

## **FACING UP TO CHANGE**

2020 HAS BEEN A YEAR LIKE NO OTHER. THE GLOBAL PANDEMIC HAS PRESENTED HUGE CHALLENGES TO THE WAY WE LIVE OUR LIVES AND THE WAY WE DO BUSINESS. AT L.B. FOSTER, OUR PEOPLE ARE EMBRACING THIS CHALLENGE, CONTINUING TO DELIVER ENGINEERING SOLUTIONS THAT KEEP OUR WORLD MOVING.



As the UK enters its second period of lockdown, I'd like to thank our brilliant teams in Sheffield, Nottingham, Lincoln and London, who are pulling out all the stops to ensure security of supply and service to our customers.

Now, at last, possibly some light at the end of the tunnel. With the government's announcement of a potentially viable and effective vaccine, we have seen a positive reaction in the markets and we hope this uplift in confidence is a sign of more promising business conditions to come. Whilst there's still a very long way to go before normality returns, at last there is something tangible on which to pin our hopes.

As we look to 2021, we are already optimistic about the opportunities ahead. The government has given the green light for major infrastructure projects, such as HS2. Our work in friction management, focusing on switch protection and how its use can significantly extend asset life, shows how the simple application

of innovation can reap real rewards for network owners, in terms of cost savings (see pages 10-11).

On the railways, we will continue to see a return of commuters and leisure travellers. We have been hard at work supporting Network Rail and TOCs as they invest in improved ways of communicating with the public. That has meant unprecedented demand for our Inform totems and Inform Media software, which are now appearing at stations and on concourses all over the UK's rail network.

In manufacturing, our automation and materials handling solutions are positioned perfectly to support burgeoning demand on the warehousing and distribution sectors.

The months ahead will continue to be full of challenges, which together we will tackle and conquer.

Peter Jones Managing Director L.B. Foster Europe

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## Getting back on track in 2021

Forward planing is key to all businesses, yet the uncertainty impacting all of us means we are all beholden to forces outside of our control. It's not just COVID-19, but Brexit too. So 'adaptability' is a new watchword, taking on board all caveats and provisos. But plan we must. And in 2021 L.B. Foster intends to get back on track with a series of innovative solutions roadshows for customers.

Dr Mark Aston is Chief Technical Officer, L.B. Foster Europe. He is responsible for research and proof of concept for many of our innovative new technology solutions. He says: "With 2021 fast approaching, we have a raft of new products ready to bring to market.

"Many of our solutions are best demonstrated in action. Many of the major exhibitions that we ordinarily take for granted have been cancelled or postponed, so we are investigating how we can deliver a series of COVID-secure presentations promoting our enhanced capabilities.

"Across our businesses, our technical teams have been head down working hard on value adding solutions for the rail, automotive, food and drink, and logistics and distribution sectors. These include our KELTRACK™ friction modifier, which has been shown to significantly extend the service of track switches, alongside developments in SIL3 LIDAR technology for level crossing safety and remote condition monitoring for rockfall and avalanche protection.

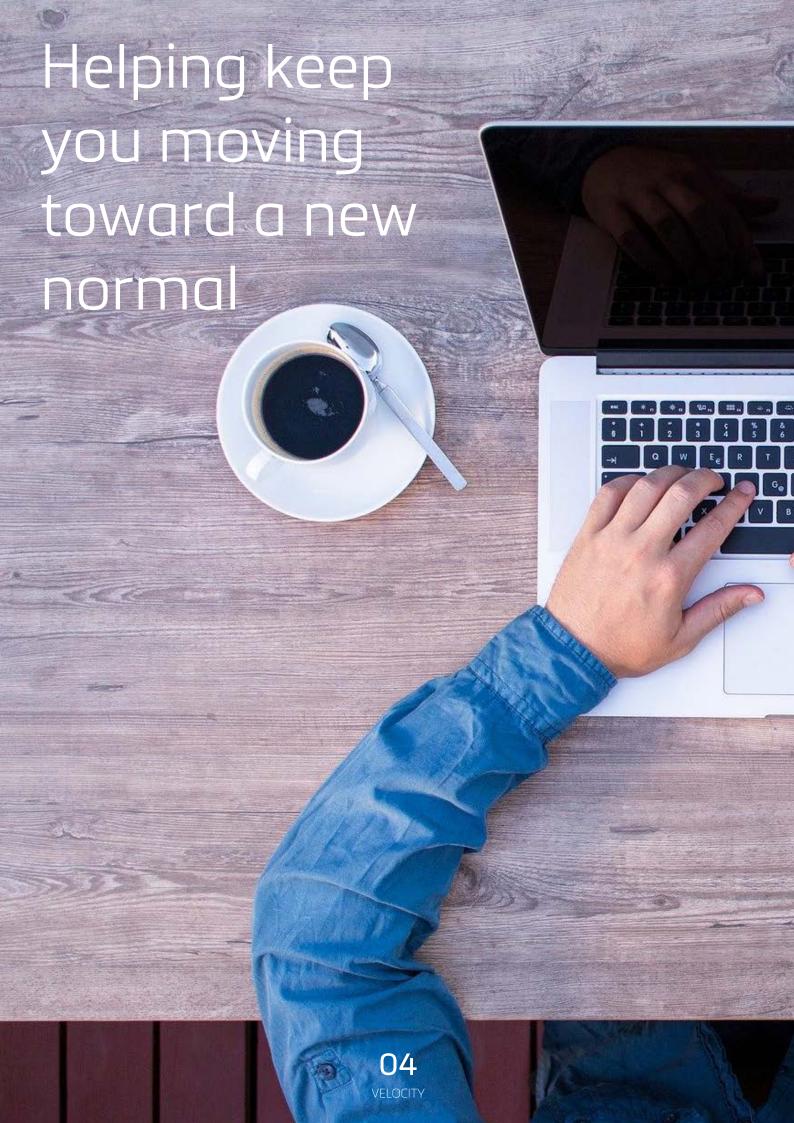
"Add to this the ingenuity of our automation engineers, with automated pallet debanders and stackers, and bespoke conveyors, you'll quickly get the picture that we have a lot to show and tell."

For more information contact **Dr Mark Aston** maston@lbfoster.com











# Movers and shakers



## Jackie Butterfield FIMMM BEng CEng is our friction management applications lead.

She recently presented at the Department of Trade and Industry's third Railways Technical Seminar in Argentina.

During the seminar Jackie spoke about how L.B. Foster adopts a holistic approach to Total Friction Management™ (TFM™) to an audience of over 70 key players from the railway sector, including ADIFSE (National Railways Infrastructure Company), SOFSE (National Passenger Operator)

## Jackie talks friction management in Argentina

and SBASE (Buenos Aires Underground), as well as the Ministry of Transport.

## **Royal Academy of Engineering**

Jackie has also been appointed as a Royal Academy of Engineering Visiting Professor at the University of Leicester, UK.

Jackie will be involved in a number of activities to enhance engineering programs in sustainable materials manufacturing and product design starting in September.



Promotion

## Shaun sets sights on Europe

Congratulations to Shaun Skill, based in Sheffield, who has been promoted to Shipping & Logistics Coordinator.

## How long have you worked at LBF?

I left school 14 years ago and within a week I'd landed a job at L.B. Foster. At the time it was called Coronet Rail and I joined a small but established team. It was a nice place, small company, lots of togetherness.

## What did you do with your first pay packet?

I left work on the Friday and went straight to get a tattoo!

## What was your first job?

I worked in operations and soon became a key operative on the glue line making rail joints.

## What's your latest role?

I've now become the Shipping & Logistics Coordinator in Sheffield. I started helping Jo Brocklesby last year just before she retired. I hope this put me in a good position to take on the role when she left.

## Do you see a chance to progress further?

I've got two kids now aged five and nine, so it's good to feel I've a chance to realise some ambitions. This role would be ideal across our European business with opportunities to bring my skills to other sites in Nottingham and Germany.

## What's the best thing about working at L.B. Foster?

Definitely the people. The team is great and I like the feeling I can go and chat to anyone in the business.



## Ian Woodford receives President's Silver Award

The President's Silver Award has been presented to lan Woodford for 'going the extra mile'.

& Materials Handling business in Nottingham. He worked with his team to deliver a complex automation project for logistics robotics specialists Swisslog throughout lockdown. Colleague Lee Stanley nominated lan: "During the build in Nottingham lan put in extra time and effort - especially during testing - staying longer than required to see the cell run and to make recommendations about how to improve efficiency and performance."

lan says: "It's a real honour to be recognised for what I do. I'm passionate about automation and am a real perfectionist when it comes to delivering for customers. It's even more rewarding to learn I was nominated by my colleagues.

We're a great team and we do whatever it takes."

Peter Jones, Managing
Director, L.B. Foster Europe
adds: "Congratulations lan,
this is well deserved. Our
Automation & Materials
Handling team has worked so
hard during lockdown to keep
our business running, so I am
delighted their efforts have
been recognised."





Promotion

Jon & Lex on the up

Two of our Sheffield Rail

Technologies team have received promotions.

Congratulations to Lex Smith, who is now Internal Sales Manager, whilst Jon Paragreen becomes our Head of Applications, Europe



Peter Jones, Managing Director, L.B. Foster Europe, says: "Achieving Principal Contractor status moves our business into a completely new operating space. It is a standard that we have aspired to for some time and our team has been working hard to achieve accreditation."

It is anticipated that L.B. Foster Europe will receive Principal Contractor status before the end of 2020

## Principal Contractor Licence

Across our business we have achieved numerous quality, safety and operating accreditations that reflect our drive for excellence We are currently working towards Network Rail's Principal Contractor Licence. This allows suppliers wanting to operate as a Principal Contractor (PC) as defined by Construction (Design and Management) Regulations 20015 to discharge these duties on Network Rail Managed Infrastructure

# Ourworldin

## Monitoring bridge strike

Our bridge strike CCTV remote monitoring systems are helping protect critical assets from vehicle collisions at the top 10 most bashed railway bridges across East Anglia and East London.

The new CCTV cameras capture images of the bridge deck, allowing faster examination in the event of a bridge strike.

Structural engineers can examine the footage and damage as it was caused, which is particularly useful if the culprit has driven away. The footage allows for quicker assessment that helps engineers get train services running again, meaning fewer delays and cancellations.





## **Celebrating INWED20**

International Women in Engineering Day (INWED) celebrated its seventh year in 2020. Our social media team is running a campaign throughout the year to acknowledge the important role of our female colleagues.

INWED is an international awareness campaign which raises the profile of women in engineering.

Watch out for, share and 'like' our posts on LinkedIn, Twitter and Facebook.

## motion

## Before, and after

Our team at L.B. Foster TEW Engineering has been working hard supporting NetworkRail with the installation and commissioning of the New NX Panel at Malton Signal Box. This is one of a series of new panels that we are currently manufacturing for Network Rail as part of a CP6 life time extension push.





See our switch protection video at www.lbfoster.eu search 'switch protection'

# Extending switch life with KELTRACK® friction modifier

We are market leaders in friction management for the rail and transit markets. Researching innovative applications for our friction modifiers has led to new thinking about how to increase network asset life and reduce costly track maintenance.

Switches and crossings are an integral part of rail infrastructure, which rail vehicles use to change from one track to another. As safety critical assets it's vital they are well maintained and suffer minimal damage.

In general terms, a switch represents a location of a geometrical track deviation (compared with plain line). A vehicle responds to a track deviation with an angle of attack (AOA) at the leading wheelset of each bogie, resulting in the generation of lateral forces and possible flange contact.

Switch blades can suffer from plastic flow leading to fatigue (RCF) crack formation, due to excessive flange contact in an area about 2-5m from the switch tip. Repair welding is required to

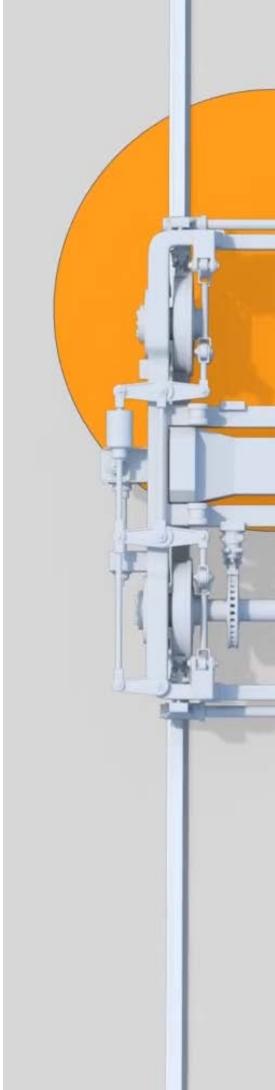
repair defects. These costly repairs can only be repeated a number of times, leading to premature replacement of switch blades.

## **Nuneaton Cemetery Junction**

A study was undertaken of a switch at Nuneaton Cemetery Junction where the switch life was significantly reduced due to fatigue failure approximately 2m from the tip. Between 2004 and 2012 the high-rail half-set has been replaced every 15-18 months, with intermediate weld repairs about every four months.

## Causes of the damage

It was clear from the initial observation of the defect that the lateral loading of the switch was excessive and that this was a fatigue issue.





Discussions within Network Rail revealed that this is a known issue at a number of sites and that it was thought to be a design issue with RT60/NR60 layouts.

The damage issues normally arise when trains are travelling in the trailing direction. The radius of curvature reduces on the approach to the switch tip so the reduction in the angle of attack is insufficient to counteract the reduced cross sectional area of the switch rail resisting the lateral loads.

The increasing load caused by the contact forces between the wheel/flange and switch rail create a fatigue cycle leading to a horizontal failure approximately 15mm below the top of the switch rail. Once the crack has initiated, it grows horizontally and turns to the vertical at the end of the crack closest to the switch tip. The horizontal growth continues away from the switch tip until the top of the switch rail breaks off.

## A permanent solution

L.B. Foster's KELTRACK top of rail (TOR) friction modifier system was positioned to ensure that the friction modifiers covered the approach to WN572A so the steering of the wheelsets was optimised through the whole switch.

Since installation WN572A was defect free for 26 months until after one month of no friction modifier application (four months in total where there had been no treatment since the new switch blade was installed), the first S/053 inspection Hazard 4 failure was reported. Since the repair was undertaken and the installation has been maintained there have been no further failures of Hazard types 1, 2 or 4.

## **Benefits at Nuneaton**

The key benefit of using KELTRACK top of rail friction modifier at Nuneaton include:

the halt of the repeated failure of the equipment

- > net value savings of approximately £40,000
- > reduction in repairs including 650 per cent increase in asset life
- > switch life increase from 18 months to 11 years
- less inspection time
- > fewer man hours on track
- reduced delays
- payback time estimated at 11 months.

## Benefits for the network

Since the first installation, a number of other sites have been identified as having similar repair issues to Nuneaton and have been treated using KELTRACK TOR friction modifier. These are Crewe Coal Yard, Reading West Curve and Birmingham Proof House.

As Network Rail moves from CP5 to CP6, with a greater focus on efficiency, TOR friction modifiers could be of benefit to the wider network. Nuneaton is demonstrating returns of £12,000 pa and Reading an estimated £100,00 pa.

## Conclusion

KELTRACK TOR friction modifier system can give a significant improvement in the life of switches. It is expected that the improvement would be at least 650 per cent, as demonstrated at Nuneaton. This is achieved by reducing the angle of attack between the wheel and the rail through the switch so that the contact forces are greatly reduced or eliminated entirely.

For more information contact **Jonathan Paragreen** jparagreen@lbfoster.com "L.B. Foster's Inform Media digital passenger journey planning solution is the game changer for us. It aggregates multiple information data feeds and presents it on screen in a simple to use and understand format."

## Richard Buckley

Customer Communications Manager TransPennine Express

# Always mow



## TRANSPENNINE EXPRESS

The challenge of 'putting passengers first', as detailed in Network Rail's Delivery Plan for Control Period 6 (CP6), has been taken up enthusiastically by all train operating companies. Now TransPennine Express is investing in class-leading passenger communications technology.



# Putting passe

Richard Buckley is Customer
Communications Manager at
TransPennine Express. He explains: "At
TransPennine Express it's our goal to
provide all of our customers with the
information they need, when and where
they need it. We don't want them having
to 'self-help' and seek out disruption
information for themselves.

"That's why we embarked on a project in 2019 to provide location and route-based service disruption notifications. It's a project where we've needed to draw on external expertise. That's where our rail sector technology partner L.B. Foster fits in. L.B. Foster's Inform Media digital passenger journey planning solution is the game changer for us. It aggregates

multiple information data feeds and presents it on screen in a simple to use and understand format."

Trailblazers TransPennine Express have been quick to recognise where TOCs need to improve performance for passengers. Damian McCracken is Operations Manager at L.B. Foster Netpractice. He says: "Our Inform Media software solution for TransPennine Express uses the output from a host of real-time rail/industry-specific disruption and train movement data feeds. Information is then overlaid on a station specific network map.

"We are providing passengers with a fully automated, real-time, graphic

representation of where disruption is occurring in relation to their personal location. This is accompanied by a narrative explaining the location of the incident, expected duration, impact on train services, alternative transport options being implemented and any ticket information to assist the customer with completing their journey."

The narrative, originated by those making the decisions in the Control Centres of each train operating company, mirrors the information published to the public website JourneyCheck.com. It contains the same disruption reason, which is fed to station Customer Information Services



Join the conversation on our Inform showcase page on LinkedIn for all the latest news and updates www.linkedin.com/showcase/inform-media-by-lb-foster

(CIS) and public address (PA), maintaining consistency of message.

Damian McCracken continues: "Inform Media is driven by an extremely powerful media generator. The Inform engine provides plug-in applications that support 'passenger first' strategies. These include a train, tram, plane and bus locator visualised on maps, plus enhanced wayfinding and mapping tools, as well as walking, taxi and cycle hub links. It also delivers a range of easy to understand analytics, giving operators awareness and strategies to cope with

Sarah Ford is Head of Communications at TransPennine Express. She says: "As with the best solutions, Inform Media is a really simple answer to a long-standing industry issue and it will make a big

difference to our customers. Clearly there's a real degree of complexity when interpreting the data feeds and translating this into bespoke maps occur at the same time. The team at L.B. Foster's software division enthusiastically embraced the challenges specified by our Customer Information Team. They've successfully delivered the initial phase of the project, paving the way for future collaboration to further enhance information for our customers."

Richard Buckley at TransPennine Express to putting our customers first. We are this, which is all about embracing a culture of continuous improvement. roll-out across our managed stations is just one part of a much bigger story.

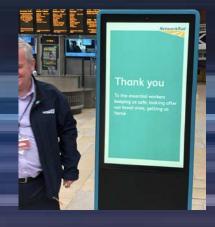
Providing our customers with easy access to information that helps them make better-informed decisions about their journeys is clearly a big step in the right direction."

For more information contact **Graham Kett** gkett@lbfoster.com



## 60+ totems 20+ stations

Since the start of COVID-19 lockdown Inform is being used by Network Rail in March this year, Network Rail has ordered and deployed over 60 of our new Inform totems on stations across the UK railway network - from yous' to the NHS and key workers. Birmingham New Street to Leeds, Bristol Temple Mead to Clapham Junction.



to deliver government messages to the public about social distancing and restrictions, as well as 'thank



"Our flood monitoring technology combines advanced internal know-how and sophisticated external sensing, ensuring system longevity and cost-effective maintenance over time."

# Remote monitoring of flood risk



L.B. Foster's Flood Monitoring System is designed to accurately track water levels in flood-prone areas.

Flood water can pose major problems on the railway, leading to costly delays and cancellations. Water blocking the lines, as well as debris, silt and mud making its way onto the track, are only part of it. The lasting damage that flood water can cause to infrastructure can lead to ongoing repair work that takes days, weeks or even months.



L.B. Foster's Flood Monitoring System is part of our Total Track Monitoring™ solution. It applies technology to accurately identify water levels "down to the inch."

A wireless in-line flood pole lets users set alarm responses at various depths. The alarms are activated at levels predetermined by customers. When flood water reaches the alarm level, nearby solar-powered cameras are triggered and zoom in for a live view of the area that generated the alarm. This initiates a customer emergency response. The live feed is delivered immediately to the customer via a web portal showing actual flood depth.

The Flood Monitoring System also highlights when the water has receded, providing trains with safe passage through the once-flooded area. L.B. Foster's Flood Monitoring System is currently installed on railroads in Mexico

and USA, where flood monitoring has shown impressive results, alerting customers within two minutes from the start of water testing to the alarm being delivered digitally.

"Many flood detection devices today use a float mechanism that is prone to sediment build-up in a typical muddy flood, preventing operation without maintenance or replacement," explains Dr Mark Aston, Chief Technical Officer, L.B. Foster. "Our flood monitoring technology utilises advanced sensing in an environmentally sealed package, ensuring system longevity and more cost-effective maintenance over the product lifecycle."

For more information contact **Keith Wilson - UK**kwilson@lbfoster.com **Michael O'Connell - US**moconnell@lbfoster.com

## View flood events as they happen

L.B. Foster's Flood Monitoring
System utilises an online customer
interface which is accessed via a
web browser. It is designed to enable
designated administrators not only
to see current status of the flood
system and water level depth, but
also to access the flood monitoring
system's optional remote cameras
to view the cause of a flood alert.

To be released later this year, our exciting new Total Track Monitoring™ by L.B. Foster enhanced software will feature even more sophisticated data management capabilities. Event data resulting from a flood event will be captured, stored and analysed, providing detailed intelligence on event regularity and severity. This allows railroad operators to build a detailed event profile and identify pre-emptive actions to prevent or off set future events.



Follow us on

## Linked in

Join the conversation on our Telecoms showcase page on LinkedIn for all the latest news and updates

# Keeping your world moving

www.linkedin.com/showcase/lb-foster-telecoms

18
VELOCITY



## New capability portfolio



We've brought together all of our automated handling solutions in a new specifier brochure to help customers understand the breadth of what we do.

The new 48 page publication features sections on our wide range of materials handling conveyors - from chain and towline to overhead and gravity - and our automated, robotic solutions for the automotive, food and beverage and manufacturing sectors.

Each section lead includes an explainer illustration showing our solutions in action.

Dr Matthew Stephenson is Head of Projects at L.B. Foster Automation & Materials Handling. He says: "Everything we do is about making things simpler and more effective for our customers. So we've distilled our website content into a detailed brochure that customers can keep to hand as a point of reference for all things conveyors and automation."

To request a copy of the new publication, contact

**Dr Matthew Stephenson** mstephenson@lbfoster.com

## www.conveyors.co.uk

There's a lot of value in a good website address and we've got that covered with our materials handling url www.conveyors.co.uk



Our web estate now includes a new, dedicated portal for all of our conveyor products. Type in the search term 'conveyors' and www.conveyors.co.uk jumps out at you from the search list.

Phil Chester, L.B. Foster Europe's Head of Marketing, explains: "We want to make sure our customers and prospects can find us easily and understand exactly what we have to offer. We own the conveyor.co.uk url so we thought we'd make the most of it."

Visitors can search by product type or by vertical market sector, such as conveyors for automotive, food and beverage, aviation, warehousing or logistics.

With over 10 different conveyor types from which to choose, the new site has solutions suitable for all uses.

Visit www.conveyors.co.uk to see our full range of conveyors.

## Linked in

Join the conversation on our Automation & Materials Handling Showcase page on LinkedIn for all the latest news and updates



"Our bespoke conveyor solutions are carefully designed to accommodate large, awkward loads."

Our design team developed a conveyor solution for a well-known manufacturer of high-performance diesel engines.

This is part of a new assembly line concept where operators work in assembly cells surrounding the engine. Operators work on both sides of the engine, which requires a change in height of the conveyor to support the assembly of the engines at two of its operator stations.

The semi-automated engine manufacturing line incorporates 13 manual assembly stations. At each station, individual operators add different engine components to the part pre-assembled engine.

We created ergonomically designed workstations, minimising the need for operators to over strain during the assembly process. Workstation design also increases efficiency and quality, with tooling automatically setting its self to the engine type being assembled, and all necessary components accommodated on the work station.

For more information contact Alex Morgan amorgan@lbfoster.com

## Heavy & awkward handling

L.B. Foster Automation & Materials Handling design and manufacture bespoke conveyor solutions for some of the world's best known vehicle manufacturers. Our high performance chain conveyors are used to move extremely heavy engine components on production assembly lines.





The combination of L.B. Foster's powerful Inform Media software and its flexible suite of Inform display hardware is delivering critical content to passengers right where it's needed.

## Passenger information software and hardware

## Inform Media software

Software developers at L.B. Foster Netpractise are working with Network Rail and TOCs to develop our Inform Media disruptive communications technology. This is designed to put the needs of Network Rail's passengers first, whilst supporting TOCs' commitment to the Passenger Information During Disruption (PIDD) Programme.

Inform Media by L.B. Foster is a comprehensive, end-to-end digital journey navigator tool that brings together journey planning data feeds from a variety of sources. It has been developed to run on L.B. Foster's Inform hardware range of mobile and fixed screens, combining the latest in high definition, touch screens with mobile, wireless and rechargeable technologies.

Damian McCracken is L.B. Foster's operations manager responsible for the delivery of Inform Media. He says: "Inform Media is driven by an extremely powerful media generator, which provides plug-in applications that support 'passenger first' strategies. These include a train, tram, plane and bus locator visualised on maps, plus enhanced wayfinding and mapping tools, as well as walking, taxi and cycle hub links.

"What attracted interest from Network Rail and TOCs is that Inform Media focuses on the total journey line. This is based on a detailed analysis of actual passenger journeys, identifying critical touchpoints at which information is accessed. These include ticket booking, car parking, platform information for station arrival, where to go, security information and retail/food and drink opportunities."

Tom Wood, Head of Stations Kent and Sussex at Network Rail was responsible for the cost, programme and quality of new technology implementation for the Southern region. Tom explains: "With COVID-19 there's never been a greater need to provide brilliant communications to our passengers. That's not just about communicating the steps we have taken to reduce the risk of spreading the virus in stations, but also about providing valued-added information to enhance the journey experience.

"When I first saw the totems it was clear the positive impact they would have on the passenger experience in our stations and would improve the passenger information available."

Inform Media applications include realtime live train information drawn from Knowledge Base and Darwin feeds. Inform Media's unique, user-friendly journey planner visualises disruption and recommends alternative route options for customers. Additional applications include:

- > timetable information
- station mapping
- > customer user surveys
- advertising
- social media feeds.

For more information contact

Graham Kett

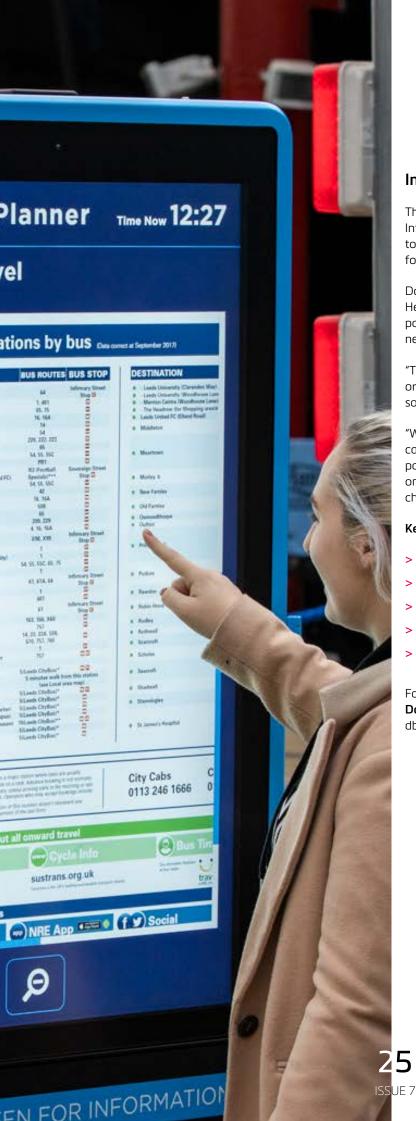
gkett@lbfoster.com







Inform Media's innovative wayfinding application maps locations within stations



## Inform hardware

The Inform mobile all-weather wireless display is part of our Inform by L.B. Foster display system range, featuring wireless totems and wall mounted high definition displays, with options for integrated touch screen technology.

Dagan Bradbury is Product Manager for the Inform project. He explains: "The Inform hardware suite is designed to deliver powerful on-screen content wherever and whenever it's needed to convey important information to passengers.

"There are two core delivery methods - our fully mobile totem or fixed, wall-mounted screens. It's a powerful set of display solutions that is proving popular with Network Rail and TOCs.

"What they particularly like about our Inform totem is its capacity to be moved and set-up without the need for fixed power supplies. That's because it features a high performance on-board battery, capable of running for 24 hours on a single charge."

## Key benefits

- Truly mobile solution
- Suitable for all weather applications
- Exceptional battery life
- Wireless 3/4G communications
- Compatible with our powerful Inform Media software.

For more information contact Dagan Bradbury dbradbury@lbfoster.com



L.B. Foster is widely recognised for its excellent telecoms solutions and customer service across the UK's rail sector. Now it is strengthening its offer with the addition of quality assured specialist services that provide customers with a total service capability for all things telecoms.

## New Specialist Services

As part of our ongoing expansion of services we have established a new Specialist Services division within L.B. Foster Europe. John Goggin is Head of Operations. He explains: "The new Specialist Services division will concentrate on the provision of fire detection, alarm and suppression services, together with heating, ventilation and air conditioning (HVAC) installations throughout both rail and commercial industries."

Neil Sheffield, Managing Director, L.B. Foster Telecoms, adds: "The addition of this new range of services perfectly supplements our current capabilities.
We can now offer existing clients an
extended service, with the benefits of
shared management and administrative
costs unlocking greater value for money.

"In the short period since we established the Specialist Services new division, it has made significant steps in terms of the levels of accreditation necessary to comply with industry standards. We have successfully obtained our ISO9001 Scope Extension, as well as confirmation of our inclusion within both LPS 1014 (Fire Alarm & Detection) and LPS 1048 (Fire Suppression) schemes.





## London King's Cross St Pancras station

Our new Specialists Services team has designed, installed and commissioned a series of new Fire Detection and Suppression systems at London St Pancras station.

John Goggin, Head of Operations, L.B. Foster Specialist Services, says: "This is a great project for us, given the prestigious nature of St Pancras as one of the most iconic rail hubs in the world. It shows immediately that we have the capability, experience and expertise to deliver on showcase installations.

"All of our designs have now been approved by Transport for London (TFL) and all disciplines have now been signed off. Our solutions interface directly with the station's mechanical ventilation system to ensure compartmentation in the event of a fire is maintained.



## Meet our team

With over 150 years experience between them, there's nothing too hot to handle for our new Fire Services team.

## John Goggin

Head of Operations jgoggin@lbfoster.com

## John Wade

Senior Project Manager

## Dan Stark

Project Manager/Fire Alarm Design Engineer

## **Louis Nicholls**

Project Manager/Fire Containment/Boarding

## Alex Goggin

Fire Assurance Engineer/Administrator

That means we are accredited to design, supply, install, commission, and more importantly, certify both systems."

The introduction of the Specialist Services division now enables us to move into a wider market place offering a broader range of Specialist Building Services solutions, perfectly complementing our Telecommunication services, whilst maximising L.B. Foster Telecoms' Principal Contractor Licence.

We now offer design, supply, installation and commissioning capabilities for:

- > Telecommunications
- > Security/access control
- > CCTV
- > Building Management Systems
- > Mechanical, electrical & public health services
- > Ventilation & air conditioning installations
- > Fire detection/alarm
- Aspirating smoke detection packages
- > Fire suppression solutions
- > Passive fire protection/stopping



# German office and website

Dedicated rail technologies team focusing on German market and broader opportunities across Europe

L.B. Foster GmbH's dedicated German sales team includes, Simon Kuhnen, Sales Engineer, Volker Streim, Applications Engineer and Nina Diehl, who is newly promoted to Account Manager.

A new German language website is now online and includes details about the company's comprehensive range of friction management and track products.

For further information visit www.lbfoster.eu/de

L.B. Foster GmbH has established offices in Herne, North Rhine Westphalia, from where we now deploy our Total Friction Management (TFM™) solutions.

Steve Fletcher, Geschäftsführer, L.B. Foster GmbH, says: In our world of friction management, three types of materials are typically deployed to achieve targeted friction conditions: friction modifiers, lubricants/greases, and traction enhancers. Applying the correct material to the correct surface is critical.

Typically, lubricants and greases should not be applied to the top-of-rail surface, as this can potentially impact the traction and braking performance of the train. But not all products are required for every situation. Depending on the local site conditions, vehicle-track dynamics, and desired outcomes, it may be only necessary to apply one, or sometimes two, materials.

"It is our mission to help specifiers and engineers understand the real

advantages of installing friction management solutions. The reasons we apply friction products on the gauge face or top of rail - and in certain instances both - vary according to the location and track characteristics.

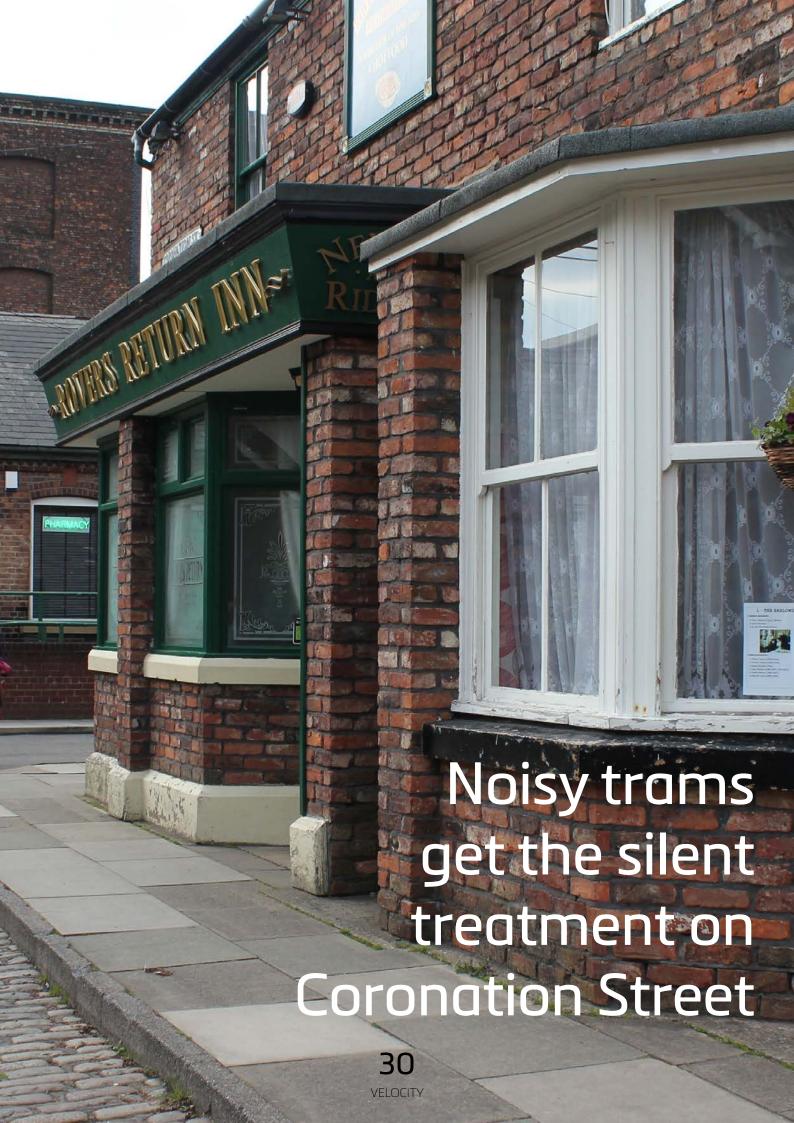
"The returns of applying friction management are not just for network owners and operators. The human, social and community benefits of reducing noise caused by wheel squeal are incalculable and a hidden benefit often overlooked in favour of reduced capital outlay."

"It is our mission to help specifiers and engineers understand the real advantages of installing friction management solutions."



Nina Diehl, part of our team focused on the German rail market





The cast of Coronation Street, the world's longest-running soap opera, no longer face daily disruption from tram noise following the installation of an innovative new trackside friction management solution by L.B. Foster Rail Technologies.

The interrupting high pitched sound of metal-on-metal was generated as trams on the new £350m Trafford Park Metrolink line in Manchester negotiated tight curves in front of the ITV Studios. Installed trackside, our embedded Top of Rail (TOR) friction modifier system is the first commercial installation of its kind in Europe using our unique new TOR Foam Bar.

Mat Holland, Head of Engineering, L.B. Foster Rail Technologies, explains: "'Coronation Street is full of firsts. It holds the title for the first TV soap opera to reach the age of 50. Now it's benefitting from the first application of our new TOR Foam Bar."

We worked on the project with MPT, a joint venture of Laing O'Rourke, Thales and VolkerRail, on behalf of Transport for Greater Manchester. The project required two modified PROTECTOR® IV units, installed and commissioned by L.B. Foster, with a 15-month support package. The Trafford Park Metrolink line connects the Trafford Centre to the existing network.

Andrew Biddulph is Mechanical Engineer, LB Foster Rail Technologies (UK): "Transport for Greater Manchester requested a cabinet design in keeping with the local urban environment. We developed a new cabinet design that offers a clean, street-friendly alternative to our standard PROTECTOR® IV. All cable and hose connections are made through the base of the cabinet. The system comprises all the standard PROTECTOR® IV components, with the addition of a new vibration sensor that can be adjusted on-site to suit the installation environment.

L.B. Foster Rail Technologies' PROTECTOR® systems are sited on pavements or at road junctions for In-street applications and are enclosed in vandal-proof steel cabinets for security and protection.

Distribution bars are placed below ground in steel enclosures, which are then embedded in the road. The distribution bars are accessible via the steel enclosure tops for routine maintenance and inspection. The in-street PROTECTOR® system provides a tamper-proof solution to rail friction management, whilst still providing road vehicles with an unobstructed route of travel through urban environments.



## **Linked** in

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