

'WE LIVE IN A VOLATILE WORLD... BUT WE'VE GOT A VERY BRIGHT FUTURE'

It's all change on the Tyne and Wear Metro. Nexus Chief Operating Officer Martin Kearney shares his current challenges - and infectious enthusiasm for the future - with Simon Johnston.

After managing major projects and transport operations on the far side of the world, Martin Kearney arrived in the North-East to head up Tyne and Wear Passenger Transport Executive Nexus in late January 2020.

In less than two years he admits that he's had to 'roll his sleeves up' and get to grips with the effects of a pandemic, network-crippling weather events, and funding crises. Yet the same period has also seen the signature of a contract with Stadler to supply an all-new train fleet, and work on not one but two new depots.

At the same time, a significant project to double-track sections of the network has begun, designed to unlock capacity, increase network resilience, and transform services when complete in early 2023.

With plenty more ambition for the future, in a wide-ranging discussion Mr Kearney now shares some of those experiences with *TAUT*...

Taking the reins in a pandemic...

I had six weeks from joining to the first lockdown, so I came in and was trying to learn the business, talking to as many people as I could, getting yourself known etc. Suddenly, 'bang', we're into lockdown.

Even though our office staff had to work from home, we still had to operate the Metro, buses and ferries as normal. We had to keep

going and we never lost a day of service, which in itself felt like a major achievement. [As an illustration, in maintaining a near-full service, at one point Metro was losing around GBP900 000/EUR1m a week].

I could say it was terrible, but in some respects it was a real opportunity to push myself to the forefront and show that I wasn't afraid to get involved. A lot of that 'slowly, slowly, soak it up' disappeared and we had to get different forms of communication going to make sure people knew what was going on and to keep people together.

Now, we believe that we're the fastest recovering transport operation in the UK. That doesn't mean we've got better numbers than anyone else, as we're at about 87% of pre-COVID patronage at the moment but our ridership came back so quickly once the final lockdown dropped. I think that shows not just that we have a good service, but how much people really rely on the Metro. It's a key part of everyday life for so many people in the North-East and that taught me a thing or two about the importance of where I am, and how quickly you have to adapt.

We're trying not to look back, but things are a little different. Weekend patronage is higher than before COVID, and people's

routines are different. The peaks have come back, but they are certainly more spread out, and we're seeing pronounced differentials on Mondays and Fridays specifically.

We've increased the amount of customer service advisors to make sure our gatelines are operational until later at night and this marks a significant increase in our front-line teams; it was a necessity and it's made a real difference to passengers. So what we're seeing is an improvement in revenue take, which is really, really positive.

Sadly, we've also seen a lot more anti-social behaviour. This isn't just on the Metro, this is everywhere, but we had to take action so we've introduced a security team specific to the Metro who are working alongside the police. The police can take action which may be more around the arrest, while our security teams are dealing with things like refusal to pay a fare and stamping out lower-level anti-social behaviour before it becomes a police issue. That's been another huge success.

On the 'bounce-back'...

We've experienced a percentage differential with Metro being above the recovery of bus and ferry and heavy rail. I don't think that's



◀ LEFT: Nexus COO Martin Kearney (left) and CFO John Fenwick inspecting the first of the new Tyne and Wear Metro fleet at Stadler's factory in St. Margarethen, Switzerland in June.

▶ RIGHT: Face-to-face staff engagement is one of Mr Kearney's favourite activities, although he admits that getting round each and every one of Nexus' 1000 staff is a challenge.

"We've recovered so well because the Metro is convenient, good value, and people need it."



NEW FLEETS, NEW FACILITIES

The system's original 90 *Metrocars* were built by Metro-Cammell to a design influenced by West Germany's high-floor *Stadtbahnwagen-B* developed in the early 1970s. However, after over 40 years of service they are showing their age.

On 28 January 2020 came the announcement many were waiting

for with the confirmation of Stadler Rail as manufacturer of the new fleet, including maintenance responsibility for 35 years, disposal of the original rolling stock and construction of a new depot on the site of the current South Gosforth facility.

An additional temporary facility at Howdon has been built, opening in

November 2020. This is used for the cleaning and base maintenance of the train fleet while the main depot is being rebuilt.

The new 59.9m five-car trains promise up to 30% improvements in energy efficiency - using onboard energy storage and enhanced regenerative braking - greater

capacity (up to 600 passengers per train), air-conditioning, USB charging points and automatic sliding steps at all eight doors to improve accessibility.

Built in St. Margarethen, Switzerland, the first of the new fleet is due to arrive in the UK in late 2022, entering service in July 2023.



▲ Delegates to this year's UK Light Rail Conference were given a guided tour of the ongoing works at Metro's existing South Gosforth depot, which dates from the 1920s. This will soon be replaced by an all-new GBP70m (EUR80m) facility. N. Pulling & Nexus

particularly changed. Our ferry service is different as it can be very much weather dependent, but it's also doing quite well.

In general terms I would say we're ahead of the rest of the industry, and we've recovered so well because the Metro is convenient, good value and people need it.

I use the Metro every day. It's such a good alternative to bringing the car into town, which is expensive with parking charges, never mind the price of fuel at the moment. This brings us into an economic discussion, which is very real for people. The Metro serves quite a high demographic of households without access to a car, so add the fact that every journey brings GBP8.50 into the economy and you see what makes the Metro so valuable.

I don't make light of things like this, but are we going to see patronage increase as power bills go up and it's cheaper to come into the office rather than pay for heating and electricity for those working at home?

We are also in the middle of challenging pay talks, so we have to remember how difficult life in general is for our people, and for our region right now. We're looking at the highest inflation since the 1980s, we're expecting further interest rate rises, and power

bills are going to shoot up in the next couple of months - and perhaps again in January.

We are trying to do our bit to make things easier for people though. We've just fully introduced the scheme where any adult paying a full fare can take up to three children for free on the Metro or the Shields Ferry, at any time, which I've not heard of anybody else doing. We implemented this last year and it has actually helped us to improve revenue. There are some great days out in the region, and it helps families enjoy the many attractions we've got in the area.

On the new fleet...

Going by the project plan, the full fleet will be in service by December 2024.

The first train arrives this year, then we have the testing programme and all the driver training before the first one goes into service next summer. I was in Switzerland at the manufacturing plant a couple of months ago and saw the first one - what a phenomenal difference they're going to make.

You often get a bottleneck, especially if you get bunching of new trains arriving as the project flexes, so making sure you've enough units in service to complete driver practical handling training is key. We've got an in-

depth plan, including our new driver training simulator which will help us manage that. There will be some challenges and we have to make sure the whole team is prepared for the transition period.

Obviously there will be a significant overlap and this is especially important when we get into maybe a 50/50 split between the new and old fleets. These are 40-plus-year-old trains, so do we need better reliability? Yes, but we've had a successful transition of the maintenance to Stadler and we've got a fantastic relationship. Not all of the current trains are operating at a level I'd like, and the miles per technical fault is not great, but it's not terrible. It's what you expect from a fleet of that age.

Understanding what our drivers are going through moving from the old to the ultra-new is interesting. If you compare today's trains to what we're going to have, wow, what a change. The current cab is more like a cupboard, but the new ones have all the equipment and comforts you'd expect from a new train.

One of the key additional advantages is that the new trains have backup battery power. So if we lose the overhead power or line for any reason, the trains are designed



▲ To prepare drivers for the incoming Stadler trains, a new driver simulator has been installed at Nexus' Learning Centre in South Shields.

“The current cab is more like a cupboard, but the new ones have all the equipment and comforts you’d expect from a new train.”

METRO FLOW

In the UK Government’s Budget statement of 11 March 2020 came confirmation of funding for an important new scheme to reduce journey times on a historic bottleneck and improve overall network resilience.

‘Metro Flow’ will see around five kilometres (just over three miles) of the Pelaw – Bede

line upgraded and electrified by December, eliminating three sections of single-track to allow inter-working on the same basis as the Sunderland line. Removing the final ‘pinch points’ on the network, it is forecast that Metro Flow will potentially boost capacity by up to 24 000 passenger

journeys daily alongside the introduction of the new fleet.

GBP95m (EUR106m) towards this long-awaited project came from the UK’s Transforming Cities Fund, some of which has been allocated to the addition of a further four Stadler trainsets to the 42 already on order.

to be able to move under their own power to the next platform. I don’t over promise at this stage, but in some circumstances that should help remove the possibility of having stranded trains.

Fixed electrification is still currently the most efficient power source, but we know that battery capacity is improving all the time. In the next eight to ten years we will have to see where we go, but we have it in our contract with Stadler that they must ensure the train is built in a way where it can be easily adapted in the future to allow greater on-board energy storage capacity as technology develops. This will allow us to develop further capability for running without overhead line power in the future. That could help with future extensions too as the savings on installation and maintenance of overhead could be huge.

We will be keeping an eye on how technology develops and taking advantage of it where we can.

New depots and Metro Flow...

In a parallel project we’ve got a brand-new depot opening later this year, which is designed around the new fleet. The total fleet replacement project is worth GBP362m [EUR420m], which includes a hundred million for two depots, the main one at Gosforth and the temporary satellite depot at Howdon. This is a fantastic stabling point, with pits and all the equipment to maintain the current fleet quite well there; it’s so good I want to find a reason to keep it!

Metro Flow is also well underway. A three-month blockade starts in September and although that’s going to be disruptive to customers initially, the long-term improvements will be huge. There’s three sections being double-tracked and electrified: Pelaw – Hebburn, which is 800m [0.5 miles]; Hebburn – Jarrow, that’s 1.4km [0.9 miles]; and Jarrow – Bede which is 600m [0.4 miles].

This isn’t stereotypical light rail, but we are going through residential areas so we’ve been out to 5500 households with letter drops because we’ve got to get the engagement with our customers right. This is another example of how we are quite different to other light rail networks, all on the back of our inheritance of a lot of former British Rail infrastructure. We also share parts of our network, so Flow is significant as at the end of this blockade we will be responsible for having 32-wagon dangerous-goods trains on our network. Could you imagine that going down George Street in Sydney, for example? Of course not.

The importance of engagement...

This is huge for me and I think it comes down to your own principles and background. There’s nothing better than hearing information from the horse’s mouth, actually going out and talking with people. Of course when you have 1000 employees, getting around everyone takes a bit of time...

I started my working life for British Rail on 10 July 1989 on GBP69 a week, and as a teenager I would do the station rosters at Leeds station. So there I was on a Friday morning in the shunter’s cabin – it’s not there anymore – with a bunch of guys who were



◀ Described as “the worst winter storm ever to hit the Metro”, Storm Arwen “savaged” the North-East in late November 2021 as 145km/h (90mph) gales felled trees and tore down overhead lines across the network. Amazingly, the trains were up and running again in less than 48 hours.

50, 60 years old and you learn quickly how to respect people, but also how to get your message across. These are the life lessons you pick up, and I love that side of my job.

Last night I left our drivers' mess room at around 7pm. I really enjoy just plonking myself on the seat so we talked about football, what's going on in the world, a bit of banter. But then we also talked about signals passed at danger, safety incidents, the pay talks, their real concerns.

It's important that we can talk honestly, so every minute of yesterday, where I'll have spoken to 50 or so people – nearly a third of our drivers – is worthwhile.

We've also set-up our senior team 'Connect' sessions where we talk openly about what's going on in the business. Are they challenging? Absolutely. But that's what you want as you get real questions, real answers and what we hear is just as important as what is said. If you don't have clear lines of communication, you don't have anything.

Why diversity is crucial...

At our senior team meetings there are still lots of people like me: white, middle-aged males. As an industry we have some diversity challenges, and this is so, so important as we've got a parallel recruitment challenge. This isn't unique to us of course, it's an issue right across the country in getting people to apply for jobs.

Twenty six percent of our workforce is female and that is nowhere near where I want it to be. We're beginning an exciting journey, we need to represent the communities we serve, but at the same time we want to change the way we think and we want to challenge ourselves.

I'm proud that although only 26% of the overall team are female, 37% of the leadership teams here are female, so we know some of the work we are doing is starting to head in the right direction. But the issue we have is especially evident in engineering roles. If we don't widen the net, we're going to have more problems as we go forward in recruitment because we are just not getting the applicants and cannot just keep trying to attract middle-aged white men.

I've had some incredible opportunities in my life. I've worked in New Zealand and Australia, managed big projects and done all sorts of things and worked with some incredible leaders. The best ones have said, 'Ask yourself a question every morning: Am I making a difference?' That sort of thing sticks with me.

Ultimately, you've got to have a reason why you do what you do, and one of mine is that I've got a six-year-old daughter who I want to have the same opportunities I've had. We have that duty for the next generation.

On network resilience...

How do you ably plan for the unknown?

We've learnt lessons from the storms earlier in the year, there's no doubt about that. I'll give the example of Storm Arwen. We had to stop-start service over that weekend and had so many different sections damaged by fallen trees. It wasn't just the high winds, it was also bloody freezing, just awful conditions to work in. Our network was savaged, but



▲ Over the past 12 years the Nexus Rail engineering team has renewed track, structures, electrification, and modernised the original Tyneside network to future-proof the Metro and prepare for the new fleet.

we were back up and running by Monday morning and I can't give enough credit to our teams here, their response was amazing.

The key lesson there was around vegetation management. We don't often associate this with light rail, but because of our style of network we suffer in autumn due to rail adhesion and delays. Yet with Storm Arwen it was also about trees coming down on overhead lines and the associated safety implications.

The problem with network resilience is always balancing budgets, but we've had to make that more of a priority.

Extreme heat is more interesting as no-one was really prepared for temperatures of 37°C, but again we've learnt a lot of lessons. We saw major disruption in July with things like sagging overhead lines, specifically in areas which we already know are in need of renewal, and although this programme continues we're always in discussions over Government support. But there are some easy things, like changing the balance weights to a more modern design to give it a lot more room rather than just digging out.

Again when it comes to the trains, the cabs are a 40-year-old design and the best air-con they've got is a window and a fan, but when you hit that level of heat all this is doing is blowing warm air around. The new fleet will have separate air-conditioning for the driver's cabs and the passenger areas so this will make a massive difference.

Immediate challenges and opportunities...

The biggest thing in front of me at the moment is the cost of high-voltage power. In the last three weeks alone, this has gone up by two-and-a-half million pounds, an overall increase of eight to nine million pounds this year. These significant costs are all unbudgeted and unexpected. The new fleet will reduce 30% of my costs in this area, and that can't come soon enough.

It's such a volatile market, but it's the same for people's own power bills as we talked about earlier. So we are trying to predict a future that's stable for us, where we've got these exciting projects but at the same time protecting our own teams who are going through the same challenges.

I said about journey trends going up on weekends, but will that continue? We seem to be in such a volatile period coming out of the pandemic, so it's about keeping a grip on that and making sure we've still got an attractive service as we go forward. So, it's very tactical from week to week, albeit with a view of the exciting projects over the horizon.

It's never easy and we could always do with more money. I could really do with more capital funding as, for example, I need to replace overhead lines faster than we're doing. But we're doing those renewals as fast as we can with the money we have and we have a good working relationship with the DfT.

So we have a solid plan, but that's today. Who knows where we will be in a few weeks or a few months?

On longer-term aspirations...

Expansion of the Metro is certainly part of the regional development plan and has regional support. I'm always interested in what we can do, for example a service to Washington, with its population of 67 000, and then the South Tyneside and Wearside Loop. These projects could give us so much more regional coverage, and we are progressing these schemes and building the case for funding.

A lot of that work is in partnership with Transport North East at this point. Nexus is funded by the five local authorities, whereas Transport North East covers seven local authorities so they are picking up the initial work, even though it's Metro, with our input along the way. **TAUT**

› All images courtesy of Nexus unless stated.