

transporttimes

The independent voice of transport

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July 2014



Buses, job creation and the economy

Report reveals supporting role p6



Best of the best named at Scottish Transport Awards

STAs winners revealed at ceremony p21



Welcome to London's mini-Hollands

The transformation of urban cycling p27

The future, now How driverless vehicles are changing transport





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Are we ready for the driverless revolution?

If the railways transformed the way we travelled in the 19th century and the internal combustion engine in the 20th, then the revolution that will transform transport in the 21st century is autonomous vehicles.

The promise held out by autonomous road vehicles is that road accidents could be reduced, congestion could be relieved, consumption and pollution could be curbed, and driver time could be reclaimed. But to achieve this will not only require the development of new technologies; it will require social attitudes to adapt, new regulatory approaches to be developed, and new ownership and business models to be explored.

The challenge facing the Government and highway authorities is when to allow semi and fully autonomous operation and under what conditions. It is estimated that by 2035, 75% of cars sold will be able to operate autonomously. The car manufacturers and technology companies such as Google have been progressing rapidly in the development of AVs; the public authorities who are responsible for regulating vehicles and road use will need to respond. Under what conditions will they permit autonomous operation with the driver alert and ready to take the controls? Under what conditions will they allow fully autonomous operation? What roadside technology is required to communicate with AVs and who will be responsible for providing it? In short, regulation is running behind technology.

AVs have the potential to increase car use. They will take a lot of the hassle out of driving, and parking in particular. In the digital age with wi-fi connectivity, people have been attracted to public transport because it allows them to make productive use of travel time. This will be extended to private transport with AVs – when they can be operated au-



Car manufacturers and technology companies have been progressing rapidly; the regulatory authorities will need to respond

tonomously. They will also provide access to private transport to people who at present are either too old, too young or physically unable to drive. If they are as effective in cutting road accidents as their supporters predict then we can expect insurance to fall. This has been identified as a serious barrier for aspiring young drivers.

AVs have the potential in the longer term to significantly increase highway capacity – by anywhere from 50% to 250% depending on the forecast. Less distance will be required between both the vehicle in front and the vehicles in adjacent lanes. The days of cruising around looking for a parking space (which has been estimated can account for as much as 30% of traffic congestion in urban centre) will be a thing of the past. Will the extra capacity created accommodate more vehicles or will it free movement space to create more “living” or people space?

With vehicles controlled remotely their location and time of travel will be logged. This paves the way for GPS-based road pricing. It has been estimated that we can reduce traffic

congestion by around 50% by replacing fuel duty with time-based road pricing. This change could be brought about without road users being charged more in aggregate, mainly as the result of road users adjusting the time of day they travel to minimise the charge they incur. However, the impact on congestion is likely to be greater when you add in the prospect of road users booking slots on the road network and capitalising on significant discounts for planning their journey in advance. This would bring best practice from seat allocation for airlines and trains to our roads. It would transform journey time reliability, giving the certainty of journey time which road users crave.

Around 90% of fatalities and serious injuries on our roads are down to human error and advocates of AVs claim that they will cut road accidents by this amount.

If and when all vehicles are fully automated who would control their speed? Would it be the driver, by setting the vehicle’s computer, or would it be the highway authority? This would make it possible to vary traffic speed at different times of day. For example in the vicinity of a school the speed could be set at 10mph when children are starting and finishing school and a higher limit could be set at other times.

I believe that safety will drive the use of autonomous features on vehicles. It will become the norm for lane detection and automatic braking to be fitted on all new vehicles. Technology that helps us to reduce the carnage on the roads should be welcomed with open arms.

David Begg

David Begg is publisher of Transport Times

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Who's moving where

Automated signalling ‘will double commuter rail capacity’

Increased capacity on the national rail network brought about by automated running will “save” London’s transport system as the capital’s population expands over the next 20 years, said Transport Commissioner Sir Peter Hendy.

He was speaking at the launch of a new report by *Transport Times* publisher David Begg on driverless and autonomous vehicles.

The report, *A 2050 Vision for London: What are the Implications of Driverless Transport?*, was commissioned by Clear Channel and looks at the potential of rapidly emerging technology to transform both road and rail transport.

The report concludes that autonomous vehicles on the roads have potential benefits for safety, reducing congestion and unlocking road capacity. But for cities the advantages are less clear-cut.

“I think the biggest impact in London in the next 20 years will be on the railways,” said Prof Begg, “using the technology to replicate the 32 trains per hour frequencies seen on the Victoria Line and Jubilee Line on the heavy rail network. That could double the number of people coming into London.” Both the Jubilee and Victoria Lines use automated signalling and train control to achieve high frequency operation.

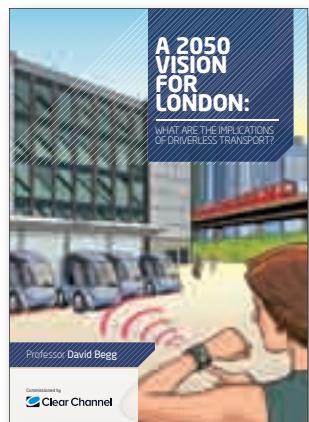
Sir Peter added: “We have a rapidly increasing population moving towards 10 million. The advantages of automated trains and railways are self-evident, when what you’re trying to do is ramp up the frequency to a level humans can’t do consistently.”

Automation would also allow the train to drive itself to the depot at night and bring itself back into service first thing in the morning, with the driver joining at the first station.

He said that the Underground could achieve 34 trains per hour and aimed to go beyond this. But he added: “The real challenge is not metro or the DLR but the national rail network. What will save this city will be the ability of the national rail network to run like a metro.” He predicted: “We’ll see automated signalling on the rail network just as we do on the Tube”, adding “I believe it’s inevitable.”

Prof Begg said that autonomous vehicles had the potential “to dramatically change transport in the 21st century”. But on the roads he said “there is the risk they make the car more attractive. That could threaten the economic growth of London, which is based on achieving a greater public transport modal split.”

Autonomous vehicles would also be attractive to the young



Sir Peter Hendy agreed with David Begg’s report that in London, automation’s greatest effect would be on rail

and people with reduced mobility who were unable to drive. But he added: “AVs are more likely to make a difference on motorways.”

For London, he said: “New technology can’t be allowed to divert TfL from achieving the biggest modal shift of any major city.” London should continue to pursue greater population and employment density, and aim for a 90% public transport mode share, as in Hong Kong. “We can’t allow technology to drive this. Lower density cities with high car use are more congested and polluted and less successful,” he said.

Both speakers agreed that traffic in London and other cit-

ies would continue to increase because of the inexorable rise in internet shopping and the consequent increase in the number of delivery vans.

Sir Peter suggested that automated road technology might have a greater role in addressing not the movement of people in cities but the movement of goods and services.

“The real challenge is that central London could be stifled by delivery vehicles,” he said. He predicted that “in the next 10 years one of the big logistics companies will find a way of using the technology.”

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Hammond replaced as transport minister

Stephen Hammond was replaced as a transport minister in this week’s government reshuffle. The MP for Wimbledon, whose responsibilities included rail and

shipping, was a regular contributor to *Transport Times*.

Patrick McLoughlin remains as transport secretary along with fellow minister Robert Goodwill. They are joined

by John Hayes, who becomes the new minister of state, and Claire Perry as parliamentary under-secretary.

Mr Hayes is MP for South Holland and The Deepings. He has



From left to right: John Hayes, Claire Perry and Stephen Hammond

held ministerial roles in the Department for Business, Innovation and Skills, the Department for Education, and the Department of Energy and Climate Change before moving to the Cabinet Office last year. He will be responsible for national roads, Highways Agency reform and maritime, and will be the Commons spokesman on bus policy.

Ms Perry was elected MP for Devizes in 2010. She was appointed an assistant whip in October last year. She will be responsible for rail (including franchising), freight and transport agencies.

Stephen Hammond, page 11

Buses provide vital access to employment and support town centre economies, research found



Greener Journeys report shows role of the bus in job creation

Jobseekers are heavily dependent on buses for accessibility to work, with 77% having no access to car, van or motorcycle.

And a 10% reduction in bus journey times would mean 50,000 more people in work.

These are among the findings of *Buses and the Economy II*, a new report produced for bus campaign group Greener Journeys and the Department for Transport by the University of Leeds Institute for Transport Studies.

The report also highlights the role of the bus in supporting town and city centre economies. Bus has the highest share of the transport market – a third – for shopping trips to city centres.

The new report is a follow up to 2012's *Buses and Economic Growth*. It investigates in more detail the links between bus services and the wider economy and examines how the knowledge gained at the macro level could be applied to the appraisal of specific bus improvement projects.

The report discovered a strong relationship between bus accessibility and employment, in addition to a high level of dependence on buses among jobseekers.

Those unemployed are more dependent on buses than the population at large for potential access to work. In a survey of over 900 jobseekers at Job Centre Plus offices in June and July last year, nearly 6 in 10 (58%) reported they took the bus to work when employed, a figure which rose to 72% for those without car availability. Over half (57%) of jobseekers did not have a full car or motorcycle driving licence, with nearly 77% having no regular access to a car, van, or motorcycle. This rose to 87% for 18-24 year olds.

An online survey of 4000 respondents was undertaken to investigate the use of the bus for shopping and entertainment trips. Respondents were asked about their most recent shopping trip, defined to exclude trips solely to the supermarket, to town and city centres, retail parks and entertainment complexes. Broadly 70% of trips were to town or city centres.

The survey found that bus trips were the most frequent mode of access to the city centre market for retail/entertainment trips – 33% versus 30% for car and 22% for walk/cycle. Bus trips represented 23% of total retail/entertainment trips, and bus users accounted for

29% of total retail and entertainment expenditure in city centres and 22% of expenditure in all location types.

To study the social insurance role of bus services, the team looked at hourly services connecting the market towns Much Wenlock, Bridgnorth and Market Drayton in Shropshire to the county town of Shrewsbury. A study involving 200 householders examined the value they placed on having a bus service available as a back-up facility for themselves (the option value) or on behalf of the rest of the community (their non-use value). It was found that on average, having a bus service available was valued at £122 for each household per year, or £2.50 per week, over and above the value of the trips they actually made.

The team aimed to demonstrate how labour market effects could be applied in bus policy analysis or project appraisal. The team undertook a series of econometric tests in which it found significant relationships between bus accessibility and employment. It concluded that a 10% improvement in bus journey time for all bus commuters in England would be associated with an increase in

employment of a fifth of one per cent, equivalent to an increase of over 50,000 jobs.

Applying this relationship to a policy test in which changes to bus service operators grant were tested, the team found that, following DfT guidance, including the economic benefit of getting more people into jobs increased the total benefit of the policy to society by around 9-10% on top of the direct transport benefits.

Greener Journeys chief executive Claire Haigh said: "This report is a breakthrough in demonstrating just how important the bus is in creating and underpinning jobs and growth."

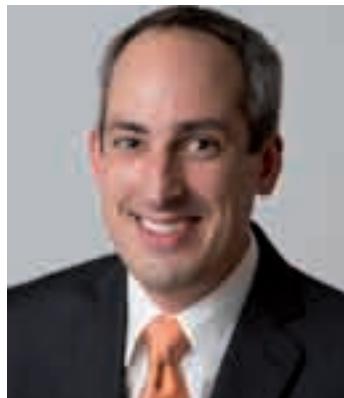
Professor Peter Mackie and Daniel Johnson, co-authors of the report from the University of Leeds Institute for Transport Studies, said: "The bus is often underestimated as a mode of transport but our research over the last three years has clearly outlined how it drives economic growth, job creation and social cohesion. It is important to recognise the vital role buses play in the functioning of a successful transport network and wider economy."

Claire Haigh, page 13

New Cubic service will extract insights hidden in transport data



Phil Silver



Wade Rosado



Cubic Transportation Systems has launched a consulting and services subsidiary aimed at helping the transport industry improve efficiency by exploiting sophisticated data analysis techniques.

Urban Insights Associates will help transport operators and authorities uncover knowledge contained in data it already collects.

The industry is a leader in the volume and variety of data that is generated by on-board sensors and data collection points introduced by passenger counting systems, vehicle location systems, ticketing and fare collection systems, and scheduling and asset management systems. But making the links between disparate data sets requires specialist knowledge and tools.

Urban Insights will bring together its team's transport sector expertise with a data managing and processing platform built on Apache Hadoop, a "big data" processing system. It is highly scalable and capable of handling the large volume of data generated by transportation systems.

"What sets Urban Insights apart is its unmatched transportation sector expertise within its corporate DNA, which informs how we apply these state-of-the-art tools and data science techniques to convert terabytes of disassociated data into strategic and operational assets," said Urban Insights business development director Phil Silver.

Urban Insights analytics director Wade Rosado added: "Our

vision is that making good use of data collected will provide the capability to allow travellers to get around the network more easily and to provide multi-modal and better planned services."

Historically, the way in which data was collected and the tools available did not facilitate the analysis that tools allow today.

A particular difficulty is linking and integrating data collected by separate systems. Urban Insights will use Hadoop's ETL (export, transform, load) capabilities, including the application of fuzzy logic, to link data not directly related.

An example is in linking ticket sales with timetable information. On rail, historically it has been difficult to connect sales of walk-up tickets with the specific train the passenger boarded. Using time stamps created by the ticket gate as the passenger passes through, and comparing this with the timetable or actual time of arrival of the next train from real time information systems, it becomes possible to associate ticket sales with time of travel and discover whether there is a mismatch between train capacity and demand.

Urban Insights is already working with the San Diego Metropolitan Transportation System, which wanted to know where passengers were making connections between its bus services and trolley services. The network had been designed with bus services acting as feeders into the trolley or light rail system for travelling longer distances, with passengers possibly using

Transfers taking place in the San Diego downtown area. The size of the rings indicates the quantity of transfers made at that location. Overlaid are the services offered at that same location, depicted as a diamond, with size and colour indicating different features of the services. The purpose of this visualisation is to help identify locations where the number of transfers taking place is inconsistent with the services offered.

a second bus from the trolley to their final destination.

The ticket and payment system was set up so that each segment – bus/trolley/bus – was recorded as a distinct transaction, without the passenger having to touch out on exit. "MTS struggled to comprehend when, where and how people were making connections, and whether this was consistent with how they designed the network," said Rosado.

Urban Insights was able to analyse data from five independent

sources to link the separate legs of each trip into journeys. "MTS will now be able to determine the numbers of people turning up at transfer locations. If they are turning up where they are not expected the bus service can be re-routed," said Rosado.

The company will be offering its services worldwide. "There's nothing geographically limited about Urban Insights. It won't be limited to public transport," said Silver.

Armitt proposes mechanism for infrastructure review

Legislation to set up a new National Infrastructure Commission should be among the first priorities if a Labour government is elected at next year's general election. This would allow a full assessment of the UK's infrastructure needs to be completed midway through the next parliament.

These are the proposals of Sir John Armitt in a supplement to his infrastructure review published last year.

Sir John was commissioned by shadow chancellor Ed Balls to undertake an independent review of long term infrastructure planning in the UK. His central recommendation was to set up an independent National Infrastructure Commission to identify the UK's long-term infrastructure needs and monitor the plans developed by governments to meet them.

Following publication of his review, in November last year Mr Balls asked him to undertake a second phase of work to consider the administrative and legislative steps needed to establish and operate the commission.

Sir John has now published a draft bill to set up the structure and membership of the commission and the parliamentary

framework in which it would operate, with a programme for the suggested steps needed to achieve this.

The documents are out for consultation until the end of October.

Sir John proposes that the legislation to establish the commission should be among the first government bills of the next parliament, and one of the new government's priorities.

The National Infrastructure Bill would give the commission statutory independence and set out its remit. It would also require government departments and other public bodies to provide it with information, and provide for stable funding to underpin the commission's work, agreed in 10-year tranches.

The bill would also introduce a duty on economic regulators to act in accordance with the commission's National Infrastructure Assessment and the relevant sector infrastructure plans, once approved by Parliament.

Government departments including the DfT would be obliged to produce sector infrastructure plans (replacing the current National Policy Statements) in line with the NIA, within a two-year timescale.

The infrastructure sectors which the commission would cover would be transport; energy generation, distribution, storage and supply; water storage, supply and treatment, including waste water; hazardous waste; telecommunications; and strategic flood defences.

To accelerate the production of the first NIA, the commission would be set up in shadow form following the Bill's second reading. The chair would be appointed by the prime minister with the agreement of the Treasury select committee and after consultation with opposition parties and devolved governments. Eight commissioners would be appointed by the chancellor. Another six would be nominated by the commission and appointed by the chancellor. The commission would include specialists and academics but would be sufficiently broad-based "that there can be a reasonable expectation of political consensus". Infrastructure UK would be phased into the commission or wound down.

Once established the commission would appoint expert committees in each infrastructure sector to gather evidence to develop the NIA. Over the next 12 months, the committees would

produce reports on the first four sectors mentioned above.

The reports would consider the infrastructure capacity that the UK would need in the next 25-30 years to remain competitive.

The commission would review the work of the sector committees and produce a draft NIA. After consultation it would be delivered to the chancellor who would have a statutory obligation to lay the assessment before parliament for approval within six months, with any amendments the Government might propose.

Once the commission's conclusions had been approved by parliament, individual government departments would have a statutory duty to produce sector infrastructure plans within two years, with detail of specific schemes and projects (with preferred locations). SIPs would go further than existing national policy statements and would set out sources of funding, detailed project timescales and the preferred vehicles for providing infrastructure investment.

SIPs would be laid before Parliament for approval alongside a statement from the commission either confirming its consistency with the NIA or pointing out areas where it departed from the NIA, with implications.

Government announces Growth Deal winners

The Government has announced a series of Growth Deals with local authorities and businesses across England in the first instalment of plans to invest £12bn in the local economy.

The money will go towards infrastructure projects, new homes and support for businesses to train young people. Transport projects receiving funding include 150 road schemes and improvements to 20 stations. The first £6bn of funding has been allocated including all of the £2bn from the Local Growth Fund for 2015-16.

Each of the 39 local enterprise partnerships was invited to submit a strategic economic plan by

March this year, outlining local priorities.

Because the quality of the proposals was so high, in some cases commitments have been given for following years to allow long-term projects to get under way.

Major projects include £18m for the Manchester Metrolink tram system, including 12 new trams, refurbished stations and improved bus services.

Birmingham will receive funding to help it maximise the benefits of HS2, including improving connections to Birmingham Curzon Street station and including two Midland Metro extensions, one to Curzon Street and beyond and one to Edgbaston. There will also be a bus rapid transit scheme

from Birmingham city centre to Quinton.

Humber LEP's award includes support for the £102m electrification of the rail line between the East Coast main line and Hull, subject to the outcome of current feasibility studies.

Biggest winners include Greater Manchester (awarded £476.7m including future commitments), London (£236m), North East (£289.3m), Lancashire (£233.9m), South East (£442.1m), West of England (£213m), and Leeds City Region (£572.9m).

The Growth Deals bring together housing, infrastructure and other funding in a single Local Growth Fund, which will be worth £2bn annually, set up

in response to Lord Heseltine's report *No Stone Unturned*.

For projects beginning in 2015, funding is expected to be matched by local investments worth around twice the government contribution.

- Transport minister Baroness Kramer this week revealed the 44 latest successful bidders to the Local Sustainable Transport Fund. The bids will share £64m in funding; including match funding and £100m from the Local Growth Fund, the overall total will be more than £375m. The successful schemes will provide improved cycling and walking infrastructure, improved bus journeys and better transport interchanges.



Nissan has invested in production of the electric Leaf in Sunderland and battery production nearby

Automotive revival 'an industry policy success'

Industry-government collaboration and consistently applied policy designed to reduce greenhouse gas emissions have revitalised the UK automotive industry, according to a new report.

The research, carried out for the Low Carbon Vehicle Partnership by E4tech and the Centre for Automotive Research at Cardiff Business School, combined a broad industry survey with in-depth interviews with senior executives. It shows that a consistent and sustained policy approach can produce both green results and growth, says the LowCVP.

E4tech director Adam Chase, one of the report authors, said: "It's unusual to receive such a consistently positive message when reviewing the effects of government policy. Time and again we heard that a long term vision, collaboration and supportive policies are giving companies the confidence to invest in low carbon developments."

A decade ago the UK automotive sector was perceived as

being in decline, the report says. Factory and company closures were common, innovation was "modest", and environmental regulations were seen by some in the industry as a threat. But since 2003 UK investment in the low carbon automotive sector has amounted to £40bn, while turnover in the sector climbed from £46.3bn to £64.1bn over the same period.

The tide began to turn with the report of the Automotive Innovation and Growth Team in 2002 which stated "we believe that the industry can have a long term future in the UK provided that industry and Government work together."

It recommended improving efficiency in manufacturing, supporting commercialisation of technology, and tackling environmental challenges through a multi-stakeholder group.

This last recommendation led to the establishment of the Low Carbon Vehicle Partnership in 2003 which, "constituted with an unprecedentedly broad range of stakeholders, began to create a

bridge between industry, government and green groups", the report says.

Since then, in addition to increases in investment and turnover, there has been a rapid recovery in car production following the global financial crisis. Exports account for 77% of UK car production, and major capacity expansions and new model programmes have been undertaken by a range of manufacturers. Average new car tailpipe carbon dioxide emissions have fallen by 25%. Rapid uptake in low carbon buses has led to over 1,500 being in service by 2013, and there is a healthy UK bus and coach sector, with a market of 3,685 vehicles last year.

A number of bodies and initiatives have supported cooperation and kept it on course since the establishment of the Low CVP as a focal point for stakeholder engagement. The Technology Strategy Board in 2007 and Advanced Propulsion Centre in 2013 provided support for innovation. The New Automotive Innovation and Growth Team in 2009

defined the industry's way forward. The Automotive Council in 2009 became the focal point for industry-government dialogue. The Office for Low Emission Vehicles and Green Bus Fund in 2009 created market conditions for low carbon vehicle uptake. Regional Development Agencies and more recently Local Enterprise Partnerships supported innovation and manufacturing at local level.

Progress was accelerated by UK's response to the economic crisis in 2008-10, which focused on support for the industry, notably in areas where the UK had a technological basis for competitive advantage. The Climate Change Act also contributed to a sense of stability in policy.

For the future the report recommends a continuing focus on low carbon technology but calls for a framework to support low carbon commercial vehicles, an area where policy has been lacking. Companies are also keen to see the UK influencing EU regulations in CO₂ and air quality performance requirements.

WHO WILL BUILD HS2?

LEARNING FROM BEST PRACTICE AROUND THE WORLD
ONE DAY CONFERENCE—11TH SEPTEMBER

One Great George Street, Westminster, London SW1P 3AA



Keynote Speaker

Robert Goodwill MP
Transport Minister

The Chinese have told the UK Prime Minister, David Cameron, they can design, build and finance HS2. What does international best practice tell us on the countries which the UK can learn most from on High Speed Rail?

The debate on HS2 has graduated from should it happen to how do we deliver the project in a way which is a credit to the UK.

The keynote address at the conference will be given by Transport Minister Robert Goodwill MP. We will also hear from the new CEO for construction at HS2 Ltd, Simon Kirby. Simon will outline how he envisages the procurement, design and construction of HS2 unfolding and will listen with keen interest on the experience the supply chain has had in delivering High Speed Rail around the world.

The conference will examine best practice in planning, financing, civil engineering, signalling and rolling stock.

Additional Speakers

Nicola Shaw CEO, HS1
Ailie MacAdam Managing Director, Bechtel Rail
David Taylor Business Development Director, Thales
James Stewart Chairman - Global Infrastructure, KPMG



Confirmed Speaker

Simon Kirby
Chief Executive – Construction,
HS2 Ltd



Chaired by

Jim Steer
Director, Greengauge

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Serving as a minister has been a privilege

In a tumultuous two years at the Department for Transport, Stephen Hammond was involved in saving the franchise system and reforming the Highways Authority. He looks back on an extraordinary time

This is the last column I shall write as a Transport Minister. To say I have enjoyed the last two years would be an understatement. It has been a privilege to be a minister, especially at a time when transport is right at the centre of government. It will be an enduring tribute to this Government that it recognised that the state of national infrastructure is a key determinant of economic growth – and recognised that with tangible financial commitment.

As I survey the mass of memories of the last two years, several things strike me. The recovery of the department following the WCML failure, which represented a low point as the future of franchising was at risk. In hindsight one can say it was a failure of process rather than policy, but at the time the whole future of rail as a privatised industry looked at risk.

Undoubtedly the leadership of Patrick McLoughlin saved the day: the courageous decision to admit error, the foresight of the two enquiries and the changes in personnel, especially in the form of Pete Wilkinson.

The Brown Review rightly concluded that franchising was the best system to produce maximised benefits to the passenger and the taxpayer. The process was then reset and an ambitious timetable of direct awards and franchise competitions set out.

Moreover, the essential ingredients of future reform remain. Franchise length is variable, depending on the area, but with the general presumption of longer franchises. Over-prescriptive elements have been reduced and train operator initiative and incentive have been embedded.

The new process of writing a consultation prior to starting the award process, or publishing a prospectus alongside the OJEU notice will allow the “quality” element to be more

readily understood by potential franchise bidders.

Two years after WCML, the timetable is being kept. The recent award to Virgin saw huge new benefits in new direct routes and new services for passengers. The re-letting of Thameslink and Essex Thameside are complete and the innovative East Coast invitation to tender sets out new opportunities and routes. I am proud of these achievements and now even Ed Balls has said no return to full scale nationalisation.

When I was told I was to be minister of shipping two years ago, it was an area of policy I knew little about. A perusal of the brief showed it to be fascinating, but with limits to the

Inevitably there is much still to do and issues I had hoped to complete

power of ministers. Hence my declaration to be its champion and to bring some coherence to government’s approach to the industry. The Maritime Round Table sessions have brought ministers from Cabinet Office, the Treasury, DEFRA, the Department for Business and the DfT together with industry leaders. The sessions on skills, the industry’s economic importance, deregulation and marine planning have been groundbreaking. London International Shipping Week showed the world the London and the UK were open for business and still the best place in the world to do shipping business. Long may that continue.

Last summer we published the Green Paper on Roads Reform: a revolutionary document that took nine months of hard work to put in place. I know, because I spent a large chunk of that nine months working with officials

to get it published. The premise was clear. The UK road network faced a number of challenges which it was ill-equipped to confront: finance, technology, environment, lack of maintenance, lack of new build, and inefficiencies in the supply chain. The answer became clear: the HA needed to be become a corporate entity with all the benefits that flow from that structure, the industry needed a proper governance structure and it needed a long term strategy for investment, funding and implementation.

All that is embedded in the bill proceeding through Parliament and which I hope will become law before the General Election. The Green Paper also had a chapter on possible ways of introducing private sector finance into infrastructure, something that will undoubtedly be a political hot topic in the near future.

The opportunities afforded to you as a minister are extraordinary. The chance to be involved in transformational policies such as road safety, the local pinch point funding and deregulation; the chance to go on fascinating visits to Crossrail tunnels, NCAP and the road safety labs, and new port facilities at London Gateway and Southampton. And to work with talented colleagues and civil servants and alongside inspirational industry figures.

Of course there are frustrations, as in any job. However as a minister they are hugely outweighed by the opportunities. Inevitably there is much still to do and issues I had hoped to complete. But they will be for my successor, to whom I wish *bonne chance* in this most stimulating of ministerial jobs. Over and out.

Stephen Hammond was Parliamentary Under-Secretary of State for Transport from September 2012 until this week. He was a shadow transport minister from 2005-10.



London plans stick in central comfort zone

Both London and Paris are planning to cope with huge growth pressures. The Parisian solution is much more comprehensive and integrated



This is a tale of two cities, and how they are approaching near identical challenges.

London and Paris both think of themselves as Europe's leading city, with huge growth pressures – say an extra three million people by 2050. In the case of London, this translates into a forecast of an extra 60% travel on public transport.

In both cities, you'd find the economic development analysis centred on the need to focus on employment in knowledge-based and high-tech industries. Paris wants to invest in the same area of the economy.

In both cities, you'll hear about the importance of clusters, and of investment appraisals that look for agglomeration benefits. (In the case of Paris, there are six land use transport interaction models to supply the relevant evidence – but, as is the way of such things, they give widely different answers).

The pressures lead to much talk of intensification and higher densities in both cities. The New Greater Paris Project is explicit in putting transport at the heart of its vision: "an urban, social and economic project based on the construction of a new public transportation network". In London, the language would be of a transport response to a planning and growth challenge. It's hard not to think how much stronger would be the support for investment and for the tax and user charges to fund it, how much easier the tortuous planning processes would be, if we in the UK could only bring ourselves to be comfortable in describing the rationale with those missing words – social and urban.

But it's not just language that differs. The key contrast is in the nature of the response. In London, what's on the stocks – having built Crossrail, Thameslink, the London Orbital, the DLR and its many extrusions,

and increased Underground capacity by 30-40% – is Crossrail 2, a single new cross-city route. Its genesis was as the Chelsea-Hackney line, from the era when it was thought that all London was missing was the S-Bahn/RER systems of continental Europe. By 2020, we will have caught up on this score, with Crossrail and Thameslink forming a new two-line city-region network.

The London plan is to add a third; the Parisian response is very different.

Perhaps with a view to protecting the centre of Paris – already high density but not at all high-rise – the Parisian response is to create a series of development hubs in the *banlieues* and the fringe of the existing urban

The Parisian approach will create scattered multiple hubs in places with a wide social mix

area. This might be thought unlikely in Britain. Here defence of the green belt is so fierce and the suburbs regarded with such disdain that it seems an almost natural consequence that, rather than a distributed development pattern, we shall have a highly concentrated central cluster, built east-west across the centre: Old Oak-West End-City-Docklands.

Two differing interpretations of the agglomeration ambition. The Parisian approach will create scattered multiple hubs in places with a wide social mix; London takes the existing central success and adds to it.

For Paris, the plan is a 200km fully-automated, high frequency, fast metro, built as two linked orbitals, nearly all underground, building on the success of the cross city Line 14. Links to high-speed rail and airports are an integral part of the concept, and

so is integrated development of 70,000 new houses annually linked to the transit plan.

This new network is designed to accommodate a 50% increase on today's Metro patronage.

Crossrail 2 looks rather tame in comparison. To the north and south-west, its multiple branches could help spawn local hubs, but there is no coherent plan to do so. Its central segment will add useful capacity, but nowhere near enough to meet the huge increases in demand that must surely be expected across the central area. If London is to stick with its "central east-west" development pattern through to 2050, Crossrail 2 isn't enough.

Though across the transport sector it is not possible sensibly to plan to accommodate all demand on offer, the market signals are clear: the demand for rail is growing and growing, and its green credentials are strong, and could be made stronger. What's needed is to embrace the planning challenge and get a joined-up vision of London's future, set in the context of a plan for the wider South East and for the nation as a whole.

So what wider lessons can we learn from this comparison? London planning should look beyond zone 1 and the east-west extensions into inner London for a start; planning for development and for rail really has to extend beyond London itself into the wider South East (where 15 years' growth of 73% outperformed the Underground's 41%); rail developments must be linked to global gateways, especially airports.

In other words, something that would take pressure off the centre of London rather than add to it, and nurture the source of prosperity, rather than smother it, perhaps.

Jim Steer is director and founder of Steer Davies Gleave.

Evidence grows of how buses support society

A new report delves further into how bus services support the labour market and strong town centres, and how they fulfil a social insurance role even for people who rarely use them

The publication of *Buses and Economic Growth* in 2012 laid out for the first time, clearly and unequivocally, how buses support the wider economy. Building on this foundation, and in partnership with the Department for Transport, Greener Journeys commissioned the University of Leeds to do a follow-up study, which was published last week.

Buses and the Economy II explores in greater depth three key areas: how buses enable a well-functioning labour market; how they support strong town centres; and how they fulfil a social insurance role both for people who use the bus regularly and for those who do not.

We learnt from *Buses and Economic Growth* that 2.5 million use the bus to get to work with a further million using bus as back up mode. In the follow-up study, we asked the University of Leeds to turn the spotlight on the unemployed and the role which bus services can play in getting people into employment.

The findings show a significant relationship between bus accessibility and employment. Econometric modelling revealed that if bus journey times for commuters in England could be improved by just 10% this would be associated with more than 50,000 additional people in employment. In policy assessment terms, allowing for this employment impact would increase the benefits of bus accessibility improvements by 9-10% on top of their direct transport benefits.

People in urban areas who are currently unemployed and seeking work depend heavily on the bus for access to employment. In June and July 2013, just under 1,000 unemployed individuals attending Job Centre Plus offices were interviewed. Some very basic findings conditioned many of the results. For example, 57% did not have a full car or motorcycle

driving licence; and 77% had no regular access to a car, van or motorbike, rising to 87% for 18-24 year-olds.

The reliance of this group on buses is borne out by the high proportion who would use the bus to get to work. 58% of the job seekers surveyed use buses when in work, rising to 72% for those who have no car available. This dependence is particularly acute for the young unemployed. Over four-fifths of unemployed 18-24 year-olds rely on buses, and almost a quarter of have missed out on job opportunities because of no available bus service to get them there.

A key conclusion of *Buses and Economic Growth* was that the

The study turned the spotlight on the unemployed and the role bus services can play in getting people into employment

bus is a vital artery for shopping and leisure trips. Bus users make 1.4 billion shopping and leisure trips annually, spending an estimated £27bn. The follow-up study looked in more depth at the role of the bus within the retail and entertainment market.

The bus emerges as a key mode of access to towns and city centres. It has the largest market share of retail and leisure trips to city centres at 33% (versus 30% for car, and 22% for walking and cycling). And bus users are responsible for 29% of total expenditure on retail and entertainment in city centres. Bus users contribute 22% of retail and entertainment expenditure across all locations.

The top reasons cited for choosing the bus include: it is less expensive, easier or more convenient, avoids parking diffi-

culties, or no car is available. For those with limited car availability, bus accounts for over a third of all shopping trips. Without bus services, 16% of bus users would not have undertaken their planned activity.

The final area explored was how buses provide a form of social insurance. People place significant value on having the option of a bus available, whether they use it or not. In *Buses and Economic Growth* we found that people are willing to pay over and above their fare to have a bus service available to them, giving a gross option value of £700m.

The follow-up study explored the option value of having a bus service in a rural context. It studied the value which local residents in Market Drayton, Bridgnorth and Much Wenlock placed on the hourly bus services to the county town Shrewsbury. They found that people placed a significant option value, on average £122 per household per year, on the existence of the bus service over and above the value of the trips they make. The Shrewsbury case study gives a clear indication that the social insurance value of low frequency but regular bus services of this kind is appreciable.

Since the publication of *Buses and Economic Growth* in 2012, recognition of the wider economic value of bus services has grown. I hope that *Buses and the Economy II* will further cement recognition of the vital role the bus plays in facilitating a large number of important economic and social linkages.



Claire Haigh is chief executive of Greener Journeys, a campaign dedicated to encouraging people to make more sustainable travel choices www.greenerjourneys.com

What's the secret of a top-rated station?

The latest National Rail Passenger Survey gives insights into the features and facilities passengers appreciate, where they'd like to see improvement and where to target investment



Which is Britain's top rated station? Who better to ask than the passengers themselves?

It's that time of year again: Wimbledon, Glastonbury, the Tour de France, and the publication of the results of the spring National Rail Passenger Survey. Every year over 60,000 passengers give their views on the journey they are undertaking – immediate, direct consumer feedback that gives the industry and the Government data that can help them take better decisions.

Overall satisfaction levels remained remarkably steady at 82% with little difference from last spring. This masks considerable variations and individual stories, though. Satisfaction with the train company varied as much as 24 percentage points (72 to 96%) and with routes by 27% (69 to 96%). Value for money scores are still low at 45% overall, but have edged up a little from last year. But the scores vary by as much as 50 points (29 to 79%) on individual routes. Of course, the commuter routes around London and the South East have the lowest scores here.

How train companies deal with delays is the biggest influence on passenger dissatisfaction. In February to April, when the survey was conducted, the weather had been bad and some train lines were badly disrupted. The satisfaction score for how train companies deal with delays remained surprisingly steady at 38%. This may indicate that companies are getting better at communicating about delays. Also, the reasons for delays were clear – lots of rain, washed away embankments and flooding made headline news day after day.

One of the uses of the NRPS is that it can help guide investment. If we look at the results for East Midlands trains, for example, we see investment has

improved some of its scores. More than 300 employees were given tailored customer service training in recent months, and the satisfaction score for the attitude and helpfulness of staff increased by five per cent. The company invested £1.5m in new and improved facilities at 23 different stations over the past year. Specifically, this investment was in shelters and seating, and both satisfaction scores increased this year by six and seven percentage points respectively.

Looking at some specific stations where the sample size is large enough, there have been significant increases in satisfaction. Some of the stations that have received or are receiving significant investment have im-

Free wi-fi is marching up the ranking order for items people want both on and off trains

proved scores: Reading station's overall satisfaction score has increased by as much as 20 points and London Blackfriars station's score has increased by 16 points. Edinburgh Waverly is up five to 87%.

We have also done some research which looks in more depth at what passengers' priorities are, including at stations. The top five priorities for service improvements on stations were accurate and timely information; good connections with public transport; improved security; maintenance and cleanliness to a high standard; and more staff being available to help passengers. All these are very prosaic things.

Passengers would probably like radically improved, well designed and smart stations, but don't forget the basics when designing. Most people are at the station for a reason: to catch

a train. Help make that an easy, pleasant experience and the rest will follow. Waterloo has been much improved by ticket barriers being installed, as it moved a lot of retail clutter away: you can now see the trains again. Euston and Victoria need the same experience.

Passengers were also asked what new facilities could be provided at the station they had travelled from. The top item was free wi-fi. This is marching up the ranking order for items people want both on and off trains. Toilets, litter bins, cash-points and fully enclosed waiting rooms followed on as part of the station experience.

What is also interesting is that passengers have different priorities for improvement at different stations: local needs vary considerably. As part of work on the National Station Improvement Plan we looked at priorities at different stations. At Barking security at the station, more staff and more information were key wishes. At Luton, the walkway to the town centre, lighting and better waiting rooms came out top. Do the research before you invest – you might be just about to spend money on things passengers don't rate.

Oh yes, I forgot – the winner. King's Cross, with 95% overall satisfaction in the spring NRPS, just pips its rival St Pancras at 94%. Both very good scores: but there's nothing like a bit of rivalry and competition to spur operators on.

Other busy stations have very different stories. Clapham Junction languishes at 68% – still no sign of a major rebuild after planning permission was refused by Wandsworth Council.

For the full results, where we have sample sizes large enough, see our website – clearly the investment in stations is paying off.

Anthony Smith is chief executive of Passenger Focus.

Transport bodies must work strategically

Local transport infrastructure is “at risk” according to the Institution of Civil Engineers. Is devolution of powers to clusters of local bodies to provide strategic and integrated planning the answer?

The Institution of Civil Engineers (ICE) has recently published its latest annual state of the nation report on the UK's infrastructure, in terms of its performance, capacity and condition. The report's intention is to stimulate an informed debate on the investment needed in the UK's infrastructure systems, especially transport, in order for the country to compete effectively with other nations.

It will be interesting to see how this exposition will be embraced by the Government and the organisations involved in the range of other recent transformational changes affecting the transport sector. These include the introduction of the Local Growth Fund mechanism and new arrangements under the reform of the Highways Agency.

The ICE has categorised the performance of UK infrastructure under five headings: fit for the future; adequate for now; requires attention; at risk; and unfit for purpose. This should enable transport practitioners to compare and contrast the situation in the UK's various regions.

Overall the UK is deemed to be in the “requiring attention” bracket. However, the ICE finds that the local transport sector is of particular concern and has therefore categorised it as “at risk” and getting worse. It should come of no surprise that the decline in the maintenance of local roads as a result of investment cuts has contributed to this grade.

The report is particularly damning of the governance arrangements for local transport, citing them as “often weak and fragmented, with funding inadequate to deliver the system we need”. Transport planning also comes in for a bashing, together with the lack of integration across modes, spatial planning and economic development.

In reality, the situation varies from one local highway and

transport authority to another, but the ICE is right to hold this mirror up to councils. Many will be able to relate to its critical analysis. By way of mitigation, local authorities in England are facing a £5.8bn black hole, according to new analysis by the LGA. This will require a 12.5% reduction in budgets before April next year. Highway and transport services are bound to suffer even further as councils continue to try and protect adult social care and children's services. The issue is how do we put this right?

In recognition of the dire economic state of local authorities, the ICE is calling for a further extension of devolved powers to new, larger and more powerful combined authorities comprising LEPs, local authorities, local

The issue will be how to set up such an arrangement within the five-year life cycle of a government

transport bodies and city deals in various combinations. In other words, this means a move to more strategic transport authorities with responsibility for local roads, public transport (including some influence on rail) and active travel.

Though this seems to be on the right track the issue will be, as always, the practicalities of setting up such an arrangement, surrounded by political sensitivity, within the five-year life cycle of a government. Moreover, if such an approach is to be adopted then we must learn the lessons of the past and not tackle the matter in a piecemeal way, ending up with a patchwork quilt of governance arrangements and illogical and inconsistent geographical areas.

Despite this, it may still be possible to achieve the same outcome without the accompany-

ing bureaucracy and unnecessary central interference that is likely to hinder the introduction of combined authorities. Local regions and sub-regions are extremely capable of working collaboratively when they are given appropriate incentives to do so. Local authorities do not need byzantine processes to gain access to relatively small and inadequate pots of money in the scale of things (remember Local Area Agreements!).

The Highways Agency is setting its new business up on well-defined areas that make sense in a strategic transport context. It should be possible for the other key players, such as LEPs and local highway and transport authorities, to cluster together within the same boundaries to integrate transport investment, economic development and spatial planning in a coherent way – just like a virtual transport authority.

The potential for this should become clear in the coming months as the outcome of the Local Growth Fund and Growth Deals becomes apparent and any gaps in infrastructure investment are highlighted.

With a £12bn bill for the highway maintenance backlog, coupled with the need for a £250bn infrastructure demand (according to the CBI), then clearly something has to change. The ICE has stimulated the debate and it is up to us in the transport sector to respond with meaningful proposals that will help keep the country up to speed.

There is no escaping the fact that more money is needed for local transport, especially if the increased investment in the strategic road and rail networks is to be truly optimised.



Tony Ciaburro is corporate director for environment, development and transport at Northamptonshire County Council.

Learn to use social media effectively in a crisis

Transport operators are learning the benefits of Twitter, Facebook and other networks to develop a dialogue with passengers and avoid reputational damage at times of disruption, says **Kevin Poulter**



Kevin Poulter: "Twitter is the first port of all for disaffected commuters"

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In a crisis, as in life, the many tentacles of social media may be annoying distractions, but if you plan well and engage properly, social media may prove to be a valuable resource to protect legal and reputational damage. Putting in the work now will reap rewards should the worst case scenario ever happen.

Social media and the incredible rise in smartphone use has been a true phenomenon of the 21st century. In the transport industry in particular, these two things have revolutionised the way passengers and operators communicate with each other. Twitter is the first port of call for many disaffected and disillusioned commuters checking for – and reporting – delays. Although this may have started as a peer to peer network, there has been a move to share this information with operators as a "critical friend".

Some operators have taken the medium further, and have developed a social communications strategy that gives the organisation a unique voice, personality and relationship with customers. Engaging in a dialogue rather than issuing "leaves on the line" explanations has been mastered by some, but this is an art more than a science. It has taken customer service one step further and improved users' confidence and trust in operators.

"Trust" was a frequently recurring word in the 2012 report by Passenger Focus which established "How passengers want social media during disruption". At a time of disruption, social media must be controlled, moderated and managed as far as possible. At a time of crisis this is even more important. Instant accessibility afforded by smartphones means that information, photographs and personal accounts of tragedy and perceived fault can be spread around the world in a moment.

Passengers, friends, families and interested parties will seek

information quickly and the many social media platforms will most likely be where news is first reported. The window of opportunity once afforded by traditional news and communication channels no longer exists and it is important that, rather than simply filling a vacuum with commentary, guesswork or time-buying statements, considered honesty is presented and is the best way to proceed. Saying nothing is no longer an option.

Action taken by employees on social media can cause serious damage to the brand of the operator and its reputation. Inappropriate photos, comments and the opportunity to air personal concerns and gripes can sometimes feel overwhelming. But they are

Some organisations have developed a social communications strategy that gives them a unique voice, personality and relationship with customers

a permanent and public record directly linked to the individual and, potentially, to the employer.

Having in place strong policies to regulate social media use, including private and personal accounts, together with practical procedures to monitor, moderate and enforce the policies can be crucial to limiting damage and in some cases liability. Policies should be carefully tailored not only to the business, but to each level of employee.

Although there is no hard and fast legislation specifically designed to address the risks posed by social media, nor any sector-wide regulation, it is surely only a matter of time until that changes. Organisations who ignore the implicit demands of social media and fail to address misuse now

will find it more difficult to apply regulation when it is introduced.

By way of example, one of the earliest social media cases involved airline crew who created a private chat room on Facebook to discuss their customers and their employer. Sharing comments about the safety records of certain aeroplanes and critical comments about passengers led to them being dismissed. Not only did this send a strong message to other employees, it may also have prevented retrospective criticism of the airline, particularly where safety fears are expressed.

In times of crisis, planning ahead and carefully constructing and implementing workable and bespoke policies and procedures can produce positive results. These will not only limit liability, but also reduce the risk of reputational damage. At all times, before action is taken, it is important not only to react promptly, but to react only when facts have been established and confirmed, when you are in control and able to offer positive advice, guidance and updates. Having a trusted network of employees and customers will only assist you in achieving this.

Many operators are already reaping the benefits of social media and working hard to grow relationships and build trust. Transport for London has recognised the importance of targeted information by introducing separate Twitter accounts for each line, allowing passengers access to the information they want rather than having to search through thousands of tweets for what they are looking for. Taking this to the next stage and developing strategies in anticipation of crisis situations will only prepare you for what we all hope will never come, but know that it inevitably will.

Kevin Poulter is a senior associate in the employment department of London law firm Bircham Dyson Bell and head of its social media team.

Automation: the next revolution?

Dave Eastbury



Cars or trains that drive themselves are no longer confined to the realms of science fiction. A new report from *Transport Times* publisher **Professor David Begg** looks at the implications of technology that could be this century's equivalent of the railways or the internal combustion engine

Driverless transport



Autonomous cars could eliminate the 90% of accidents caused by human error

You're on your way to an important business meeting. There's a two-hour journey ahead of you, so you leave the house in plenty of time. The seven o'clock news headlines have just begun as you pick up your laptop and briefcase and get into the car. You enter the postcode of your destination into the navigation system and... relax.

The car itself does the rest while you're free to read your briefing notes, catch up on email, use the time for some undisturbed thinking or just admire the scenery. Motorways, congestion – the car takes care of all that. You arrive at your destination fresh and alert, not worn out from the stresses of driving. The car even drops you off and then parks itself...

Google's driverless prototype

Automation will increase capacity on motorways

That's a vision of the future in which autonomous or driverless vehicles are the norm. A new report by *Transport Times* publisher David Begg, commissioned by Clear Channel, explores the implications of technological developments already under way.

A 2050 vision for London – What are the Implications of Driverless Transport? looks at the overall possibilities of autonomous vehicles before considering how they could affect London in particular.

Driverless cars have considerable potential, the report concludes. They could eliminate the 90% of accidents estimated to be caused by human error, or the 30% of traffic that at peak times can be made up of cars looking for a parking space. They could vastly increase the capacity of existing roads by

allowing vehicles to travel safely more closely together.

They could take the stress out of driving. Car ownership patterns could be transformed – in cities, it could become so much easier to call a driverless taxi or car club car when you need one that many people may no longer bother to own a car.

But there will also be decisions to be made. Will driverless cars be allowed to shape our urban areas in this century as the conventional car did in the last one? Or, by allowing roads to be used more efficiently, will they transform cities by freeing space for public areas?

There are implications for other modes of transport. Automation of trains on the lines of the Docklands Light Railway could vastly increase capacity on conventional rail lines, allowing frequencies of 30 trains per hour.

Already here

The report starts by pointing out that autonomous vehicles are here already. On public transport there are the Docklands Light Railway, the Ultra personal rapid transit pods at Heathrow Terminal 5 and many automatically operated metro lines, in London and elsewhere.

On the roads Google is developing its driverless cars, which navigate by comparing a pre-surveyed image of the road with what it "sees" via onboard cameras and sensors. In Milton Keynes a trial of driverless pods linking the railway station with the shopping centre, running on pavements and mixing with pedestrians, is due to get under way by the end of this year.



On Britain's trunk roads, trials of three-lorry platoons in which a lead lorry guides the following ones (though with a driver available at all times) are also planned to start later this year.

Autonomous systems such as electronic stability control are now standard on production cars, with others such as autonomous emergency braking being adopted rapidly.

Experts have defined four levels of automation (see box); systems such as ESC are defined as level 1. A number of integrated features, for example adaptive cruise control with lane centring, is defined as level 2. At level 3 the driver can relinquish control of all safety-critical systems in certain circumstances. Full autonomous operation is defined as level four.

By 2035, according to one prediction, 75% of vehicles sold will have automation to levels three or four.

Potential issues

There are a number of potential issues which could cloud this apparently bright picture, the report notes.

One is that for the full benefits of autonomous vehicles to be gained all vehicles must be capable of operation to levels three or four. There are questions about how to regulate for driverless cars, particularly in the interim phase where autonomous and conventional vehicles mix.

Another potential issue is driver "underload" at levels two or three, in which the driver may be called on to resume control at short notice. How quickly will drivers be able to do this when they will not have been giving driving conditions their full attention?

The question of who would be to blame in an accident continues to be a stumbling block. Would it be the car driver, the manufacturer, the software developer? Will some sort of no-fault legislation be needed before autonomous cars can be widely used?

Another question is, if driverless cars take all the stress out of driving and increase road capacity, will they lead to an explosion in car use just at the point where many thought "peak car" had been reached? The report concludes this is more likely on motorways, in rural areas and in less densely populated cities.

This has wider implications for cities. The report points out that in the nineteenth century, rail led to a concentration of population in city areas. In the twentieth, the effect of the internal combustion engine was the opposite: high car ownership led to dispersal, seen at its most extreme in US cities. "It will not be good for the economy or the environment if autonomous vehicles lead to lower density cities or higher car use," the report concludes.

David Begg's conclusion is that for maximum efficiency and prosperity, cities need to be high density, which lend themselves to efficient public transport systems, Hong Kong being the model.

Public transport

Automation will have benefits for public transport too. The same technology used in autonomous cars will make bus operations better, the report adds. They will be able to drive safely closer together. Picture a dedicated bus rapid transit lane with moving buses queued up end-to-end. Buses could become more like trains, and bus services to less populated areas could be replaced with driverless taxis acting as feeders to the main services.

Automated buses using the same technology as cars could be much cheaper to run. Around 40% of bus operating costs are accounted for by the driver's wages. However, the report goes on, it is unlikely that driverless buses would be seen in London before 2050 because the complex driving conditions common on the capital's roads "are not conducive to full automation".

The difference between private and public transport could become blurred. Driverless taxis would be cheap, and passengers would be able to remotely call a taxi to take them to their destination. As a result of this added convenience, taxis would replace some car and bus journeys. "There is likely to be a big shift away from car ownership to car clubs or shared vehicles," the report argues. Lower car ownership would be a good thing: cars spend most of their time lying idle so that there are too

many of them, with the resulting pressure on parking.

For London, the greatest impact of automation over the next 30 years is likely to be on rail, the report concludes.

The Docklands Light Railway is the most obvious example of autonomous operation in London. It has been running without drivers, using communications-based train control technology, for over 25 years. Less well known is the fact that London Underground has had automatic train operation for many years – on the Victoria since it opened and on the Central Line for 20 years, the Jubilee Line since 2011 and the Northern Line from this year. These lines retain a driver in the cab, who starts the train on a "clear" signal and can perform emergency stops.

Automation has made possible operation at a frequency of over 30 trains hourly, and the central section of Thameslink will use automated running to allow a similar frequency of service.

"If this technology could be transferred to the heavy rail network we could more than double the number of people commuting into London by rail," says the report. There could be difficulties in some areas of the commuter network because of the complexity of service patterns. But, Prof Begg concludes, "This is the type of step change that is required if London is to continue to grow and secure its position as the world's most dynamic and prosperous city."

Speaking at the launch, London Transport Commissioner Sir Peter Hendy agreed that if London's popula-

The difference between private and public transport could become blurred

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Four steps to autonomy

There are four stages of development for automated road vehicles:

Level 1: Function-specific automation: Automation of specific control functions, such as cruise control, lane guidance and automated parallel parking. Drivers are fully engaged and responsible for overall vehicle control.

Level 2: Combined function automation: Automation of multiple and integrated control functions, such as adaptive cruise control with lane centring. Drivers are responsible for monitoring the roadway and expected to be available for control at all times, but under certain conditions can be disengaged from vehicle operation.

Level 3: Limited self-driving automation: Drivers can cede all safety-critical functions under certain conditions and rely on the vehicle to monitor for changes in those conditions that will require transition back to driver control. Drivers are not expected to constantly monitor the roadway.

Level 4: Full self-driving automation: Vehicles can perform all driving functions and monitor roadway conditions for an entire trip, and so may operate with occupants who cannot drive, or without human occupants.

A design concept for the Milton Keynes driverless pods



Driverless transport

Exhibition Road gives pedestrians priority; personal rapid transit pods operate at Heathrow Terminal 5



from page 19

A gradual transition to automated train operation is a virtual inevitability

tion is to grow as predicted, such an increase in the capacity of commuter lines is what will "save" London's transport system.

For Underground and Metro systems, "it seems impossible to imagine that any metro system designed from now on will choose anything but a driverless system," the report argues. Retrofitting the technology to an older system also has a precedent in Paris Metro's oldest line, Metro Line 1, which has been converted to driverless operation.

The extent to which costs will be cut by automated train operation will depend on whether the trains remain staffed or not. Surveys suggest passengers will feel safer if trains continue to have passenger service assistants on board, and deep Tube lines in particular may need to continue to be staffed to deal with emergencies, the report says. It also recognises that trade unions will need assurances about their members' jobs and wages. But experience of driverless technology on the railways over the last ten years means that "a gradual transition to automated train operation is a virtual inevitability" it concludes.

Preparing for the future

What should TfL be doing to prepare for this technology? The report makes a number of recommendations. It should assess the level of investment in road infrastructure need at the four stages of AVs – research will be needed into this in the immediate future.



Piloting autonomous vehicles is a prime example of a project which should qualify for the mayor's Innovation Fund.

TfL should wait for the results of trials such as the one at Milton Keynes before deciding whether to aim to establish London as a pathfinder for the development of autonomous vehicles. It should consider establishing at an appropriate point in the future a distinct area where only AVs can operate.

The report suggests that the orbital road tunnel proposed by the mayor's Roads Task Force would be ideal for AV-only operation. But when traffic and pedestrians are not segregated, the advantages of AVs are less clear. The question arises, if automated vehicles release road capacity, should it be used for cars or to free space for people?

"What sort of cities do we want to live in?" asked Sir Peter Hendy at the report's launch. If the preference is for a city in which you can walk and cycle around, with decent public spaces, "not one where you can roar around in your car" then there will be more spaces like Exhibition Road, where pedestrians have priority.

"Exhibition Road is designed for people to walk about at will," said Sir Peter. Cars would only be able to proceed at 3-4mph."This is not what people have in mind when they think about driverless cars," he said. "They might have an uncomfortably slow journey."

The report concludes that AVs would make it more feasible for London to achieve the three core objectives of the Roads Task Force: transforming conditions for walking, cycling and public transport; creating better, active and inclusive places and new city destinations; and maintaining an efficient road network for movement and access.

Speaking at the report's launch David Begg summed up the implications for a city like London. "The risk that automation makes cars more attractive threatens the economic growth of London, which is based on a bigger public transport modal split." London needs to continue "to aim for a 90% modal split", as in Hong Kong.

He added: "We can't allow technology to drive this. Lower density cities with high car use are more congested, more polluted and less successful."



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The people behind the headlines

Excellence, innovation and progress in all areas of transport in Scotland won due recognition at the 12th annual Scottish Transport Awards. The best of Scotland's transport industry gathered for the event, with 450 professionals attending the Glasgow ceremony hosted by TV journalist and presenter Kirsty Wark.

Delivering the keynote speech, Scottish transport minister Keith Brown said: "With so many transport successes to reflect on in Scotland over the past 12 months, and many more exciting projects currently under way or in the pipeline, it's important to recognise the people behind the headlines who don't always get the credit they deserve. We will build on the progress created by the largest ever investment in Scotland's transport infrastructure in recent years, and I hope our continued commitment to transport projects as a key driver of sustainable economic growth continues to pay dividends."

Local Transport Authority of the Year

The night's most prestigious award, Local Transport Authority of the Year sponsored by First ScotRail, went to Strathclyde Partnership for Transport.

SPT impressed the judges with its tireless work towards the objectives of the statutory regional transport strat-



In its 12th year, once again the Scottish Transport Awards demonstrated a stunning and multi-faceted breadth of achievement across the country

We will build on the progress created by the largest ever investment in Scotland's transport infrastructure

,



Above: Keith Brown gave the keynote speech; TV journalist and presenter Kirsty Wark hosted the awards

egy: attractive, seamless reliable travel; reduced emissions; access for all; and improved connectivity.

Under the first heading it has introduced Scotland's first statutory quality partnership, in Glasgow, Renfrewshire and South Ayrshire. The Subway modernisation programme is continuing and a new Subway smartcard was introduced last year. Redevelopment of Hamilton and Port Glasgow bus stations has been completed.

Under access for all, SPT provides patients of NHS Greater Glasgow with personalised journey plans. It manages over 2,000 bus service contracts for 11 of the 12 councils in its area. It supports the MyBus service for people who would otherwise be unable to access public transport.

Under reduced emissions, SPT JourneyShare is one of the fastest growing car journey share schemes in Scotland. An SPT survey of park and ride users suggested that regular users' car mileage could double if park and ride were not available.

SPT is seeking to improve connectivity by working with member councils to improve the strategic road network. It has secured £40m for the Scottish government for the Fastlink proposals to regenerate the Clyde waterfront area.

Public Transport Operator of the Year

Public Transport Operator of the Year was **Lothian Buses**. The company has invested significantly in technology and services, which has helped patronage rise to a 25-year high of 115.4 million. It has taken the lead in environmental performance by fitting older buses with an Eminox SCRT exhaust system, which gives considerable savings in emissions. Last July Lothian Buses introduced a fully revised NightBus service which extended routes and offered more journeys. Lothian also launched an advanced mobile phone app in November 2013, combining travel information and mobile ticketing.

Virgin Trains was highly commended in this category.

Rail Supplier of the Year

Rail Supplier of the Year, organised in collaboration with Network Rail, was awarded jointly to **BAM Nuttall** and **Morgan Sindall**. BAM Nuttall won this category in 2013 and impressed the judges again this year with its collaborative approach and commitment to sustainability. Morgan Sindall impressed the judges with its work alongside Network Rail at Haymar-

two Dundee schools. At Forthill primary school parking is prohibited but vehicles continued to obstruct the main access to the school. St Mary's primary school is approached by a narrow cobbled lane with two narrow footways. Traffic orders were used to prohibit vehicle access around the school entrances at school start and finish times, the first time this approach has been used at a school in Scotland.

Integrated Transport Project of the Year

The award for Integrated Transport Project of the Year went to **Fife Council** for Halbeath Park and Ride. The bus-based park and ride is designed to serve the new Queensferry Crossing and cross-Forth corridor. Building on the successful partnership at the nearby Ferrytoll park and ride, Fife Council and Stagecoach East Scotland have adopted similar arrangements at Halbeath. Stagecoach developed a comprehensive route plan for Halbeath, introduced the new route X52 and extended the successful Jet 747 service between Fife and Edinburgh Airport. All Glasgow-bound coaches call at Halbeath, providing a 20-minute frequency.



ket Station. The redevelopment of Haymarket was carried out to a high standard and has increased capacity at Scotland's fourth busiest station.

Most Effective Road Safety, Traffic Management and Enforcement Project

Dundee City Council was the winner in the Most Effective Road Safety, Traffic Management and Enforcement Project category, sponsored by FirstGroup, for its use of part-time prohibition of driving orders to improve the safety of pupils around

Best Practice in Travel to School and Work

Caledonian MacBrayne took the award for Best Practice in Travel to School and Work for its services supporting the remote communities of Scotland's west coast islands and peninsulas. Ferry travel is an unusual way of getting to school and work but for these communities it is essential. CalMac has introduced two new hybrid ferries on key routes used by commuters, offering more comfort and a quieter trip for commuters wanting

to catch up on work, and it is installing free wi-fi over its network.

Achievements in Cycling

Glasgow City Council was the winner in the Achievements in Cycling category for its Connect2 and Glasgow Cycle Network plan. There has been a major expansion of the city's cycle network with routes along London Road, Gallowgate, within Scotstoun, and to Cathkin Braes and Anderston/Kelvingrove.

This project had the objective of completing Glasgow's famous "bridge to nowhere" plus 2.5km of new off-road or segregated cycle connections. The centrepiece Bridge to Nowhere works were completed as the first phase, followed by connections via segregated routes to the city centre and Central Station, the River Clyde and to Kelvingrove Park.

Sustrans (which manages Connect2 nationally) has subsequently confirmed that Glasgow City Council will receive additional investment of £2.5m.

Excellence in Technology and Innovation

Local authority of the year **SPT** also won the Excellence in Technology and Innovation category, sponsored by **BAM Nuttall**, for its Subway smartcard ticketing project.

The initiative, part of the Subway's £300m modernisation, replaced the magnetic stripe tickets which have been in use since the 1970s. The new ticket system gives greater choice on how to pay, and the ability to offer new and flexible ticket types. The tap in/tap out system provides a complete database of journey and ticket sales information, allowing for improved planning and service provision. The smartcard is ITSO-based so it can integrate with other transport modes. The system recognises multi-mode zone cards, and offers pay as you go with daily capping. Online top-up will be added in future. Queues in stations are reduced.

turn to page 24

Investment in technology and services has helped Lothian Buses' patronage rise to a 25-year high

Caledonian MacBrayne's services are an essential route to school and work for island communities; smartcards have replaced magnetic stripe tickets on the Glasgow subway



Scottish Transport Awards



from page 23

Excellence in Travel Information and Marketing

The Excellence in Travel Information and Marketing category, sponsored by Worldline, was won by **Transport Scotland** and its National Control Centre and Contact and Education Centre.

The Traffic Scotland National Control Centre is co-located with the Forth Replacement Crossing Contact and Education centre.

The Traffic Scotland service collects and disseminates information via radio and social media about the status of the trunk road network to road users. The control centre was officially opened in April last year following relocation of services from Glasgow. It allows co-location of partners such as the Met Office, and will provide traffic management features such as bus hard shoulder running. The education centre provides a focal point for community involvement and an education facility during the construction of the Queensferry Crossing. To date, the education programme has hosted 52 school visits.

Best Bus Service

Best Bus Service went to **Nestrans** and **First Aberdeen's Platinum Service**, created with a focus on customer service to make passengers feel they are receiving VIP treatment. A fleet of 12 buses was given a £300,000 refurbishment, with TV screens featuring 24-hour news, free wi-fi and leather seats. Fifty of First's best drivers were chosen for the route and received additional customer service training. A no-quibble guarantee allows passengers to claim a



Fifty of the company's best drivers were chosen for First Aberdeen's Platinum Service

free journey if they are unhappy with any aspect of the service.

In the first two months after launch, passenger numbers were up by more than 5% over the previous year.

Contribution to Sustainable Transport

First ScotRail won the accolade for Contribution to Sustainable Transport with its Energy Reduction Strategy. The strategy has led to reductions in water use, an increase in waste segregation for recycling, the launch of a renewables portfolio and expansion of an eco-driving scheme.

In the last three years ScotRail has saved approximately £80,000 through energy efficiency improvements; £8,000 via renewable generation; and £20,000 annually by increasing recycling. ScotRail is believed to be the first operator to have created a specialist environmental team; submitted planning bids for six wind turbines; and introduced gas-fired combined heat and power systems at stations and depots. In partnership with Network Rail and Transport Scotland it has launched electrification schemes on key routes. Future projects include identifying sites for rainwater harvesting; expanding eco-driving to more trains and routes; and developing a biodiversity fund to encourage staff to plant wildlife friendly plants in stations and depots.

Aberdeen City Council and Co-wheels were highly commended in this category for their work together on Aberdeen Car Club.

Transport Team/Partnership

ScotRail, with **First Glasgow**, also won the Transport Team/Partnership category, sponsored by Siemens. A new scheme, introduced last July, enables ScotRail customers to travel free on any First Glasgow bus service using their rail tickets at times of severe disruption on the railways. When problems affect rail services, ScotRail wanted to give its passengers the option of using the bus rather than waiting for alternative transport arrangements to be made. Because First Glasgow operates across the city and



From top: The Traffic Scotland control centre; MV Lochinvar, one of the first two hybrid ferries; Lothian Buses

Outstanding Contribution to Transport

A personal award for Outstanding Contribution to Transport was presented on the night to **Mike Galloway**, director of city development at Dundee City Council. The judges were impressed by the outstanding job Mr Galloway has done in leading transport and development in his city. He is behind the successful improvement of the waterfront, including the new V&A museum, and the refurbishment of the station. He supports innovative schemes in and around the city, and the transport people who pioneer them. It is due to his support and encouragement that Dundee is currently in a partnership with major private sector players – leading the way in smart, integrated mobility in Scotland.

The Frontline Employee of the Year

The Frontline Employee of the Year award went to Caledonian MacBrayne's Arran Kintyre relief team **Colin McCort, Angela Herd and Sandra Sturgeon**.

In March last year blizzards brought down power lines, plunging Arran and parts of Kintyre into darkness. Villages were cut off by 4.5m snowdrifts. Homes and businesses were without power for up to 10 days.

The region was in desperate need of engineers, generators, fuel, snow-ploughs and medical supplies, and CalMac was the only means of getting them there. This three-strong team of port managers showed exceptional dedication in coordinating the relief effort.

At Brodick, Colin McCort liaised with energy firms, emergency servic-



Outstanding contributions

es and the council, detailing all equipment and manpower required. He attended four-hourly Arran resilience team meetings, agreeing priorities for each sailing. At Kennacraig, Angela Herd had no power, heating, email or landline for four days. She had to organise fuel tankers to refuel the ferry directly because of the lack of power. She charged VHF radios and emergency lighting at home at night, and released MV *Hebridean Isles* to take emergency generators to Campbeltown. Sandra Sturgeon, at Ardrossan, updated service status on behalf of Brodick while power was down. She informed emergency teams arriving at the port of loading priorities, and loaded all traffic on to the ferry in accordance with the priorities of Arran Resilience. Every scheduled sailing

over the 10 days was fulfilled, despite bad conditions.

Though the relief effort was necessarily a team effort, the judges recognised the exceptional role these three managers played in coordinating the response.

Lifetime Contribution To Transport

A special award honoured the lifetime contribution to transport of one of the frontline employee nominees, **Annette Robson**. Annette died suddenly from a heart attack in May. She was widely known and respected within her Orkney community where she was the face of Serco NorthLink Ferries, following a 30-year career. Her husband Arthur collected the award on Annette's behalf.

Mike Galloway (centre) receives his award from Prof George Hazel

Mike Galloway has done an outstanding job in leading transport and development in Dundee

Lanarkshire to towns such as Motherwell, Hamilton, Clydebank, East Kilbride, Cumbernauld, and Cambuslang, the new initiative enables passengers to get home quickly and reliably. First Glasgow bus travel is available from more than 100 stations.

Most Innovative Transport Project

Most Innovative Transport Project, sponsored by Clear Channel, went to **Caledonian Maritime Assets Ltd** for the world's first seagoing diesel-electric hybrid ferries. With £450,000 from the European Regional Development Fund and a Scottish Government loan, CMAL ordered two ferries from Ferguson Shipbuilders of Port Glasgow. The first, *MV Hallaig*, was delivered last November and is serving the Sconser to Raasay route. The second vessel,

Edinburgh Airport has expanded its route network secured four new airlines

MV Lochinvar, recently entered service on the Portavadie-Tarbert route.

Each ferry can carry 143 passengers plus 23 cars or two HGVs, and has a service speed of nine knots. They are powered by small diesel generator sets which in turn power electric propulsion units. Two lithium-ion battery banks with a capacity of 700kWh can also supply power, reducing fuel consumption and carbon dioxide by 20%. At quiet times during the winter the vessel will operate 100% on batteries.

It is planned to order another two vessels. Each will save £250,000 in maintenance and £50,000 in fuel costs in the first five years of operations.

Airport of the Year

Edinburgh Airport was named Airport of the Year. In the last year it has expanded its route network, secured

four new airlines and announced £150m investment in terminal operations over five years. Working in partnership with the airlines it has introduced 16 new routes to a variety of European destinations plus Toronto and Sharm el Sheikh. Another nine new destinations will be introduced this year.

Edinburgh makes a concerted effort to inspire its employees through peer-nominated reward and recognition schemes, running regular pulse surveys and satisfaction surveys and listening to their opinions. The staff satisfaction survey at the end of 2013 revealed that 95% of staff have a clear understanding of their job responsibilities and 91% are proud of the work they do.

Glasgow Airport was highly commended.

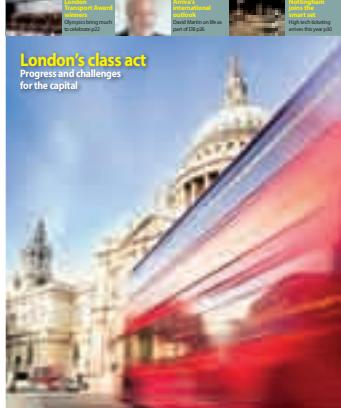
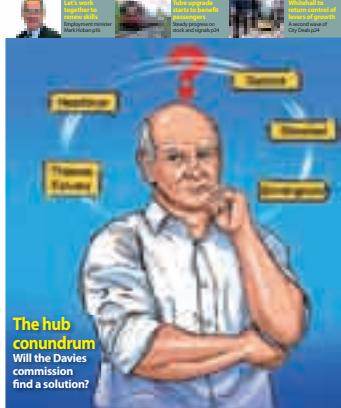
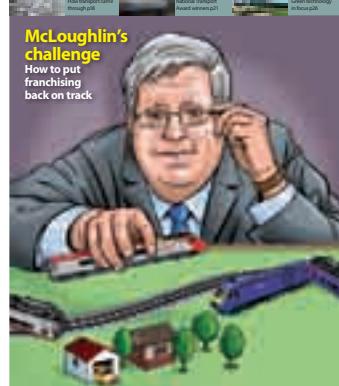
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Three London boroughs were chosen from a shortlist of eight earlier this year to take forward "mini-Holland" cycling plans. But TfL and London mayor Boris Johnson considered the quality of the other bids to be so high that all will receive some form of funding to take forward their plans.

Enfield, Kingston and Waltham Forest will get the full treatment, receiving up to £30m each from the £100m mini-Holland budget.

The term mini-Holland is shorthand for a number of features intended to encourage levels of cycling seen in European cities such as Amsterdam (see box) as well as improving the public realm for the benefit of all, not just cyclists. High spending will be concentrated on relatively small areas to gain the greatest impact.

Bids were sought from outer London boroughs because TfL analysis shows that over half of potentially cyclable journeys made in London are in the suburbs. The programme's aim is to move significant numbers of suburban car journeys, which are often short and highly cyclable, to the bike. The winning bids include redesigns of town centres, new suburban cycle superhighways, Dutch-style roundabouts and rail superhubs.

In Enfield, Enfield Town centre will be redesigned, with segregated superhighways linking key destinations, three cycle hubs in the borough and new greenway routes introduced.

Kingston will create a major cycle hub and the plaza outside Kingston station will be transformed. New high-quality cycling routes will be introduced, together with a Thames Riverside Boardway along the banks of the river.

Waltham Forest will develop a semi-segregated superhighway route along a key artery, Lea Bridge Road, with a range of measures focused on improving cycling in residential areas, and the

Proposed Cycle Routes in Central London for local engagement



Dutch courage

Work is progressing in three London boroughs on so-called 'mini-Hollands' to encourage cycling. Over the next pages, **David Fowler** looks at each of these projects while **Caroline Pidgeon** and **Tom Bogdanovicz** give their opinions on their pros and cons, as well as what other measures are needed

creation of "Hackney-style" cycle-friendly low-traffic neighbourhoods.

Bexley, Ealing, Merton and Richmond also made exceptional proposals, said TfL. It will work with them to take forward "substantial parts" of their bids to improve cycle routes and facilities. Bexley's application, in particular, was said to have strongly impressed the judges.

Over half the potentially cyclable journeys are in the suburbs

The eighth finalist, Newham, has been invited to bid for funding under TfL's major schemes budget towards a £16m plan to remove the Stratford gyratory and reshape Stratford town centre.

Boris Johnson said: "I have been incredibly impressed with the standard of the mini-Holland entries. Areas once terra incognita for the bicycle will, over time, become every bit as cycle-friendly as their Dutch equivalents – places that suburbs and towns all over Britain will want to copy."

TfL managing director of surface transport Leon Daniel added: "From the moment we launched the Mini-Holland programme we were blown away by the ambition and scale of the proposals from boroughs across London. The proposals from the eight finalists were all of exceptional quality."

Discussions continue between all 32 London boroughs and TfL's delivery partner, Sustrans, about the new quietway network of direct and continuous routes across London on low-traffic streets.

On the next few pages we give more details of the three main winners' proposals and other elements within the mayor's cycling vision.

What are mini-Hollands?

Mini-Hollands, according to the mayor's cycling vision, "will be the most transformative of all our policies".

They are based on the premise that cycling in outer London is "low, with great potential for improvement". A budget of £100m was made available specifically for outer London.

The mini-Hollands are to have "very high spending concentrated on relatively small areas for the greatest possible impact", says the mayor's cycling vision document. They represent "a fantastic opportunity for the boroughs to achieve dramatic change – not just for cyclists, but for everyone who lives and works there". The idea is that, over time, they will become "every bit as cycle-friendly as their Dutch

equivalents", places that other towns all over Britain will want to copy.

A number of features are expected to be included in all the mini-Holland projects. Though they are expected to include a good route for commuter journeys to central London, the main focus will be on replacing short car journeys within the target boroughs. There will be substantial redesigns of the main town centre, "to show what is possible when roads and spaces are built around cyclists". A network of routes will radiate out from the centre. These will be predominantly quietways through back streets and parks, in parallel to the main travel routes.

Cycle "superhubs" will be created at local railway stations. A big marketing push will target, in particular, non-cyclists doing short trips.

Leadership and funding needed

Cycling won't become a routine activity by chance, says **Caroline Pidgeon**



Caroline Pidgeon is chair of the London Assembly transport committee but writes here in her capacity as a Liberal Democrat London Assembly member

Earlier this year the green light was given to a major investment in cycling across the capital when Transport for London confirmed that three London boroughs – Enfield, Kingston and Waltham Forest – will have mini-Holland status. Each borough will receive up to £30m for projects to transform cycling.

The further good news is that some improvements will also take place in other outer London boroughs which were shortlisted in the mini-Holland programme.

How did this come about? And why is there what appears an obsession with outer London?

To understand the genesis of the mini-Hollands we need to understand how cycling has grown in London, both in numbers on the road and as a political force. There are now over half a million journeys on bikes made each day in the capital.

Before the 2012 mayoral and London Assembly elections all mayoral candidates were challenged by the London Cycling Campaign to sign up to its Go Dutch campaign. LCC had three specific demands, one of which was the delivery of three flagship cycling projects.

The Labour, Liberal Democrat, Green and Conservative mayoral candidates all signed up to the campaign. In many respects the confirmation of funding is the outcome of this growing voice now being heard.

One further successful outcome is that the mini-Holland proposals have already put cycling higher up the agenda in the bidding boroughs. Not that long ago cycling was a relatively minor issue, concerning at most just a few council officers. Now cycling is a real bread and butter issue for many council leaders and London borough chief executives.

As for why the funding was

restricted to outer London boroughs: evidence shows that the greatest potential for growth in cycling is in the outer boroughs. Inner London benefitted from the cycle hire scheme and will also be gaining investment in quietway routes and an east-west cycle route. However, the key obstacle for many is how safe streets feel for cyclists. The mayor has to tackle the dangerous junctions and gyratories throughout the capital and to provide more segregated cycle lanes, if we are to make London a truly cycling city.

I really hope the mini-Hollands are a huge success, in making cycling safer and more attractive, but also in providing an example to all urban communities around the UK.

Making cycling a routine form of transport for everyone will not come about by chance. Political leadership and serious funding is needed if we are to transform cycling into a mainstream mode of transport.



Winner of Scottish Integrated Transport Project of the Year 2014

Halbeath Park & Ride is Fife's newest transport facility. Located just off the M90 to the east of Dunfermline, there's 1000 car spaces and is ideal for journeys to Edinburgh and Glasgow.



For more information visit
www.halbeath.org

Kingston has the second highest mode share of cycling in outer London. But the potential for cycling is limited by the variable quality and consistency of cycle infrastructure in the borough. Kingston says that mini-Holland funding "will enable us to unlock our untapped cycling potential through... high-quality cycle infrastructure improvements borough-wide".

Cycling in the borough "will be seen as an enjoyable, safe, practical and accessible everyday option for more people, including older and disabled people, children and families."

The borough experiences relatively high levels of traffic congestion, and the private car accounts for almost half the trips in the borough. There are high levels of car dependence; some areas have poor public transport accessibility and the South West main railway line runs at up to 110% of capacity at peak times. The vision for cycling will benefit "all road users, not just cyclists" by reducing congestion and helping to reduce public transport overcrowding.

Kingston's mini-Holland objectives include providing a high quality core network of interconnecting routes; facilitating part-cycled commuter journeys; improving the quality of the public realm and supporting the viability of town, district and local centres.

Kingston has identified a number of everyday projects and "landmark" projects that can be completed by 2016 and within the budget set by TfL.

Everyday infrastructure includes the strategic network, public realm projects at Kingston and Surbiton stations, a superhub at Kingston and a new green route providing direct access from New Malden to Raynes Park alongside the railway line. The two planned landmark projects are the Thames railside bridge connecting Kingston and Hampton Wick, and the Thames riverside boardway.

Kingston station is the principal public transport arrival point for Kingston town centre. Pedestrians and cyclists are faced with a vehicle-dominated environment created by the relief road that was built to allow pedestrianisation of the town centre. It is proposed to reallocate road space in front of the station entrance to create more space for pedestrian circulation and to allow integration of the cycle network with the transport interchange. The station plaza will provide a new focal point for Kingston.

Access to the town centre is limited by the relief road around the pedestrianised core. There will be a review of crossing facilities to identify improve-

Kingston



ments such as raised tables and other measures to reduce traffic speed, and modifying traffic signal operations to reduce waiting times.

Surbiton Station is well connected by fast and frequent trains to central London but the provision of facilities for cyclists is poor. It is proposed to relocate the taxi rank and short-term parking from the station forecourt to create a new town plaza, prioritising the movements of pedestrians and cyclists, in front of the station. This will provide a more appropriate setting for the listed station building, and will allow pedestrians and cyclists to move safely between the station and the town centre.

A Dutch-style roundabout will be built at the heavily trafficked Fountain Junction in New Malden. At present there are many conflicts between motor vehicles and cyclists; constraining the circulatory carriageway would provide the required space to accommodate Dutch-style segregated cycle lanes which would significantly increase safety for cyclists.

Limited river crossings over the Thames mean cyclists travelling east-west have to cross by Kingston Bridge and navigate a heavily trafficked gyratory system. The east-west railway through Kingston runs just to the north of the town centre on an embankment, crossing the River Thames on a five-arch iron railway bridge. A lightweight suspension structure across the Thames is proposed alongside the railway bridge, with a single 75m span across the river.

The quality of the riverside walk at Kingston is variable. Cycling along the waterfront is prohibited upstream of Kingston Bridge. A 4m wide boardway would create a two-way cyclist-only link along this stretch of the



Top: a new station plaza will be a focal point for Kingston; a 4m wide boardway will run alongside the Thames

Thames, enabling cyclists to avoid the town centre and connecting with the cross-river bridge to make longer journeys possible. Pedestrians would still be able to use the existing river bank path, providing direct access to cafés, bars, restaurants and the town centre.

There are only a few existing transport links between Kingston and neighbouring Merton due to severance caused by the A3 dual carriageway.

Kingston proposes constructing a 3m wide two-way cycle path and 2m wide footway from New Malden to Raynes Park. Discussions are taking place with Thames Water about using an existing pipe trackway between New Malden station and the A3, to which there is currently no public access.

Not all the projects Kingston wanted to undertake could be fitted into the timescale and budget available, and a number of proposals will be brought forward in the longer term as funding from other sources becomes available. These include the full version of the Kingston station plaza, and superhubs at Kingston and Surbiton stations and Kingston town centre.

Mini-Holland funding will allow Kingston to unlock its cycling potential

Enfield



Enfield town will be transformed by removing general traffic from the high street

Enfield envisages a fivefold increase in the number of cycle trips in the borough over five years. Its Albany Park Greenway has already demonstrated the potential, achieving a 395% increase in cyclists in two years. It engaged transport consultants from the Netherlands to assist in formulating its proposals.

Enfield has some of the worst air pollution hotspots, with 10 of London's 187 air quality focus areas in the borough, and its proposals are located at such sites.

The proposals include the redesign and "rejuvenation" of the town centres of Enfield itself and Edmonton Green, to create an improved environment for everyone. Edmonton Green in particular is a community where

cycling "could make a real difference and change people's lives, particularly their health and employment opportunities", says Enfield's bid. Three new segregated cycle routes, along the A1010 Hertford Road, the A105 Green Lanes and the A1010 Southbury Road will provide direct connections from the town centres to central London.

Enfield town centre will be transformed by removing general traffic from the high street and providing a two-way segregated cycle route with connections to other routes to all four points of the compass, and with direct routes to Edmonton Green and Palmers Green. The plans will also reduce bus journey times and will improve access to and the environment around Enfield Town station, where a new cy-

Enfield's main high street will have a two-way segregated cycle lane

cle superhub will be sited. There will be associated public realm improvements in the town centre.

Edmonton Green will be redesigned around a Dutch-style roundabout connecting directly to the A1010 segregated cycle route. Railway arches will be opened to create a commercial and community space including one of two cycle hubs. The other hub will be in the shopping centre and provide training and apprentice schemes. Again there will be public realm improvements, as well as more convenient pedestrian crossings around the roundabout and better access to Edmonton Green bus and railway stations.

The A1010 will be completely redesigned as a world class north-south cycle commuter route, but also as an improved public space. Road space will be reallocated to provide a safe and continuous cycle lane along the whole route, with safe crossing facilities for cyclists at major junctions. Slower traffic speeds and reduced through traffic will make the road one that is enjoyable to walk or cycle along. There will be safe connections to all 23 schools along the route. Public realm improvements, in particular at the five shopping areas, are a key element.

The A105 Green Lanes corridor will gain safe continuous cycle lanes from Enfield Town to Palmer's Green.

Improved cycle routes will address severance caused by the A10 and A406, the borough's busiest roads.

Cycling vision (or what is a Dutch-style roundabout anyway?)

The mayor's cycling vision has four elements. It aims to provide "a Tube network for the bike" – a network of cycle routes across London (the central London grid); to provide safer streets for the bike, with measures to improve cycle safety at junctions, and targeting heavy goods vehicles; to get more people travelling by bike, making cycling a mainstream and popular mode of transport; and to create better places for everyone.

The Central London Grid will be a network of direct, joined-up cycle tracks, many running in parallel with key Underground, rail and bus routes. It will be a mixture of cycle superhighways and quietways.

Safety will be improved through increased spending on the junction review, with greater priority given to the worst junctions. There will also be "a range of radical measures" to improve safety and reduce conflict between cyclists and large vehicles.

TfL and the mayor have consulted on a proposed network. Though welcoming the proposals the Lon-



Dutch-style roundabouts typically include separate tracks for cyclists that give them priority on the arms

don Cycling Campaign also said that shortcomings in coverage, continuity and directness needed to be addressed, as well as a lack of clarity concerning standards to be adopted.

Regarding timing, it is planned that the first improvements will be in place by late this year. At least half the quietway network in the grid area will be complete by 2016. All the superhighways would open by 2016.

Quietways

Whereas superhighways are mostly segregated and on main roads, qui-

etways will be less segregated and mainly on streets with less traffic. They will form a network of radial and orbital routes following back-street routes, through parks, and along waterways. They will appeal to less confident cyclists seeking a safer environment as well as experienced cyclists who are happy to travel at a slower pace.

TfL is working in partnership with the London boroughs, the Canal and River Trust and the Royal Parks on a 10-year quietway programme. The first two routes will be between Waterloo and Greenwich, and Bloomsbury and Walthamstow. Work will start this year and the entire routes will be finished by spring 2015.

Dutch-style roundabouts

Dutch roundabouts are designed to slow traffic down to reduce road danger during turning movements at conflict points, rather than increase throughput of motor traffic. They typically include separate tracks for cyclists, giving them priority on the arms.

Waltham Forest

Waltham Forest is already putting a three-year cycling action plan into effect, but mini-Holland funding will allow the borough "to go much further and much faster".

Cycling is increasing but mode share is still low, at 2%. The borough wants to "normalise" cycling, making it something everyone feels comfortable doing.

Its objectives are to substantially increase cycling within the borough, to shift a significant proportion of short local car trips to bike, to improve the look and feel of public spaces, to assist in economic regeneration, to improve actual and perceived safety for cyclists on the borough's streets, and to increase the number of adults and children incorporating physical activity into their daily routines.

The proposals centre on a roughly rectangular area around the main town centre, Walthamstow, bounded by four principal roads.

The town centre is undergoing significant mixed development, providing an opportunity "to build cycling into the physical, social and economic fabric of the area". However, "key routes within the centre are currently dominated by road traffic, creating an unwelcoming environment for cyclists and pedestrians, spoiling the look of the area and causing air quality problems".

The mini-Holland bid will accelerate changes brought about by prioritising walking, cycling and public transport.

A key feature of the proposals is the concept of "villagisation", removing through traffic from residential areas in central Walthamstow.

In Walthamstow town centre road space will be reallocated to reduce



**In
Walthamstow
town centre
road space
will be
reallocating to
reduce
domination
by traffic**

Top: the western arm of Walthamstow gyratory will become a linear park with a street market; international best practice including semi-segregation will be used on the borough's cycle routes

domination of the streets by traffic. The High Street is already a pedestrian zone but is dominated by Walthamstow market five days a week. The current arrangement, whereby cycling is informally permitted outside market hours, will be formalised.

A cycle superhighway is proposed along the Lea Bridge Road (a mini east-west route at the southern end of the mini-Holland area). This will be the first in the borough and will fill a gap in the cycle superhighway network, linking with the borough's planned north-south cycle routes and connecting to central London. The road has the highest flows of cyclists in the borough, 6% of traffic at peak, and there has been an increase of 500 cyclists a day over the last year.

"Currently, high traffic speeds and volume make Lea Bridge Road a threatening environment for the less experienced cyclists we are keen to attract," says the borough's proposal.

The borough's proposals for a cycle route network comprise two main north-south routes linking Walthamstow and the secondary town centres of Leyton/Leytonstone to the south and Chingford and Highams Park to the north, plus an east-west route. Design principles set out the aims of creating safe space for cycling, drawing on international best practice, on a number of key routes including the Walthamstow gyratory, and creating north-south and east-west routes that are simple and direct.

Of the main north-south routes, Leyton to Blackhorse Road will be a high quality route linking the area to the Queen Elizabeth Olympic Park and Stratford and on to Canary Wharf via Leyton town centre. The Leyton to North Chingford route will have "substantial stretches of segregation". The east-west route, Coppermill Lane to Wood Street, will be "an exemplar quiet route" based on Dutch practice, running through the heart of the mini-Holland area.

The bid will address severance caused by the Walthamstow gyratory, the Whips Cross roundabout, and a number of other junctions on the Lea Bridge Road. Footbridges over the A406 North Circular Road will be improved.

In the secondary centres, a philosophy similar to that at Walthamstow will be adopted, aiming to increase short journeys by bike and to improve the streetscape through planting and landscaping. A number of temporary road closures would be introduced on an experimental basis to reduce the amount of traffic cutting through residential areas. The borough will work with local schools to ensure that cycling is a viable alternative for schoolchildren and parents alike.





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Vision or mirage?

Tom Bogdanovicz bemoans slow progress in providing cycle routes as safe as those in Holland



Visions are necessary but you can't ride along a vision – people ultimately judge transport projects by what is delivered, not by what is promised. In London, mayor Boris Johnson's Vision for Cycling (2013) was widely welcomed by both politicians and stakeholders. Similarly, at the national level, the Get Britain Cycling report (2013) attracted all-party and stakeholder support. Neither the vision nor the report, however, have yet produced bike routes that are "as safe and inviting as those in Holland" – the promise at the heart of London Cycling Campaign's Love London, Go Dutch initia-

tive which the mayor (and all his competitors) agreed to meet at the 2012 London elections.

There appears to be a political consensus that growth in cycle use can help ease traffic congestion

and its successor, LCN+, were abandoned before completion. The Better Junctions review, initiated by the mayor back in early 2011 to address one of the main causes of cyclist deaths – poor junction design – continues to grind on but with little to show for it. The more recent central London Grid of cycle-friendly streets is still in consultation, while quietways (a network of back street routes) and upgraded cycle superhighways await consultations in September, after protracted negotiations with boroughs.

As many readers will know, 5% of London roads are controlled by Transport for London (unwieldy, but under mayoral control) and the remaining 95% controlled by 32 London boroughs plus the City of London. The mayor's cycling commissioner Andrew Gilligan

commissioner Andrew Gilligan says he is pressing TfL, but even he has limited scope to put pressure on local authorities.

LCC's Space for Cycling campaign this year was expressly designed to address this issue – LCC supporters sent 84,000 messages to 7,000 local election candidates asking them to back the campaign and half of them said yes. The outcome is that 43% of elected councillors signed up to specific cycling improvements in their wards.

The key ingredient of any infrastructure programme, political will, should therefore be in place across a large swathe of London. Local councils and TfL now have to turn those commitments into shovel-ready projects.

Only then will we have roads as safe and inviting for cycling as those in Holland, enabling the quarter of Londoners who want to cycle to have the confidence and opportunity to do so.

Tom Bogdanovicz is senior policy and development officer at the London Cycling Campaign



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Noel Travers



Dyan Crowther



Jackie Jackson



Mark Nodder

Bombardier Transportation confirms senior leadership team

□ Bombardier Transportation has confirmed its new senior leadership team in the UK, following the departure of **Francis Paonessa**, who is joining Network Rail as managing director for infrastructure projects.

Noel Travers has been appointed interim managing director and head of projects for Bombardier Transportation UK. **Peter Doolin** will retain responsibility as head of projects for Crossrail and London Underground.

Mr Travers joined Bombardier Transportation in 2008 as sales director for the passengers division in the UK, from the Royal Bank of Scotland, where he was senior director for transport and infrastructure in its structured asset finance business. In 2013 he became vice-president for project management, taking responsibility for all Electrostar new build projects. At the start of 2014, he added responsibility for all Electrostar maintenance contracts. He is a chartered engineer, and member of the Institution of Mechanical Engineers.

Mr Doolin joined Bombardier Transportation in 2010 as senior director for multiple unit projects, leading the Electrostar and Turbostar projects. He had previously held a variety of roles in Alstom Transport in the UK and Northern Europe including project director for the Virgin West Coast Pendolino project.

In January 2012, he was appointed vice-president for project management and, in June 2013, VP for project management

for the Crossrail and London Underground contracts. He is now also responsible for Crossrail depot and maintenance projects, together with London Underground rolling stock and maintenance contracts. He is a Fellow of the Institution of Mechanical Engineers.

□ Gavia, the joint venture of Go-Ahead and Keolis, has appointed **Dyan Crowther** chief operating officer of its recently-won Thameslink, Southern and Great Northern franchise (TT June).

Ms Crowther joins from Network Rail where she is currently route managing director for London North Western. She has held senior leadership roles at the company including regional director of London North Eastern and director of operational services, and was previously managing director of Arriva Trains Northern.

□ Consultant Parsons Brinckerhoff has made a number of appointments in its expanding UK Highways, Transportation and Asset Management business.

Matt Croucher joins as technical lead for sustainable transport solutions, from Systra (formerly MVA) where he was a principal consultant. Over a period of 10 years with the company, he undertook a wide variety of local transport studies, ranging from multi-modal corridor studies to mode specific studies, addressing issues like barriers to walking and cycling, bus

- **Dyan Crowther to be COO of Gavia franchises**
- **Parsons Brinckerhoff adds to UK highways, transport and asset management business**
- **Wrights Group creates high-level executive team**

interchange, freight impacts and parking.

At Parsons Brinckerhoff, he will be a key component in developing sustainable solutions for local authorities through their Local Growth Funds, building on the platform of the Local Sustainable Transport Fund, rail franchises, and Parsons Brinckerhoff's expanding developer client base.

Martyn Brooks has been appointed director for local government services and **Neil Harris** technical consultant for intelligent transport within the same division.

Mr Brooks, a transport planner with 30 years of experience, joins from CH2M Hill, where he was director of local authority partnerships. In that role he held a range of management positions for highways and transport term consultancy contracts, including for Bristol City Council, Bath and North East Somerset Council, North Somerset Council, South Gloucestershire Council, Swindon Borough Council and the Transport Planning Framework with Oxfordshire County Council. He will be taking the lead in expanding Parsons Brinckerhoff's market presence in all aspects of local government services.

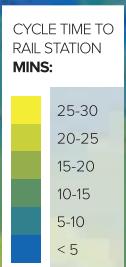
Mr Harris joins from Atkins where he has worked since 2000 as a project manager and IT director, leading the DfT's online Transport Direct journey planner project and the Environment Agency's flood warning website. Prior to this, he worked in the defence and manufacturing sectors. At Parsons Brinckerhoff, he will initially work on the M25 Connect Plus contract.

Jackie Jackson has been appointed to lead PB's newly-formed rail team in its York office, which opened earlier this year.

Ms Jackson joins from CH2M Hill where she was a project delivery director. She has a background in power engineering and 15 years of railway engineering and project delivery experience. She will be responsible for developing Parsons Brinckerhoff's team, capability and client relationships in the North East, as well as continuing her involvement in the development of a rail cluster for Yorkshire and the North East.

□ Wrights Group, parent company of Wrightbus, has announced the establishment of a high level executive team to oversee the strategic development of the business and co-ordinate the operational activities of the companies within the group.

Mark Nodder has been appointed chairman and chief executive; **Steven Francey** is appointed chief operating officer and **Mark Johnston** becomes chief financial officer.



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