Lydia Fairman
Network Rail
Achieving business buy in
The Story So Far...

2016 Network Rail undertaking 2 STEM events a year

Apprenticeship Levy, 2017

Funding achieved via an investment committee for early engagement

Routes into Rail research and project 2018-2019

Established industry and internal steering groups, annual investment process, funding included in long term funding cycle (CP7) and industry work.

Industry collaborations 2018 onwards

Yead of Engineering 2018
UK Rail Workforce Headlines

240,000
Workers employed within the Rail sector

Current attrition rate is between 10 and 15 percent (compared to a ‘usual’ attrition rate of 5 to 8%).

Demand for replacement alone to 2030 will be around 50,000 workers not accounting for growth and skilled project staff who’ll be needed to deliver capital investment programmes.

40% of active trainers will reach retirement age by 2030.

15.6%
Of workers within the Rail sector are women (down from 17% pre pandemic)

<1%
New Apprentices employed by the sector per annum, a figure we need to double

40%
Workers under 25

Average age within the Rail sector is 45 years old

45 yrs

There are less than half the number of workers under 25 in the sector now compared to 2016. Over the 5-year period the trend shows the decline from 10% to 4% of the overall workforce.

33%
New Apprentices employed by the sector per annum, a figure we need to double

33% (just over 80,000 workers) of the Rail sector are aged 50 or over

Attrition Rate
Current
Benchmark

8%
15%

Of workers within the Rail sector are women (down from 17% pre pandemic)
Building the case: our workforce

• Current attrition rate is between 10 and 15 percent (compared to a ‘usual’ attrition rate of 5 to 8%). Demand for replacement alone to 2030 will be around 50,000 workers not accounting for growth and skilled project staff who’ll be needed to deliver capital investment programmes;

• The sector employs fewer than 1% (2,000) new Apprentices per annum, a figure we need to double;

• 40% of active trainers will reach retirement age by 2030.

• There are less than half the number of workers under 25 in the sector now compared to 2016. Over the 5-year period the trend shows the decline from 10% to 4% of the overall workforce;

• Analysis over the last five years or so has indicated that the proportion of women within rail remains steadfastly below 20%.
## Building the case: problem statements

| Problem                                      | Analysis                                                                 | Mitigation                                                                 | Impact                                                            |
|----------------------------------------------|--------------------------------------------------------------------------|---------------------------------------------------------------------------|                                                                  |
| Skills shortages in key disciplines          | Supply chain won’t invest in skills to the right level. Delivered less than half of the new entrants we need (at various skills levels) | Systematic delivery of new entrant and upskilling programme for the whole industry 5,000 candidates over 3 years | Wage inflation halved                                             |
| Insufficient management capability e.g. digital, commercial, finance | Major barrier to modernisation, innovation and productivity | Major programme of supervisor and middle manager training 24,000 managers 15,000 supervisors – only 20% trained – we will take it to 50% Connected leaders | Managers are better able to deliver. Productivity improved by 3% |
| Rail less attractive to young people         | Only 3/10 think of a career in rail due to inaccurate perceptions        | Digital and other marketing, railway 200, influencing and schools (teachers and curriculum) Routes into rail | Double the number of young people pursue relevant courses          |
| Diversity and social value lower than they should be | Evidence shows that outreach and a joined up pipeline works             | Physical outreach programme Pre-apprenticeship/traineeship programme Work experience programme | 20% of new recruits come from a disadvantaged background. At least 30% are female. Increased BAME representation in engineering disciplines |
| Modernisation hindered by narrow skill sets  | Rail skills sets at both technician and manager level are too narrow. We need staff to have a broader skill set to cope with new technologies, one p&l, and integration of track and train operational thinking | Short length training programmes to multi skill existing staff and teams. New lattice of competence to broaden and develop staff and encourage them to invest in their own development Affects 40,000 Technicians and 24,000 Managers | 3% to 7% improvement in productivity |
| Training market failure                      | Not enough planning to confirm demand to training providers. Insufficient investment in training from industry. A skills shortage in the training market. Not enough use of technology in training to access to training. | Improve workforce planning. Create a network to inform and update training providers on need. Business cases to improve investment from industry in training. | Not being able to train people either on time or in sufficient numbers will limit our ability to meet productivity targets and cause overruns |
A strategic approach: Our aims: inform and inspire

- Encourage children aged 5 – 16, to choose STEM Subjects
- Promote our role models, attract to rail
- Attract to Network Rail: Brand, adverts, campaigns
- Change perceptions of rail, and rail roles, improve industry image
- Increase Diversity

“you can’t be what you can’t see”
Supporting the wider strategic agenda

- We aim for a significant proportion of our schools to have free school meal (FSM) % higher than the national average.
- NSAR will measure the economic value (ROI) of our future work experience programmes.
- Some of our campaigns focus on a particular protected characteristic, e.g., My Skills My Life for females and Talent Foundry for social mobility.
- We’re working on ways we can better represent all areas, e.g., LGBTQ+ or disability to young people, for our future campaigns, e.g., story books.

- 25% of all young people we interact with for each programme to be from a black, Asian or minority ethnic background.
- 50% of all young people we interact with will be female.
- Over the next year, we will measure and increase (if we need to) the diversity of our role models. We are collaborating with employee networks to improve the diversity of role models.
- We aim for a significant proportion of our schools to have free school meal (FSM) % higher than the national average.
5,000 books distributed to young people aged 6–8 at stations across the country.

123 colleagues signed up as STEM ambassadors in the last year.

3,923 people have visited our Early Engagement website.

4,469 primary school aged children took part in the Primary Engineer Rail Project programme from 82 schools, 70 engineers volunteered and 82 teachers trained to deliver the programme.

250 colleagues have volunteered in our national programmes and events.

Big Bang Fair. 1,142 young people visited the Network Rail stand over 3 days.

Students achieve more. Our support reaches 160,000 young people through Network Rail supporting national STEM outreach activities, increasing engagement, aspiration and attainment.

125 young people attended a Network Rail Bring Your Child into Work Day, Internal STEM session or Work Experience Programme.

3,923 people have visited our Early Engagement website.

Our funding supported 400 schools to participate in a STEM outreach activity.

140 children from 7 schools took part in our Track to the Future mentoring programme.

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How can I sign up?

To sign up, please contact earlyengagement@networkrail.co.uk

There were 20,669 meaningful interactions between Network Rail role models and young people in the past academic year.

We have supported 10 national schools' programmes and delivered 47 events over the last academic year.

Demonstrating ROI - data September 2022 - July 2023

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Future proofing: Building a scientific approach to talent pipeline

STEM Subjects taken per annum
- GCSE – 725,000
- A Levels – 300,000
- Degrees – 175,000

Industry requires...
- Level 2 = 0.3% pa
- Level 3 = 2% pa
- Level 6 = 1% pa
Questions ?