

POWERING PRODUCTIVITY

THE CASE FOR GREATER DIVERSITY



STEWART THORPE OUTLINES WHY RAIL NEEDS TO DRAW ON NEW POOLS OF TALENT

In a quiet side street office in the heart of Westminster, a team of data analysts gazes into a crystal ball to predict the makeup of rail's future workforce. At its fingertips the team has collected anonymised data on 237,000 people by drawing on databases from the safety passport system Sentinel and industry employers that date back to 2016. Details such as job role, age, gender and location are entered into a specially designed programme that generates a map of Britain, highlighting where rail's skills gaps and shortages are most acute.

For example, it knows there are currently 288 male train drivers based in Wales over the age of 50 and that, in 10 years time, 613 will be needed in Wales in total.

This tool, referred to as the 'Skills Intelligence Model' (SIM), not only looks at today but, by looking at how much and where investment is going into the rail industry, it is able to forecast how many people the industry will need, what skills will be needed, where they'll be needed and, crucially, when.

WHAT IS THE DIFFERENCE BETWEEN A SKILLS GAP AND A SKILLS SHORTAGE?

A skills shortage relates to the number in a particular job role (signallers, for example), whereas a skills gap describes limitations in their skillsets

THE BIGGER PICTURE

The remarkable resurgence in the UK rail industry has seen passenger numbers double in the last 20 years, it's a fact we're all familiar with.

What hasn't been reported so widely is the number of people employed by train companies alone has increased by almost 50 per cent in that time. With demand for rail services set to increase further, so will the need for more staff.

Added to the equation are further trends that complicate the picture for rail's future workforce in the short and long-term. For example, rail has an ageing workforce caused by a lack of investment in training and skills over the last 20 years. Around 22 per cent of the workforce is older than 50 and the National Skills Academy for Rail (NSAR), which developed SIM, predicts this could result in as many as 50,000 people retiring by 2033.

Furthermore, as much as 20 per cent of the rail industry workforce consists of non-UK EU nationals. For some organisations, particularly those in London and the South East, that figure is as high as 50 per cent. Brexit, therefore, threatens the industry's access to this pool of skilled labour from the EU.

Finally, a shift in the types of skills that are in demand - from manual to digital caused by technological advances and digitisation - will change the make-up of jobs and put pressure on upskilling and recruiting people with higher skillsets.

These are all changes that influence the SIM forecasting tool.

Neil Franklin, head of skills intelligence at NSAR, leads on this work to predict the future workforce for the rail industry. He said there are three areas in particular in which rail faces the most acute skills shortages: signallers, train drivers and maintenance technicians. Simply put, overall, rail will need around 50,000 extra people by 2033.

If it doesn't succeed in tackling the skills shortages and gaps, labour costs will be pushed up, increases in productivity prevented, project timelines delayed and the industry's ability to deliver a railway to meet future growth requirements compromised.

"By not investing in skills, what we're actually doing is worsening our productivity perspective," said Neil. "Because we have an ageing workforce, if people retire and that well of capability is not being replenished, we're relying on fewer and fewer people to do the same job, which basically means we're paying them more because we don't have a choice."

"What that means is we become less and less productive. So what we should be doing is replenishing the reservoir of talent, either with apprentices or with people from the armed forces or people from other sectors. At the moment, our reservoir is diminishing rather than increasing, which means we're being less and less productive."

It's a big task, and it requires a change in approach.

FISHING IN NEW POOLS

The railway workforce has long been made up of predominately white, middle-aged men, but if it wants to tackle the skills challenges, it needs to widen its reach and attract the very best talent.

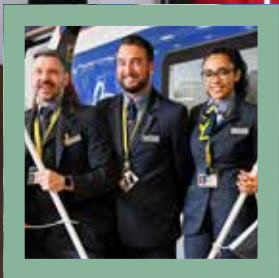
This includes recruiting and retaining people of a black, Asian and minority ethnic background and women - who make up less than 15 per cent of the workforce and have previously been underrepresented. It is exactly why this special issue of RailStaff focuses on women, who are one of a number of key talent pools for the industry to fish from.



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Mark Carne, ex-CEO of Network Rail, alongside colleagues Janice Crawford and Becky Lumlock.

ADVANTAGES OF GENDER DIVERSITY

Not only does rail need women and their skills, research has shown that more gender-diverse workplaces perform better than imbalanced teams.

Former chief executive Mark Carne wanted to find out if this held true for Network Rail and prompted a research project looking at its teams. It found teams with 20 per cent or more women - the "critical minimum threshold" - were more engaged, more collaborative, safer and more motivated. And in teams with up to 40 per cent women these scores were even higher.

Mark said: "When a workforce is made up of similar people – when they all think the same and have the same background – it encourages conformity and stifles creativity. It doesn't help us to challenge the way we've been doing business for decades. It doesn't help us to drive up productivity and offer better value for money. It doesn't help us to keep making our railway safer. It doesn't help us get better every day."

He added that "diverse, gender balanced teams" were "better in every way". "The prize is huge" he concluded.

A SPECIAL EDITION

The research above stresses exactly why diversity is important, not just from a cultural standpoint but from an economic one too.

This issue, which has been shaped by three railwaywomen who have helped to edit its content, focuses on women in the rail industry, highlighting issues that will hopefully inform, educate and inspire change when it comes to attracting and retaining the very best talent.

Researching this topic has been an eye-opener. Diversity has improved considerably since the mid-19th century, when women disguised themselves as men to secure lucrative work constructing railways. Nevertheless, it has so much further to go.

The following pages highlight pioneering women, work organisations such as Network Rail, GTR and WSP are undertaking to recruit and retain more women into their workforces and what lessons could be learnt from other industries.

I've learnt a lot over the past few weeks but, above all else, I've come to realise the historic assumption that the market will take care of the provision of skills is no longer safe. We must all act now. ●

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MEET OUR GUEST EDITORS

ONE WOMAN FROM THE SUPPLY CHAIN,
ONE FROM NETWORK RAIL
AND ANOTHER FROM THE DRIVER'S CAB;
TOGETHER THEY HAVE HELPED TO SHAPE THIS ISSUE



ANNA DELVECCHIO

DIVERSITY CHAMPION,
INDUSTRY LEADER AND ROLE MODEL

You can't underestimate the influence of good role models. Anna Delvecchio, Amey director and Rail Sector Deal co-lead, had two.

The first was a commercial account director - the same type of role Anna now holds - when she was a sprightly 16-year-old apprentice. The second is the Princess Royal - who she describes as an "exceptional ambassador for Great Britain".

Anna, who is becoming a role model herself, recently returned to Amey after a three year secondment to the Rail Supply Group as programme director, taking on the additional voluntary role as Rail Sector Deal co-lead during that time.

Only seven sectors successfully negotiated sector deals with the government, an achievement Anna takes great pride in.

"We had many individuals saying that we wouldn't achieve it, that we were not capable, as a sector, of coordinating ourselves," she said.

"We created, negotiated and secured it against other sectors. It is a really good news story for the sector, so I would have to say that's one of my biggest achievements, as well as taking an apprenticeship in the profession I have gone on to enjoy for over 20 years."

Hailed as a key milestone in the government's modern industrial strategy, the Rail Sector Deal is intended to deliver more for passengers, create jobs and drive economic growth across the country.

For Anna, the deal was one of the proudest moments from her 20 years of working in commercial and supply chain roles in the transport sector, a journey that began in 1997 when she joined Railtrack as a buyer for Major Projects in the Great Western region.

"I'm driven by challenges and I knew it was going to be a challenge to co-ordinate the entire sector," she said.

Anna climbed her way up the ladder, building up her knowledge of the industry and its assets through working in the regions and, centrally, in both a contractor and client environment.

ACHIEVEMENTS

When she's not working with the Rail Supply Group or for Amey, Anna is a champion for greater diversity and inclusion across the sector.

She set up Women in Rail's 'South' group, sits on the board of Women in Transport and, through working with the Chartered Institute of Logistics and Transport, launched the Big Logistics and Transport Diversity Challenge.

In June 2019, the London Transport Museum unveiled a portrait and plaque of Anna, appointing her as a patron of the museum and recognising her as an iconic woman of

transport. Anna was also named Woman of the Year at the 2018 Everywoman in Transport & Logistics Awards, in recognition of her work supporting others and helping to inspire the next generation to be part of these sectors.

"For me, many years ago, I attended a transport meeting and, when I walked in, there were 300 in the room with perhaps less than five or six women there and no BAME," said Anna, explaining how she came to become a champion of greater diversity overall. "It was a real turning moment for me. It was 'Do I roll my sleeves up and help the sector make it more diverse or is it just someone else's problem?' I decided that I would voluntarily try and champion change to make the sector more diverse."

Anna said that the perception of rail and transport as a male profession is holding the industry back when it comes to attracting a more diverse workforce.

Since having her plaque in the museum, Anna has received numerous messages from people wanting to find out more about transport.

Anna said: "To inspire others to want to join a great sector in transport and in rail, that will be one my biggest achievements but we are just at the beginning.

"Role models play an important part and, as a judge of the 2019 RailStaff Awards, I'm looking forward to identifying a new set of role models that can help deliver and champion change.

"Looking ahead, I'm involved in a number of exciting projects with the London Transport Museum and CILT [the Chartered Institute of Logistics and Transport]. In addition I'll be supporting the All-Party Parliamentary Group for Women in Transport to highlight best practice in recruiting and retaining women in the sector." >>



INGE-SARAH ANDERSEN

ENGINEER, STEM AMBASSADOR
AND RISING STAR

If the first 18 months of Inge-Sarah Andersen's time at Network Rail is anything to go by, she has a promising career ahead of her.

The trainee engineer is entering the final months of her graduate programme and has made an impression on colleagues with what she has achieved in a short space of time.

In 2018, she was a key player in the launch of Fast Trackers, an outreach programme that gave 150 students, from areas with the lowest uptake of further education, an insight into a career in engineering. Inge-Sarah enlisted the support of industry leaders such as David Waboso, former managing director of the Digital Railway programme, co-ordinated internal and external communications and organised volunteers to help inspire and mobilise the engineers of Generation Z.

On its 2019 return, Fast Trackers was even bigger and better, this time reaching more than 300 students.

MENTORING THE CEO

Ambitious and eager to seize opportunities to make a difference, Inge-Sarah threw her name into the hat to reverse mentor Andrew Haines, chief executive of Network Rail, when he joined at the end of 2018. Diversity and inclusion (D&I) is a cause close to her heart and one she is passionate about improving. She was one of 60 people to put themselves forward and, after going through a testing application and interview process, she was chosen for the role.

Inge-Sarah and Andrew now meet once a month, although Andrew's busy schedule sometimes gets in the way, to share their experiences and thoughts on D&I improvements at Network Rail.

Both of these roles are in addition to her ongoing work placements as a graduate electrical and electronic engineer - currently as part of the signalling team working on East West Rail.

Unsurprisingly, Inge-Sarah featured in the 15-person shortlist for the Graduate of the Year category at the 2018 RailStaff Awards, thanks to the backing of colleagues. Although she narrowly missed out on the top prize to a fellow Fast Trackers organiser, judges identified her as one of two highly commended entries.

A HAPPY ACCIDENT

Since her childhood, Inge-Sarah has wanted to turn her passion for science into a career. Initially she wanted to become a plastic surgeon and, later, when she took



'...it clicked very quickly for me that working in rail means there are lots of exciting opportunities...'

a greater interest in physics, she sought to join academia, applying to join the University of Birmingham as her first step.

Unfortunately, a required A* grade from her A-Level maths studies did not materialise and she was unsuccessful in her application. Before the news had even reached Inge-Sarah, the University of Birmingham had assessed her credentials and suggested she explore engineering instead.

"Before I had even picked up my UCAS results, I had a phone call from the electrical engineering department at Birmingham saying 'Hi. So, you didn't make your maths grade, so we're offering you a place on this course instead.' I was like - 'Excuse me? I've not heard any of this,'" she said.

"I realised that if I'd have known what engineering was, I would have chosen it. It's essentially applied physics. People talk about engineering, but they don't say what it is.

"If you have a pure physics degree, you either work as an academic or a teacher, or you go into something that's not really related at all - with engineering that's not the case."

Enrolling onto the University of Birmingham's electrical and electronic engineering course, she developed an interest in rail under the tutelage of professors such as Clive Roberts, who is also a director for the Birmingham Centre for Railway Research and Education.

She added: "Clive would use examples that were railway-based in class - very much subliminal advertising - it just got me thinking that it seemed really interesting.

"In the first year of university, he took about 10 of us to China for two weeks, which was amazing. It was a little bit of a tour of China, but it was also helping Chinese students to build robots to get credits to pass their summer class.

"When I was there, it clicked very quickly for me that working in rail means there are lots of exciting opportunities, the demand is worldwide, and you get to travel. So, from a very simplistic young person's point of view I thought 'This is cool, I'd like to find out more about this.'"

Inge-Sarah hasn't looked back since.

OVERCOMING ADVERSITY

The story of how Inge-Sarah fell into and then fell in love with the rail industry is one many will recognise. But the struggles she went through as a youngster to get to where she is today is a story many would not.

From the age of 11, Inge-Sarah has been a young carer for her mum, who has fibromyalgia, osteoarthritis and rheumatoid arthritis.

Aged 16, the ongoing battle of juggling studies with her responsibilities at home became too much and she left the education system to look after her mum full-time.

It was only when she turned 19, with her mum's words of encouragement ringing in her ears, that she decided to return as a mature student to tackle her A-Levels.

Those difficult years have shaped her mindset and fuelled her drive and determination to this day.

Inge-Sarah said: "I was a young carer and my mum was a single parent, she was disabled, there were loads of times when we didn't have any money, we lived in a crap area, I'm an ethnic minority and I'm a woman. These are all things that, if I hadn't have had the right support from my mum, would have 100 per cent have held me back. Statistically, people who are just a little bit like me don't make it in life.

"I had my own blip; I was not going to make it. I managed to climb out of that and thought there are so many young people who don't.

"My background is a little unique, as in my mum already had that self-belief. But, if you come from that background, and maybe it's generations and generations of those backgrounds and you're already so downtrodden by humanity, society isn't structured to help you."

Inge-Sarah admitted one day she would love to take on one of the top jobs in the industry, to become chief executive of Network Rail, or to sit on the board of a major company in the rail industry, so she can impart real change. In the meanwhile, however, she is determined to instigate change wherever she can.

She added: "Getting into a position where people start to take you seriously, and then getting into contact with people in power and getting to influence people in power, it feels irresponsible not to try and do something with that."

NIKKI WILLIAMS

SCUBA DIVER, TRAIN DRIVER
AND ADVENTURER

Of the 128 Virgin Trains drivers based out of Euston station, only three are women. Not that it matters to Nikki Williams. Nikki has been undertaking a demanding programme of training since joining the train company in July last year and is almost ready to operate Pendolinos along the West Coast main line solo.

"For me, it's been very positive," said Nikki. "I don't feel [my gender] has had any relevance. Transitioning into this job has been fantastic. The support that I've had has been great, I just generally get the feeling that people look out for each other as a whole."

A COLOURFUL CV

Her job may be bound by rules, restrictions and routes, but her career to date has not been.

Between university studies and hopping into the train driver's cab, Nikki spent 18 years living a split life. In the summer months she worked as an ice cream lady, driving around the country to earn and save as much money as she could.

Come winter, Nikki would pack up her things and, with the savings from the seasonal work, head abroad to take part in unpaid conservation work while also picking up paid-for work as a divemaster and scuba diving instructor.

She flew to South Africa to help with the rehabilitation of injured penguins and travelled deep into Nicaragua's tropical rain forest to study the area's rich biodiversity.

Nikki admits it was a bit of a strange lifestyle but it's one that enabled her to chase her dreams and journey all over the globe.

TURNING POINT

In 2017, Nikki married her partner and together they decided to settle in the UK.

With an undergraduate degree in geography and a master's in conservation and protective area management, she assumed she could find a well-paid job in this specialist field. But she was wrong.

It was after being offered a position with a starting salary of £15,000 that she decided to think outside of the box and beyond the reach of her university education.

"I had a chance conversation with my mum's best friend's daughter, who basically said she was in a very similar position to me. She had a PhD in her field, so she was even more qualified, but was struggling to find a reasonable job.

"She said 'I'm going to try to become a train driver, it's supposed to be a really good job.' By that point, I was looking into anything that I thought I might enjoy that would pay better – so that I could live!

"I love driving – always have done, always liked being on a journey – so I thought I might enjoy that.

"That night I went onto the internet, looked up train driver jobs and the Virgin train driver apprenticeship came up.

"It was only offering £15,000 to start off with, but that was for a year's apprenticeship with the provision that it would go up. I had seen jobs for guards and they started at £26,000 going up to £36,000. I figured the driver must get paid more, so I went for it. And the rest, as they say, is history."

Nikki didn't secure a place on the apprenticeship scheme but joined Virgin Trains soon after as a trainee.

IN THE DRIVER'S SEAT

Speaking to RailStaff exactly one year to the day since she joined the rail industry, Nikki said: "I love it. I really didn't know what to expect. I kind of went into it quite blind and hoping I'd enjoy it and I've enjoyed it much more than I expected.

"There's a lot to learn, it's quite overwhelming at times with the amount of information you need to know, but it's been fantastic."

Nikki said she had never thought about becoming a train driver and believes efforts should be made to change people's perception, from a young age, of career possibilities.

"It is about opening people's minds that anything is an option if it suits you and that your gender isn't something that binds you," she added.

Travel has played a big part in Nikki's life and it continues to do so along one of the busiest stretches of railway in Britain, where she hopes to spend the rest of her working years.

Nevertheless, Nikki hasn't ruled out eventually changing depots or training to become a driving instructor – building on her past experience teaching English in Japan and leading scuba diving lessons all over the world.

"In this job it is very easy to make a mistake, so you've got to make sure you do your job well every day," she said. "It doesn't matter what happened yesterday, you're only as good as your drive today. So, it's making sure you keep on top of your game.

"Fingers crossed, this is me now. I want to retire in this job." ●



'For me, it's been very positive.'