



Attracting custom: No 345038 calls at Custom House with the 10.23 Paddington to Abbey Wood on 24 May 2022, opening day for the Elizabeth Line. **ANTHONY GUPPY**

## From project support to top notch performance

With the Crossrail project effectively completed, MTR Elizabeth line's top priority is driving up punctuality, as MD **MIKE BAGSHAW** tells **PHILIP SHERRATT**

**L**ondon's Elizabeth Line has proved a huge success – of that there can be no debate. While future enhancements such as additional trains will continue to be discussed, for now the aim of delivering a cross-London rail service with a 24 trains per hour (tph) peak frequency has been achieved.

MTR's operating concession began in 2015, and since then the company has been supporting Transport for London with completing the Crossrail project and the delivery of the succession of timetable changes which have brought us to this point. With that journey mostly at an end, MTR Elizabeth line's key focus now is driving up performance on London's newest railway.

Mike Bagshaw joined MTREL in June 2018 as Performance and Planning Director, and after a brief period working at MTR UK he became MTREL's Managing Director in February this year.

In taking on the role, his brief is to drive that performance focus within the business. 'Ultimately we want to run the trains on time, keep our customers happy and run a great service – and do all of this safely' he says.

The good news is that performance is heading in the right direction. Mr Bagshaw instances the Saturday before our interview, when the Elizabeth Line recorded an impressive Public Performance Measure (PPM) figure of 98.8%. And customer satisfaction is also strong – at 82% it is trending as the highest in the TfL family.

The May 2023 Elizabeth Line timetable was the result of a significant amount of modelling, with MTR drawing on the expertise of Trenolab for this purpose, and the two organisations have since formed a joint venture to help apply Trenolab's modelling techniques to the UK network (p14, April issue). 'The modelling helped us determine which service

enhancements to go with and enabled us to design out the elements which didn't work' says Mr Bagshaw. 'We had five or six goes at it through that modelling process, and while it's always more challenging running more trains, we've shown the timetable works and we have the ability to deliver performance in the high 90s.'

The less positive news is that MTREL is not achieving its concession target of 95% PPM as a rolling average figure. 'It's not unachievable' Mr Bagshaw says of this target. 'I've set us a series of interim targets so we can work in achievable steps. First, we need to get to a stable 90% PPM, then we can aim for 92%, which is what the Trenolab modelling showed we would achieve, and then we'll aim to better that and reach the 95% target.'

### CHALLENGES

That 92% figure in the Trenolab modelling was based on

assumptions about the number of disruptive incidents – unfortunately, the Elizabeth Line is facing more disruptive incidents than was assumed. Mr Bagshaw says there are two key issues – Network Rail performance (primarily on the Western) and the number of train faults.

From a Network Rail perspective, performance on the Anglia side has generally been good. On the Western there have been more challenges, although Mr Bagshaw reports a positive trend. New Western Route MD Marcus Jones was previously MTREL's Train Service Delivery Director so knows well what the issues are, and Mr Bagshaw says the key challenges are to reduce the number of infrastructure failures, improve the time taken to get staff to site when there is an issue and to address regulation issues.

The regulation question points to the difference between the

Great Eastern and Great Western main lines as far as the Elizabeth Line is concerned. Out east, MTREL has almost exclusive use of the 'electric' lines, where there is an almost entirely consistent stopping pattern. On the west, Elizabeth Line services share the relief lines with a considerable amount of freight traffic and stopping patterns vary, and Mr Bagshaw says having freight trains presenting in the right slots is critical. The failure of Nuneham viaduct, between Didcot and Oxford, heightened this issue, as extra intermodal trains from the South Coast ran along the relief lines while repairs took place – and the Nuneham closure straddled the implementation of that key May 2023 timetable.

To help drive this improvement, MTREL has appointed Kirk Annetts as Director of Network Interface. 'He has a small team whose sole focus is to work with Network Rail on driving improvement in performance, both in real-time and from a strategic perspective' Mr Bagshaw explains.

Part of that strategic approach is to foster more of a 'metro mindset' for operations on the Western, an approach which is already embedded within Anglia Route. 'It's all about how you operate the railway and having sharp regulation' says Mr Bagshaw. 'We've seen green shoots of progress, but there is more to do.'

In terms of fleet reliability, Alstom continues to work on software upgrades to improve performance. While there is some frustration that progress has not been more rapid in this respect, Mr Bagshaw says there is plenty to be optimistic about. For MTREL's part, the operator is refining the way it responds to incidents – for example, determining which action is the best one to take if a train does suffer an issue. 'It's about getting the right message to the driver to help them get to the right solution first time – whether that's a reboot, reset or new start-up mission' says Mr Bagshaw. 'Some of the stoppages that take just a couple of minutes to resolve now used to result in a train being stationary for 40 minutes, which is a measure of the progress we've made.'

## FOCUS

While MTREL is working with its partners to reduce disruption caused by external factors, the

operator is also focusing on what it can do to improve performance.

This includes its contingency strategies during disruption. As frequency has increased on the central section of the Elizabeth Line, the value of access to Liverpool Street and Paddington main line stations as a 'bolthole' in case of any issues has been realised, helping avoid a build-up of stationary trains. This is often used at Stratford, for example, if a westbound train fails to make the signalling transition to automatic control before entering the tunnels. At Paddington, using the main line platforms can help contain disruption and avoid an issue on the Western having a major impact on the Shenfield branch.

Originally MTREL's strategy was to move to a position where all its drivers covered all routes, providing maximum flexibility. However, Mr Bagshaw says this approach has now been reviewed based on operating experience, and the aim is to ensure a majority of crews sign the routes into the high level platforms at Paddington and Liverpool Street.

MTREL has worked with consultancy CPC to develop a Crew Displacement Management Tool, which was Highly Commended in the Operations and Performance category at this year's Railway Innovation Awards. This provides immediate visibility to controllers of information about the identity of each train's driver, when their next break is due, which routes they sign and their contact details – a useful tool during disruption. Mr Bagshaw says the aim is to develop this further – the holy grail would be to enable a dynamic response which automatically recasts the train crew plan in a compliant way at the click of a button.

Another issue which has been addressed is delays caused by passengers taken ill on trains. Mr Bagshaw says the number of such incidents is higher on the London Underground than on the main line, a trend which has been mirrored on the Elizabeth Line's central section. 'We have to avoid trains being stopped for a long period of time' says Mr Bagshaw. 'We've worked with the London Ambulance Service on how we get ambulances to assist people. We've seen a major turnaround – now only 23% of incidents involving ill passengers lead to a delay.'

If there is a single location which is key to Elizabeth Line performance, it is Paddington. In particular, Mr Bagshaw observes that of the 24tph through the central section at peak times, half terminate at Paddington and therefore require rapid de-training. 'We've developed Formula 1-style plans to de-train and dispatch terminating services in less than one minute' he says. 'It's resource intensive in terms of the number of people who get on and sweep the train, but there isn't another way to do it. We've also worked to improve the information on the screens so terminating trains can be more easily identified.'

## COMMUNITY ROLE

While running a reliable service is MTR's top priority, the operator is also tasked with a range of community engagement activities. A key part of this is engaging with a broad spectrum of the communities the railway serves and ensuring the experience of a diverse range of passengers is taken on board. Simple things such as station gardens are received positively by locals and can help reduce antisocial behaviour.

The school summer holidays brought a busy programme of engagement with children and young people, including trips on the line and even cab rides. As well as boosting the image of the Elizabeth Line and public transport more generally, a key aim of this work is to inspire young people to consider a career in rail, and in particular to demonstrate that such a career is an option for everyone, no matter what their background.

From a staff perspective, Mr Bagshaw highlights MTREL's

work with Samaritans on suicide prevention – MTREL colleagues have delivered more than 600 life-saving interventions, and the company aims to recognise that with internal awards such as 'Hero of the Day'.

## LOOKING TO THE FUTURE

Part of MTREL's role as concession holder is to support TfL with future development of the Elizabeth Line, including identification of capacity pinch-points and the case for timetable tweaks.

Beyond that, talk will inevitably turn to what happens when MTREL's concession expires in May 2025. 'What the next concession includes is for TfL to decide, but we'd expect there to be a strong focus on performance and incentives to get the basics right' says Mr Bagshaw. And naturally the MD considers MTR to be well-placed to fulfil that role. 'We're proud of our achievements on the Elizabeth Line and where we've got to so far, although we are under no illusions that there is still more work to do.' [mr](#)



Creating a positive impression: station garden at Goodmayes.

**COURTESY MTREL**



Tackling a key cause of delays: roadshow at Paddington highlighting the options for passengers who are unwell. **COURTESY MTREL**