

Helping people, cities
and economies thrive

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for change

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Exploring the
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Movement Matters
Exciting new series
of inspirational
events

The Review

European Edition
Issue 51
February 2019
steergroup.com

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MM Movement Matters

A BURST OF FRESH THINKING

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www.steergroup.com/events

Movement Matters is a series of inspirational thought leadership events exploring new ideas about places, people and economies. Drawing on experience from leaders from around the globe, these sessions provide a burst of fresh thinking and a great opportunity for industry networking.

Read more about our programme of events across the UK, USA and Canada.

BRITAIN'S STATIONS AS PLACEMAKERS

London, UK
13 February 2019

As towns, cities and regions search for solutions to economic competitiveness, resilience, social inclusion, housing and identity, what role should our stations be playing?

With 90% of the British population within 20 minutes of one of the 2,500 railway stations, this extensive network is one of the last remaining civic building estates in the country, presenting both a great challenge and an opportunity in the changing face of modern Britain.

In 2008, the then Secretary of State for Transport, Lord Adonis, commissioned the wide-ranging Better Stations report on the future of the nation's stations. A decade on, we present an expert panel who will share their insights into today's challenges, providing perspectives on the role of stations in city shaping, and how the rail industry, central and local government and the private sector need to work together to unlock the potential from this unique estate.

Speakers and perspectives

- **A national perspective - The Rt Hon. Lord Adonis**, formerly Secretary of State for Transport and Chair of the NIC.
- **The City Region perspective - Eamonn Boylan**, CEO of Greater Manchester Combined Authority.
- **A developer perspective - Rob Heasman**, Project Director for Euston, Lendlease.
- **A railway perspective - Jeremy Long**, CEO of European Business of MTR Corporation & Stations Lead for the Rail Delivery Group.

BEYOND TRANSPORT MOBILITY

Toronto, Canada
March, 2019

Transport investment can act as a catalyst to economic development, housing and job centres, but wider economic benefits and business case analyses are not widely used to justify it.

The panel will offer a range of views on how transport can be an enabler to wider economic benefit, how to measure and justify investment through economic analysis, and how a transit-centred integrated framework can enhance city planning.

RESEARCH & INNOVATION SHOWCASE

London & Leeds, UK
March, 2019

At the heart of our 40 years of success is our desire to explore and innovate. Our R&I programme provides Steer consultants with resources to develop new ideas, products and services. In this year's R&I project showcase, we feature case studies that include 'The implications of a cashless society' and 'The future of urban mobility', among other exciting innovations.

ALTERNATIVE DELIVERY MODELS

New York, USA
May 2019

Industry experts will talk about alternative models for financing and delivering infrastructure projects and their potential for take-off. They will consider private sector delivery as well as public involvement, and will try to provide an answer to questions such as how best to manage the risks and impacts of change and how to increase the confidence from design to operations to ensure whole life value for money.

CHANGING TRAVEL BEHAVIOUR

Los Angeles, USA
June 2019

In LA, where funding is being poured into transport infrastructure, is the motto 'build it and they will come' enough? As we continue to plan for transit-oriented districts and make strides in reducing physical barriers, should we also be thinking about how to create lasting behaviour change, increasing transit ridership and decreasing single occupancy vehicle travel? Our panellists will discuss mobility shifts and how to capture the greatest return on the region's investment.

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Welcome

Welcome to the latest edition of the Steer Review.

We publish this issue at a time when the UK is working towards leaving the European Union. While the outcome is still uncertain, we recognise the scale and complexity of the challenges and opportunities that lie ahead. As a multinational company with deep European heritage, we are ready and open to use the full breadth of our global knowledge base to provide the very best advice to all our clients. This way of working, as an integrated multinational company, is one of our core values and one that will continue as we grow and expand our European operations.

In this issue, we explore our role in helping cities thrive by working with our clients to create better and more liveable urban environments. We look at solutions for solving hospital parking problems and for unlocking the delivery of new homes, and we delve deeper into the current legislative challenges regulating dockless bike share schemes in London.

Finally, I would like to invite you to join our series of global thought leadership seminars, Movement Matters. In their second year, these popular seminars take place across UK/Europe, North America and Latin America, and bring together industry experts to explore new ideas about places, people and economies.



Hugh Jones
CEO

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Company updates

New faces



Jim Daisa
Associate Director
Jim joins as an Associate Director and Practice Leader for our Los Angeles office. Jim is a transport planner and traffic engineer with over 30 years' experience. He brings expertise in complete streets policy, planning and design, and will work to develop further our presence in California.



Matt Bull
Associate Director
Matt Bull rejoins Steer as an Associate Director. He joins from the World Bank to lead our business and financial modelling work. Matt is an infrastructure finance specialist with over 15 years of experience as an advisor and financier of infrastructure projects in the UK and in emerging markets.



James Ager
Associate
James joins our Advisory team as an Associate to lead and support our aviation team with business development, policy and transactional work. James has over 28 years' experience and is an expert in air traffic analysis and new route development.

Looking to move?

If you are considering your future and are looking for somewhere to make a real difference, Steer has much to offer. The firm continues to grow in Europe, Asia and the Americas. To find out about the opportunities we have to suit you, visit our website:

www.steergroup.com/careers

Leadership changes



Sharon Daly
COO

We are delighted to announce the appointment of Sharon Daly as Chief Operating Officer. Sharon has worked at Steer almost nineteen years, developing her consultancy experience from consultant through to Director before being appointed as the Division Head of our UK Planning division in 2014. In 2016, she was promoted to UK Managing Director and now she looks forward to her new role as Chief Operating Officer. Sharon has worked in the transport industry for over twenty-five years and has a background in finance and economics. At Steer she has worked with mixed client and advisor teams to take transport interventions from strategy through to scheme development - obtaining planning, consents and funding - advising clients such as Transport for London and the UK's National Infrastructure Commission. As UK Managing Director, Sharon has had an opportunity to set a vision for our UK business. As Chief Operating Officer, she will ensure that the operational aspects of the way we work support our global success.



Mike Goggin
UK Managing Director

We are pleased to announce Mike Goggin's appointment as UK Managing Director, succeeding Sharon Daly. In this role, Mike will assume responsibility for our UK business. Mike is in his second spell with Steer, having rejoined in 2011 following a two year period as Director of Stations & Customer Service for Network Rail. Mike's time with Steer has seen him set up our first US office and lead the rebranding of the company, and numerous UK and international assignments primarily relating to the transactions, investment and strategy for railways, metros and stations.



Steer supports Women in Transport

Women make up 47% of the UK workforce yet remain underrepresented in the transport sector, accounting for only 20% of workers. Steer is committed to providing equality of both opportunity and reward for all staff. To this end, we are involved in several initiatives that encourage equality.

We are sponsors of Advance, a non-profit mentoring programme designed by Women in Transport, that empowers women to maximise their potential. The programme helps professional women develop and progress their career in the transport sector. We have also set up an internal committee called "Women in Steer" in which all employees are given the opportunity to share their views and have insightful discussions. Over the last year we also carried out a gender pay gap analysis of our UK business. The report sets out our findings, our plan of action and how we will monitor and regularly share progress with our staff.

Movement Matters kicks off strong in 2019

We are delighted to announce the relaunch of our Movement Matters series of thought leadership events. With a refreshed look and feel, the first event of the 2019 programme will take place in central London and will feature a panel of excellent speakers including the Rt Hon. Lord Adonis.

The panel will bring together their unique perspectives to talk about the role of stations in Britain to bring about economic competitiveness, resilience, social inclusion, housing and identity. For more information and to register to attend visit: www.steergroup.com/events

The Steer R&I programme continues

At Steer, we actively invest in developing new ideas and ways of working through our Research and Innovation programme. We encourage our staff to think creatively about their work and how we can help our clients maximise opportunities. Recent significant successes for our R&I programme include: widely reported research about the effect of AVs on urban design; software for recording the movement of pedestrians through spaces such as stations; and research on the value of train numbers on tickets and timetables.

Our R&I Club meets every two weeks and allows anyone to bring ideas, problems and solutions for debate. To mark our 100th R&I Club meeting we produced a booklet describing 32 of our favourite R&I projects carried out since the Club was established. You can download your copy here: www.steergroup.com/about/research-innovation

One of the ways we encourage innovative thinking is by holding Hackdays, in which teams use their skills and knowledge to find innovative solutions to industry problems. In November we held our third Hackday event. Five teams worked intensively for a day on preselected topics: the benefits (or otherwise) of free public transport; the effects of a cashless society on transport; the impact of extreme weather on transport; how changes to demographics and technology will affect transport demand; and how Steer can attract a diverse workforce.

At the end of a long day each team gave a presentation about their findings to a panel of judges, who had the difficult task of choosing a winner. The team looking at the effects of a cashless society were the Hackday winners, but all five teams delivered excellent work.



Better boarding on Britain's trains?

By Helen Waters



On increasingly busy railways, reliable operation means making every second count, including the time required to let passengers and their luggage on and off trains. As long ago as 2004 the timetable into Waterloo, London's busiest terminal station, was reworked to include the extra time needed for more passengers to board and alight at each stop. On Thameslink services through central London, doors open automatically at busy stations to eliminate the delay until passengers press the "Open" button.

The May 2018 timetable expanded these Thameslink services and introduced new Northern services through Manchester on the Ordsall Chord, connecting Piccadilly, Oxford Road and Victoria stations. The timetable required extensive changes across the rest of the network, which were intended to deliver benefits from major investment, but instead resulted in extensive disruption, particularly for Northern and Thameslink passengers.

The December 2018 timetable introduced changes to remove some of the main causes of the poor reliability and, after the first few days of operation, appeared to be performing relatively well. Nonetheless, every second still counts, and the industry has introduced, or trialled, initiatives to improve the speed of passenger boarding and alighting.

At London Euston, passengers arriving for Virgin Trains without reservations can now see on the departure board the

"Reservation Level" on each coach of the train. However, on its own, data on which seats were reserved does not provide real-time information on which ones are occupied and where there is still space.

In real time, sensors on vehicle suspensions can estimate the number of passengers on board, and at-seat sensors can identify where they are sitting, but both require the installation and maintenance of additional equipment. In contrast, increasing use of CCTV on trains, and mobile phones by passengers, means that estimates based on image analysis, or the location of mobiles, require only suitable software. London North Eastern Railway uses beam sensors to detect which seats are occupied, and passengers can access maps of free seats through the onboard WiFi. Chiltern Trains has developed a similar technology.

On the London Overground, information on vehicle loading is already relayed to platform staff, who can direct passengers to less crowded parts of the train. The logical next step is to provide this information direct to passengers waiting to board, ideally giving them enough time to select the emptier parts of the train. This could both reduce the crowding they experience and contribute to shorter dwell times as they alight and board.

However, trains range from multi-stop urban services to 300 km/h high speed trains, and several issues will need to be addressed for new approaches to speeding passenger boarding to be

both effective and commercially viable. How will information be presented to passengers waiting on a platform? Will it be sufficient to know which doors of an approaching train have most people behind them without also predicting how many of them will alight? On frequent services, such as the planned 24 trains per hour through the Thameslink core, will passengers have time to move to other parts of the train, or will it be more effective just to tell them if the following train is less busy? How will the system deal with trains of different lengths, types or configurations?

Steer can help evaluate options and assess the costs and performance benefits of these technologies to support business cases for their deployment.



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Urban Dynamic Model

By John Swanson

The recent UK Department for Transport (DfT) consultation on appraisal and modelling had an eye-catching new concept: transformational change. What, it asked, are the implications for appraisal of transformational change and do we have the tools to do the job?

Transformational change is a term that has crept into the transport debate in recent years, meaning, loosely, 'large' or 'visionary'. In the search for investment projects that can regenerate stalling economies, transformational change is seen as a way to reshape and reconfigure those economies and societies to bring about a better future.

That's the vision. More prosaically, a transformational project is one that will have a significant impact on the shape and workings of an urban or regional economy; on the size of the population, and where people live; on the numbers of employers and where they are located; and on the volumes and patterns of travel they all generate. It is a project whose primary effects are not marginal changes to existing travel patterns and behaviour, but a shift – a beneficial shift – in how the whole economy works.

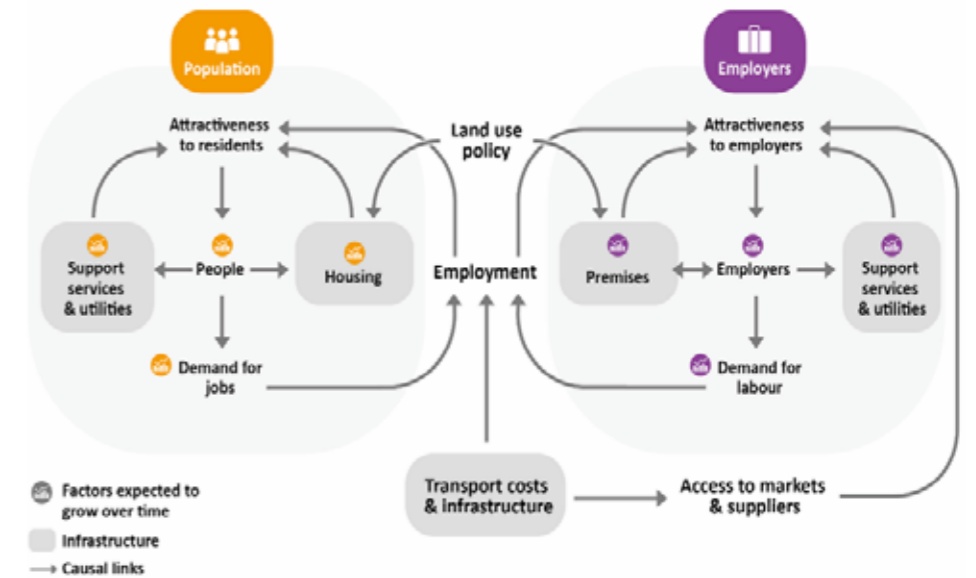
Where transport is proposed as a transformational stimulus, or more realistically, a package of transport linked with other investment projects, an appraisal case must be made and, in the UK, that means following the requirements of WebTAG. Hence the DfT's consultation. But WebTAG, and many of the tools it requires people to use when developing an appraisal, wasn't really designed for 'transformational'; those tools work well for marginal changes to an established system; but not when the system itself is being changed.

A systemic model

At Steer, our Urban and Regional Dynamic Models (UDM and RDM) are intrinsically systemic. In fact, they are built using System Dynamics, a simulation technique designed precisely for modelling how systems behave and the links between people, employers, transport, housing and commercial infrastructure are most certainly a system.

The model's roots go back a long way. We were using an experimental version of it in the early 2000s, and in 2007 the model won the Scottish Transport Awards prize for Technology and Innovation. But its time really came when large, visionary and, yes, transformational, projects came along.

For the West Yorkshire Plus Transport Investment Fund, the UDM was central to designing the investment package and building the business case for a



£1bn multimodal transport investment package.

The RDM was used in 2017 on behalf of the National Infrastructure Commission to look at the transport implications of very large-scale development proposals, with up to a million more households in the Oxford to Cambridge corridor.

A customised version of the RDM, known as the Northern Economy and Land-Use Model, or NELUM, has been built for Transport for the North, and is now being used to appraise the impacts of transformational investment in transport and the economy across six cities in the North of England.

The future looks good. Steer has recently been commissioned by Transport for the South East to build a model of the South East of England, and we have had our first success overseas with a model of Boston, Massachusetts, commissioned by the Massachusetts Bay Transportation Authority.

The Urban Dynamic Model is unlike any other model:

- The UDM and RDM are both large-scale systems models of how people, employers, transport and land use interact over wide areas and long periods of time.
- Their primary use is to demonstrate how investment in transport changes, and is changed by, where people live, where new development occurs, and where employment locates.

- With a rich variety of outputs, the headlines are: the impacts on employment; the changes to travel patterns, mode shares and volumes; changes to CO₂ emissions; and social-equity measures, such as access to employment opportunities.
- The model can also provide WebTAG-compliant estimates of user benefits, productivity gains, and the GDP impacts of increased employment.
- It is fast. Run times are typically around 30 minutes to simulate 25 years, allowing rapid testing of alternative scenarios.
- It is scalable: we offer the 'full' model, a simplified version called UDM-Lite, and a light-touch online version that can be run with a browser.

To try the online UDM, go to:
<http://udm.steergroup.com>



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Dockless bike share: a regulatory grey area

By Nicole Badstuber

New mobility options could support London's ambitions for more sustainable travel but currently regulation is outdated and not fit for purpose. The case study of London is a microcosm illustrating the out of sync regulation.

In summer 2017, dockless bike share hit London's streets. Unlike the city's existing system, the new schemes did not have designated stations, known as docks, to leave and pick up bicycles from. Instead, in theory, the new dockless bikes could be left and picked up anywhere, providing a key advantage over the established docked system. The promise was to offer bike share beyond Central London – to which the docked bike hire was geographically limited.

However, hiccups cropped up early on. London's first dockless bike share service oBike was launched without the cooperation of London's citywide transport authority responsible for London's arterial roads, Transport for London (TfL), or any of the city's 32 boroughs and the City of London which are responsible for 95% of the capital's streets. An influx of dockless bike hire in London followed: Irish Urbo, and Chinese ofo, Mobike and more recently American Lime trailed oBike. The sudden influx of dockless bike share services exposed the outdated levers that local government had to manage their presence on London's streets.

Under current legislation, operators do not require consent or a licence from the borough or TfL to operate, because the operator places no infrastructure on the roads. The only lever left to boroughs to manage the influx was to remove the bikes on the grounds of causing nuisance, obstruction or danger. The legislation to do this dates back as far as the Highways Act 1980 and it is not fit to address the issue.

In the absence of suitable legislations, the recommendation by London Councils, the body representing London's boroughs, was to use legislation regarding waste, specifically the Environmental

Protection Act 1990 by classifying the parked or abandoned bikes as waste. Alternatively, Public Space Protection Orders under the Anti-Social Behaviour and Policy Act 2014 to tackle anti-social behaviour associated with dockless bike share. London Councils also advised boroughs to use street trading powers under the London Local Authorities Act 1990 to manage the operations of dockless bike share on their streets. Yet, even these ill-suited levers fall short at giving boroughs and TfL the power to effectively manage usage of road and public space. Legal advice given to the City of London, is that dockless bike share operations do not fall under the definition of street trading and that it is doubtful that definitions of 'waste' or 'litter' in legislation apply.

In short, London's citywide transport authority and its boroughs lack the powers to licence and regulate dockless bike share in the capital. To provide some guidance, TfL developed a Code of Practice setting out how it wants and expects dockless bike share schemes to operate. Also, CoMoUK, a charitable organisation which supports the development of shared transport in the UK, provides an accreditation scheme for bike share operators, which can be used to maintain standards within a procurement exercise, noting that most London boroughs have not procured dockless bike share to date, with a Memorandum of Understanding being one tool to manage the relationship between operator and borough. However, any arrangement the dockless share schemes abide to is currently voluntary. Mirroring concerns across the globe in cities from Beijing to San Francisco, dockless bike share operations in London are perceived as adding to street clutter and pressure for bike parking.

Some dockless bike share operators in London have shown a willingness to engage positively with the boroughs and TfL, and adhere to the Code of Practice.



However, both entities have their hands tied without effective powers to regulate dockless bike share operations in their jurisdiction.

'A new light-touch London-wide regulatory regime could realise these benefits [of dockless bike share] while minimising risks concluded a recent report on the future of transport by the London Assembly, London's city council and the scrutiny body of the Mayor of London. In another recent report on the state of cycling infrastructure in the capital, the London Assembly puts forward the case for TfL to 'more actively shape the market' so that the benefits of dockless bike share can be reaped: 'Dockless bike hire schemes have the potential to increase and widen cycle ridership in London. But TfL needs to manage them strategically to ensure their benefits are maximised – and that London avoids the problems they have caused in other cities'.

In response to the lack of powers, TfL and London Councils have proposed a London-wide bylaw,

expected in early to mid 2019, to regulate dockless bike share in the capital. The bylaw is expected to effectively make it an offence to operate a bike share scheme in London without a licence. London's boroughs would then have the powers to grant dockless bike share operators consent to operate on their streets given local assessment and abiding to set conditions.

London-wide regulation, instead of for each borough, is sought because trips on dockless bike share often cross borough boundaries. So far dockless bike share operators have been working at the borough level. This has limited the trips for which dockless bikes are a feasible option – limiting the attractiveness of the service and undermining potential mode shift to cycling. The same logic also supports a national regulatory framework, which had been discussed by central government in early 2018 but has since stalled. Without overarching regulation the market remains

difficult for dockless bike operators to succeed and thus they have repeatedly expressed their support for a London-wide or national regulatory framework. This would have made it easier for operators to launch and expand in London and other cities across the country. The lack of ability to operate at scale and across borough boundaries may be one reason for a recent retreat from London by some operators, although new entrants featuring shared ebikes are starting to emerge.

Giving local government and transport authorities the right tools to manage dockless bike share to align private sector operations with long-term transport strategies and visions, with overarching policies such as mode shift to sustainable transport and road safety, is important. However, it is also important not to weigh down potential mobility innovations with regulations and restrictions. It is also important to take a step back and reflect on whether regulation

and restrictions on "conventional" transport modes are sufficient and supportive of the transport visions for our cities. In the context of London, the Mayor of London has set out his headline objective in his transport strategy: for four out of five trips to be by public transport or active travel. Currently over a third of trips in Greater London are completed by car. As we reflect on whether the current regulatory framework is fit of purpose for dockless bike share and the new mobility options on the horizon, it begs the question: do we have the right tools to discourage private motorised travel and encourage sustainable modes?



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Considerations for solving hospital parking problems

By Ian Bewick



The topic of parking at hospitals is never far from the media glare. A popular opinion is that parking at hospitals should be free. From the work we have done in the health sector – both in England where parking charges are the norm and in Scotland where there is a policy of free parking – there appears to be little evidence that providing free parking can solve the chronic problems faced by hospitals.

To solve this problem requires a more strategic approach to pricing, as part of a wider Travel Demand Management (TDM) strategy. Building on our experience in this sector, potential approaches to reducing parking demand at hospitals include:

1. Ditching the supply-based approach to parking

A typical supply-based approach sees additional parking as the solution to capacity problems. However, experience shows that this doesn't work. Hospitals that continue to invest in additional parking to address capacity issues often find that neither the problem nor the media spotlight go away.

2. Reducing the number of staff parking

A TDM strategy requires fewer staff, patients and visitors travelling by car. Hospital staff are regular commuters and employers have direct communication channels with them, so from a demand management perspective, it makes sense to focus on reducing staff parking demand. On the other hand, trips to hospital by patients and visitors are likely to be one-off or occasional trips at a time when illness may reduce their ability to travel by public transport, walk or cycle, which makes it harder to persuade them to use those modes. The difficulty (not the cost) of finding a parking space is often the main concern of patients and visitors – a practical way to make more spaces available to patients and visitors is to free up spaces currently used by staff.

3. Making the most of the local travel opportunities

Large hospital sites are generally well-served by public transport. Finding out how many staff live close to public transport routes can help focus the allocation of parking to those who need it most. Supporting locally-based staff to walk or cycle instead of driving one or two miles can free up a significant number of parking spaces for patient use. Some hospitals have distance-based exclusion zones where locally-based staff cannot obtain a permit to park. These can be an effective way to remove unnecessary car parking demand.

4. Incentivising the use of sustainable travel

Compared to the resources dedicated to providing parking for staff, those who walk, cycle or travel by public transport to work seem undervalued by the health sector, despite the healthier nature of these modes. Providing incentives for travelling sustainably brings a double benefit of improving wellbeing and reducing parking demand.

5. Flexibility

Travel options available to staff may be inflexible, both in terms of parking permits, which tend to be permits charged at an annual fee, and public transport options which operate to fixed routes and may not coincide with changing shift start and finish times. Charging staff per use of the car park, rather than a flat fee, gives them an incentive to commute by another mode. A flat annual parking permit arrangement just encourages staff to drive every day.

New smartphone technologies are also enabling more flexible transport services, such as on-demand minibuses and dynamic car sharing which can offer good options for getting staff into work for early shifts and guarantee journeys home for late workers. Proactively supporting staff to get to and from work could help with recruitment and retention of staff, particularly those who are lower paid, an important issue for hospitals.

All these elements, when brought together into a coherent strategy, tackle the root of the problem and can be transferred to any large employment site struggling to cope with the differing demands of staff and visitors, including airports, shopping centres and visitor attractions.



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Unlocking the delivery of new homes

By Josh Stott

The Government has set the ambition of delivering 300,000 new homes a year. Attaining and sustaining this level of housing development will depend on the availability of a rolling, long-term pipeline of residential development sites.

Over the last six months, Steer Economic Development and Steer have been working alongside the Ministry for Housing, Communities and Local Government (MHCLG), Homes England, the Department for Transport (DfT) and local government partners on the Forward Fund component of the Housing Infrastructure Fund (HIF). Spanning 45 places nationally, the purpose of this multi-billion programme is to increase housing supply through a better co-ordinated approach to infrastructure planning, investment and delivery. We take this opportunity to share some of the key insights that we are applying to our ongoing HIF-related work and beyond.

Recognising that transport is necessary but not sufficient

Although the majority of HIF investment will be used to deliver transport infrastructure, it will also fund a diverse package of 'other infrastructure' including utilities, land assembly, flood defences and schools. Delivered in isolation, transport interventions are not sufficient to unlock housing sites. But by facilitating the delivery of a co-ordinated package, HIF aims to address a range of strategic infrastructure constraints and unlock commercially viable residential development sites.

Basing the case for investment around housing impacts

Sponsored by MHCLG, the primary purpose of HIF is not to 'solve' transport problems but to unlock new housing. Bids are being assessed primarily on the basis of their housing impacts. Because of this, HIF requires a multi-disciplinary approach to case-making, combining housing, transport and other professionals. This collaborative approach to problem-solving has been one of the most valuable and rewarding aspects of our HIF work, as it has brought together innovative teams, both internally and externally.

Establishing a clear link between infrastructure investment and housing delivery

HIF Forward Funding projects are typically geared towards unlocking multiple sites over a 10- to 20-year timeframe. Developing a clear rationale for intervention can, therefore, be



complex. Establishing the dependency of the development on the new infrastructure is important, but the linkages between the infrastructure and housing delivery must also be underpinned by site viability and property market evidence. MHCLG and Homes England need to be satisfied that HIF investment will be sufficient to bring forward the desired new homes.

Combining housing and transport impacts

Our work has focused on supporting the development of 'Economic Cases' for HIF investment, combining Land Value Uplift (LVU) methodology with an assessment of transport impacts into a single, integrated value for money assessment. Reflecting the emphasis on housing, LVU is the core metric for HIF, and, as such, is based on site-specific valuations undertaken by a qualified valuer. This must be combined with transport impacts which involve quantifying i) the number of homes that the infrastructure improvements could help unlock relative to the number of homes that would be likely to be delivered in any event [i.e. the deadweight] ii) any detrimental impact that these new homes might have on the network iii) any beneficial impacts to the 'base load' traffic [i.e. existing network users] because of the transport improvement. Although the 'combined method' is set in guidance, many applicants have not applied this approach before. Our role has been to

help applicants to navigate their way through the economic impacts and to do so in a way that best captures the benefits of their proposal while giving bid assessors confidence in the analysis.

To meet Britain's housing needs, the HIF model needs to become the norm, not the exception. This model could be further refined and enhanced, but at its heart sit three powerful principles which should be rolled forwards. Firstly, HIF is not a short-term, headline-grabbing initiative. It recognises that the 'housing crisis' has been a long time in the making and will require a long-term fix. Secondly, it is explicitly and resolutely outcomes-focused, with the primacy of housing impacts embedded in business planning. Thirdly, it adopts a co-ordinated approach to the design and delivery of packages of infrastructure, essential to unlocking new homes in the right places.



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The economic case for devolution from the UK Government to Yorkshire

By Scott Dickinson

The UK operates different devolution arrangements in different places – the UK's largest county, Yorkshire, is seeking its own arrangements

England operates a centralised system of government, which has been undergoing a process of decentralisation over the past 20 years. In recent years, the focus of this process has been on 'deals' struck by central and local government and the introduction of 'metro mayors'. The deals set out specific powers and budgets to enable areas to promote local economic, social and environmental wellbeing. The metro mayors receive powers and budgets from central government – and the powers and budgets vary from place to place to reflect local priorities.

Eighteen local authorities in Yorkshire, along with the Mayor of Sheffield City Region, are working together to make the case for the devolution of significant powers and budgets to Yorkshire and a newly established Mayor of Yorkshire. Central government requested an economic rationale for devolution to Yorkshire, as opposed to its constituent city regions. The 18 local authorities asked Steer Economic Development to assess the extent to which their local economies, when taken together, form a coherent economic area, and to identify opportunities for promoting economic growth at the level of Yorkshire.

The nature and scale of the issue

The Yorkshire and Humber region has a population of 5.6 million people, a workforce of 2.5 million, and more than 400,000 businesses of all types. It is a complex, polycentric and diverse economy that is worth around £112 billion a year. Yorkshire is twice the size of Wales and is larger than 13 countries in the European Union.

The region's governance arrangements for business and economic development reflect its economic complexity. At the time of writing, eight of the region's 22 local authority districts were members of more than one Local Enterprise Partnership, business-led groups with responsibility for setting economic development priorities for an area. The complexity of interactions between sub-regional economies and local

political and administrative boundaries in Yorkshire and Humber has stymied efforts to establish governance arrangements that are as economic, efficient and effective as they could be. Thus, current governance arrangements for business and economic development fail to make the most of the region's economic potential.

The need for effective action to drive the region's economic growth is clear: if the region's gross value added (GVA) per head matched the UK's, it would be c. £31 billion (c. 25%) higher. Furthermore, economic forecasts indicate that without action the GVA gap could grow to £42 billion a year by 2038.

Establishing the economic tests

In assessing the region's economic coherence and strength of the case for devolution, we set some tests:

- What are the key sectors and industries in Yorkshire?
- To what extent are these sectors shared across Yorkshire?
- Is the Yorkshire economy sufficiently different from the rest of the UK for it to benefit from devolved powers and budgets?

We identified 16 industries that are significant employers which are shared across Yorkshire. We also found that Yorkshire's economy is distinctive from the UK – based on its specialisation in manufacturing and in distribution, transport, accommodation and food. To identify Yorkshire-level issues, we asked: What are the specific challenges and opportunities facing the region and what might be done at the level of Yorkshire to address them? We broke down the issues into five policy areas:

- International Trade & Investment;
- Skills;
- Business and Enterprise;
- Innovation; and
- Transport.

Is there an economic case for devolution?

Using data available at the regional level, we assessed Yorkshire and Humber's performance relative to its share of the UK population, and we found scope for action to address:

- a £10.4 billion annual shortfall in the value of the region's exports;
- a 7% shortfall in those qualified to NVQ 4 or above – a gap estimated to cost the economy c. £1.56 billion a year;
- a gap of around 56,000 businesses – generating a £15 billion a year hole in region's output;
- a £1.35 billion annual shortfall in investment in Research & Development – with even greater long-term economic losses due to slow adoption of innovation; and
- a shortfall in investment on transport that is worth around £130 million a year and worth a total of £1.7 billion based on the known investment pipeline – with even greater economic losses in terms of inefficient labour markets, congestion, and pollution.

These gaps should not be treated as cumulative because some, such as innovation, highlight funding gaps (inputs to the region's economy), while others, such as exports, point to shortfalls in GVA (outputs from the region's economy), and others, such as skills, cut across policy areas and therefore carry a risk of double-counting. But together they are indicative of specific issues of under-investment and untapped potential that could be more effectively addressed at the Yorkshire level than current arrangements permit.

We suggest it is reasonable to argue that Yorkshire and Humber's annual economic growth rate could be raised above trend – thereby helping to close the GVA gap over the next 20 years – provided the region has significant devolved powers and budgets for the policy areas that matter most: exports and inward investment, skills, business and enterprise, innovation, and transport and communications.



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Placemaking: idea and tool for change

By James Brown and Riccardo Bobisse

Placemaking is both an overarching idea and a tool for improving a street, neighbourhood, or even a city; it can inspire a collective reimagining of spaces by strengthening the connection between people and places. So, what is the key to successful placemaking?

More than just promoting better design, placemaking enables the cultural and social identities that define a place and its people to underpin its evolution. Effective placemaking capitalises on a community's assets, inspiration and potential, resulting in the creation of places that contribute to people's health, happiness, and well-being.

All too common problems such as a traffic-dominated street, an underused open space, or an underperforming development can be addressed – or altogether avoided – by embracing placemaking ideals.

Good placemaking

The success of the placemaking trend and its ability to deliver tangible outputs has led to people wishing to be associated with the economic, social and cultural benefits. More and more the term placemaking is being used and capitalised on by developers, planners, and community leaders who use the term like a "brand" in order to provide a mark of quality and authenticity to schemes such as retail and mixed-use developments.

Making a place is not the same as constructing a building, designing a privatised space, or developing a retail site. If used too much by projects that aren't rooted in the community it risks diluting future potential or backfiring and being perceived as gentrification.

Genuine placemaking cannot be measured by its physical attributes alone; it is also when people of all ages, abilities, and socioeconomic backgrounds can enjoy a place, and play a key role in its identity, creation, and curation. As more communities engage in placemaking and more professionals come to call their work "placemaking", it is important to preserve the meaning and integrity of the approach.

We should remember that:

Placemaking is:

- Inclusive & Collaborative
- Focused on creating places
- Context specific
- Dynamic

Placemaking is not:

- Top-down
- Exclusionary
- Homogeneous
- Discipline-driven
- Project-focused

Measuring success

The way in which the success of placemaking projects are measured has evolved significantly over the years. Initially, projects were judged on raw data via the use of footfall. The apparatus of measurement then became more focused appraisal and evaluation tools to justify not only success but also investment in placemaking projects.

More recently, however, the focus has shifted towards assessing social value and how interventions have affected the communities using them, though this is very difficult to track. The use of emerging technologies and existing digital tools such as mobile phone data can provide a greater breadth of information and new ways to understand how and by whom places are used. However, the challenge with any form of evaluation is how to adequately assess the full impact of placemaking.

Lessons to be learnt

In an era where both public and private stakeholders are seeking to create financially sustainable and socially engaging places, what is the key to successful placemaking?

- Greater collaborative working between local authorities, developers, Business Improvement Districts (BIDs) and businesses that can break down silos and narrow focuses of interest.
- Greater community engagement that enables people to see how powerful their collective ideas can be.



- The creation of a collective vision to bring everyone along on the journey.
- Embracing a model of placemaking that views a place in its entirety, rather than a focus on isolated components.

For us at Steer, placemaking is both a design process and a philosophy. We align our urban design, landscape architecture, branding and wayfinding expertise to create a common vision for a place, making it work for all who live and work there.

The example of Brick Lane

Brick Lane is blessed with a well-connected, strategic location in East London. It is at the centre of an array of attractions of local and citywide relevance, features in tourist guides, has a rich history and is often seen in films. Its character is a paradigm of London's multi-cultural heritage. The post-recession years have also seen the arrival of several large developments in the proximity of Brick Lane as well as public realm improvements and infrastructure projects. Despite this incredible mix of ingredients, Brick Lane is not fully capitalising on its potential, and struggles to secure benefits for its businesses and residents.

Brick Lane's current movement patterns are generated by key local attractors such as Spitalfields Market, the Truman Brewery, and Petticoat Lane Market, but these only relate to a short section of Brick Lane. A dedicated strategy with a placemaking focus offered the opportunity to capture and spread the footfall along the entire street and to turn Brick Lane into a key pedestrian north-south route, linking all the attractions in the area and reinforcing the street's competitiveness.

This was realised partly through the identification of a series of characterful, creative, and distinctive interventions to increase footfall and aid discovery and exploration. Interventions included improvements to building facades, the development of a cultural trail through to larger scale projects including the design of a pocket park behind the Whitechapel Gallery. Developed in collaboration with the whole local community, these interventions aim to embrace local identity and create a sense of place for the entire area.

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Source: East Architecture

Beam Parkway, from trunk road to housing centrepiece

By Simon Davies

Despite its name, New Road in the London Borough of Havering has a history extending back over 100 years. The road served for many years as the A13 trunk road from London to Southend but was bypassed and downgraded nearly twenty years ago. The area is now being transformed to support a new housing zone and to provide improved transport connections.

Although New Road was bypassed by the new A13 and downgraded, much of it is still a dual carriageway, creating an unwelcoming environment that is dominated by the road, and which also acts as a barrier to movement between areas to the north and south. Some specific challenges associated with the current layout include:

- The predominance of dual carriageways and the presence of large junctions is an environment that encourages high vehicle speeds and creates road safety issues.
- Existing cycling facilities are discontinuous and inconsistent, and therefore unused by cyclists.
- The walking environment is unpleasant due to street clutter as well as the speed of adjacent traffic. The many signalised crossings are indirect and inconvenient to use, requiring up to four stages to cross the road. This also makes it less attractive to walk to bus services.
- Existing green spaces at either end of New Road are largely hidden.

These findings are underlined by results from the TfL Healthy Street Check for Designers, where New Road currently only scores 37/100 with particularly low scores achieved in easiness to cross [30%] and safety perception [33%]. In addition, baseline attitudinal surveys showed that only 19% of respondents agreed that 'the streets in this area are attractive'. New Road is therefore not fit for purpose today, and even less so when the planned growth in the area is considered.

In 2016 the Greater London Authority (GLA) designated the industrial area around New Road as the Rainham and Beam Park Housing Zone, offering around 3,500 new homes, community facilities, a new school, and a new railway station.

New Road in its current form does not meet the needs of the housing zone and Havering Council has therefore embarked on an ambitious project part-funded by Transport for London (TfL) and the GLA to reconfigure New Road from a legacy dual carriageway into Beam Parkway, a new city street and linear park that will support the housing zone and provide improved transport connections for all modes by creating a series of new places and green links.

The Beam Parkway scheme will therefore transform a 2 kilometre length of New Road into a single carriageway and the space gained will be transformed through the provision of new walking and cycling facilities as well as new landscaping and sustainable drainage systems.

Footways on both sides of the carriageway will be improved, widened and decluttered and a new two-way segregated cycle track will run along the entire length of the corridor. Floating accessible bus stops will improve access to public transport.

All side road priority junctions will be provided with continuous footway and continuous cycle lane treatments. Informal raised crossings with pedestrian refuge islands at regular intervals will improve permeability between the existing and the new neighbourhoods, while encouraging lower vehicle speeds.

Dedicated lighting features will provide appropriate lighting levels along the footway and cycle track as well as along the carriageway. Seating and resting places will encourage residents to use the new pedestrian and cycle facilities. New landmarks, referencing memories and the history of the road will help people identify with the area.

Complementing these features will be an articulated landscaping and planting palette. A line of vegetated swales will be introduced along the length of Beam Parkway, separating pedestrians and cyclists from the road and providing a cleansing and drainage system for rainwater.

The existing wetland character of the Ingrebourne Marshes will be extended through the planting palette across the eastern end of the scheme. The scheme will also link into the Beam Country Park

at the western end of the scheme. New trees and planting will help to improve air quality as well as provide shading and create a pleasant environment for walking and cycling. An educational 'urban wild trail' will increase and support biodiversity in the area.

The Beam Parkway scheme will:

- unlock major regeneration and use opportunities to work with developers;
- enable and encourage the use of sustainable transport;
- reduce severance, strengthen social cohesion and improve links between communities;
- enhance urban realm and provide new green space;
- reduce the negative impacts of transport on the environment and amenity;
- contribute to improved health; and
- provide improved access to employment and education opportunities.

The new scheme has been designed by a team led by Steer including East Architecture, Jonathan Cook Landscape Architects, Studio Dekka and Norman Rourke Pryme.

Steer has led the scheme through TfL's Major Schemes bid process, modified to reflect the current Healthy Streets agenda. In addition to the scheme design, Steer has carried out extensive traffic modelling to ensure that the modified junctions and crossings meet the need for traffic capacity while providing significant walking and cycling benefits. Steer is now supporting Havering through procurement of a contractor to deliver the project.



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Current situation



Proposed solution

News in brief

New or improved rail lines: case studies of local economic impacts

In October 2018 the Department for Transport (DfT) published a set of case study reports prepared by Steer with Cambridge Econometrics. Findings from the research were also presented by DfT at the European Transport Conference 2018. This significant and innovative piece of work has started to fill a knowledge gap highlighted by the What Works Centre for Local Economic Growth – the absence of reliable evidence for the impact of rail infrastructure on employment. The study has now obtained quantitative and qualitative evidence relating to case studies in Corby, Falmouth and Leamington Spa, plus baseline data for Oxford Parkway, Bromsgrove, and Swindon. Read the reports at: www.gov.uk/government/publications/economic-impact-of-new-and-improved-rail-lines-case-studies-and-method

Supporting WYCA to develop local cycling and walking infrastructure plans

Steer is supporting West Yorkshire Combined Authority (WYCA) and its five partner councils in Leeds, Bradford, Calderdale, Kirklees and Wakefield to develop Local Cycling and Walking Infrastructure Plans (LCWIPs). LCWIPs, a Department for Transport (DfT) initiative, are a strategic approach to identifying cycling and walking improvements, enabling a long-term approach (e.g. 10 years) to network development. As advocated by the DfT's LCWIP guidance, we are taking an evidence-led approach to planning for walking and cycling, with an overall principle that cycling and walking routes form part of the transport network and should be designed to provide a transport option for making everyday journeys. Steer is enabling active stakeholder involvement in planning the networks – working with Dutch consultancy Mobycon and walking charity Living Streets – to engage with a wide range of stakeholders through innovative network planning workshops and street audits. The first phase of the West Yorkshire LCWIP is expected to be completed in spring 2019.

Transforming London boroughs into liveable neighbourhoods

By Peter Piet



Encouraging people to walk, cycle and use public transport rather than cars has the potential to transform a city and improve the lives of everyone who lives and works there. With the ambitious goal of increasing active journeys in London, a new funding programme was introduced to provide London boroughs with the opportunity to transform their streets into a place where people choose to walk and cycle and, ultimately, live healthier lives.

In 2017, a new £114 million 'Liveable Neighbourhoods' programme was announced by the Mayor of London and Transport for London (TfL) with the aim of improving local environments across London – by directly enabling walking, cycling and the use of public transport. Seven London boroughs – Ealing, Greenwich, Hackney, Haringey, Havering, Lewisham, and Waltham Forest – were awarded funding to progress proposals that will transform their neighbourhoods into greener, healthier, more attractive places.

The programme will help achieve the aims of the Mayor's Transport Strategy, which states that 80% of all journeys in London should be on foot, by cycle or by public transport by 2041. Grants will be provided for a wide range of community-supported projects, potentially

including the creation of green spaces, new cycling infrastructure, improved junctions and the widening of walking routes to enhance access to local shops, businesses and public transport. Encouraging people to think twice about jumping into a car for short journeys and consider a lifestyle without owning a car, as well as encouraging businesses to consolidate waste management and alternative delivery systems, will also be ways in which neighbourhoods should see a reduction in traffic dominance.

Underpinning the programme is the Healthy Streets Approach devised by TfL, which will enable boroughs to improve air quality, reduce congestion and make London's diverse communities greener, healthier and more attractive places in which to live, play and do business. This approach provides the framework on which to devise policies and strategies to transform our streets into enjoyable places to be.

Steer is currently working with the London Borough of Ealing and key stakeholders on the feasibility study and TfL Gate 2 funding application for the West Ealing Liveable Neighbourhood. Branded 'Live West Ealing' the neighbourhood straddles the Uxbridge Road, a strategic east-west transport corridor into and out

of central London. This area, a busy high street surrounded by old and new residential accommodation within easy walking distance of the new Elizabeth Line station at West Ealing, is an ideal location where walking, cycling and the use of public transport can be encouraged through improvements to the public realm.

Proposed projects include tactical interventions such as parklets and colourful crossings to generate interest in the programme, "Passageway Places" to turn unloved alleyways into creative connections featuring light and art installations, and Gateway plazas to celebrate entry into the neighbourhood.

Steer also assisted Hillingdon and Islington Councils with their applications for the second round of funding, which closed on 30 November 2018, and we look forward to working with other London Councils and TfL to deliver this programme over the coming years.



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Interview

Michael Colella
Associate Director
US Advisory Team

North American transport infrastructure two decades on

Associate Director, Michael Colella, originally from New York, has returned home after spending 22 years in London. Given his experience working in both the UK and USA, we asked Michael about the differences between the two, and what challenges he sees for transport in North America.

Q: Since you have been away from the States for over two decades, how do you compare transport infrastructure and policy today to that of the 1990s?

A: I think nowadays there is a growing acceptance that transport infrastructure, and infrastructure more generally, are much more important issues than they were perceived to be in the 1990s. Back then, transport was important in some areas, but on more general terms and at a national level, people just got around and transport was not a priority on the political agenda of the time. In Canada, back in the 1990s, they were disinvesting in transport.

Fast forward 20 years and we start seeing a sense of urgency and appetite to do something in this arena. In Canada, since the Trudeau administration came into power, they have increased investment in transport infrastructure. In the US, there is definitely a greater interest, and in key areas – LA, Seattle, Atlanta, Dallas, Houston, Denver – they are finding ways to generate income for investing in infrastructure improvement.

Q: What are the main differences between transport in the UK and North America?

A: In the US, there is a clearer distinction between what the private sector does, such as running an airline, and what the public sector does, such as running a commuter rail service.

In the UK, it is much more fluid. There is a sense that while transport policy is

ultimately a public-sector decision, the development and delivery could be done by either the public or private sector. London is the best example of this, where Transport for London determines the types of bus or rail services or cycling policies, but most are operated and delivered by the private sector. This outsourcing remains limited in the US, and although some exceptions such as P3 toll road projects are happening, there is very limited involvement of the private sector in what is considered the public-sector realm.

Canada is similar to the UK. For example, Toronto's Metrolinx determined what they wanted for the GO station expansion project but the private sector will develop, deliver and run the expansion.

Q: What are the challenges you see facing transport into the future in the UK and North America?

A: I have found that the quality of infrastructure in the US could use some improvements, but there are fundamental challenges – more money, investment and time are needed to deliver these. I think the country could benefit from finding a more effective and efficient way of delivering and maintaining transport infrastructure involving the private sector. In the UK, the challenges lie in the growing population using infrastructure that isn't growing at the same rate and finding the funding to make the necessary changes that doesn't depend solely on general taxation.

Canada is somewhere between the US and UK. Some infrastructure in Canada has seen very little investment over the last few decades, though this is now changing. I think passenger rail could be playing a much bigger role, whether it is long-distance commuting or intercity.

Q: Technology is constantly changing transport as we know it. In your view, which technologies are having a bigger impact on the transport sector?

A: Many technologies have already had an interesting impact on the world, as we know. In New York, for example, services like Uber have had a pretty big impact on people's lives. Bike share schemes have also had interesting consequences, allowing big cities like New York and London to have more extensive cycling infrastructure than 20 years ago.

It will be very interesting to see how technology impacts a country like Canada, with a large rural population. I think rural communities could really benefit from some of the technologies that are starting to permeate.

Q: Steer works across the globe. Could any transport lessons or strategies being deployed in other countries or geographies be applied to the UK or North America?

A: I think bus rapid transit (BRT) and more flexible transport infrastructure could play a much bigger role in North America, or even the UK. The rise of BRT in Latin America – Brazil, Colombia, Chile and almost every country there – has been done partially because they didn't have the time to design and build big expensive metro or commuter rail systems. They potentially represent a stepping stone to those metro systems in the future where demand, fares and costs are better understood. This approach of 'incrementality' is really something that could be leveraged further elsewhere.

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The role of air freight logistics

By Peter Wiener and Mark Scott



The air freight industry plays an important role within the UK, particularly for regional economies. Many of the industries most reliant on air freight services are located in regions such as the North West, Wales and East Midlands, but the majority of air freight facilities are highly concentrated around Heathrow Airport in the South East, often causing congestion and delays to shipments.

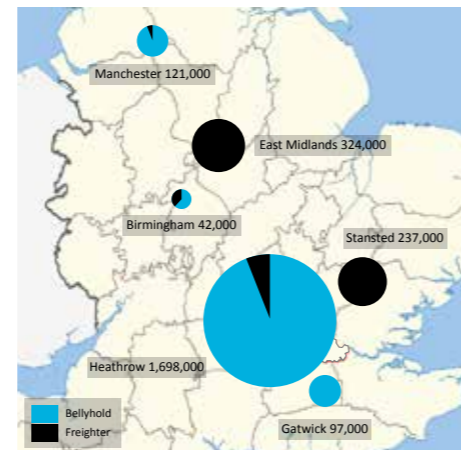
In 2017, air freight accounted for over 40% of the UK's trade [outside the EU] in terms of value – equivalent to over £180 billion^[1] – but under 1% in terms of volume. This reflects the fact that, as transporting goods by air is significantly faster than other transport modes, air freight is often used for time-sensitive and high-value products. The fast delivery of these products supports many important parts of the UK economy, including just-in-time production lines within high-end manufacturing industries (such as aircraft) and the release of new ranges of consumer goods (such as iPhones).

Both globally and within the UK, the vast majority of air freight is transported using two principal business models; the forwarder model, which uses an intermediary (the forwarder) to provide a link between shippers and airlines, and the integrator model, which uses one entity throughout the entire shipping process. These business models dominate the UK's major freight airports.

Heathrow, which predominately uses the forwarder business model, is by far the UK's largest freight airport, with an overwhelming majority of the cargo transported in the bellyhold of passenger aircraft, mostly on long-

haul routes. East Midlands Airport, by contrast, is dominated by more time-sensitive express freight using the integrator business model, with freight carried in dedicated freighter aircraft, often overnight on routes to mainland Europe. Stansted Airport has a combination of integrators and other freighter-only airlines, while Manchester is largely bellyhold, although on a

Figure 1: Freight volumes at six largest UK airports, tonnes [2017]



Source: CAA

much smaller scale than Heathrow. One notable feature of the UK air freight market is the concentration of freight facilities at Heathrow, with most forwarders having major consolidation centres near the airport. Significant volumes of air freight are trucked to these facilities near Heathrow, processed, and then trucked to another airport, either in the UK or in continental Europe, without ever flying in or out of Heathrow itself. This concentration of activity around Heathrow, combined with continued under-investment in airport freight facilities, often causes significant congestion and, in some cases, delays for freight shipments departing from the airport.

Although UK air freight activity is concentrated around London and the South East, many of the industries that are currently dependent on air freight services are located in other regions of the UK. As part of a recent study for Airlines UK^[2], using the proportion of goods each UK industry exports by air, Steer estimated the proportion of these industries' (and their supply chains') gross value added^[3] (GVA) that is currently dependent on air freight services. While, in principle, other transport

modes could provide alternatives to air freight, in practice they are likely to be poor substitutes since air freight is, typically, at least four times faster and at least four times more expensive than surface freight, implying that shippers use air freight because it provides a unique level of service (which may be difficult to replicate through alternative modes of transport).

At a UK level, the total GVA currently dependent on air freight services was £87.3 billion, equivalent to 5% of UK GVA in 2016^[4]. However, at a regional level, the GVA currently dependent on air freight services varied depending on the industries located in each region.

Although London and the South East provide the majority of UK air freight services, with Heathrow as the main hub, only a small proportion of their regional GVA is currently dependent on air freight, compared to regions such as the North West, Wales, the East Midlands and the South West, where there is a far greater share of regional GVA dependent on air freight but a smaller volume of air freight services. The location of many of the industries dependent on air freight, as well as the congestion and delays associated with the concentration of freight activity around Heathrow,

suggests that there is an opportunity for greater utilisation of freight capacity at other regional airports across the UK.

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[1] HMRC trade statistics
 [2] Link to report: <http://airlinesuk.org/wp-content/uploads/2018/10/Assessment-of-the-value-of-air-freight-services-to-the-UK-economy-Final-Report-v22-Oct-2018-b-SENT.pdf>
 [3] Gross Domestic Product (GDP) before accounting for taxes and subsidies
 [4] The most recent year with available data

Electric buses: impetus for electric mobility in Indian cities?

By Prashanth Udayakumar

India has recently been considering electric mobility and alternative fuels as potential solutions to the multi-pronged crisis of air pollution. Although there is an appetite for electric vehicles, the inadequate charging infrastructure and higher capital costs pose a challenge. Can electric buses, with their advantage of captive charging infrastructure and subsidies, provide the breakthrough for large-scale electric mobility in India?

Updates from policy and industry show that, with the appropriate strategy, planning and intent, there is potential. With India being highly solar-resourced, and solar picking up in the renewable energy sector, electric vehicles have the potential to become a fully clean mobility option in the emerging pro-sustainability markets.

Starting with an ambitious target for complete electric mobility by 2030, in the last five years the Indian government has attempted several strategies to promote electric mobility. Phase I of the federal Department of Heavy Industry's (DHI) FAME Scheme offered subsidies for the purchase of electric vehicles. In 2017, this scheme included electric buses (e-buses), with up to 60% subsidy capped at INR 10 million (for 35% localisation). After expressions of interest from 44 cities, Phase I saw 11 cities being selected for the pilot project.

With final funding approved by DHI, Tata Motors is expected to supply 230 e-buses to seven cities and Goldstone-BYD 290 e-buses to three cities. Delhi is planning to procure 700 e-buses using the state budget. Between the gross cost model (bid per km operating cost) and outright purchase (bid per bus purchase cost), the former finds its place in the contracts of cities like Bangalore and Hyderabad that have the largest size and numbers of buses, battery capacity and range in the contract. Besides FAME, there have also been



supply-side incentives. Apart from a lower Goods and Services Tax (GST) on electric vehicles (12%) compared to conventional vehicles (28%), the GST on lithium ion batteries has been lowered to 18% from 28%. Though India does not have enough lithium reserves on its own, its preferential trade agreements with lithium-producing countries like Chile can help bring down lithium costs, and in fact, despite the higher import duty, lithium ion battery costs have been coming down in the last three years. In addition to these measures, the government think tank, NITI Aayog, has recommended fiscal incentives to EV manufacturers. The need for licences to set up charging infrastructure has been diluted to include players beyond power distribution companies.

Steer has been assessing the case for introducing new bus technologies in Latin America, Europe and India. We have extensive experience in advising international players and local governmental bodies on strategy, bidding and operations across corporate and city bus segments in Indian cities like Pune, Delhi, Gurugram and Nagpur. Based on our experience, we see five factors that provide an enabling environment for clean buses – public transport characteristics, environmental standards, energy and infrastructure setup, governance and markets, and funding and financing options. Context-specific solutions, innovative win-win

operating models, and inter-sectoral coordination between transport, power and urban planning are important principles for success.

Local characteristics, including topography, ambient temperature, typical bus speeds, stop frequency and load factors have a substantial influence on performance and technology choice for clean buses. Completely electric vehicles may not be a one-size-fits-all solution, as seen in the Indian government's parallel efforts in encouraging alternative fuel like ethanol and methanol-blended fuel and a modified target of 30% electric fleet by 2030 in India. Nevertheless, electric vehicles (buses and taxis in particular) are likely to be a major component of the clean fuel mix.

As successful pilots potentially emerge from the ongoing efforts and the Indian market learns more lessons, Steer can leverage its expertise to facilitate the greater penetration of electric buses and vehicles into Indian cities.



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10 years of behaviour change in West of England

By John Geelan



Behavioural and attitudinal change often take time and persistence to achieve – one only need look at the challenges relating to smoking cessation, or various types of discrimination, to see how long entrenched behaviours and attitudes can take to change and new cultural norms to become established. Influencing travel behaviour is no different.

Running coherent ongoing programmes to support the objective of changing travel behaviour in the UK can be challenging. This makes the fact that we have now passed our tenth year of managing the West of England Sustainable Travel Field Team (STFT) even more a reason to celebrate.

The team, originally introduced as part of the Bristol Cycling City programme, now provides travel advice and support to employment sites, new residential developments, universities, schools and communities across Bristol, Bath and North-East Somerset, South Gloucestershire and North Somerset. Recent examples of the team's work include:

- Supporting business resilience during infrastructure improvements in South Gloucestershire. Bromley Heath Viaduct has undergone a £5.9m maintenance programme. The STFT worked with local businesses to ensure that they were prepared for any route changes required during the improvement.
- Delivering support to new movers at housing developments. Over 700 homes across five developments were targeted by the STFT, who delivered PTP to residents as developments became occupied.
- Exploring the potential for health benefits from encouraging

walking as part of a wider public transport journey.

- Working with businesses to prepare staff for the introduction of paperless ticketing. A switch to app-based and smartcard tickets purchased prior to boarding Metrobus M2 and M3 has meant a need for extensive customer engagement to ensure a smooth transition. The STFT has engaged with employees at key employment sites in the run up to route launches to support this transition and to reduce the potential for initial delays due to passengers' lack of awareness of new ticketing options and revised routes.
- Providing outreach support to businesses before Residential Parking Scheme implementation. Businesses within several residential areas were to lose on-street parking which until then had been the norm. To prepare them for the change, the team provided information and answered questions to those affected.

Each year the team have been well-received in terms of their customer service skills and have delivered high levels of change by the residents and employees they work with in terms of reduced single occupancy car trips, and increased active journeys.



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News in brief

Steer at the European Transport Conference

Steer consultants Dick Dunmore and Lucia Manzi attended the European Transport Conference in Dublin to speak on the topics of European infrastructure development and local public transport.

Dick attended a session on the Belt and Road Initiative (BRI), China's programme of investment in transport infrastructure and operations linking it to global markets by air, land and sea. He presented our paper, "The 'Belt and Road Initiative': impacts on TEN-T and on the European transport system", which showed the findings of our study for the European Parliament describing the BRI and examining where and how it might affect Europe's airports, ports and rail and road networks.

Lucia presented on the potential role of cable cars in local public transport, describing the opportunities presented by the mode in an urban setting. Focusing on the example of La Paz in Bolivia, which has the world's largest network of cable propelled transit (CPT), Lucia identified how other cities, like Paris, Amsterdam and Marseilles, are experimenting with CPT lines.

Reviewing rolling stock fleet maintenance to improve fleet availability

Steer has been commissioned by Italy's Trenord to review its rolling stock fleet maintenance functions, with the aim of identifying how its fleet availability can be improved. Trenord is the operator of suburban and regional passenger rail services in Milan and the Lombardy region of Italy, operating 2300 services daily and 40 million train-km annually. Trenord has been facing increased public and political pressures as service performance has fallen short of expectations. This is in part a reflection of the level of cancellations arising from poor fleet availability. Steer has been working with Trenord and its maintenance management team to identify prioritised actions that will help to restore fleet availability to planned levels.



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Answers that help people, places and economies thrive.

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The logo for Steer, featuring the word "steer" in a lowercase, white, sans-serif font with a slightly rounded and friendly appearance.