

# Network Rail is changing young people's perceptions of engineering and the rail industry



## Background

Network Rail owns, operates and develops Britain's railway infrastructure: 20,000 miles of track, 30,000 bridges, tunnels and viaducts, and thousands of signals, level crossings and stations.

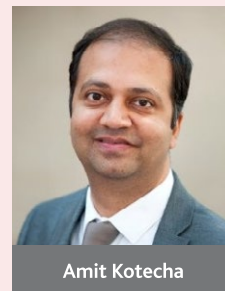
Their purpose is to get people and goods where they need to be, by running a safe, reliable and efficient railway.

Amit Kotecha is Network Rail's Senior Campaigns Manager, based within the HR function of the business. He has responsibility for leading their STEM outreach activities. Here, Amit describes how Network Rail supports the STEM Ambassador programme and the impact that his team of STEM Ambassadors has.



## The STEM Ambassador journey

"Network Rail has a long-established relationship with the STEM Ambassador programme. STEM outreach work is an important business priority for us. **The STEM Ambassador programme has provided us with the perfect mechanism through which we deliver our outreach.**



When a colleague signs up to the programme, STEM Learning provides them with a full DBS check and some important initial training. Our staff get a good insight into why STEM is important and why engaging young people in this way matters so much. The programme then provides us with volunteering opportunities, which our Ambassadors do alongside the STEM programmes we deliver. We currently have around 650 active STEM Ambassadors.

Our work as STEM Ambassadors is important. **We want to change young people's perceptions of engineering and the broader rail industry** – we know that young people don't see it in the way that we want them to. Girls often think it's something for boys: male-dominated, with jobs that aren't interesting, full of people in high-vis jackets on the tracks! But Network Rail is much more than that. There are so many exciting careers we can offer which are not restricted to engineering, and we know there are future skills gaps in the data and digital aspects of our business which are just as important. We want young people to see how diverse our workforce is. **We have a saying in our team: 'you can't be what you can't see', and that's why we want more of our role models to get involved and talk about routes into rail, particularly telling students about hidden roles like our environment and biodiversity managers, data scientists and drone pilots!**

The STEM Ambassador programme aligns very closely with our values, and 'putting passengers first' is the most important of these. Our passengers come from very diverse backgrounds, and we want to ensure that this diversity is represented and reflected in our workforce. We set diversity and inclusion targets for each of our STEM outreach campaigns and programmes, and we reach out to minority ethnic groups or schools in socially deprived areas and encourage them to take part. The hope is that they will come to work for us in the future.

We value our staff volunteering as STEM Ambassadors. It's something that they can include in their objectives and something we discuss in their performance reviews. Our apprentices and our graduates are set STEM objectives, and **all Network Rail employees are allowed up to five days a year to use for volunteering activities. What a great way to use those days – to take part in STEM outreach with young people!**

Our STEM outreach activities are well-organised and co-ordinated. We have a STEM lead for each region who has an overview of the work done by our STEM Ambassadors, and I manage an annual calendar for our STEM programmes which sets out the outreach opportunities available for our staff. I share this calendar at the start of the year and as each event approaches, I send out communications to recruit volunteers.



Our STEM Ambassadors do very varied things, working with young people from Reception up to age 16.

We support lots of national education programmes, such as The Robotics Challenge. For this programme, STEM Ambassadors could be mentoring groups of students and they will go into their school every couple of months, talk to the young people about their jobs, find out about the robot the students are building, share ideas, inspire them and – importantly – encourage them to think outside of the box. We provide judges for competition heats and finals too.

We invite schools to come into our buildings – our depots and offices – and we get our STEM Ambassadors to talk about the varied careers available in rail, to showcase the projects they are doing, and to run question and answer sessions.

Some of our STEM Ambassadors represent Network Rail at exhibitions, careers fairs and large national events such as the Big Bang Fair. They often organise their own outreach activities in schools local to them, or they sign up for opportunities facilitated by our local STEM Ambassador Hub. We also have STEM Ambassadors who volunteer as mentors to young people, using materials produced by us centrally.

We also work with the wider rail industry, such as VolkerRail and HS2, teaming up with their STEM Ambassadors. **It's an excellent opportunity for collaboration and together we can give young people access to the broader rail industry.**

It is important that we make it as easy as possible for our staff, as they volunteer as STEM Ambassadors on top of their day jobs. We match our STEM Ambassadors to our programmes carefully, so that we provide relatable role models for young people and so that they can learn from people doing the actual jobs they are talking about – so whether you're a data analyst or an engineer, you won't have to learn anything new to be able to run your outreach activity.

During the pandemic, we had to move our outreach work online and deliver virtual activities instead. It made things harder – lots of what we usually do is very hands-on, like when we are helping the children to build a robot – but some things worked really well, such as judging competition heats or getting students to present what they've made to us online.

# Making an impact

Our STEM Ambassadors make a huge difference to young people. We do a lot of monitoring and evaluation to measure our impact – we check their perceptions and knowledge of our industry at the start and end of our activities, and we always see that they leave with a much better understanding. **The questions that students ask us show their genuine interest – before we meet them, they have no idea about the careers we can offer, and we can see their perception really shifts.**

**Volunteering as a STEM Ambassador is just as important for our staff too.** We ask them for their feedback, and they always talk about what they have done with a real sense of achievement. They have promoted their careers to young people, they've increased their confidence and they feel like they're making a difference.

Some of our biggest successes come from helping young people who have got stuck about their future job options and need some help with signposting. Our STEM Ambassadors can offer genuine advice – they can show them how to move on and the choices they need to make to access an exciting career.

**I am always putting out a call to action to sign up to the STEM Ambassador programme among my peers within the rail industry. It's something I definitely encourage other people to do!"**



## How to get involved

If you have been inspired by how Network Rail supports the learning and development of young people across the UK and you'd like to know more, please contact us at [employer@stem.org.uk](mailto:employer@stem.org.uk) or visit [stem.org.uk/stem-ambassadors/partner-info](https://stem.org.uk/stem-ambassadors/partner-info)

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