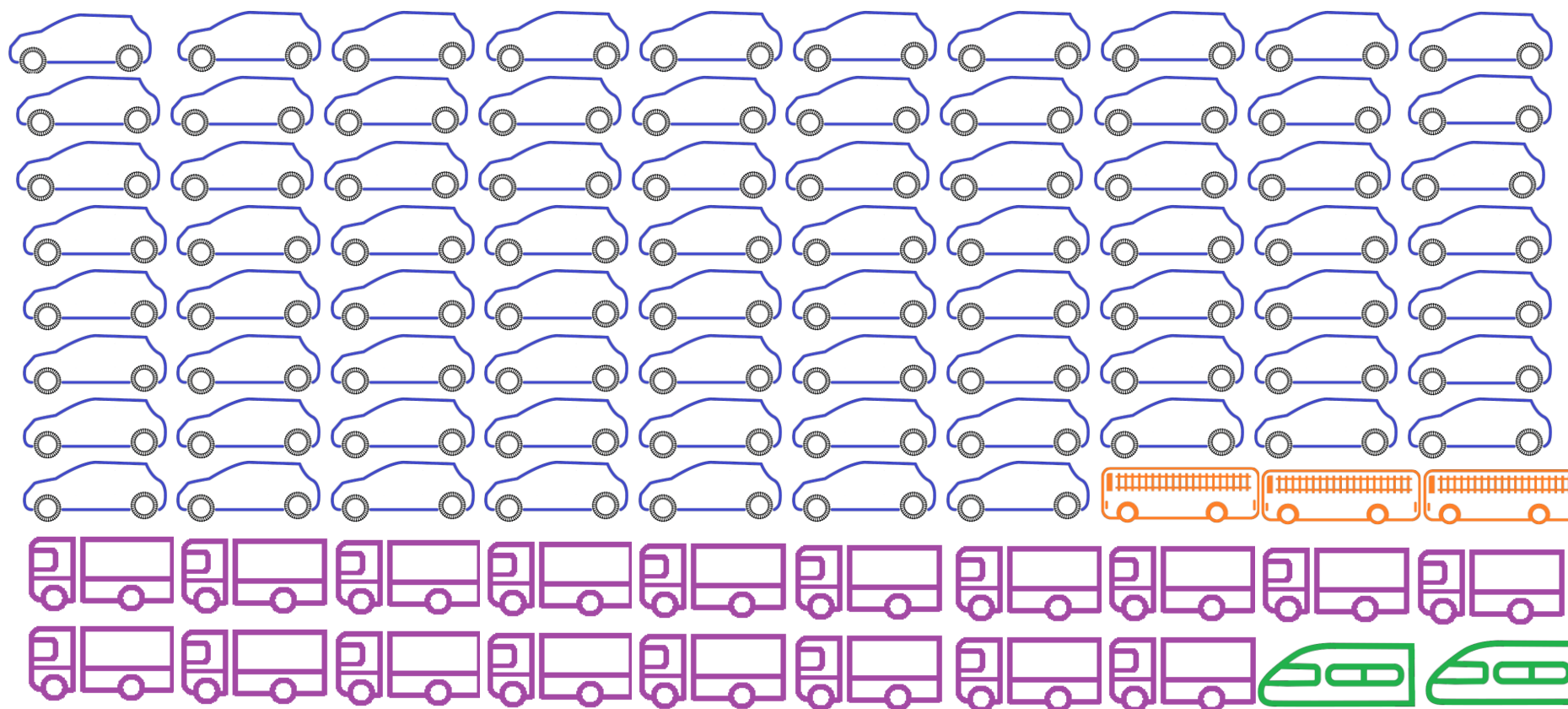


The pressure is on transport now



Other UK sectors have reduced emissions but transport emissions continue to increase resulting in significant political and public pressure

Rail responsible for less than 2% of transport emissions



Decarbonisation focus will continue to be on road transport. But rail will still be expected to play its part.

Also an opportunity for rail to be part of a green economic recovery and support modal shift for passenger and freight.

The challenge

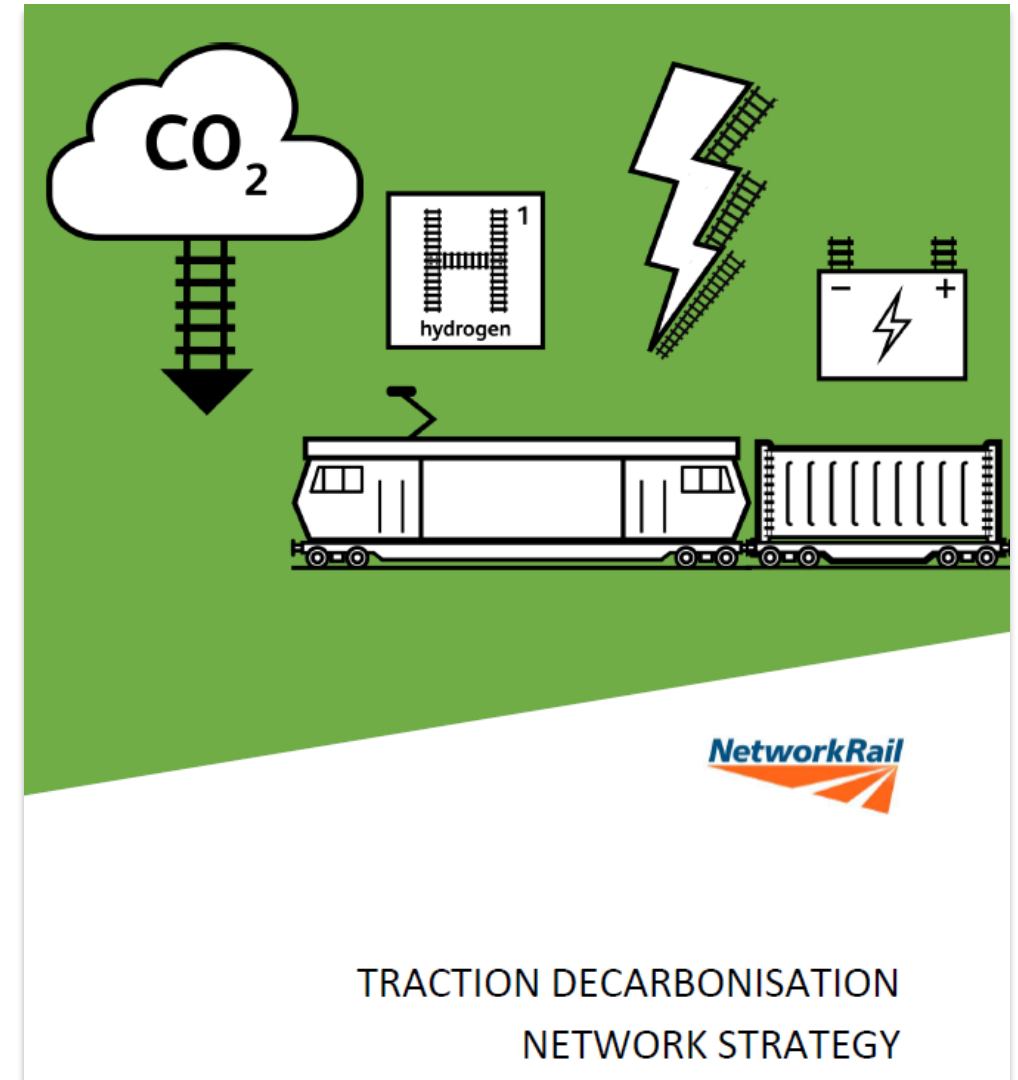
“I would like to see us take all diesel-only trains off the track by 2040 ...

I am calling on the railway to provide a vision for how it will decarbonise”

Jo Johnson, 12 February 2018



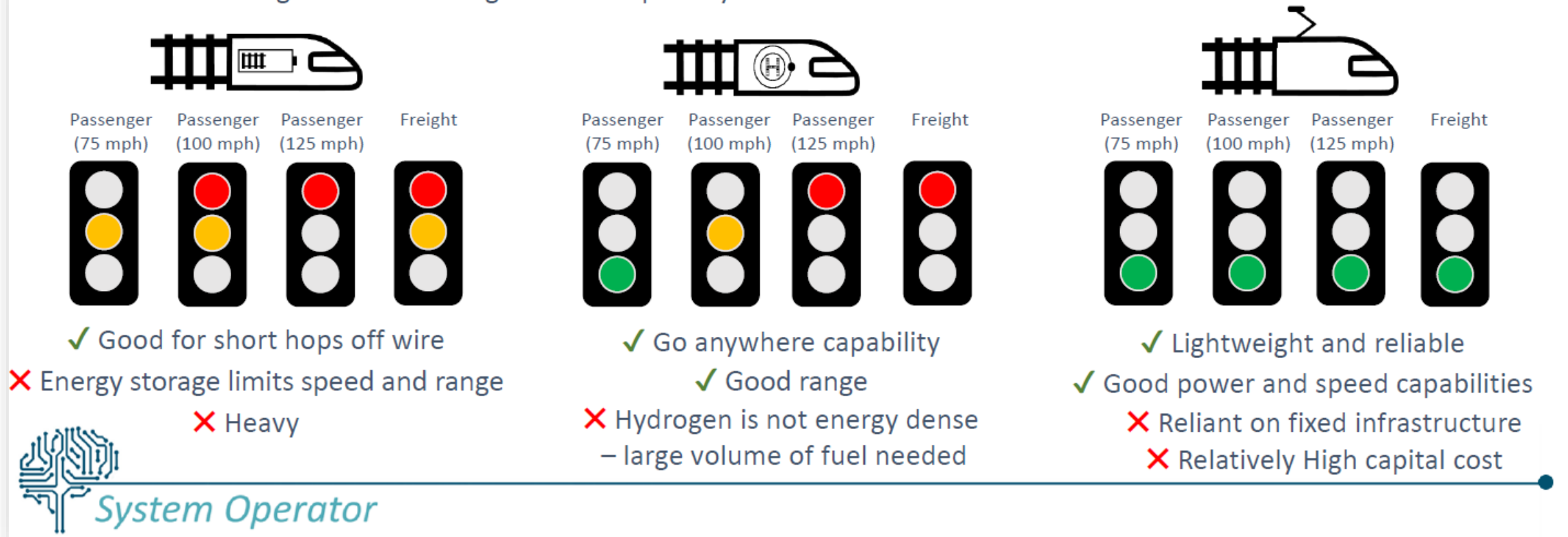
Mobilising the industry



How can we decarbonise rail?

Network Rail's Traction Decarbonisation Network Strategy (TDNS) has assessed three technologies to replace diesel trains: electrification, battery and hydrogen fuel cells.

The three technologies have differing levels of capability and are summarised below:



How can we decarbonise rail?



11,700 STKs of electrification.



Battery operation over 400 STKs of infrastructure.

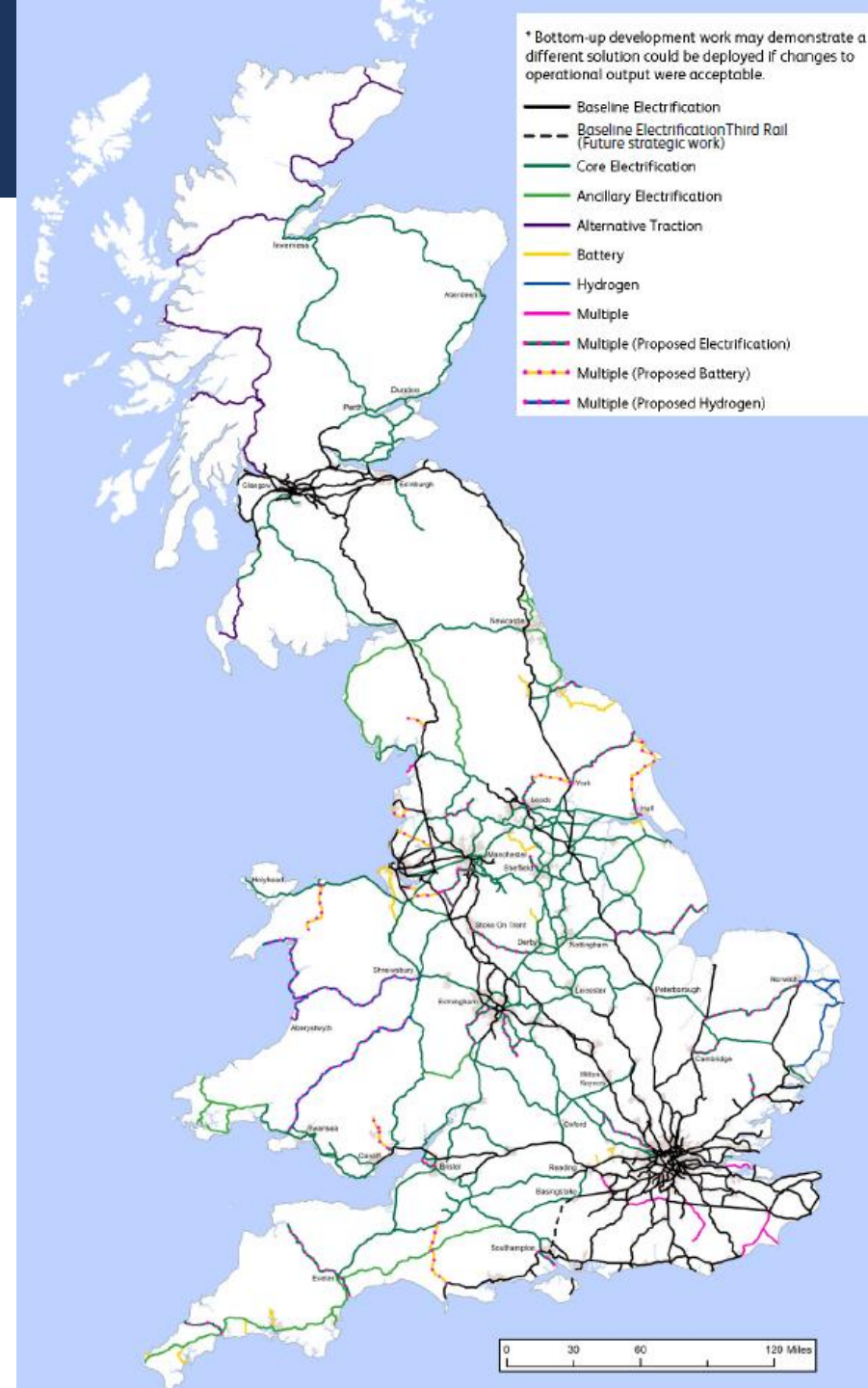


Hydrogen operation over 900 STKs of infrastructure.



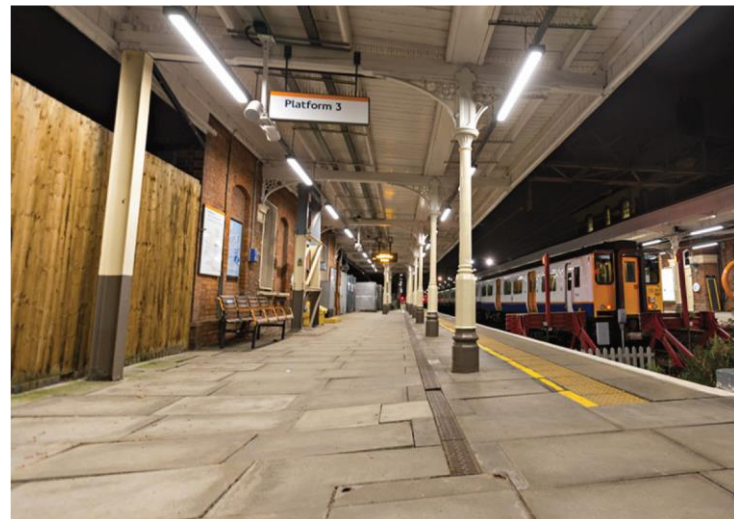
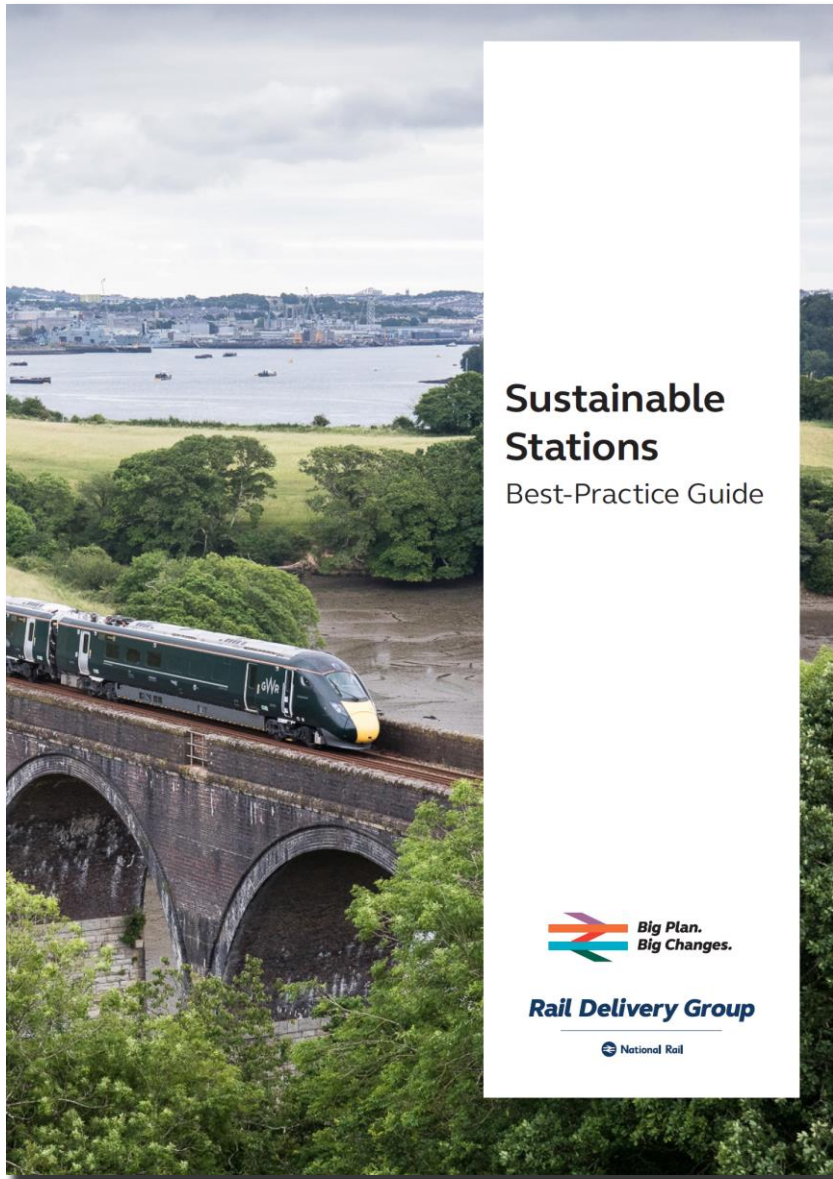
2,300 STKs where there is no clear technical choice.

Further info at: <https://www.networkrail.co.uk/wp-content/uploads/2020/09/Traction-Decarbonisation-Network-Strategy-Executive-Summary.pdf>



- Decarbonising the railway will require concerted action and investment over many years.
- It will require investment in electrification and rolling stock
- But will also require people with the right skills to operate and maintain new technologies
- Positive signals in Rail White Paper
- DfT's Transport Decarbonisation Plan should be published later this year
- Also expect decarbonisation to be a key theme in the Whole Industry Strategic Plan
- Don't forget fares reform!

Related activity



Renewable energy for traction

- The railway uses around 4 Terawatt hours of electricity each year
- How can rail secure more of its traction electricity from renewable sources?
- Could Power Purchase Agreements help?



A photograph of the interior of Grand Central Terminal, showing its iconic vaulted glass and steel roof. People are walking on the platform, and various shops and signs are visible in the background. The text is overlaid on this image.

Thank you!

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