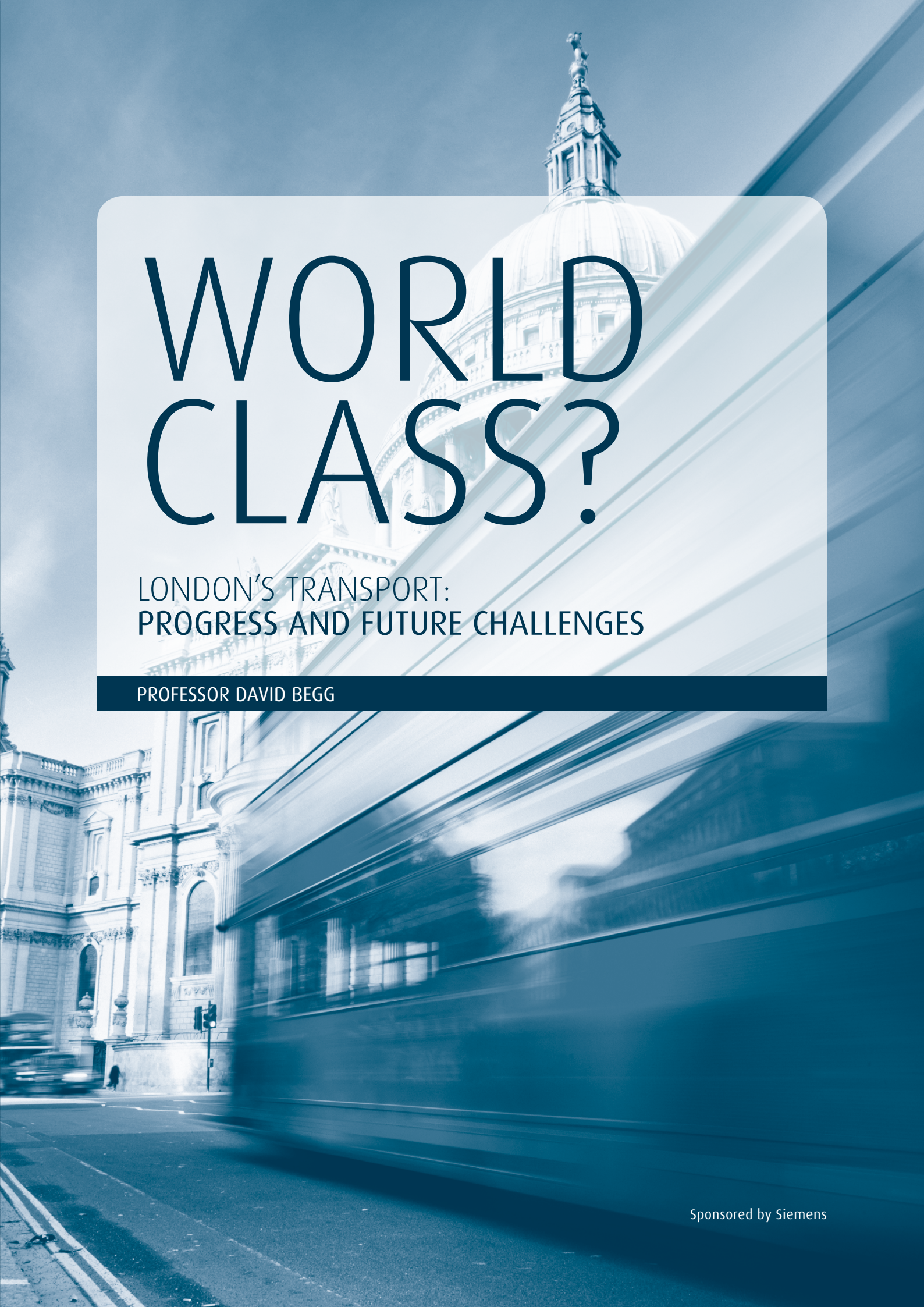


WORLD CLASS?

LONDON'S TRANSPORT: PROGRESS AND FUTURE CHALLENGES

PROFESSOR DAVID BEGG

Sponsored by Siemens

CONTENTS

1. About the Author

Professor David Begg is Chief Executive of Transport Times, Non-Executive Director of First Group and Heathrow Airport Holdings Ltd and Advisor to the Board for Transport for Greater Manchester.

He runs a series of transport awards in conjunction with Department for Transport (DfT), Transport Scotland and Transport for London (TfL).

From 1999 to 2005 he chaired the Government's Commission for Integrated Transport. It was set up to advise the government on transport policy and to monitor performance. He was also a Board member of Transport for London from 2000 to 2006 before joining Tube Lines as chairman (2006-2010). He was a Non-Executive Director of the Strategic Rail Authority and before that British Rail.

Before moving to London he was Professor of Transport policy at the Robert Gordon University in Aberdeen. He is a visiting Professor in Transport at Plymouth University.

In the 1990's he was the political lead on transport on Lothian Region and then the City of Edinburgh Councils.

SIEMENS

2. Foreword

Steve Scrimshaw, Managing Director Siemens Rail Systems UK & NW Europe

London is without doubt a world class city. And when it comes to transport our capital has much to offer and many learnings to share. From the world's oldest underground railway that this year celebrates its 150th anniversary, to the innovative iBus system, our transport network continues to evolve and develop.

As an organisation Siemens' involvement in London's transport infrastructure is extensive. Our trains transport passengers into the city on a daily basis; our involvement in the congestion charging, low emission zones and traffic management platforms help Transport for London to effectively manage, monitor and channel road users; and, we are significantly involved in large infrastructure projects such as Thameslink and Crossrail. Siemens is intrinsically linked to London and our commitment to helping develop next generation projects and solutions for the city is assured.

We should be proud of what we have collectively achieved to date in London – transport and infrastructure suppliers and manufacturers working hand in hand with UK Government and advisors to develop systems, solutions and options for transporting London's visitors and residents safely and efficiently on a daily basis. Equally we must look to the future and consider the question – what next?

London 2012 gave us increased confidence in our transport network. The pressure was intense but all those involved in any way, shape or form can be rightly proud of their achievements: our infrastructure not only met expectations it exceeded them, giving us a glimpse of the future – an integrated transport network; changing modal shift patterns; and, a more varied travel and passenger demand. We can't ignore the challenges facing our capital, we should embrace them and move forward with policies, plans and strategies to position London at the forefront of transport-related innovation.

Professor David Begg, the author of this report, has spent many years formulating exactly such strategies and policy decisions. His network of contacts is unsurpassed, his academic pedigree unquestionable. I am delighted that David took on the 'not so small' task of developing this report and sharing his findings with us all – the report he has developed is both informative and insightful and I hope you will find it an enjoyable read. I also hope that the points Professor Begg has made will help all those involved in transport-related decision making – both public and private sector – to develop additional strategies to address the challenges we face and keep London a world class city.

3. REMIT AND SCOPE OF REPORT

I would like to thank Siemens for commissioning this report and for giving me the opportunity to write it. It's so refreshing to write a good news story on transport and what Transport for London has achieved since it was formed in 2000 is exemplary. I was dismayed and frustrated at just how negative some of the commentary was about London's transport during last year's Mayoral election. The more I have studied the progress that has been made in the last 12 years the more impressed I have been.

The focus of this report is on the progress that London's transport delivery agency, Transport for London (TfL), has made since it was formed in 2000 by the Greater London Authority Act 1999, and the future challenges it faces. It does not examine all aspects of transport in London, with the following modes excluded: London Tramlink, river services, the non-TfL rail network that serves London and aviation.

The report tries to examine the extent to which TfL's achievements are "world class", which has been more of a subjective exercise than anticipated given the lack, and often inadequacy, of international benchmarking data. This is exactly the same challenge I faced in 1999 when the Government asked the Commission for Integrated Transport that I chaired to benchmark how the UK compared with best transport practice in Europe. You could say with some certainty that Rory Mcilroy (golf), Novak Djokovic (tennis), Lionel Messi and Cristiano Ronaldo (football) are all "world class." There are well-established world rankings which you could point to justify this assertion. We can't be so conclusive when it comes to transport but I make no apologies for trying.

To identify where performance in London can justifiably be called world class, the report has used benchmarking data where available as well as testing the hypothesis with TfL stakeholders interviewed as part of this study. A survey was also conducted among 3,500 London transport professionals on the progress made in London's transport since 2000[1].

[1] See Appendix A

Figure 3.1 Transport Times Survey

I would be surprised if there are many transport authorities in the world that achieve such a positive rating: more than 73% said that performance was either excellent or good!

Figure 3.2 Transport Times Survey

The term "world class" is often used frivolously without proper analysis. Given the constraints I have mentioned, I accept that to an extent this is true of this report. It should also be made clear that London should be compared with a small number of truly world class cities rather than small to medium sized cities. Comparisons are often made between London and European cities such as Copenhagen, Stockholm or Amsterdam, especially when it comes to walking and cycling. This is not comparing like with like. There is however an argument that London is made up of urban villages more akin to small towns, and that London can still learn plenty from best practice in cities which are smaller.

I was surprised and disappointed during the last Mayoral elections when there was so much criticism of London's transport system. The truth is we have witnessed a sea change in transport provision and performance in London since 2000. We have become too conditioned to the improvements and are in danger of taking them for granted and forgetting what things were like.

This is not to deny that too many transport users in London still have journeys to make which are too difficult and that there is much still to do. However it's also important to acknowledge success and to collectively focus on how we can all play our part in ensuring that this success story can continue. Crossrail demonstrated that the more allies TfL can have on its side when it comes to investment the more likely it is to succeed.

4. Process

I have personally interviewed the following professionals for this report:

- **Steve Allen,** Managing Director, Finance, Transport for London
- **Mike Brown,** Managing Director, London Underground and London Rail
- **Paul Buchanan,** Technical Director, SKM Colin Buchanan
- **Simon Buxton,** Chief of Staff, Surface Transport, Transport for London
- **Janet Cooke,** Chief Executive, London TravelWatch
- **Leon Daniels,** Managing Director, Surface Transport, Transport for London
- **Isabel Dedring,** Deputy Mayor for Transport, Greater London Authority
- **Michèle Dix,** Managing Director, Planning, Transport for London
- **Garrett Emmerson,** Chief Operating Officer, Surface Transport, Transport for London
- **Vernon Everitt,** Managing Director, Customer Experience, Marketing and Communications, Transport for London
- **Professor Stephen Glaister CBE,** Director, RAC Foundation
- **Sir Peter Hendy CBE,** Commissioner, Transport for London
- **Stephen Joseph OBE,** Chief Executive Officer, Campaign for Better Transport
- **David Leam,** Executive Director for Infrastructure Policy, London First
- **Nick Lester,** Corporate Director of Services, London Councils
- **Terry Morgan,** Chairman, Crossrail
- **Cllr Daniel Moylan,** Deputy Chairman, Transport for London
- **Caroline Pidgeon AM,** Chair, London Assembly Transport Committee
- **Ashley Steel,** Vice Chairman and Global Chair for Transport, KPMG
- **Hugh Sumner,** Director of Transport, Olympic Delivery Authority
- **Professor Tony Travers,** Director, London School of Economics
- **Jeroen Weimar,** Chief Operating Officer, UK Bus, FirstGroup

Additionally, a roundtable discussion was held with key stakeholders, key TfL management and representatives from Siemens:

- **David Brown,** Chief Executive, Go-Ahead
- **Michèle Dix,** Managing Director, Planning, Transport for London
- **Garrett Emmerson,** Chief Operating Officer, Surface Transport, Transport for London
- **Professor Stephen Glaister CBE,** Director, RAC Foundation
- **Stephen Joseph OBE,** Chief Executive Officer, Campaign for Better Transport
- **David Leam,** Executive Director for Infrastructure Policy, London First
- **Nick Lester,** Corporate Director, Services, London Councils
- **Tom MacMorran,** Sales & Marketing Director, Siemens Mobility UK
- **Ben Plowden,** Director of Better Routes and Places Programme, Transport for London
- **Steve Scrimshaw,** Managing Director, Siemens Rail Systems UK & NW Europe
- **Jim Steer,** Director and Founder, Steer Davies Gleave
- **Vincent Stops,** Policy Officer, London TravelWatch
- **Laurie Waugh,** Head of Communications, Rail Systems, Siemens Rail Systems
- **Jeroen Weimar,** Chief Operating Officer, First UK Bus

I am grateful to everyone for their input. If there are any errors in this report then the responsibility rests solely with me; the views expressed are mine and cannot be attributed to anyone I have interviewed.

I was impressed by how loyal the TfL management I interviewed were to both Mayors they served under. Even if they did not agree with all their policies they kept their discretion.

As part of this report, we conducted a survey of London transport professionals to ascertain the perception on progress TfL has made since 2000. Targeting over 3,500 people, we received a comprehensive view on a range of delivery aspects of Transport for London, incorporating a broad cross section of transport experts.

Although authored independently by me, I would like to thank the team at Transport Times: Katie Allister, David Fowler, Anna Pett and Grant Poulton, for their research and support in writing this report. I could not have done it without them.

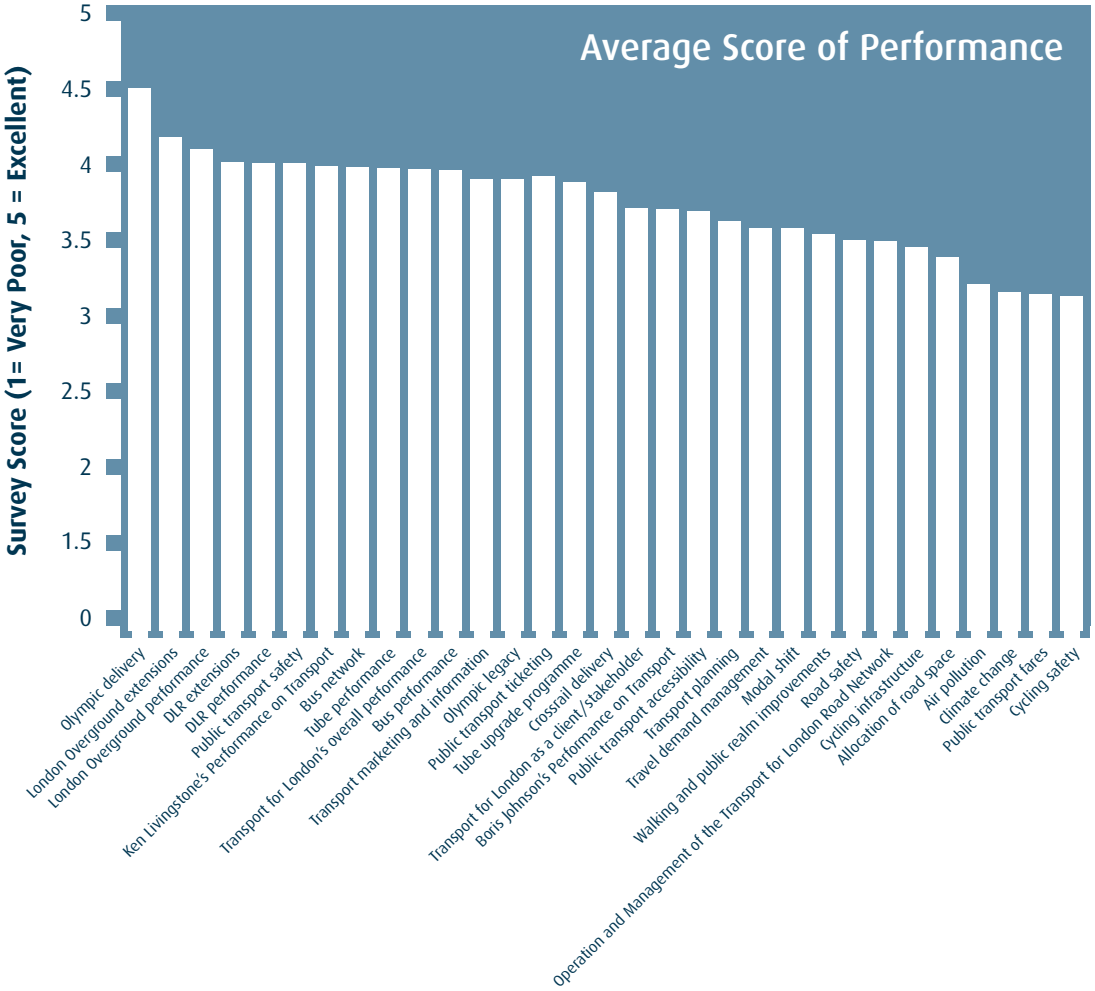
Vernon Everitt, Managing Director, Customer Experience, Marketing and Communications, TfL, has also been extremely helpful in ensuring that all the relevant TfL information was made available to me and that I had access to the key people. I received very positive feedback from the stakeholders I interviewed on the good job Vernon has done since he took over as head of marketing, information and customer experience.

5. Executive Summary

Since TfL was formed in 2000 by the Greater London Authority Act 1999, London's transport system has been transformed and in many instances can be described as "world class". This is reflected in the high number of people surveyed who said that progress was either "Excellent" or "Good".

EXECUTIVE SUMMARY

Figure 5.1 Transport Times Survey



SURVEY QUESTIONS

- It will come as no surprise that Olympic delivery has the highest score in the survey, closely followed by London Overground and DLR. 31 questions were asked and there were only five which had an average ranking less than fair: cycling safety, public transport fares, climate change, air pollution and allocation of road space. I can understand why most organisations' surveys are rarely presented as an average: it is not the most flattering way to present the data!

A more accurate way to present the results of our survey would be to quote the percentage of respondents who thought performance was either excellent or good.
The results are impressive: Olympic delivery (94%), London Overground (77%), Tube (76%), public transport safety (74%), DLR (72%) and Bus (70%).

- I would agree with most of the rankings in this survey with one exception: modal shift. It comes at the lower end of the rankings, whereas I would have had it near the top. I find it hard to believe that almost 20% of respondents thought it was either poor or very poor. We could not find any city in the world that has experienced as big a shift from car to sustainable modes of transport as London has over the past twelve years. There may be a messaging issue here for TfL.
- London has been blessed with two strong, independent and powerful Mayors who have given top priority to transport. They have had the gravitas and political clout to stand up to central government to secure the best deal for the capital. In the survey, 72% thought that Ken Livingstone was either excellent or good on transport with Boris Johnson achieving 57%. I have made recommendations in this report on how Boris can shift his ratings from "good" to "excellent" and rank among the very best Mayors worldwide when it comes to transport. An important point to bear in mind is that the survey is of transport professionals – who very often view things differently from the general public.
- There has been no attempt to move from public sector to private sector provision. Boris has proved to be every much as strong an opponent of the PPP as Ken, and indeed has overseen its demise. London Underground remains one of the last bastions of public sector operations and there has been no indication that the Conservative Mayor wants to change this. Public transport in the UK is run almost entirely by the private sector. What both Mayors have in common is that any political ideology they might have is disregarded if it conflicts with what they believe is right for London (or politically too difficult to deliver depending on your view).
- TfL is unlike any other body in the public sector. It is intensively focused on delivery, operational performance and customers. It is much more political than Whitehall or local government – not in the sense of party politics, but in loyally pursuing the agenda of the incumbent Mayor. TfL is there to deliver the Mayor's agenda in the way successive Prime Ministers wish Whitehall would deliver theirs.
- TfL was born under Livingstone's regime and you could understand why there was initially deep suspicion from people around Boris as to its loyalty, effectiveness and efficiency, especially those who had a jaundiced view of the public sector. It has taken time to earn trust and respect. The success of the transport system during the Olympics was the clincher.
- TfL is particularly strong at strategic planning epitomised by the Mayor's Transport Strategy (MTS) and before that the 2025 Transport Report. It has set out a clear vision of what is required from transport to support the city as part of a coherent plan – enabling London to grow and prosper in an economic and sustainable way and supporting the case for further investment.
- If TfL is to continue to perform as well as it has then remuneration is an issue. In austerity Britain, where the Prime Minister has questioned why anyone in the public sector earns more than him, we have to accept the consequence which is that public sector organisations like TfL will find it increasingly difficult to compete with the private sector in the recruitment and retention of staff. This is not just an issue at the top but is relevant right down the organisation.
- Boris has been a good Mayor when it comes to transport with an impressive focus on delivery. He has presided over a massive increase in public transport capacity and patronage, cycling continues to grow and car use remains in decline. It's too easy to be dismissive and say that he has implemented the policies and initiatives that were started under Ken. Delivery is the hard bit in transport and Boris has to do it in a much tougher financial environment. Boris was unfortunate in that his first term as Mayor coincided with the global financial collapse in 2008. That did not stop him securing the finance from central government to ensure that investment levels were sustained. However,

if he wants to go down in history as one of the world's great radical mayors then his litmus test will be how he responds to his Roads Task Force which will report shortly. If he wants to make London a city which is more associated with walking and cycling with an urban realm to be proud of, then he needs to support a roads hierarchy whereby walking, cycling and buses are prioritised over other road vehicles at appropriate locations. The Mayors that have been most successful in shaping their cities are the ones who have not been afraid to make this tough decision. Radical world Mayors such as Jaime Lerner (Curitiba), Enrique Peñalosa (Bogota), Michael Bloomberg (New York), Marcelo Ebrand (Mexico City) and Ken Livingstone (London) have all been prepared to do this even if it risked short-term unpopularity. How a politician decides to allocate scarce road space highlights where their priorities lie.

- London is much less densely populated than most other world cities. Roughly 8 million Londoners occupy twice the footprint of the same number of New Yorkers and four times that of Hong Kong (population 7 million). This makes it more challenging from a financial and environmental perspective to transport people and goods in and around London. The success London has experienced in the past 12 years in dramatically increasing public transport capacity has not been matched by a growth in the number of houses, schools and other essential infrastructure. The Mayor has said that London needs one million more houses over the next 30 years. To reduce pressure on the transport system, and to make the capital city more fit for walking and cycling, it's important that every effort is made to increase residential densities.

- In TfL's latest Business Plan, the Mayor states that he "rejects the old fashioned idea that roads will always be a place of conflict between different road users". He is wrong. All the stakeholders interviewed for this report also disagreed. There will never be enough new capacity on the road network to ensure that supply satisfies demand. No matter how much is invested in junction redesign, active traffic management and tunnelling – sharp choices will still have to be made on how much priority is given to different road users.

- There is merit in the argument that relative to the public transport network, investment in the roads network in London has played second fiddle. When you consider that 80% of all passenger trips and most freight trips are made by road, yet roads account for only one-third of TfL's expenditure, you can understand why the Mayor has made this a top priority in the Business Plan and established a Roads Task Force. There is often a simplistic, but mistaken, view that spending on public transport is "good" and "green", but that spending on roads is "wrong" and "bad". The quality of the road network is vital to bus passengers, cyclists and pedestrians as well as car users, taxis and freight.

- The safety record on London's roads compared with the rest of Great Britain has been a good one with substantial reductions in road casualties and collisions achieved over the last decade. However, recent trends around road users who are over represented in the recent casualty figures are concerning and show that walking accounted for 21% of daily journeys in London in 2011, but 35% of killed or seriously injured casualties (KSI); powered two-wheelers accounted for 1% of daily journeys, but 21% of KSI; and cycling accounted for 2% of daily journeys, but 20% of KSI casualties. Between 2006 and 2011 the number of cycling casualties rose by 50%. If the Mayor is to ensure that the capital is a safe, pleasant and people-focused city to live, work and to visit, then keeping citizens safe while they are travelling around it must be the top political priority.

- Cycling in London has experienced a phenomenal increase over the last decade, growing by 70% – and on major roads by 173%. However, this growth still only translates to 2% of all journeys being made by bicycle, which falls short compared with many other UK and European cities. If the Mayor wants to achieve his vision of a cycling revolution across London he must allocate funding that matches the likes

of Edinburgh in the UK and Copenhagen and Amsterdam in Europe and he must take bold action on addressing the main barrier to take-up: cycling safety. This will be very challenging if he continues to rule out a Roads Hierarchy which prioritises non-car modes of travel. Political leadership on segregated cycle lanes, speed reduction, shared space and junction design is the only way to encourage sufficient cycling permeability to make London a world cycling city.

- Active Traffic Management (ATM) is something on which TfL can claim to be world leaders. The Olympics highlighted just how effective TfL could be in controlling traffic, with traffic flows managed by holding traffic at junctions. ATM allows longer strategic journeys to be prioritised. However, managing traffic flows through Split Cycle Offset Optimisation Technique (SCOOT), the traffic signal control system, is more about redistributing traffic and congestion than cutting it. It leads to more congestion away from the Transport for London Road Network (TLRN). This was evident during the Olympics where boroughs in outer London reported higher congestion levels. The decision by the Mayor to rule out the wider use of congestion charging limits TfL's ability to manage traffic volumes and tackle vehicle delays, as well as eliminating a sizeable source of funding for transport. The one policy that has had the biggest impact on traffic, congestion, cycling, walking and bus reliability was the central London congestion charge introduced in 2003.
- London's bus network can truly be described as world class, in size, frequency of service, reliability and accessibility. Approximately 7,500 buses carry over six million passengers each weekday, more than since the early 1960s. More than 90% of Londoners live within 400m of one of the 19,500 bus stops in the capital. London now accounts for 50% of all bus journeys in the UK. This is up from 40% in 2000 and is primarily due to the growth in London rather than decline in bus patronage in the rest of the UK. A study by Imperial College, benchmarking London with other world cities, found it has the lowest subsidy requirement per passenger; its operating cost per vehicle has decreased since 2006 to the fourth lowest – without loss of quality and with increased ridership; it was the first to achieve a fully accessible fleet; carbon dioxide emissions per passenger have decreased to the third lowest; and London has double the number of daily passenger boardings compared with the next nearest city in the study. Demand has also grown more, in absolute terms, in London than any other city in the study.
- Prior to the birth of TfL in 2000, London's Underground network had faced decades of stop-start investment and until the early 1980s patronage had been falling. The upgrade programme that began under the public-private partnership in 2003 p rovided, for the first time, consistent investment and renewal as well as dramatically increased capacity. This helped to generate the phenomenal passenger growth that has since been experienced. Passenger demand has continued to exceed forecasts with a 16% increase in passengers over the last 7 years and 40% over the last 15 years. Journeys on the Tube now regularly top 4m a day, the highest ever, as was last year's satisfaction figures and operational performance (prior to this, reliability had improved by almost 40% since 2007/08). London's is now one of the more reliable metros in its peer group of large European and North American metros and has seen the second fastest improvement in overall reliability performance in the last five years in Europe. Where it continues to trail is in comparison with the best-in-class metros which tend to be modern Asian systems. Sustained investment promises further improvements but the Underground still needs to make optimum efficiency gains if it is to resist calls for it to be run on a concession or franchise basis like most other UK rail and light rail operations. Although London's productivity in delivering passenger journeys is above average in comparison with international metros, it is still not as good as would be expected[2]. As one of the more expensive cities, London's staff costs are relatively high and investments in automation and productivity improvements should therefore

[2] See Chapter 13 – London Underground

"To maintain London's position as a global city and support its continued economic growth, we'll need continued investment in its transport network. Recognising that public funds are limited, this will mean:

- Making the best use of the existing network, to improve capacity and reliability – for example, through the roads pinch point funding that Government has made available to local authorities, including TfL, following the Autumn Statement.
- Agreeing to finish the necessary upgrades and agreeing priorities for future investment. It won't be possible to fund every transport project, so we need to identify and support those projects which are most important.
- Continuing to improve the efficiency of spend, to ensure money is spent on investment rather than operating costs; to leverage as much money as possible from other sources; and to drive down the costs of capital projects."

Stephen Hammond MP
Parliamentary Under-Secretary of State for Transport with responsibility for London

be considered to a greater degree than other international metros.

- TfL's management of the London Overground has shown how a neglected line can be dramatically transformed. Passenger numbers and satisfaction are impressively high; new rolling stock and signalling have been introduced as well as turn-up-and-go service frequencies. London Overground Rail Operations Ltd is now ranked as one of the best performing TOCs in the country. There are lessons for revenue protection and standards of service generally. The lines comprising the Overground were fairly self-contained and the challenge for TfL, as it seeks to take over more suburban rail services, will be to improve them while reconciling the conflicting needs of longer-distance services.
- The Docklands Light Railway (DLR) is also one of Britain's great transport success stories. It has been the main catalyst for the regeneration of Docklands, helping to bring in investment and development and aiding job creation in a deprived area of London. It was one of the first light rail systems in Britain, with one of the world's most advanced automatic train control systems, and it has expanded faster than any other UK railway. It carries more than 80 million passengers a year with consistently high levels of reliability and passenger satisfaction and during the Olympics it displayed world class reliability of 99%. As an integral part of east London's transport system, future expansion will be necessary to cope with the increased demand stemming from the capital's population and employment growth over the next twenty years – half of which is forecast to occur in the east sub-region the DLR currently serves.
- No other change or innovation has so dramatically changed passengers' lives or willingness to use the system than the Oyster card. Oyster had a huge impact on bus usage and given the complexity of the tube fare structure, the development of Oyster on the Tube was a world best management change. London can justifiably claim to be world-leading on ticketing technology.
- What many critics had anticipated would be the main weakness of the 2012 London Olympics –transport – turned out to be one its main strengths. The performance of London's transport during the London 2012 Olympics compares favourably with that of any other Olympic Games. It was a "Gold Medal" for operational performance. Worthy of particular mention was the focus on the complete journey experience of customers from beginning to end on public transport and roads, including step change partnerships with the freight and logistics industries. So too the unprecedented partnership working and record levels of operational performance and world-leading integrated marketing and communications programme, including highly successful travel demand management (where 30% of regular travellers did something different to avoid the hotspots while public transport carried record numbers of passengers).
- For a city of its size and economic growth, London's transport infrastructure had been neglected prior to the establishment of TfL in 2000. Not only was there a failure to increase capacity in line with growing demand but the assets had been neglected and were not maintained properly. To continue increasing capacity to keep pace with projected population growth, and to maintain assets in a good condition, TfL's capital requirement is between £1.5bn and £1.8bn per annum. Network Rail benefits from five year funding settlements in the High Level Output Statement (HLOS). This deal should be considered by the Treasury for TfL to provide it with the certainty that is required for long term planning.
  This approach could open the door for private sector investment in London's transport infrastructure if public finance proves to be inadequate.

6. The birth of TfL

The 1999 Greater London Authority Act created the Mayor of London and Transport for London (TfL). These new born entities could have evolved in very different ways from the manner in which they have.

THE BIRTH OF TFL

London has been blessed with two strong, independent and powerful Mayors who give top priority to transport and have had the gravitas and political clout to stand up to central government to secure the best deals for the capital.

"Devolution in the form of the Mayor gave us a transport budget and an integrated strategy – these are great strengths for a world city as it plans for growth."

Baroness Jo Valentine
Chief Executive, London First

TfL is unlike any other body in the public sector. It is intensely focused on delivery, operational performance and customers. It is much more political than Whitehall or local government, not in a party political sense, but in loyally pursuing the agenda of the incumbent Mayor. TfL is there to deliver the Mayor's agenda in the way successive Prime Ministers wish Whitehall would deliver theirs.

It was no chance or accident that TfL evolved this way. It is down to the fact that the first Mayor, Ken Livingstone, wanted to bring in a "big hitter" as Transport Commissioner for London. The search was worldwide, and unusually for a "socialist" Mayor Livingstone would pay whatever salary was necessary to secure the right person. Bob Kiley, an experienced and forceful American with a CIA background and years of experience working with powerful Mayors across the Atlantic, was appointed.

The conventional approach in the UK would have been to install a civil servant in this post. This would have created a more traditional British type of institution, strong on administration and consultation with a "cosy" relationship with Whitehall, but less preoccupied with delivery.

Kiley taught Ken Livingstone how to be a Mayor. This is something which Jay Walder, former finance director at TfL, impressed upon me when I interviewed him. This will surprise many who view Livingstone as an experienced political operator, who was previously leader of the Greater London Council. However being a Mayor is a different proposition altogether and Kiley had experience of what powerful Mayors in the US could achieve.

TfL became a hybrid: a mixture of private and public sector. It focused on key projects – bringing in talented people to run them – and disregarded those felt to be peripheral. Kiley was not a fan of long strategy documents and quickly dispensed with the post of Director for Integrated Transport. TfL ran roughshod at times over Whitehall and the London boroughs. There was a hire and fire culture which was anathema to the UK public sector. Delivery was everything and British niceties were secondary.

Kiley brought in top people to run TfL and paid the appropriate salaries to attract them. The search was again worldwide. He and Livingstone took the view that if you aspired to create a world-class organisation you needed to attract world-class people.

The salaries paid to the top team at TfL a decade ago were roughly one-third higher than what is paid now. There were also generous housing and schooling allowances to compensate directors appointed from overseas, which are no longer available. This is the approach the Government has taken to recruit the new Governor of the Bank of England, the Canadian Mark Carney.

While salaries were high compared with what was earned elsewhere in the public sector it must be noted that a number of the top team at TfL have since moved to the private sector to earn remuneration packages two to three times as high as what they earned at TfL: Tim O'Toole (chief executive, FirstGroup), Jay Walder (CEO, MTR), David Brown (group chief executive, Go Ahead), Jeroen Weimar (MD, Serco Integrated Transport - and now First Group chief operating officer for UK Bus) and very recently Howard Collins, CEO Sydney Rail.

This highlights the fact that TfL recruits quality people who can move seamlessly between public and private sector. It demolishes the myth that good people don't work in the public sector and the private sector has a monopoly on talent.

"I've been particularly impressed by ambitious schemes such as the construction of the Millennium Bridge and the redesign of sites such as Trafalgar Square and Exhibition Road. What they all have in common is the transformative effect on the public realm changing the way people walk, spend time and view these locations."

Tony Armstrong
Chief Executive, Living Streets

If TfL is to continue to perform as well as it has then remuneration is an issue. In austerity Britain, where the Prime Minister has questioned why anyone in the public sector earns more than him, we have to accept the consequence, which is that public sector organisations like TfL will find it increasingly difficult to compete with the private sector in the recruitment and retention of staff. This is not just an issue at the top but is relevant right down the organisation. It is critical that TfL does not lose the high calibre of staff that it currently has.

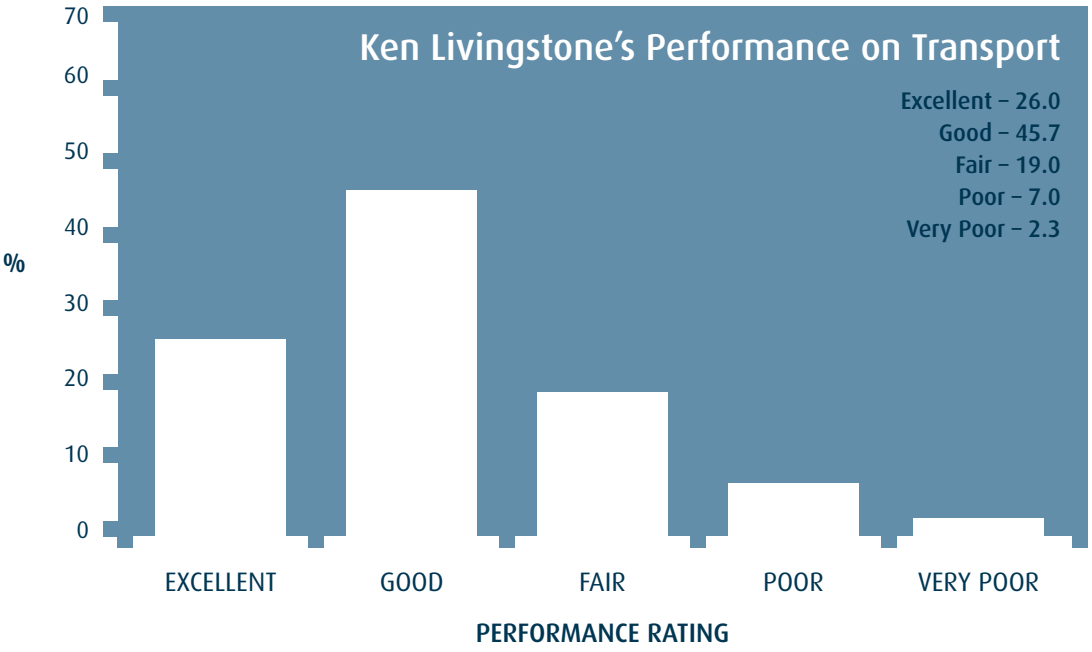
Of course pay is not everything. There are always people like Sir Peter Hendy, the current Transport Commissioner, who are driven by a public service ethos and passion for London's transport, or Mike Brown, the London Underground MD, who moved from running Heathrow Airport for less salary as was the case for Leon Daniels, MD Surface Transport, who moved from First Group.

If you want to highlight how a draconian approach to salaries, staffing and consultancy can cost the taxpayer dearly then look no further than the West Coast franchising débâcle at the Department for Transport. If we learn anything from this it has to be that the public sector has to be a smart client who procures intelligently and efficiently. TfL, in most instances, meets this criterion.

Sir Peter Hendy deserves great credit since he became Transport Commissioner for establishing a more collegiate team spirit at TfL and for integrating the different divisions under its banner. Under his leadership TfL's record on delivery has been, and continues to be, impressive, with the London 2012 Olympics convincing even the sceptics. His transport knowledge, experience of both private and public sectors and work ethic are unsurpassed. The current management work together in a much more collaborative way. The sum of the parts is stronger at TfL and they have successfully delivered for London in a much tougher economic environment. The current team have delivered exceptionally well on the 2012 Olympic Games, unprecedented operational performance, world- leading ticketing and customer information and innovative financing. Like the Transport Commissioner, their dedication, commitment and work ethic are also impressive. However we should not be deluded into thinking that in the medium to long term remuneration is not an issue.

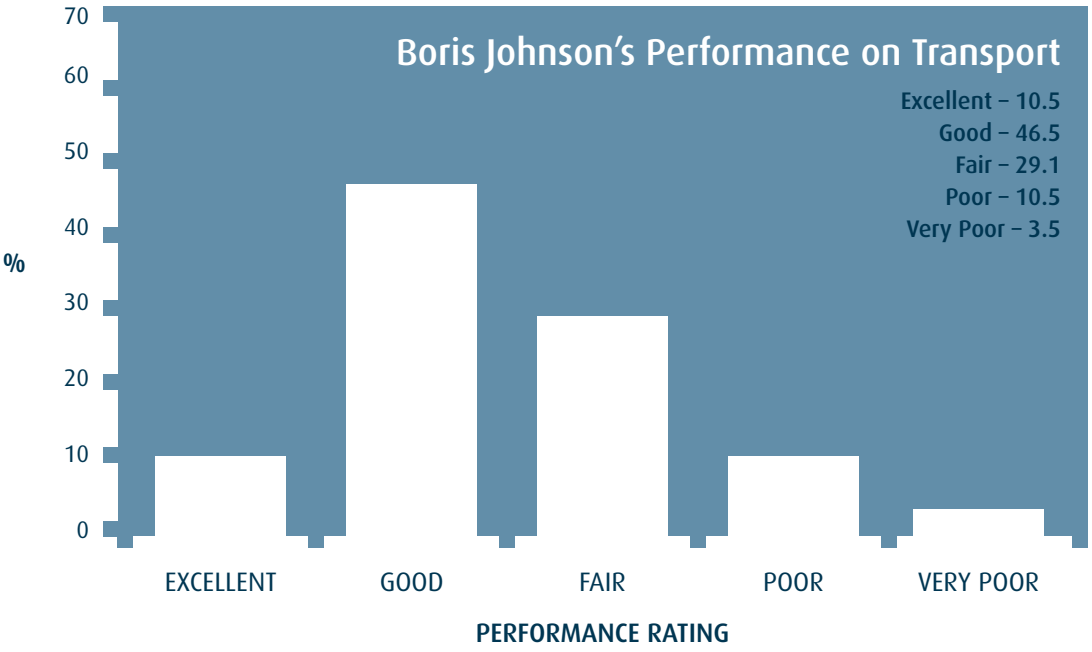
7. From Ken to Boris

Figure 7.1 Transport Times Survey



72% thought that Ken was excellent or good.

Figure 7.2 Transport Times Survey



57% thought that Boris was excellent or good.

FROM KEN TO BORIS

It might be thought that when a Conservative Mayor, Boris Johnson, was elected in 2008 to replace a socialist Mayor in Ken Livingstone, there would have been radical changes in policy. True, there was the abolition of the western extension to the congestion charge and the removal of bendy buses.
But the fundamental direction of transport – the prioritisation of sustainable transport (Tube, rail, bus, cycling and walking) over the private car – has continued pretty much unchecked.
However, by abandoning the roads hierarchy – which gave priority to these more sustainable modes of travel – Boris did send out a signal that he would be less radical than his predecessor.

"London has had the benefit of Livingstone's policy programme and the delivery of Johnson's leadership. This era will pass and there is a risk that transport will lose its first among equals status in the public debate."

Tim O'Toole
Chief Executive, FirstGroup Plc

There are some differences in policy. Under Ken, the report Transport 2025 (published in 2006) supports congestion charging as an essential policy to cut traffic congestion, while in Boris's 2010 Mayor's Transport Strategy he refers to "smoothing out traffic flow" but rules out more congestion charging. The other main difference between these two documents is that under Ken there was more emphasis on reducing the demand for travel on the basis that public transport capacity could never continue to cope with the growth in demand. Boris gives more priority to cycling, which is reflected in the policy on Cycling Superhighways and the more extensive roll out of the Barclays Bike Hire scheme than was envisaged under Ken. Ken was prepared to put the urban realm first even if it displaced traffic and resulted in vehicle delays, the removal of traffic from the north side of Trafalgar Square being a case in point. This was not something which Boris was prepared to endorse in Parliament Square due to concerns about traffic congestion.

However, the new breed of Conservatives are very different from their predecessors in the Thatcher era who were very often dismissive about public transport and cycling, and ensured that roads enjoyed the lion's share of spending. Boris Johnson, David Cameron and George Osborne have continued cycling since their Oxford days. Living in London they have become accustomed to the dominance and importance of public transport. Department for Transport spending has been skewed in favour of rail under successive governments. The policy gap between the main parties on transport policy is very small compared with what it was a generation ago.

There has been no attempt to move from public sector to private sector provision. Indeed Boris has proved to be every bit as strong an opponent of the public-private partnership for the Tube upgrade as Ken, and indeed has overseen its demise. London Underground remains one of the last bastions of public sector operations and there has been no indication that the Conservative Mayor wants to change this. Public transport in the UK is run almost totally by the private sector. What both Mayors have in common is that any political ideology they might have is disregarded if it conflicts with what they believe is right for London.

TfL was born under Livingstone's regime and it is understandable why there was initially deep suspicion from people around Boris as to its loyalty, effectiveness and efficiency from those who had a jaundiced view of the public sector. It has taken time to earn trust and respect. The success of the transport system during the Olympics was the clincher.

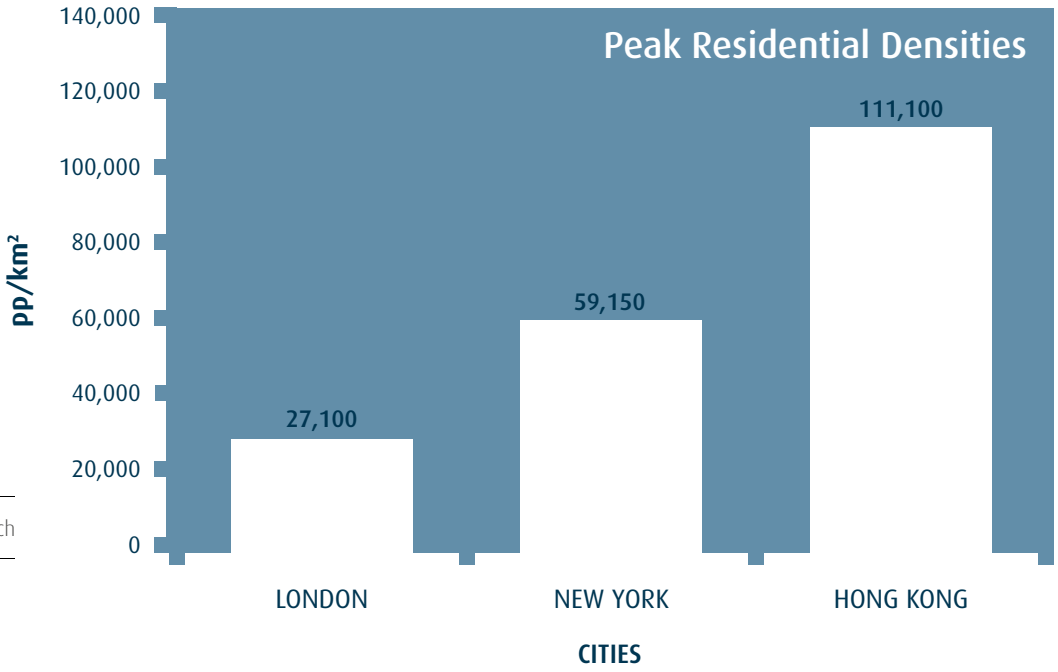
8. A tale of three cities: London, New York, Hong Kong

A TALE OF THREE CITIES

The three world cities are similar in population: London has 8.2million; New York 8.2 million and Hong Kong 7 million. They also face the challenge of accommodating a rapidly growing population. According to the London School of Economics Cities Research Unit, between now and 2025 London's population is projected to grow by 10 people per hour, New York's by 26 and Hong Kong's by 8.

However, London's transport faces a greater challenge in accommodating this growth than New York or Hong Kong because its residential density is much lower, although employment densities are high and similar in the three cities. In other words London's population is scattered over a far wider area.

Figure 8.1



Source: LSE cities research

The LSE research shows Hong Kong has peak residential densities four times as high as London while New York is twice as high. London's more dispersed residential settlements increase the demand for travel and require more transport capacity per head of population.

Current policy focusing on the intensification of available urban land in the capital is affecting this pattern. While the most significant changes are occurring in east London (where the 2012 Olympics were held), densities remain highest in the West, in areas like Notting Hill and Earl's Court, but peaking at 27,100 people per km^2 in Pimlico.

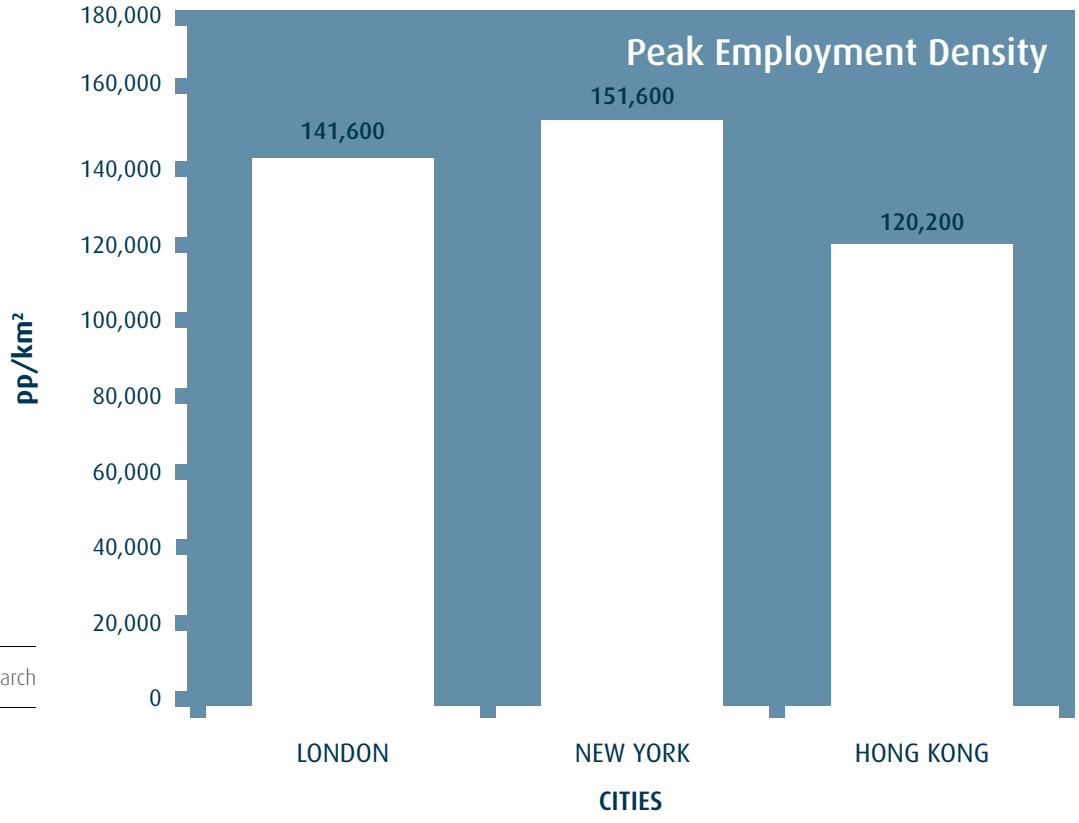
Hong Kong stands out with its extremely high residential densities exceeding 110,000 people per km^2 (double New York City's). This is not restricted to Hong Kong Island, but can also be found in West Kowloon, Kwun Tong and the New Territories. Planners have responded to scarce land availability with very tall (over 30 storeys), high-density development. Planning authorities have also pursued a 'Rail plus property' development model, with extremely high-density development clustered around public transport nodes.

Topography and history have also influenced the development of New York City, where Manhattan densities peak at 59,000 people per km^2. London is, in contrast, more spread out. Roughly 8 million Londoners occupy twice the footprint of the same number of New Yorkers.

London has been more successful in achieving high levels of employment density.

Peak employment densities in London occur at the core of the financial district in the City of London and Canary Wharf, reaching 141,600 jobs per km^2 and in the West End around Oxford Circus.

Figure 8.2



Source: LSE cities research

London

New York

Hong Kong

"In the light of an extra 1.5m Londoners and 700,000 extra jobs in London over the next 20 years, I consider capacity to be the biggest challenge facing transport in London. It is important that fares are kept down while continuing to invest in significant extra capacity."

Lord Adonis
Former Secretary of State for Transport

New York's employment peak of over 150,000 jobs per km^2 is found in midtown Manhattan above West 42nd Street, close to Times Square. Downtown, the Lower Manhattan business district around Wall Street is returning to pre-9/11 density levels. Outside Manhattan, employment activities are relatively low, with few high-density sub-centres.

Peak employment districts in Hong Kong occur at Central and Wan Chai on Hong Kong Island, and Tsim Sha Tsui and Kwun Tong in Kowloon, making the most of a new generation of super skyscrapers occupied by companies and corporations. London, New York and Hong Kong graphically illustrate that office workers are drawn to well-connected central locations. But while in both London and New York work densities do not coincide with residential densities – fuelling the need for intense commuting patterns – Hong Kong has a close integration between residential and employment peak densities.

Future Challenges

The success London has experienced in the past 12 years in dramatically increasing public transport capacity has not been matched by a growth in the number of houses, schools and other essential infrastructure. The Mayor has said that London needs one million more houses over the next 30 years. To reduce pressure on the transport system, and to make the capital city more fit for walking and cycling, it is important that every effort is made to increase residential densities.

Higher urban densities – where tall, medium or even low-rise buildings are clustered together in a tighter urban grid – can facilitate more sustainable public transport, walking and cycling, improve service delivery efficiency, and promote urban vitality. These advantages depend, however, on high-quality urban design and effective city management to minimise the negative impacts of overcrowding, stress and pollution.

London has shown commitment to the compact city model over the past decade with the vast majority of new builds located close to rail and underground stations, making the most of London's extensive public transport system and anticipating further improvements such as Crossrail. The Nine Elms development – a 195 acre site between Battersea and Vauxhall – is going to be three times as dense as the London average with a cluster of tower blocks. This is a good example of how London is trying hard to build high density residential and employment developments, served by new public transport links.

9. Mayors world-wide who have been radical on transport

MAYORS WORLD-WIDE WHO HAVE BEEN RADICAL ON TRANSPORT

Boris Johnson has been a good Mayor when it comes to transport: he has presided over a massive increase in public transport capacity and patronage, cycling continues to grow and car use remains in decline. His strongest legacy so far has been his ability to lever finance and powers from central government and his determination to deliver on many excellent initiatives that were started under Livingstone's tenure. While Livingstone was the right person for the job during his spell as Mayor, Boris has been the right person at City Hall to coincide with a Conservative-led coalition government.

However, if he wants to go down in history as one of the world's great radical Mayors then he must make bold decisions on how he wants to allocate road space. The litmus test will be how he responds to his Roads Task Force which will report shortly. If he wants to make London a city which is more associated with walking and cycling, with an urban realm to be proud of, then he needs to support a roads hierarchy whereby walking, cycling and buses are prioritised over cars at appropriate locations.

"Rebalancing the limited road space for cycling and buses is one of the most critical challenges facing London's transport going forward."

Caroline Pidgeon AM
Chair, London Assembly Transport Committee

All the radical world Mayors mentioned in this chapter have been prepared to do this – even if it risked short term unpopularity. How a politician decides to allocate scarce road space highlights where their priorities lie.

The Mayors that have been most successful in shaping their cities are the ones who have not been afraid to make tough decisions.

Enrique Peñalosa

Bogota, Colombia
(1998 - 2001)

When he first became Mayor, Enrique Peñalosa was dismayed to find that while only 20% of the inhabitants used private cars, almost all public investment went into car infrastructure. He reversed this and gave greater priority in spending decisions to the 80% who did not have a car.

He was impressed with how quality public space could create equality for people and how that was linked to a sense of happiness.

When he first proposed constructing segregated bikeways in Bogota in 1998, nobody else in the world was doing it. Now, cities everywhere are implementing bikeways. Peñalosa decided that it was one of the most important things to do to improve equality because bikeways protected and raised the social status of the cyclist. He was truly concerned with developing a cycling culture. Every Sunday, 120km of the Bogota streets are closed with people invited to come out and do a "cyclovia". Almost 1½ million of the 6 or 7 million inhabitants join this remarkable festival of bicycling. He also improved the pavements and made the city more walkable.

Peñalosa lost popularity, but improved the city's mobility, by introducing the Pico y Placa, a restriction on the rush hour circulation of private vehicles. (Pico y placa roughly translates to "rush hour and number plate"; during rush hour number plates ending with one of four numbers are prohibited from circulating on specific days of the week, thus removing about 40% of the vehicles).

The Peñalosa administration spearheaded a number of bold initiatives, including the development of the TransMilenio, a citywide bus rapid transit system (BRT), as well as a wide-ranging network of bikeways. After a decade, TransMilenio is widely regarded as a success, moving over 1.6 million riders a day, eclipsing most rail systems around the world.

"A developed country is not a place where the poor have cars. It's where the rich use public transportation."

"I believe it is not a technical question, but a political one. So if you believe that society should strive to promote equality and happiness, you push to make your roads integrated and humane, from space for walking to space for cars and transit. And in my mind, the most advanced cities are the ones with the best quality sidewalks."

Enrique Peñalosa
Mayor of Bogota.

Jaime Lerner

Curitiba, Brazil
(1971–75, 1979–84 and 1989–92)

Jaime Lerner first became Mayor of Curitiba in the early 1970s (he has been Mayor three times). He made it his goal to make Curitiba a city fit for people rather than cars. This has been good for the economy and the environment. His leadership was crucial to the changes. An impressive list of achievements include a bus system that is so good that car traffic decreased by 30% while the population trebled in a 20-year period; the largest downtown pedestrianised shopping area in the world; the construction of large numbers of beautiful parks to control floods, rather than concrete canals. Lerner's policies have made Curitiba a city where 99% of its inhabitants want to live. In comparison, 70% of Sao Paolo's residents want to live in Curitiba. Sustainable transport policies have been good for the economy – average income per person has risen from less than the Brazilian average in the 1970s to 66% greater than the average.

Lerner invented and built the bus rapid transit system, Speedybus – a bus system that works like a light rail system but costs a tenth as much. Originally, the city was given federal money to build a subway, but Lerner persuaded Volvo to make a 270-person articulated bus so that the problem of a lower passenger number to driver ratio was no longer an issue (there is a lesson for London here with the removal of bendy buses). The city built attractive transit stops with the look and feel of train stations.

Michael Bloomberg

New York, America
(2002 - present)

Michael Bloomberg is increasingly focused on redesigning roads so they work for "people, not just cars." He has prioritised cycling, walking, trolleys and buses.

Times Square was recently closed to traffic and has now become a permanent pedestrian mall. The initiative, which cab drivers hated, has been a huge success. Foot traffic has greatly increased. Rents on the ground floor of buildings in Times Square are now up because more people visit them.

Bloomberg believes that investing in public transit and creating spaces for pedestrians is the way to go because "traffic hurts your economy". But to create demand for these public systems and spaces, "cities need to make people feel like they will benefit". To show the benefits in New York City, Bloomberg collects immense amounts of data, which shows communities how being near highways and interstates "explains how they get asthma" and who will ultimately benefit from more sustainable forms of transportation.

He wanted to introduce congestion charging in Manhattan but was prevented by the New York State Assembly.

"We have to start looking at other ways to move people. Traffic does hurt your economy."

Michael Bloomberg

"I have been particularly impressed with the congestion charge: this was a signature innovation for London which came with political benefits and above all a measurable cut in traffic"

Baroness Jo Valentine
Chief Executive, London First

Marcelo Ebrard

Mexico City
(2006 – 2012)

Under Ebrard, Mexico City became cleaner, safer and more environmentally friendly. The development of attractive public spaces was a priority for Ebrard, since he recognised that the poor could not afford other entertainment options.

Throughout his time in office, Ebrard robustly supported numerous environmental initiatives. Mexico City was long known as one of the most polluted places on earth, but initiatives taken by Ebrard have shaken the stereotype. As a result of Ebrard's Green Plan, Mexico City reduced its greenhouse gas emissions by 7.7 million tonnes between 2008 and 2012. The Green Plan included environmentally friendly policies such as the expansion of the Metrobus system by 350%, the creation of a bike-sharing programme called Ecobici, and the closing of major solid waste facilities. While Mexico City still has much to do it is seen as a model of environmental sustainability in developing countries and has made great strides forward since Ebrard became Mayor.

"Mexico City was like a patient sick with heart disease. Its streets were some of the most congested in the world. In the last year, Mexico City extended its great Metrobus BRT system straight through the narrow congested streets of its spectacular historical core, rebuilt public parks and plazas, expanded bike sharing and bike lanes, and pedestrianised streets. With the blood flowing again, Mexico City's urban core has been transformed from a forgotten, crime-ridden neighbourhood into a vital part of Mexico City's future."

Walter Hook
CEO of the Institute for Transportation and Development Policy. He presented the 2013 Sustainable Transport Award to Mexico City.

Ken Livingstone

London, United Kingdom
(2000 – 2008)

Ken Livingstone's most radical policy was the introduction of congestion charging in central London in 2003. It was a brave move and one which was opposed by his political advisors but Livingstone - very much a conviction politician - was convinced that it was crucial to achieve his objectives of reducing congestion and changing travel behaviour. It was also a valuable source of revenue which he invested in public transport. He was the first democratically elected politician to introduce congestion charging.

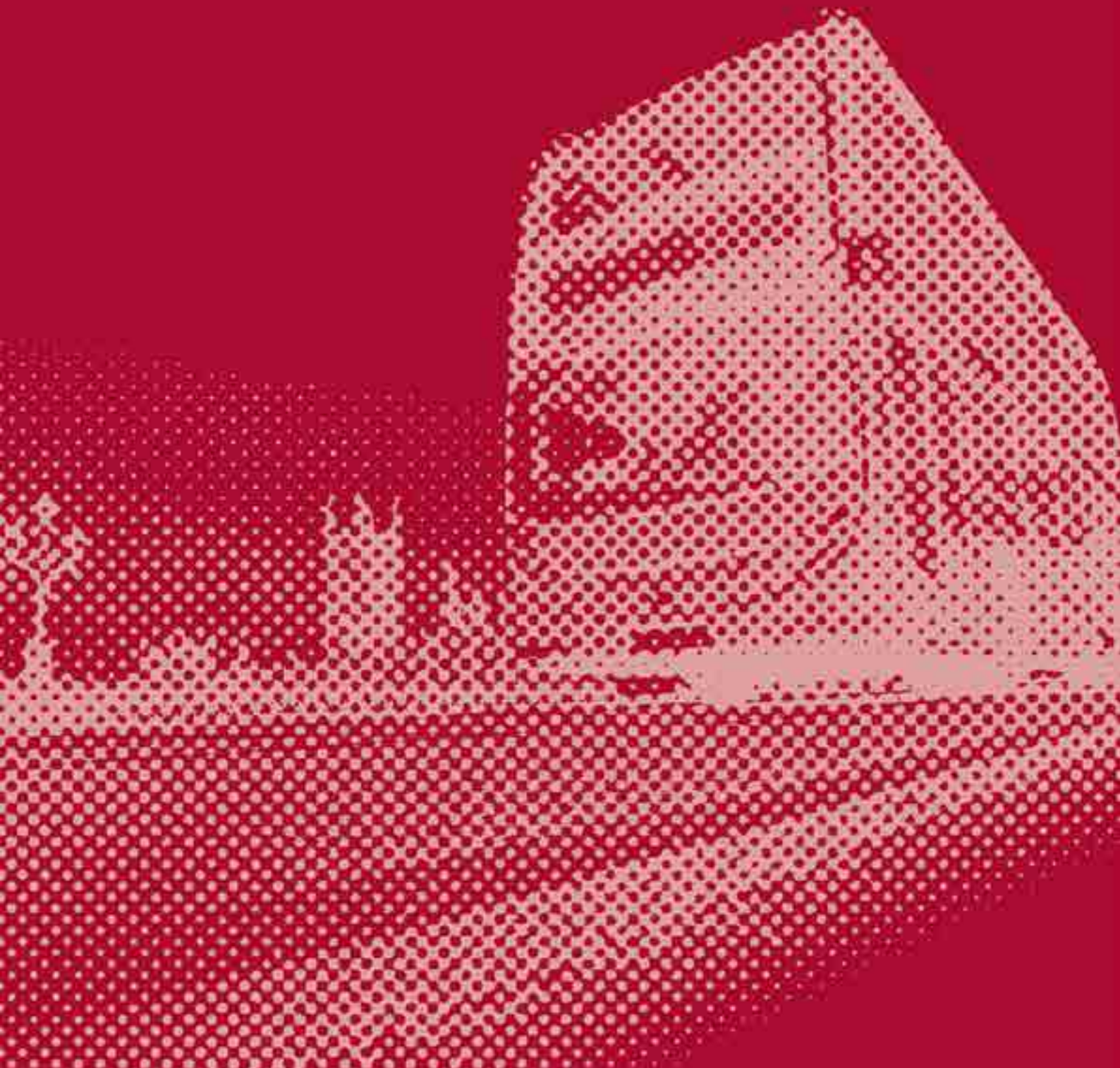
Congestion charging cut traffic by 20% and initially reduced congestion by 30%. It led to a dramatic increase in bus patronage and reliability and a big increase in the numbers walking and cycling. Air quality also improved. During his second term in office he extended the scheme westwards. This was reversed by his successor Boris Johnson.

He also launched the UK's first Low Emission Zone in 2008 which targeted heavy commercial vehicles that failed to meet strict emissions standards by charging them £200 to enter Greater London. This made London one of the first cities in the world to have taken such a radical step to tackle air pollution and safeguard the environment.

Livingstone presided over a modal shift from car to public transport, walking and cycling which was unrivalled worldwide. He believed in a roads hierarchy which prioritised pedestrians, cyclists and buses in that order. He pedestrianised the north side of Trafalgar Square, turning it into a beacon for quality urban realm.

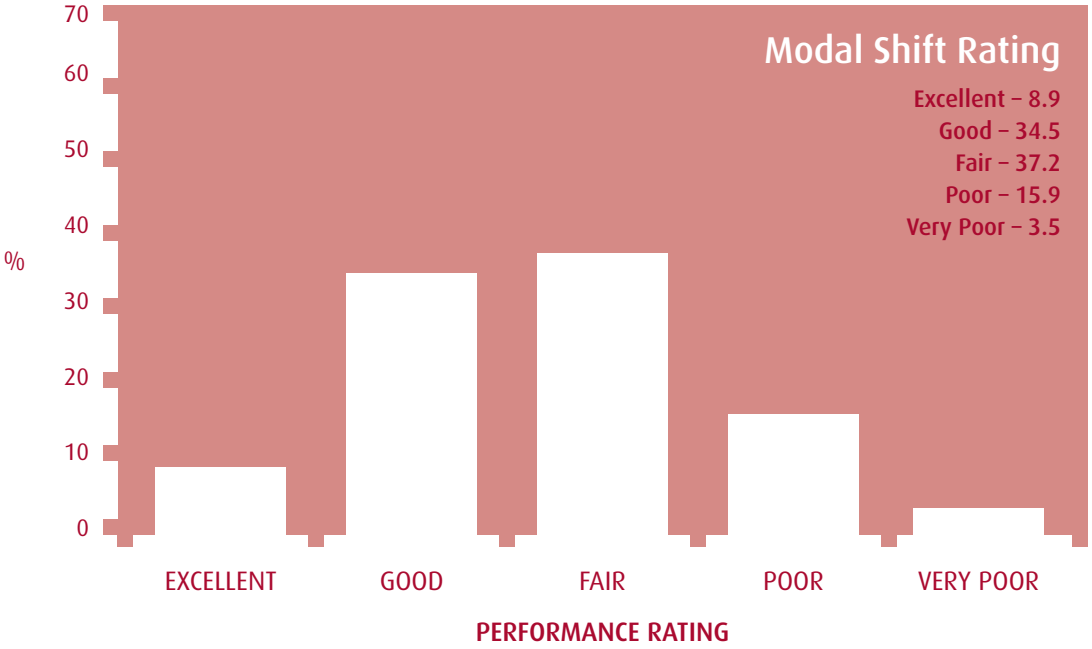
Livingstone was a better Mayor during his first term – when most of the difficult and radical policies were implemented – than during his second term.

10. Modal Shift



MODAL SHIFT

Figure 10.1 Transport Times Survey



This surprises me: I would say that TfL's delivery on modal shift has been excellent. However, only 9% of those surveyed agree with me.

It is difficult to identify a city anywhere in the world that has been as successful as London in changing travel behaviour. Since 2000 there has been an astonishing 9% shift from car to sustainable transport – public transport, cycling and walking.

Percentage shares of journey stages by type of transport in 2000 and 2011

Modal shift from car is the Holy Grail for transport planners. Not because they are anti-car, but because the car is the most inefficient user of road space. Transport is a means to an end. It is there to support wider objectives such as promoting a strong economy, the environment and social inclusion. These objectives cannot be achieved if there is too much dependence on the car.

Politicians need to decide what the priority is in our cities: moving cars or moving people!

In London, more than most cities, the supply of transport infrastructure creates its own demand. This is because of the growth in population and the strength of the economy. Extra lanes on the M25, more trains on the Underground, longer platforms and trains on the DLR, new capacity on the Overground – they all fill up and revert back to the original level of congestion in somewhere between two and ten years.

Cars are extremely inefficient users of road space they need to be discouraged in cities. As Boris Johnson has ruled out wider use of congestion charging beyond the central zone this greatly restricts his ability to reduce traffic volumes and congestion.

If he decides to give more space and priority to cyclists and pedestrians then it will increase vehicle congestion which will in turn make it less attractive to drive and, in time, reduce traffic. The main constraint on traffic volumes without road pricing is congestion.

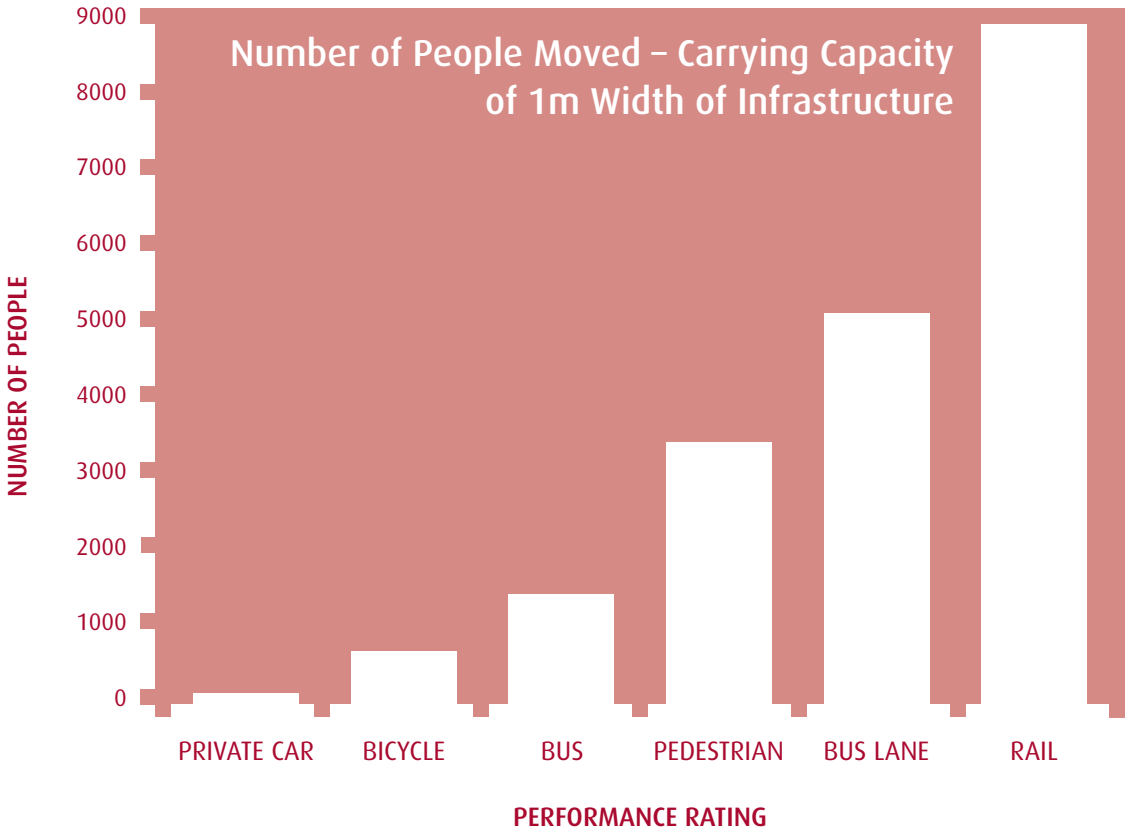
Unlike his predecessor Mayor Boris Johnson has avoided making these tough choices. He does not want to be portrayed as anti-car.

The London 2012 Olympics demonstrated that active traffic management (by adjusting traffic light phasing in real time) could control the volume of traffic in the central area. However, while this was a considerable achievement, it did result in more congested streets in outer London as the traffic lights were phased to push the queues further out.

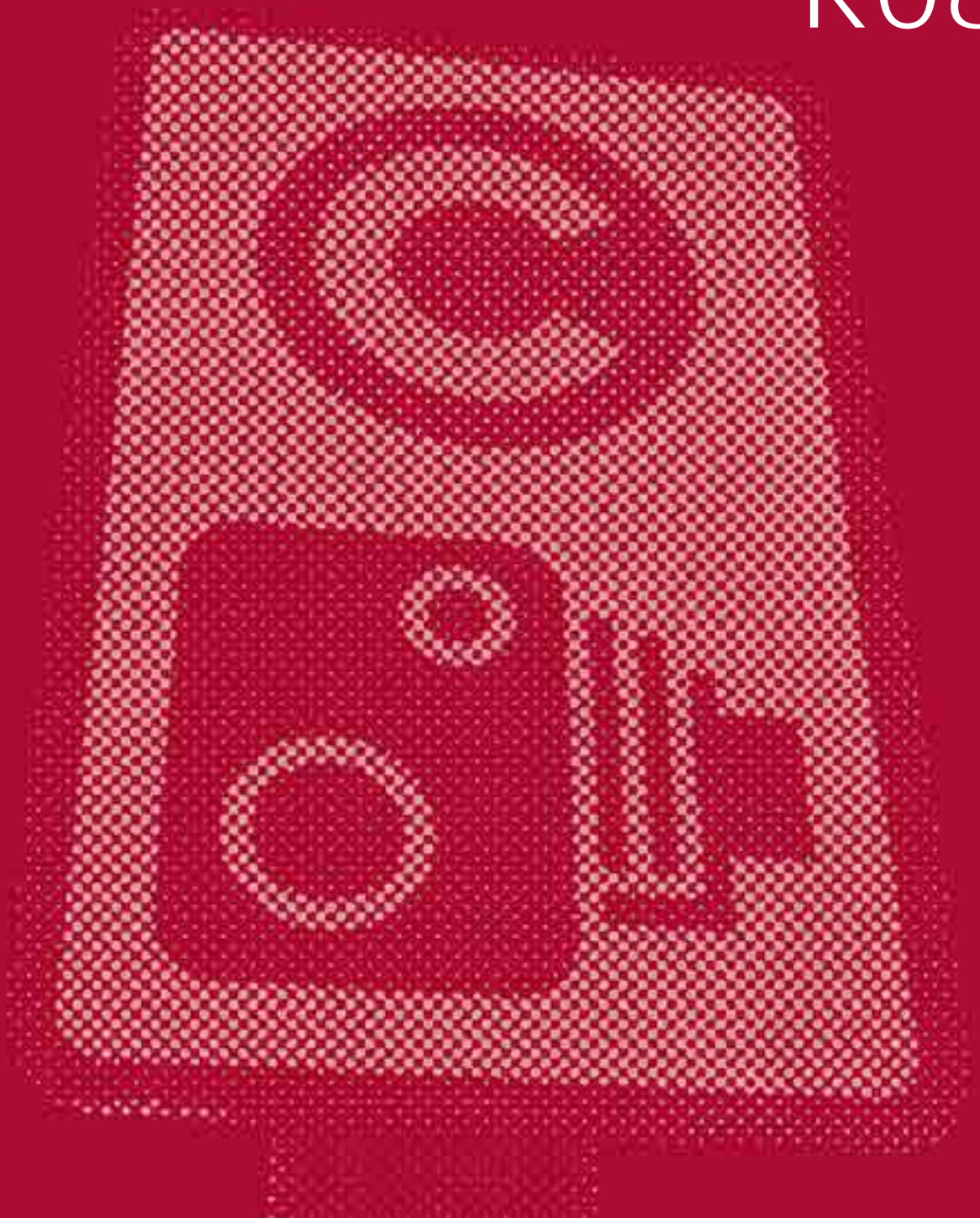
The Olympics also demonstrated how crucial travel demand management was with the number of journeys cut by 30%. A similar reduction in delivery trips was achieved through excellent cooperation and coordination with the logistics industry.

While these initiatives were impressive it is not realistic to expect to sustain them over a prolonged period and they are no substitute for congestion charging.

Figure 10.2



11. London's Roads



LONDON'S ROADS

London's roads need to achieve a wide range of often competing objectives: provide accessibility for all to services, jobs and centres; support business efficiency and growth; contribute to world class places; promote a healthy active city; foster community cohesion and provide places for play and leisure; support vibrant town centres; unlock new areas of growth and development; keep Londoners safe and secure; and, help make London cleaner and greener.

"The increasing numbers of cyclists will force a re-appraisal of road space – they cannot or will not be demand managed. What will give?"

Anthony Smith
Chief Executive, Passenger Focus

The Mayor wants London to be the "best big city in the world". That means a city with the strongest economy, a clean environment, ease of access, green spaces, and an excellent quality of life. The key policy to achieve all these elements is modal shift away from the car.

The Mayor's Roads Task Force will have to get the balance right between the competing demands of the "moving" and "living" function of roads.

A city such as Los Angeles allocates a disproportionate amount of land to movement space. This is because it is too car-dependent. The result is a very inefficient use of space, low density and urban sprawl. London, by contrast, moves more than 80% of people in the central zone by public transport. This means it is more focused on people movement than vehicle movement and does not crowd out exchange space/living space.

Figure 11.1 Transport Times Survey

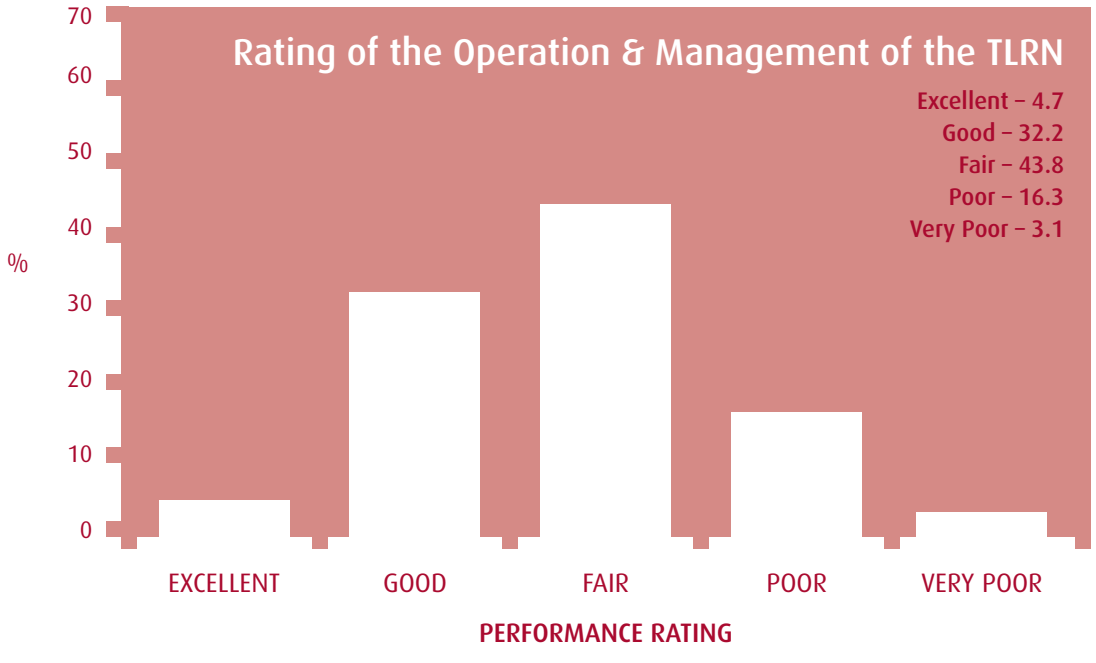


Figure 11.2 Transport Times Survey

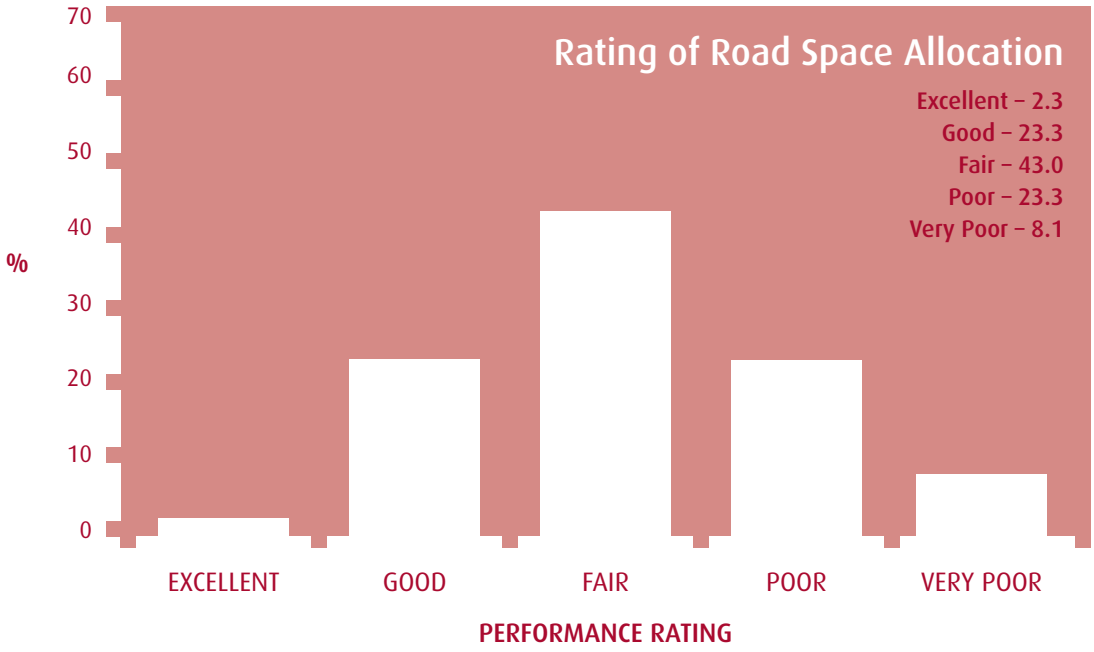
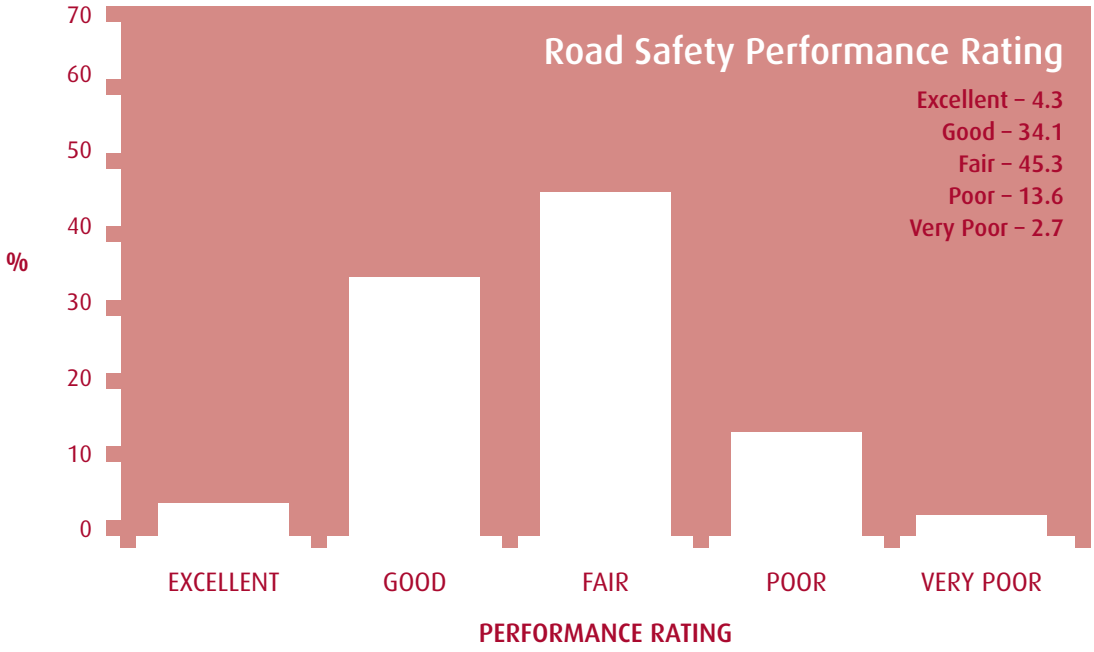


Figure 11.3 Transport Times Survey



It must be remembered that quality of life is an increasingly important factor in determining the competitiveness of world cities. "Liveability" is key for workforce and entrepreneurs who are more mobile and have considerable choice on where they locate. The cities in the world with the best quality of life are the ones which have reduced dependency on the car and have encouraged people to walk, cycle and travel by public transport.

The images below illustrate how inefficient cars are as users of road space. The top image shows a road jam packed with cars. However when you strip back the metal you find that there are not that many people moved (middle). Compare that with how much space is taken by a bus moving the same number of people as all the cars. There is a common misconception – among motorists in particular – that buses cause congestion. They are in fact congestion busters.

Figure11.4

Looks a busy road!

But when you strip back the metal not many people are moved!

Visual proof that buses are a solution to traffic congestion.

This is why TfL should be congratulated on reducing the number of trips by car by over one million per day since 2000 and increasing the number of trips by bus by the same figure. When you add in the fact that there are 1.4 million more trips by foot since 2000 and almost 220,000 extra cycling trips then there has been a dramatic improvement in the use of road space.

It is not wholly fair to compare a city the size of London with smaller European cities which have achieved much higher modal splits for walking and cycling and have led the way in improving the urban realm. However the Mayor makes it clear in the introduction to his 2010 Transport Strategy that he wants the best of both worlds: emulating smaller cites which are "lovely to live in" while remaining a large city which is an "economic powerhouse".

In his introduction to TfL's latest business plan the Mayor says he "rejects the old-fashioned idea that roads will always be a place of conflict between different road users." He is wrong. All the stakeholders interviewed for this report also disagreed. There will never be enough new capacity on the road network to ensure that supply satisfies demand. No matter how much is invested in junction redesign, active traffic management, or tunnelling, sharp choices will have to be made on how much priority is given to different road users.

With space at a premium, tough decisions will have to be made on who gets priority. It is difficult to see how the Mayor can avoid reverting to a roads hierarchy, which prioritises cycling, walking and buses over other road vehicles at appropriate locations, which he abandoned when first elected in 2008. It will have to be re-introduced with priority varying depending on the road. The road network needs to play different roles in different parts of London. For example the priority attached to the public realm in a town centre would be higher than it would be on an arterial road in outer London.

Future Challenges

Since 2000, in contrast to the strong growth in public transport patronage, volumes of travel by road have declined – by about 10.2% overall with the figure higher for central London (20%).

Why then has traffic congestion gradually got worse? You have to look at the supply side of the equation as well as the demand side.

Over the past 20 years, 30% of road capacity in central London has been lost through a combination of roadworks and priority given to pedestrians, cyclists and bus users. The reduction in highway capacity in inner London has been 17% and in outer London 5%. The Mayor's Roads Task Force will find it difficult to balance competing objectives such as "smoothing out traffic flow" with enhancing the urban realm and encouraging walking and cycling.

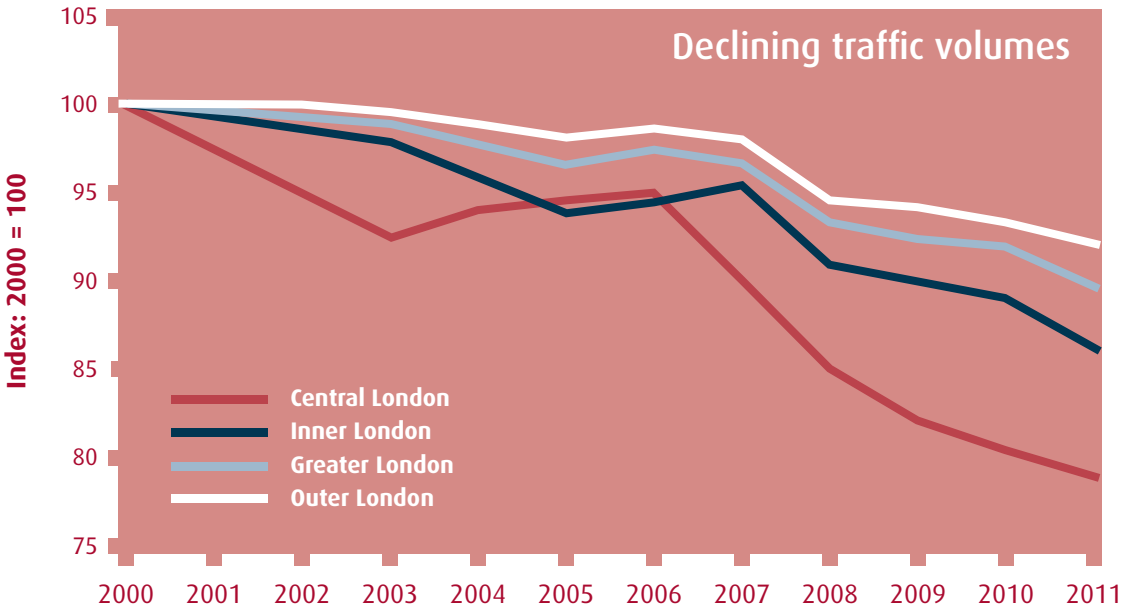
The challenge facing London's roads is that demand greatly exceeds supply. While further reallocation of road space from vehicles to cyclists and pedestrians is desirable, it cannot be done without increasing congestion – unless vehicle demand is reduced.

Wider geographical use of congestion charging would solve this conundrum. As this has been ruled out by the Mayor this places a huge emphasis on other polices such as active traffic management and travel demand management.

There is merit in the argument that, relative to the public transport network, investment in the roads network in London has played second fiddle. When you consider that 80% of all passenger trips and most freight trips are made by road, yet roads account for only one-third of TfL's expenditure, you can understand why the Mayor has made this a top priority in the business plan and established a Roads Task Force.

There is a simplistic but mistaken view taken that spending on public transport is "good" and "green", but that spending on roads is "wrong" and "bad". The quality of the road network is vital to bus passengers, cyclists and pedestrians as well as car users, taxis and freight.

Figure11.5



Source: Transport for London, Travel in London, Report 5 – TfL Group Planning, Strategic Analysis/Department for Transport.

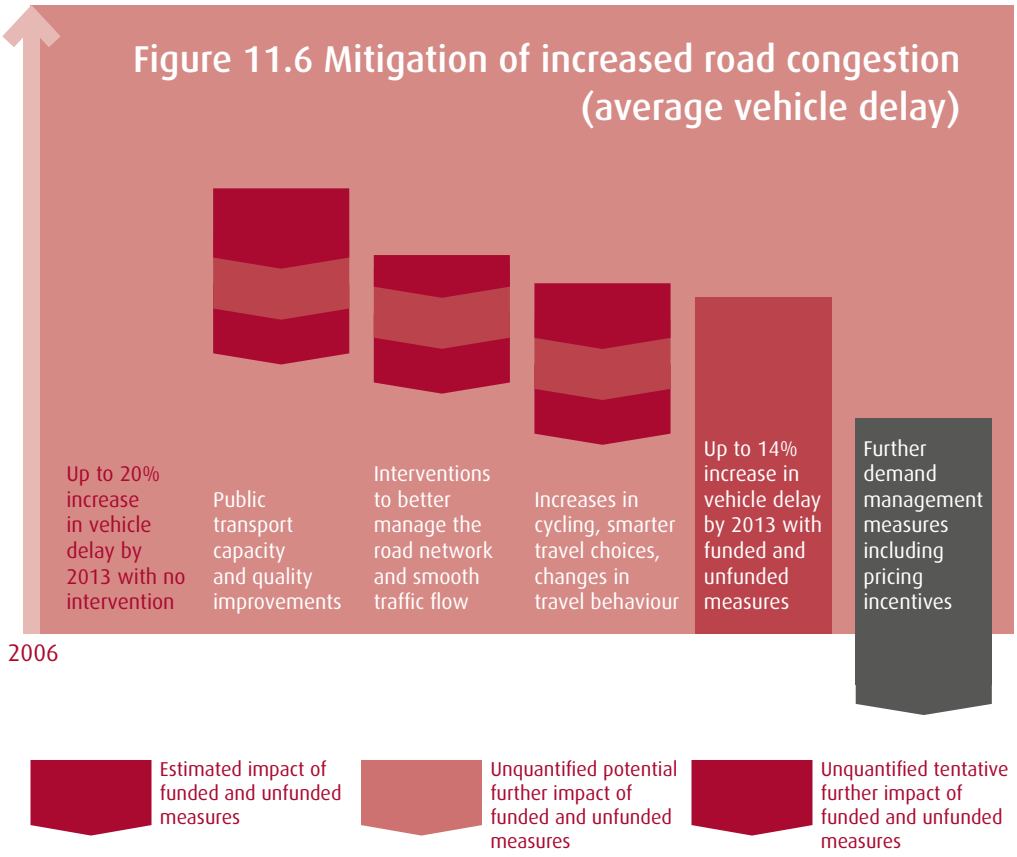
While there is more evidence in London than anywhere in the UK – and possibly the world – that the phenomenon of "peak car" has arrived – in other words that demand for car travel has reached a ceiling – this neglects to identify the real stimulus for traffic growth: white vans serving the exponential growth in online deliveries. The number of light vehicles is forecast to grow by 30% by 2031. Even with car traffic continuing to decline, dealing with the rapid increase in the number of vans poses a big challenge to TfL. Encouraging deliveries to be made in the evening would help to take traffic off the road during peak times. This would also suit many customers who find it inconvenient to be at home during working hours.

The success TfL had during the London 2012 Olympics in shifting one-third of freight deliveries from daytime to night-time was a spectacular achievement and shows what can be done by forging a good working relationship with the logistics sector. This is something that TfL is keen to continue.

The decision by the Mayor to rule out the wider use of congestion charging limits TfL's ability to manage traffic volumes and tackle vehicle delays, as well as eliminate a sizeable source of funding for transport. The one policy which has had the biggest impact on traffic, congestion, cycling, and walking and bus reliability was the central London congestion charge introduced in 2003.

When the central congestion charging zone was implemented the initial impact was a 20% reduction in traffic and a 30% cut in congestion. It is an example of a policy initiative which is world class. London was the first city in the world where a democratically-elected politician introduced congestion charging (Singapore was the first if you ignore the democracy constraint). It attracted transport professionals and politicians from around the world to see how it was done. If "world class" is measured on the criterion of international renown then London's congestion charging qualifies. If it is measured on the basis of how bold or radical a policy initiative is, then it is unbeatable.

Figure11.6



Source: Transport for London, Travel in London, Report 5 - TfL Group Planning, Strategic Analysis/ Department for Transport.

Active Traffic Management (ATM) is something in which TfL can claim to be a world leader. The Olympics highlighted just how effective TfL was in controlling traffic, with traffic flows managed by holding traffic at junctions.

The traffic signals operation and modelling capability of TfL is impressive and was put to effective use during the Olympics. The detailed dynamic model of central and inner London is able to link directly with data from the SCOOT traffic signal control system to enable TfL to accurately predict changing traffic patterns as a result of changes to the network. This has previously been used to plan significant network changes (e.g. removal of the Western Extension of the congestion charge) and also manage incidents and events on the network in real time. It was used extensively to plan for the Olympic Route Network, which involved approximately 130 major junction alterations and over 1300 traffic signal timing changes being implemented overnight. TfL also used this capability to actively manage traffic flows across the city in real time during the Games, to prevent the Olympic road network from becoming over-saturated with general traffic and undermining Games-related journey times to meet the target of an average 30% faster than normal journey times in London. This is something which no other city has been able to do on anything like the same scale.

Going forward, it will potentially give TfL the opportunity to use traffic signals as a policy tool to effectively control traffic flows on any road, or within any geographic area, as part of an integrated city-wide system.

ATM allows longer strategic journeys to be prioritised. However, managing traffic flows through the SCOOT system is more about redistributing traffic and congestion than cutting it. It leads to more congestion away from the Transport for London Road Network (TLRN). This was evident during the Olympics where boroughs in outer London reported higher congestion levels. Traffic queued where the SCOOT system had not been installed. Installing SCOOT at a junction reduces traffic delays by 12% therefore its installation at 1000 additional sites over the last four years has helped to reduce congestion across the network. TfL's Business Plan commits to introducing it at a further 1500 sites over the next 3 years which will mean that over 75% of London's 6000 sets of traffic signals will be equipped .

The permit/lane rental scheme for road works in the capital has given TfL visibility of all road works as well as the ability to say no to utility companies and change the time of their permit. Since April 2012 a cap has been set on the number of road works to be carried out on the TLRN at 30% below 2010 levels.

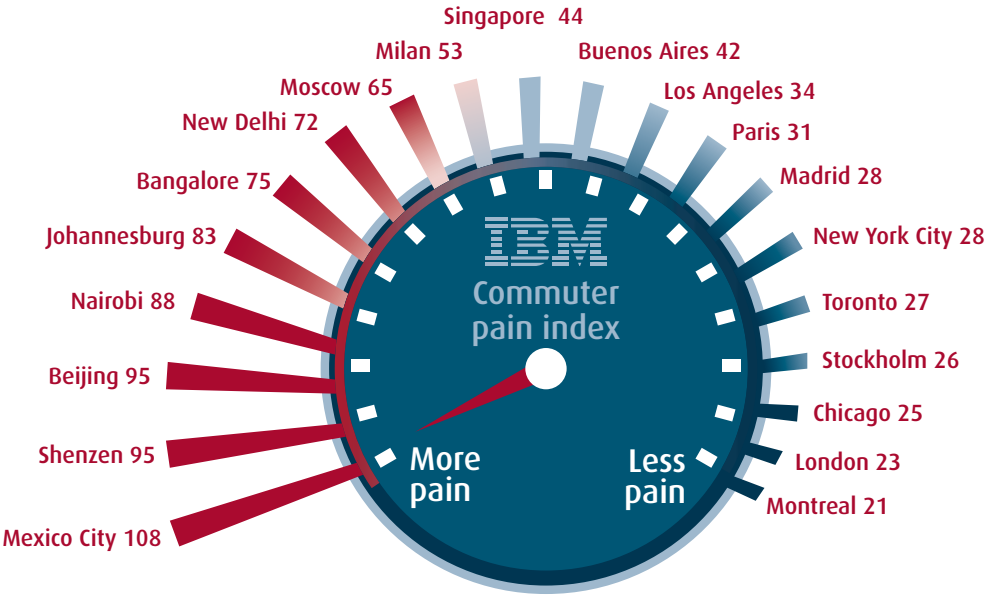
The lane rental scheme is a world first and has the potential to significantly reduce traffic delays resulting from road works. A charge of up to £2500 per delay can be levied on utility companies occupying road space. This will encourage more work to be carried out in the evening and night when there will be less disruption to traffic.

It will come as something of a surprise to motorists in London to learn that out of the top 20 largest cities in the world, it is the second least stressful to drive in, according to IBM's Commuter Pain Index 2011. The IBM Commuter Pain Index, which ranks the emotional and economic toll of commuting in each city, with the highest number being the most onerous.

The IBM survey attempts to gauge drivers' perceptions of how traffic affects them, based on factors such as stress, anger, health, and performance at work or school. More than 8,000 drivers (approximately 400 per city) from 20 cities around the world, were surveyed.

Figure 11.7

IBM Commuter Pain Index



Source: Frustration Rising, IBM Commuter Pain Index 2011

The index reveals a tremendous disparity in the pain of the daily commute from city to city. Montreal had the least painful commute of the cities studied, followed by London and Chicago. Here's how the cities stack up: The index is comprised of 10 issues: (1) commuting time, (2) time stuck in traffic, agreement that: (3) the price of fuel is already too high, (4) traffic has got worse, (5) start-stop traffic is a problem, (6) driving causes stress, (7) driving causes anger, (8) traffic affects work, (9) traffic so bad driving stopped, and (10) decided not to make trip due to traffic.

What can we learn from IBM's study? I suspect that a psychologist would be able to explain the results better than a transport planner. The fact that motorists in London have become conditioned to expect slow traffic speeds for a generation or more has made them more immune to overreaction. The Chinese, Indian, African and South American cities in the study – which come out worse on the stress indicator – have experienced an explosion in traffic volumes over the last decade. London, by contrast, hit a peak in traffic volumes in the 1990s and has experienced steady decline since.

What we can take from this study is that traffic congestion and the stress associated with it is a worldwide phenomenon.

"The successful implementation of congestion charging in 2003 in spite of the opposition to it has been the most impressive approach of transport delivery. It was closely based on a thorough piece of research; it met its objectives and significantly improved the quality of life in London and has since been studied with great interest by other cities around the world."

Professor Stephen Glaister CBE
Director, RAC Foundation

12. Cycling

CYCLING

Progress

Cycling in London has experienced a phenomenal increase over the last decade, growing by 70% – and on major roads by 173% – establishing it as a serious transport mode in the capital.
As a movement it has built real momentum and punches above its weight insofar as cycling issues regularly feature within political debate and media dialogue, despite the fact that it accounts for only 2% of journeys in London. This prominence stems from its success in developing an impressively vocal lobby, arguably more than any other transport mode. It is also thanks to the strong representation from a large number of active cycling organisations and the fact that a number of senior media figures and politicians, including the London Mayor and the Prime Minister, are themselves London cyclists.

Figure 12.1 Transport Times Survey

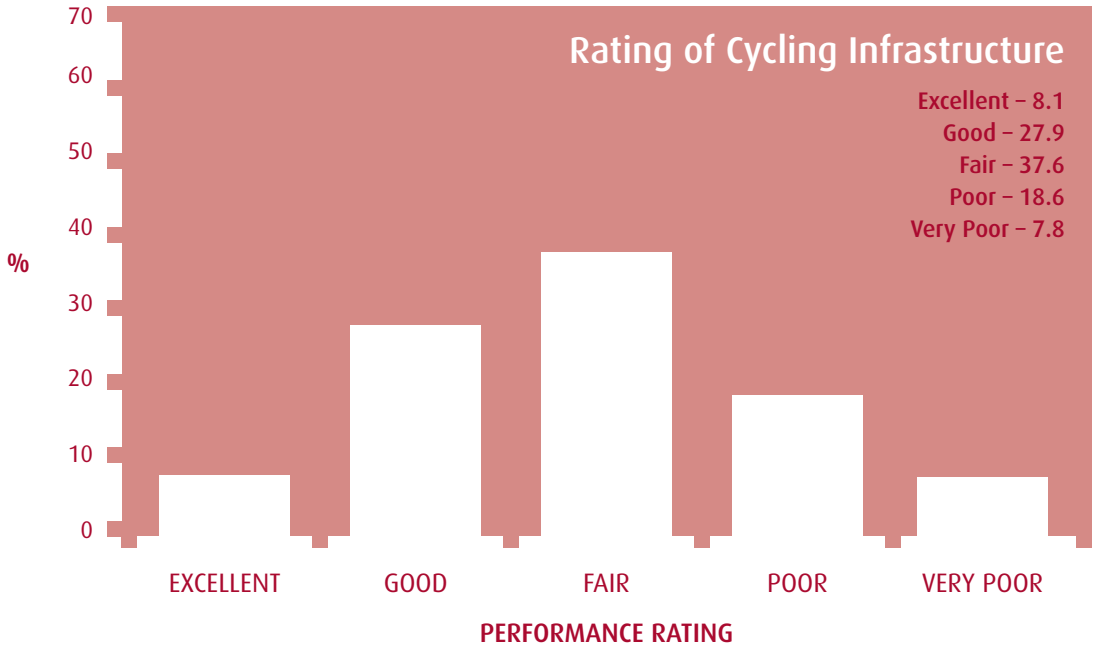


Figure 12.2 Transport Times Survey

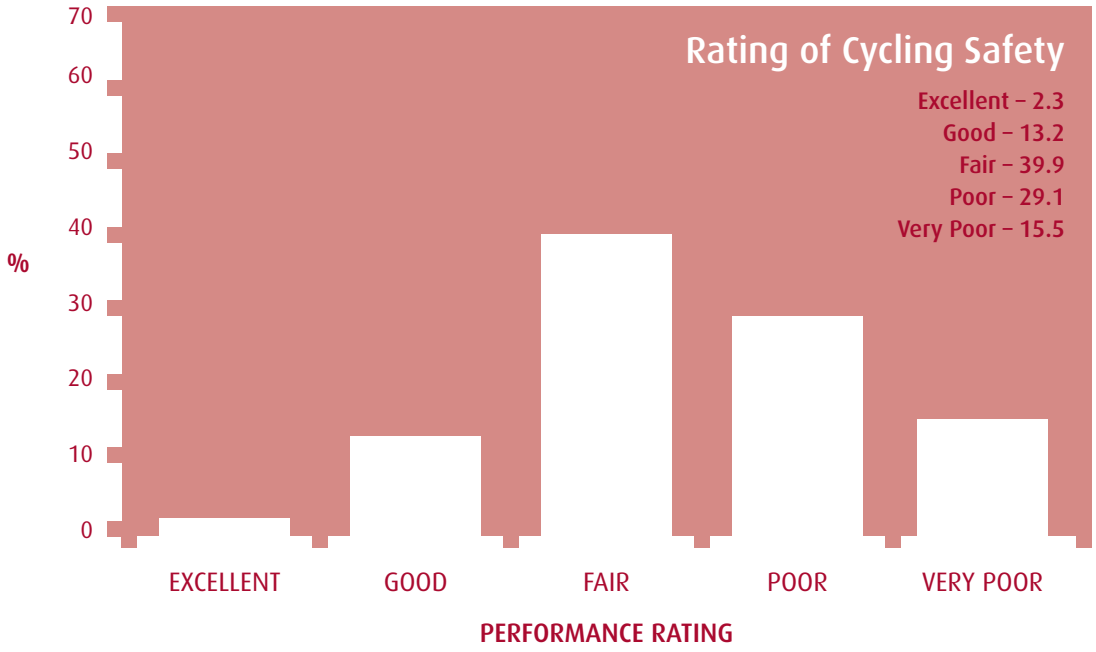


Figure 12.3

Daily average cycle stages and trips in London

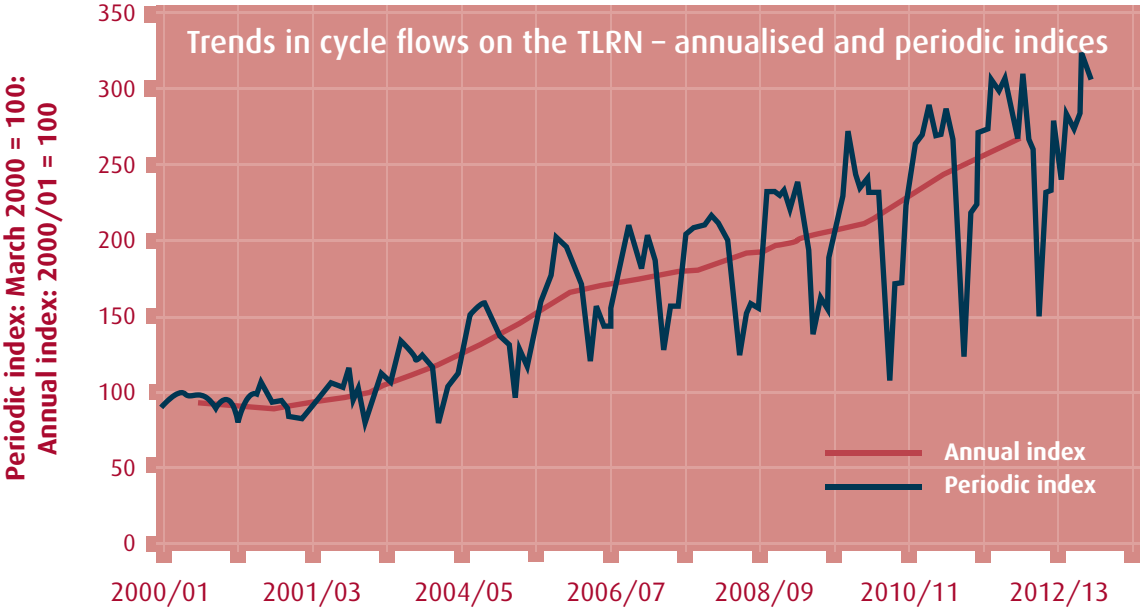
	Cycle stages Millions	Year on year change %	Cycle trips Millions
2000	0.29	6	0.27
2001	0.32	12	0.30
2002	0.32	1	0.30
2003	0.37	14	0.32
2004	0.38	3	0.33
2005	0.41	9	0.39
2006	0.47	12	0.42
2007	0.47	-	0.42
2008	0.49	5	0.44
2009	0.51	5	0.47
2010	0.54	6	0.49
2011	0.57	5	0.50

Source: Transport for London, Travel in London, Report 5 - TfL Group Planning, Strategic Analysis.

Since 2000 there has been an estimated 99.6% increase in cycle journey stages in Greater London with an increase of 66.6% in total number of cycling trips since 2001.
Cycle journeys in the capital now stand at more than 540,000 a day and this continues to rise. This dramatic growth in cycling over the last ten years contrasts very strongly with effectively static levels for this mode throughout the 1990s.

Unsurprisingly, then, the large increases in cycling have taken place alongside increases in cycling investment. Successive Mayoral administrations since 2000 have dedicated more spending to cycling and implemented measures to promote and encourage this mode through the provision of new infrastructure and related initiatives.

Figure 12.4 Daily average cycle stages and trips in London



Source: Transport for London, Travel in London, Report 5 - TfL Surface Transport Delivery & Planning.

As Mayor, Ken Livingstone set a target of an 80% increase in cycle flows on London's roads by 2010 against the baseline represented by the year 2000. This was achieved almost four years early with a new target being subsequently set in 2006 for a 400% increase (equating to 5% of modal share) by 2025. His introduction of congestion charging in central London in 2003 improved conditions for cyclists by reducing the amount of traffic, which after one year led to cycling levels within the zone increasing by 20%. His 2004 Cycling Action Plan contained a vision to implement the London Cycle Network Plus, a London-wide network comprising 900km of strategic cycle routes. In 2008, he announced a new programme of almost £0.5bn investment in cycling, including a cycle hire scheme and a 12-route network of Cycling Superhighways running from outer London into central London.

Boris Johnson's very public identification as a cyclist since he took over as Mayor in 2008 has arguably helped build the profile of cycling in London. One of his first pledges on cycling was to make London's streets as safe and inviting for cycling as they are in Holland, signing the London Cycling Campaign's pledge, Love London: Go Dutch. He has since promised to deliver a "cycling revolution" no less, preserving his predecessor's target to increase cycling mode share to 5% of all journeys by 2026. London is broadly on track to achieving this target.

In 2010 he very successfully delivered Ken Livingstone's original vision of the city's first cycle hire scheme following Paris's adoption of a similar scheme in 2007. Around 55,000 trips are made on weekdays using the London scheme, with Paris seeing around 110,000 trips every day on its better-established system. Around 6% of all weekday cycling journeys currently made in Greater London are made by cycle hire bikes, with more than 17 million cycle journeys made since July 2010. The scheme's popularity continues to grow with 5.6 million journeys made on the hire bikes in the six months to September 2012, a 38% increase on 2011.

In the same year, Boris Johnson also made a start on the previous Mayor's vision of a 12-route network of Cycle Superhighways by successfully implementing the first two routes, with the aim of all 12 routes being in place by 2015. Transport for London's monitoring of these two routes after the first year found usage had increased by an average of 70%.

To capture pockets of high demand in outer London, the Biking Borough programme was introduced to be able to implement improvements in infrastructure, along with smarter travel initiatives and support at a local level and in an integrated way with key partners such as the police, healthcare providers, schools and workplaces. Biking Boroughs have helped to identify "cycle hubs", where potential for a shift to cycling is greatest and resources can be targeted.

In 2012, the Mayor announced that he would be trebling spending on cycling infrastructure to £900m over the next decade to be spent on initiatives like further expansion of Cycle Hire, the construction of additional Cycle Superhighways, the redesign of junctions, continued support for cycle training and a further 80,000 cycle parking spaces. A major new elite and cycling participation event in August 2013, RideLondon, will also seek to encourage more cycling. A return of the Tour de France to London in 2014 was also announced. Together these measures aim to sustain the momentum achieved so far in cycling, particularly from the level achieved during the Olympic Games.

At the start of 2013, the Mayor appointed London's first ever Cycling Commissioner (Andrew Gilligan) who, while not a transport professional, is a keen cyclist and an advocate of high quality cycle lanes, one of the key measures the Dutch use to make cycling convenient, safe and enjoyable.

More than half of all cyclist deaths in London are caused by collisions with heavy goods vehicles (HGVs) even though such vehicles only make up 15% of traffic on London's roads. TfL, along with the London boroughs, is engaged in a range of schemes to improve HGV safety, involving retrofitting safety equipment, mandating cycle safety training and using levers such as minimum standards in procurement.

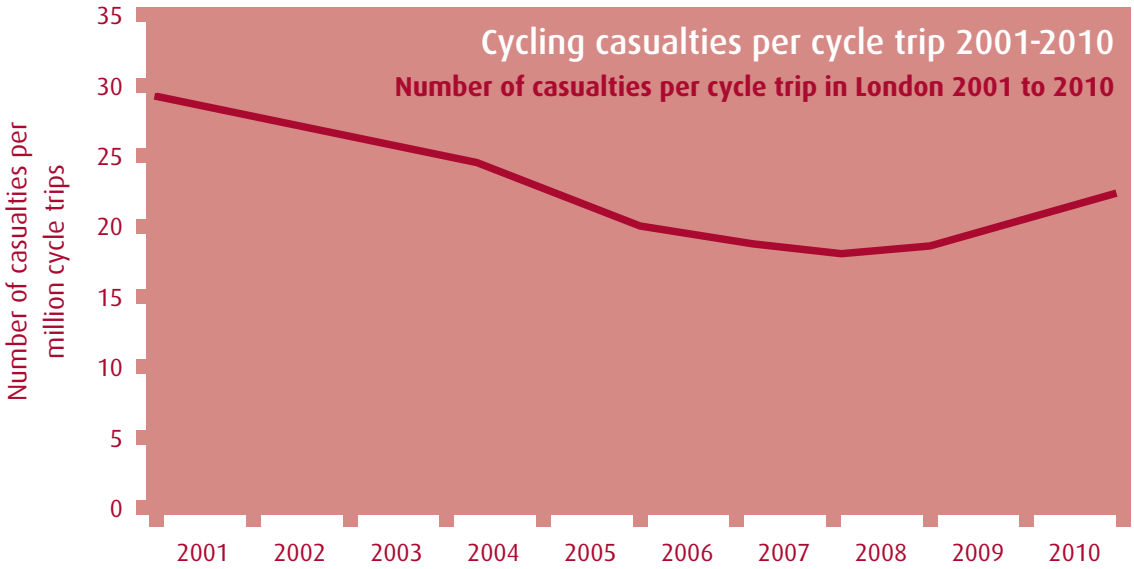
In 2010, the Mayor published his Cycle Safety Action Plan which detailed 52 actions aimed at reducing the number of collisions involving cyclists. This was followed by his launch of a Junction Review. He is to shortly publish his Vision for Cycling.

Future Challenges

While the increase in cycling across London has been phenomenal, the reality is that this growth still only translates to 2% of all journeys being made by bicycle. This falls short of other UK cities such as Bristol (5%), Cambridge (21%) and Hull (12%) and other European cities such as Copenhagen (36%), Amsterdam (30%), Berlin (10%) and Paris (3.1%). Even US cities with historically lower cycling levels have relatively high commuter cycling rates, such as Portland (5.5%), Seattle and San Francisco (2.9 and 2.8% respectively).

The demand exists to further boost London's mode share to help close the gap on these cities. A survey for TfL showed that a quarter or more of the population would like to cycle or cycle more often. The Olympics effect clearly demonstrated the potential of capitalising on this unprecedented enthusiasm for cycling in the capital with cycle use in central London during the Games period rising by 29% and in East London by 62%.

Figure 12.5



Source: Gearing Up, Transport Committee, London Assembly- TfL, Travel in London Report 4, 2011

However, as the last decade has shown us, investment will play a key role in tapping into this demand and achieving future levels of growth. TfL's increased spending on cycling as set out in its Business Plan in December 2012 represents almost 2% of its overall budget. This contrasts with Edinburgh where the city council has set aside 5% of its transport budget for cycling next year, reaching 9% by 2016. This is despite Edinburgh being characterised by geography less conducive to cycling, with hillier terrain and colder weather than London. TfL's spending represents around £20 per capita compared with £30-£40 per head of population in the Netherlands. Dutch-style spending would equate to £3bn across Greater London over a decade, rather than the £900m allocated by the Mayor in the Business Plan. There is also concern that the targets for future growth are simply not ambitious enough.

Funding is undoubtedly one of the challenges for the Mayor going forward. The expansion of the cycle hire scheme is one example.

His 2008 manifesto pledge was to bring in the scheme at no cost to the tax-payer. One of the ways he intended to achieve this was through the innovative sponsorship deal struck with Barclays - the 'Boris Bikes'. However, the Greater London Authority reported in 2010 that the deal with Barclays had only met a fraction of the scheme's cost, which led to public funds previously earmarked for suburban cycle routes subsequently being diverted to pay for the launch of the hire scheme. Funding for these suburban routes and for the Biking Borough programme in general will be important if the number of outer London residents that cycle is to be increased. At present they only make around 166,600 cycling trips each weekday, compared with inner London residents who make 214,600 trips.

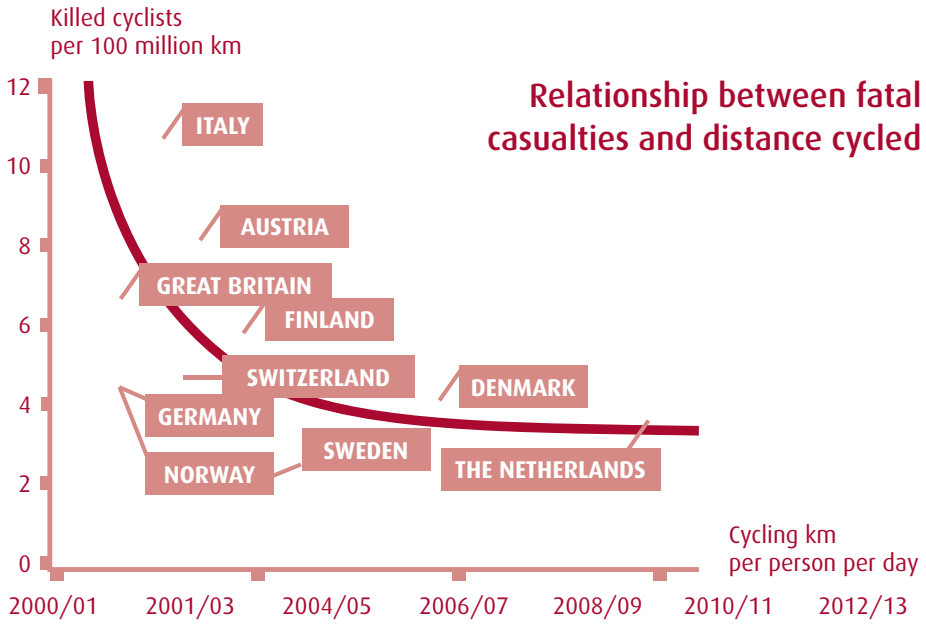
The big increase in London's cycling journeys has presented the Mayor and Transport for London with a very serious challenge – how to tackle the concerning rise in the cycling casualty rate. Despite improvements between 2001 and 2006, the cycling casualty rate worsened between 2007 and 2010. The target to reduce the number of cyclists killed or seriously injured (KSI) by 50% by 2010 compared with the 1994-98 average was not reached with the actual reduction achieved being 18%.

"It's no surprise that I identify the largest challenge as whether collectively we will sufficiently prioritise walking and cycling. This should include huge increases in investment and taking some difficult choices which include re-allocating road space away from vehicles, calming and slowing traffic where we live, work and shop and using the planning system to reduce travel demand and prioritise active travel modes."

Tony Armstrong
Chief Executive, Living Streets

Between 2006 and 2011 the number of casualties rose by 50%. While TfL has sought to establish a natural, causal link between growth in cycling numbers and casualty rates, this is at odds with evidence from other cities in European countries such as the Netherlands and Denmark, which have experienced a drop in cycling casualties when cycling numbers have grown and a critical mass for that mode has been established. Between 2010 and 2011 the rate of casualty increase for cyclists far outstripped the rate of increase in cycle use with a 20% rise in casualties generated by a 7-8% rise in cycling[3]

Figure 12.6



Source: Gearing Up, Transport Committee, London Assembly

The Mayor's current junction review offers some potential to improve cycle safety and the perception of safety, given 75% of national cycling KSIs are at junctions. It represents an opportunity to prioritise the removal of one-way systems and gyratories, introduce 20mph speed limits where appropriate and conduct trials of new road layouts which can provide protected space for cyclists. Current junction designs in London tend to encourage fast driving, which is not the case in other European cities.

Arguably all these different challenges could be solved by cracking the biggest and most fundamental challenge of all. That is the political challenge to redress the balance of priorities of time and space on London's roads. The inherent conflict between road users fighting for constrained road space should be addressed by pursuing a policy based on most efficiently using the space available, which means re-allocating space away from cars and allowing adequate space for cycling (as well as walking and bus use). This fundamental change would have the biggest and most tangible impact on safety, the biggest barrier to a wide uptake of cycling.

If the Mayor is to fulfil his ambition of presiding over a cycling revolution in London, he must be bold enough to change his present political priority of smoothing traffic flow across the city: this ultimately means higher traffic speeds which are not conducive to safe and enjoyable cycling. Political leadership on segregated cycle lanes, speed reduction, shared space and junction design is the only way to encourage proper cycling permeability from all Londoners, regardless of age, background and ability.

[3] Evidence given by CTC to London Assembly's enquiry into cycling and cycling safety 2005

13. London Underground

LONDON UNDERGROUND

Figure 13.1 Transport Times Survey

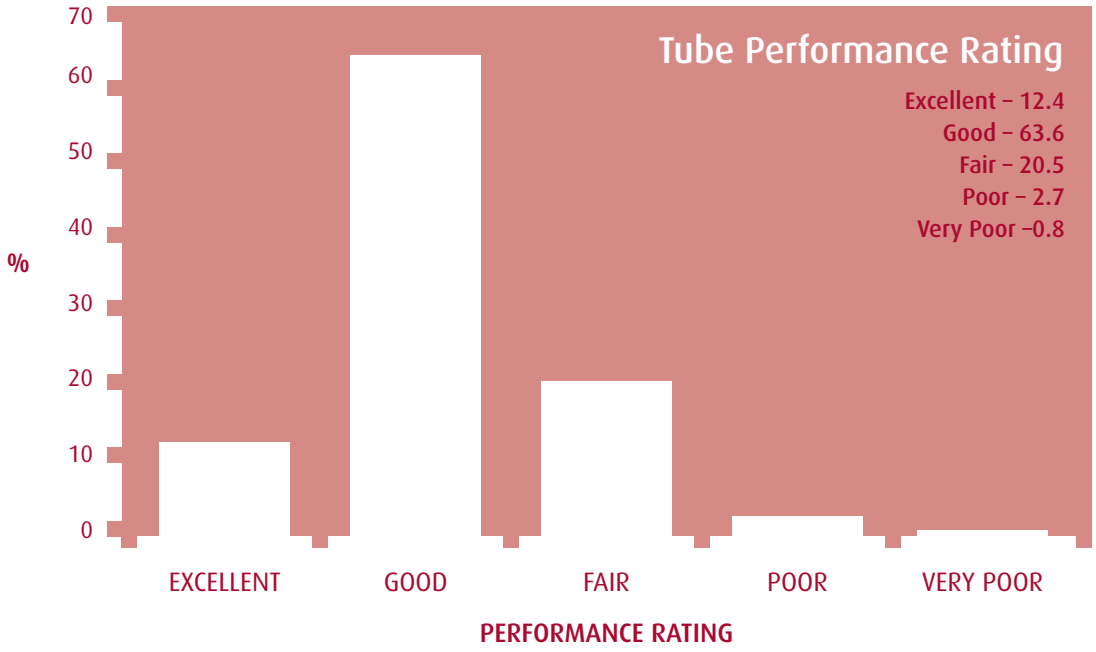
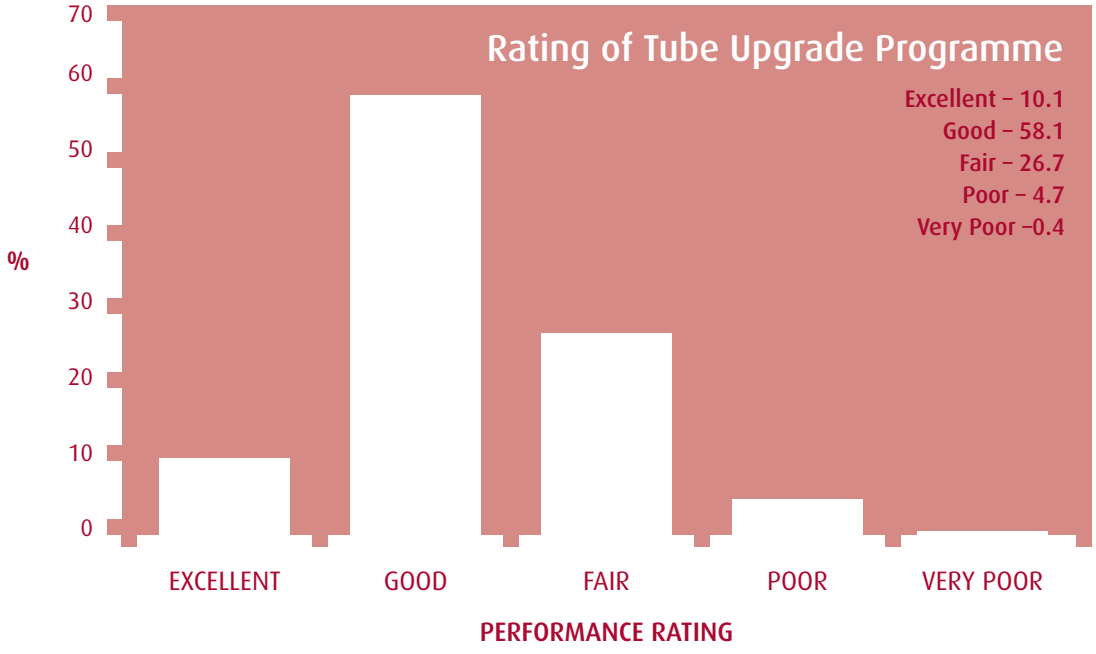


Figure 13.2 Transport Times Survey



Progress

In 1991 the Monopolies and Mergers Commission confirmed the public perception of the London Underground as "an erratic, overcrowded and poorly maintained service" but stated that this was the result of "chronic underinvestment". Customer satisfaction now stands at an all time high as does operational performance which has seen reliability levels improve at the second fastest rate in Europe over the last five years.

The Labour Party manifesto in 1997 proposed a public-private partnership for the Tube, designed to bring in private sector practice, assumed to be more efficient, and more importantly to unlock private sector funding for the modernisation of the Underground without increasing the public sector borrowing requirement.

Details were left to be worked out after the election, a process which went on in parallel with the creation of the London Mayor, Assembly and Transport for London. The eventual Tube public/private partnership deal was almost universally opposed, but pushed through by the Treasury which, following cost overruns on the Jubilee Line Extension and the upgrade of the Central Line, did not trust the nascent TfL to manage the work itself.

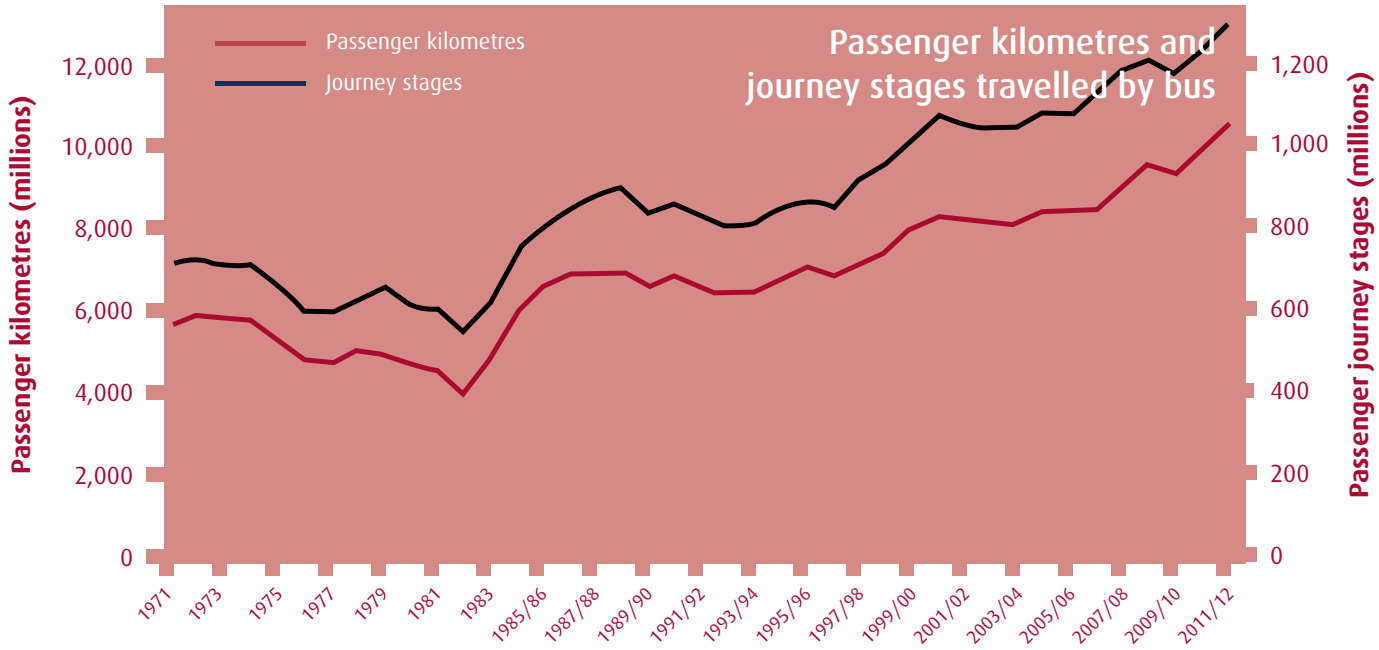
Criticisms that the PPP would be inefficient and unworkable in its complexity proved well-founded, and by 2010 both the PPP "infracos" had been absorbed by TfL. However, even though the money might not have been spent in the most efficient way possible, by that time improvements were becoming apparent on the Underground, with new rolling stock and signalling systems improving capacity and reliability and many stations having been refurbished. What the PPP succeeded in doing was making the case for an annual investment in the system of £1bn a year and showing that such spending could reverse the legacy of underinvestment of previous decades.

Figure 13.3

	2003	2012	Change
Journeys	948m	1.2dn	+26% Journeys
Train kms	68m	76m	+12% Train kms
Customer Satisfaction	76	83	+7% CCS
Reliability	52m LCH	24m LCH	-54% LCH

Source: TfL

Figure 13.4



Source: Transport for London, Travel in London, Report 5 – TfL Service Performance data.

As remarked elsewhere, TfL has been shaped by the early decision by Ken Livingstone and Bob Kiley to recruit the best managers wherever they were found. In the case of the Underground, Tim O'Toole joined as managing director in 2003 as the PPP deals were finally agreed. Putting the battles over the PPP to one side, he took the view that his job was to make the system work. He set about re-energising London Underground employees through a series of personal addresses linking pride in the history of the Tube with an assessment of the challenges it faced. He made basic principles such as "valuing our customers' time" central to LU customer service. Another significant development was the introduction of Oyster ticketing, dealt with in a separate section of this report.

The outcome of such initiatives has been that since the inception of TfL, more passengers than ever before have been carried, with satisfaction rates also on an upward trend (Fig 13.3).

Since 2003 there have been 26% more journeys, 12% more km operated, 7 point increase on Customer Satisfaction Survey and a 54% improvement in reliability (Lost Customer Hours).

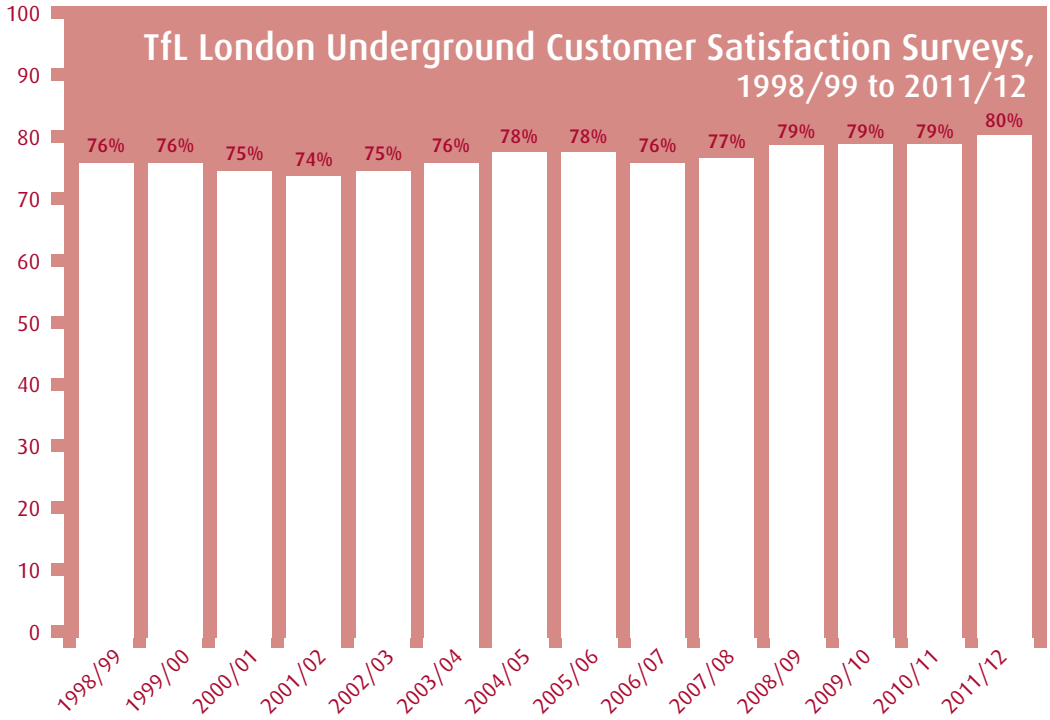
Fig 13.4 above shows the long-term trend for travel by London Underground. The trend was one of falling patronage until the early 1980s, rather like that seen for buses, when substantial changes to the fares structure stimulated passenger demand increases of about two thirds during the remainder of the decade. Demand was fairly static during the late 1980s and early 1990s but started to grow again in the late 1990s and has continued to grow strongly since.

The number of people using the Underground in 2011/12 was the highest ever, with 1,171 million passenger journeys (journey stages). Growth during the last year was particularly strong, with 5.7% more journey stages and 7.3% more passenger kilometres than the previous year, along with an increase of train kilometres operated of 5%[4]

Figure 13.5 shows that customer satisfaction with London Underground has increased fairly steadily since 1998/99. The mean score for customer satisfaction with London Underground was 80 in 2011/12, the best achieved to date.

[4] Transport for London, Travel in London Report 5, 2012

Figure 13.5



Source: Transport for London, Travel in London, Report 5 – TfL London Underground Customer Satisfaction Surveys, 1998/99 to 2011/12

Benchmarking London Underground against other metro systems is not straightforward. The first Rail and Underground annual benchmarking report, produced for TfL in June 2012[5] under the direction of the Independent Investment Programme Advisory Group (IIPAG), points out: "London's underground network suffers from a legacy of lack of investment and consequently many of the assets on which the operation still depends are beyond their design life. There is a wide variety of old, obsolete technology which is fragile and unreliable, and when it fails it has to be fixed very quickly in order to restore the railway service. This is very labour intensive."

However the same report found significant differences between different parts of the organisation: for example it found differences in approach and culture between LU and Tube Lines. TfL is using benchmarking to identify and spread best practice throughout the organisation. The Piccadilly line's fleet maintenance costs are the best in London and a study is under way to identify the reasons.

Nor is the correlation between old equipment and unreliability universal. The Piccadilly line train fleet, introduced in 1975, is the most reliable on the entire network. Meanwhile LU's "last six fleets" of new trains have had "very poor" reliability and typically took five or six years to reach an acceptable level. This partly reflects the technical complexity of the modern trains, but is nonetheless not expected to be finally remedied until the fleet is replaced again, in a programme in which first deliveries are planned to start in 2016, continuing through the 2020's.

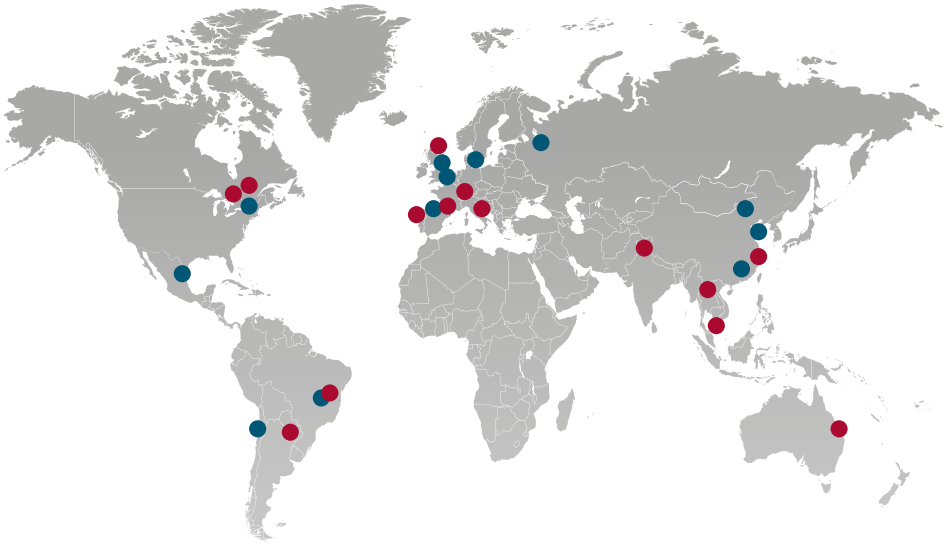
The report draws on benchmarking analysis of the CoMET and Nova groups of metros worldwide undertaken by Imperial College London. The members of CoMET and Nova are shown in Figure 13.6 below.

It concludes that "London's underground network does not compare well with the best international metros in terms of either cost or reliability. This is not surprising, as high performing metros typically have

[5] TfL Rail and Underground Annual Benchmarking Report, Independent Investment Programme Advisory Group/TfL, June 2012

Figure 13.6

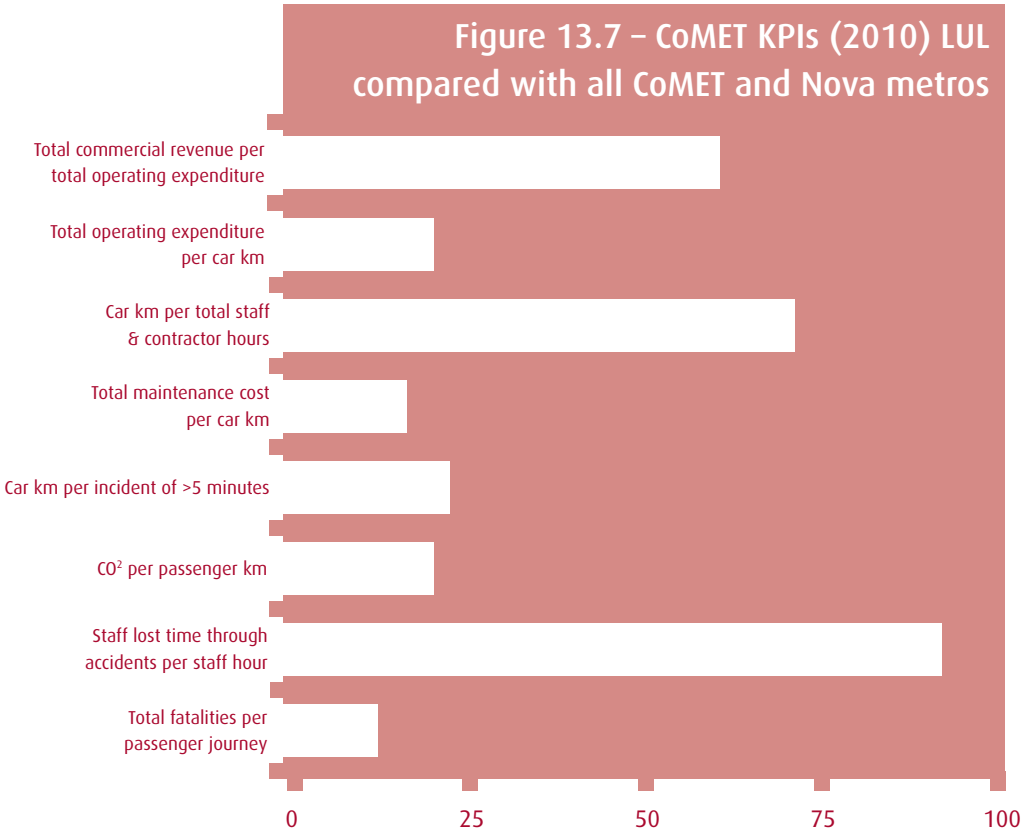
Map showing location of CoMET and Nova metros



Source: Imperial College London/ TfL Rail and Underground Annual Benchmarking Report 2012

Figure 13.7

Figure 13.7 – CoMET KPIs (2010) LUL compared with all CoMET and Nova metros



Source: Imperial College London/ TfL Rail and Underground Annual Benchmarking Report 2012

modern technology throughout, high levels of automation, relatively low staff unit costs and very high ridership."

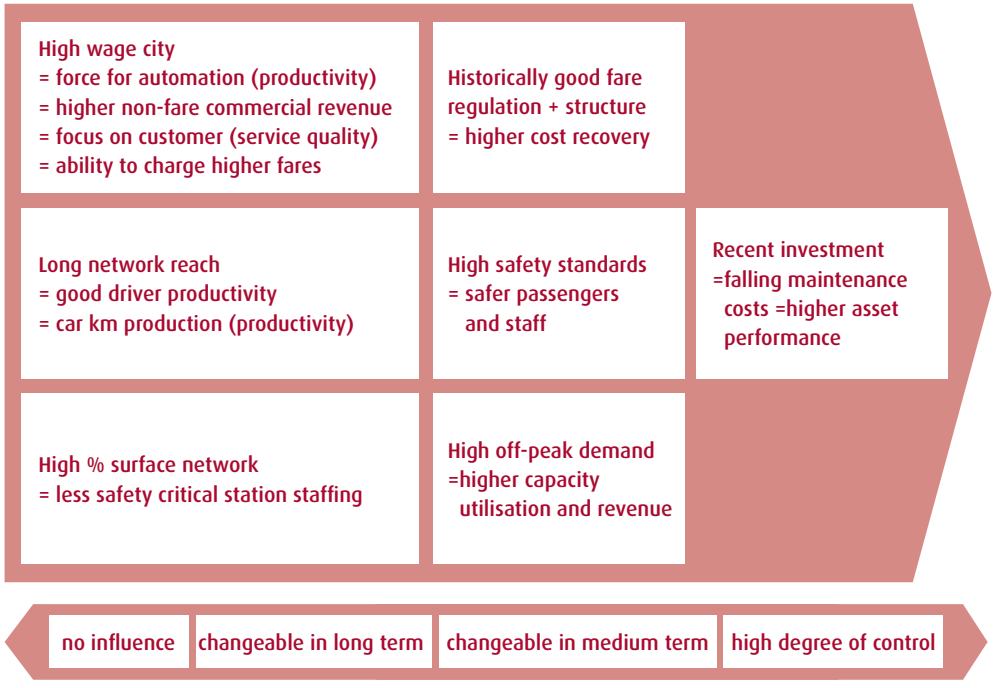
However, "in 2011/12 London recorded its best ever reliability, and it is now one of the more reliable metros in its peer group of large European and North American metros. London's underground network has seen the second fastest improvement in overall reliability performance in Europe in the last five years." Where it continues to trail is in comparison with the best-in-class metros which tend to be modern Asian systems. The report adds that "London is a wealthy city and staff costs are relatively high". The network operates for 19 hours in each day and access to its single-track deep tube sections is particularly difficult, especially for the maintenance and renewal of track and trackside assets. 'These factors should create incentives to invest in automation and productivity improvements to a greater extent than in almost all other metros, yet London's productivity in delivering passenger journeys is above average when compared with international metros but is not as good as would be expected given that these factors have existed for many years", IIPAG concludes.

The report also acknowledges that "improvements to some historic and inefficient working practices have been made, but some remain. TfL will require the support of a range of stakeholders to progressively introduce new technologies and to improve the flexibility of working practices."

It can also be argued that stable, long term investment funding will drive down capital expenditure unit costs, secure supply chains and improve the capability of the organisation, in other words allowing the investment to be used more efficiently.

Figure 13.8

Structural factors affecting LU positively



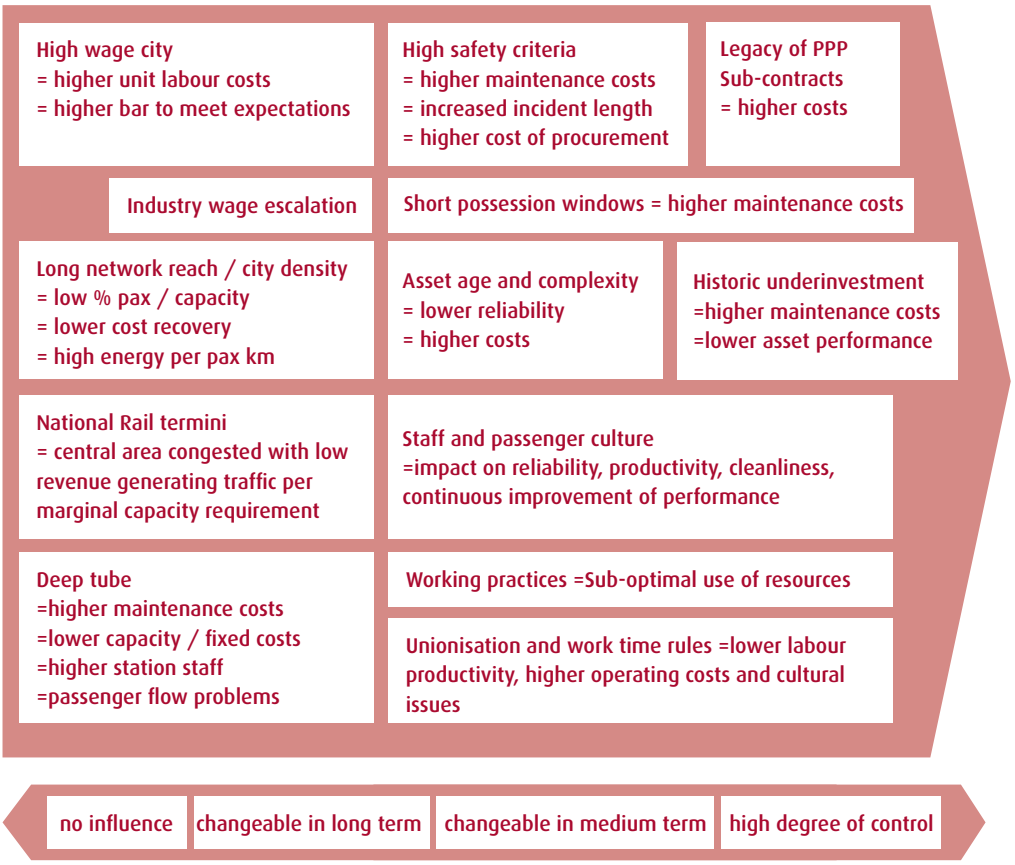
Source: Imperial College London/ TfL Rail and Underground Annual Benchmarking Report 2012

"TfL are only part way through their tube upgrade programme and there's a lot of investment still to come, but I have been impressed by the upgrades to the Jubilee and Victoria lines which have increased capacity in the rush hour by 33% and 21% respectively, with a train every two minutes at peak times."

Stephen Hammond MP
Parliamentary Under-Secretary of State for Transport with responsibility for London

Figure 13.9

Structural factors affecting LU negatively



Source: Imperial College London/ TfL Rail and Underground Annual Benchmarking Report 2012

TfL will continue to address these issues and plans to extend benchmarking to a wider range of activities. A Reliability Improvement Programme is succeeding in reducing response times to disruptive incidents.

The Victoria Line, for which the upgrade was completed in 2012 and has both a new train fleet and a new signalling system, "now has one of the highest performing fleets of trains on the Tube network, with reliability now twice the level that it was in 2007/08, comparing favourably with the best performing metros around the world".

By the end of the current funding period (2014/15) overall benchmarked maintenance unit costs are forecast to be 20% below 2010/11 levels. In the same period the overall reliability of the London underground network is forecast to improve by 49%, in terms of mean distance between failures.

The IIPAG benchmarking report concludes that to compare on cost and reliability with the best metros in the world and achieve the aim of becoming a world-class Underground, "TfL will have to maintain and increase levels of investment in new infrastructure, ensuring that future upgrades take full account of the whole life cost and performance of the entire railway system as well as addressing capacity issues; increase levels of automation in train control;

"I believe one of the biggest challenges facing London transport in coming years will be exploiting the further potential of the successful and highly cost-effective DLR technology across a much wider geography."

Jim Steer
Director and Founder,
Steer Davies Gleave

increase automated inspection, remote condition monitoring, mechanised maintenance and renewals; reduce the variety of equipment in use; improve working practices and flexibility in the workforce; and significantly reduce track maintenance costs."

ORR research shows that LU is one of the safest railways in the world, if not the safest, measured in terms of customer and worker accidental fatalities and major injuries.

Future Challenges

Continuing to improve reliability while "current assets, both old and new, are being pushed towards the upper limits of their performance capability" and with full upgrade of old assets not projected to be complete until well into the next decade will present difficulties.

New rolling stock is being introduced on the Sub-Surface Lines and is expected to improve reliability as well as bringing the advantage of a single train type for all those lines.

More reliable trains on the Central Line must await the major procurement referred to above, expected to get under way in 2013 with deliveries starting in 2016 and continuing for at least a decade, of 2,400 vehicles to replace the rolling stock on the Bakerloo, Piccadilly and Central Lines. As with the SSL trains this will bring the additional advantage of one interoperable train type running on several lines, reducing maintenance costs.

Productivity improvements are essential to fund the capital programme and in so doing support the growth of the London economy.

One of the areas to be addressed is working practices and it is likely that the continuing operation of trains with a driver in a separate cab at the front will need to be questioned. Trains on the Central, Jubilee and Victoria already operate automatically between stations: the driver's functions are to open and shut the doors, press a button to start the train on the journey to the next station, and to apply the brakes in an emergency. A TfL paper in November 2011 said that the fleet of trains currently being procured for the Sub-Surface Lines could be the last to have a conventional driver's cab, and "the next generation of employees supporting the train service could be much more like the train captains on the Docklands Light Railway", travelling in the carriages in the role of passenger assistant[6]. Other metros have achieved this: Copenhagen Metro has a completely driverless system in which train operation, door closing, obstacle detection and emergencies are all handled automatically. Vancouver's Sky Train, the longest automated network in the world, has 69km of track, three lines and 47 stations. Paris Metro's Line One has been converted to automatic operation and became fully driverless by the end of 2012, following the example of Line 14 (which, it is worth pointing out, is different from London's other lines which are all deep level lines).

TfL's paper recognised the political and industrial relations difficulties this poses and proposed that existing drivers should be able to continue in their current role until retirement. Nevertheless when the subject was aired by Mayor Boris Johnson there was a significant backlash against the idea, as well as a surprising lack of knowledge of the extent to which the Tube is already automated. TfL has, however, said that it does not anticipate ordering any more trains with a cab after the current upgrades are completed.

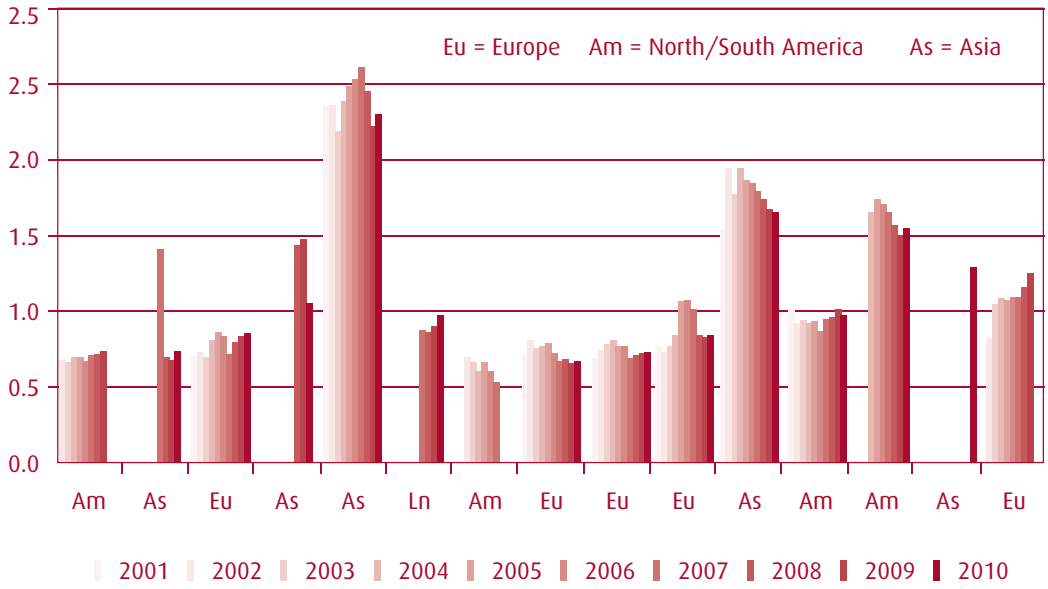
Is London Underground commercially-minded enough? London Underground's total operating costs are high relative to its international peers, at 18% above the average. Its maintenance costs per car km are 35% higher than the average of the other CoMET and Nova metros, and service operations costs 2% higher by car kilometre. The organisation has, however, improved its total operating costs compared with other metros, particularly since 2008/09.

Operating cost recovery is falling for many CoMET metros, primarily due to falling average fares in real terms. By contrast LU has shown an improvement in recent years, and forecasts to break even this year, 2012/13. This is a result of both increasing fares in real terms, and the

[6] Transport for London Board Paper 2 November 2011: London Underground's Operational Vision – Technology Enables Change

Figure 13.10

Recovery Ratio: Total commercial revenue per operating cost



Source: Imperial College London/ TfL Rail and Underground Annual Benchmarking Report 2012

impact of greater efficiency, reducing operating costs. Operating costs per passenger km have improved by more than 30% since 2008/09 largely driven by 2,200 roles being removed from the business (including via Metronet integration).London generates a significant amount of non-fare commercial revenue. It achieves approximately 47% more non-fare revenue from activities such as advertising, merchandising and retail than the CoMET average.

LU is anomalous in that it is the only major UK rail or metro operation still operated by the public sector: all others are run on the basis of franchises or concessions. The East London Line became part of London Overground rather than the Underground after its upgrade in 2010 because it was estimated that its operating costs under the Overground's concession model would be 30% lower than with the Underground. It is arguable therefore that operating cost savings could be made by franchising the operation of the Tube.

Opponents of this view argue that the comparison with the Overground is not valid because that operation began with a blank sheet; that the PPP was unable to reduce costs; and that the private sector faces costs pressures of its own, such as rising salaries in train operating companies.

Like the issue of driverless trains, the issue of privatisation also comes with considerable potential difficulty from a political and industrial relations point of view for any London Mayor wanting to consider it.

If the Mayor and TfL are committed to retaining LU in the public sector, it is imperative that they are able to demonstrate that it is delivering value for money.

14. London Buses

Figure 14.1 Transport Times Survey

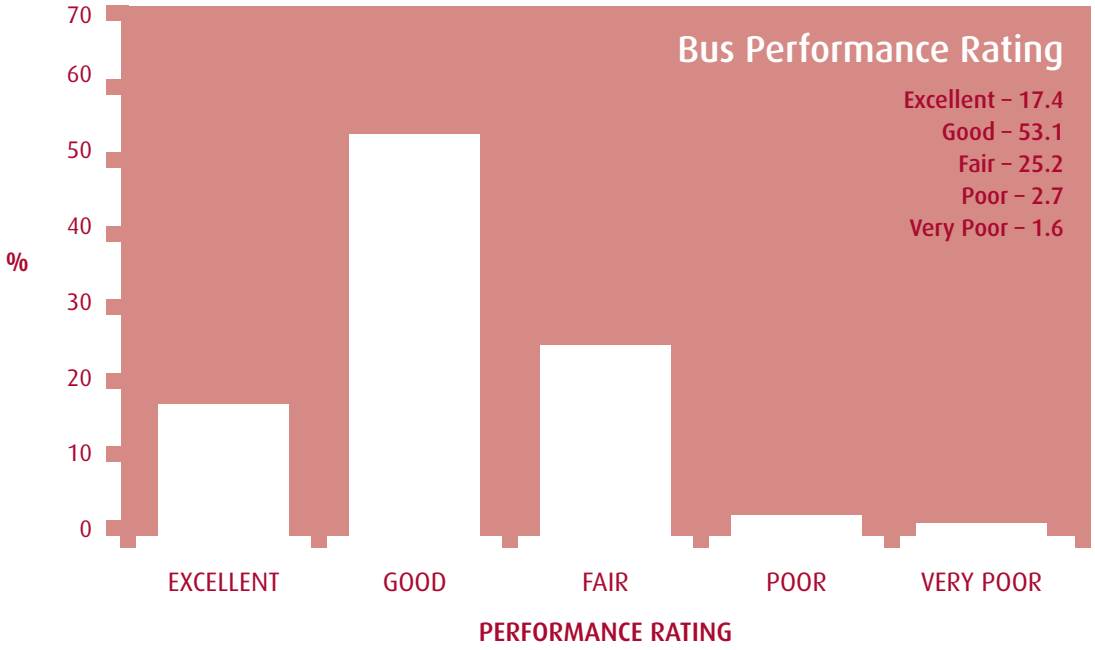


Figure 14.2 Transport Times Survey

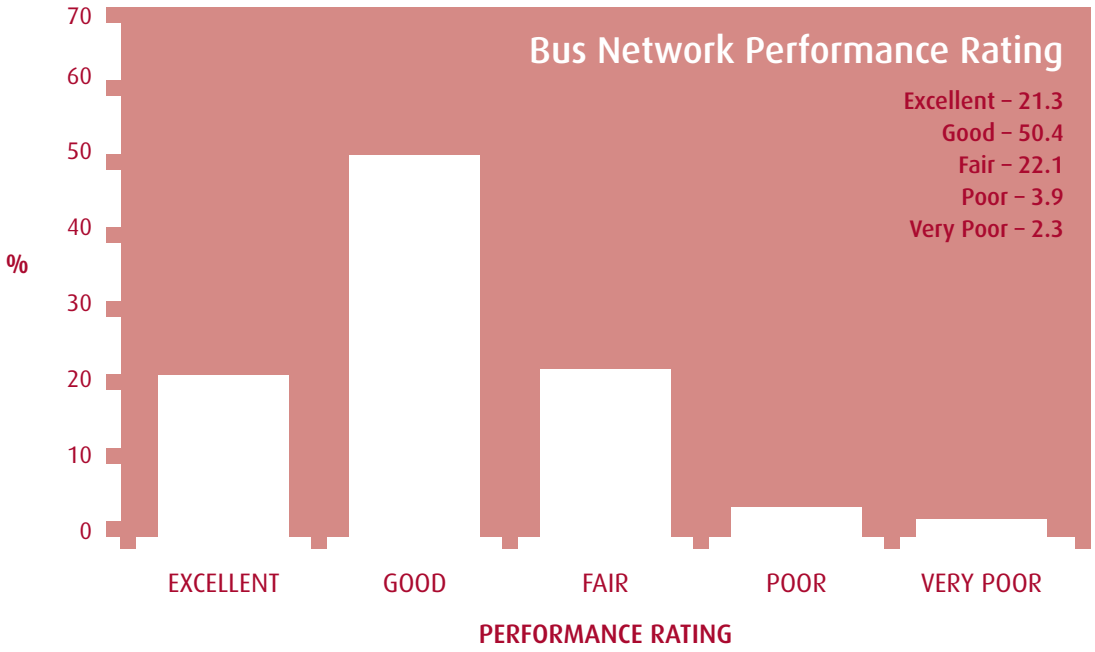
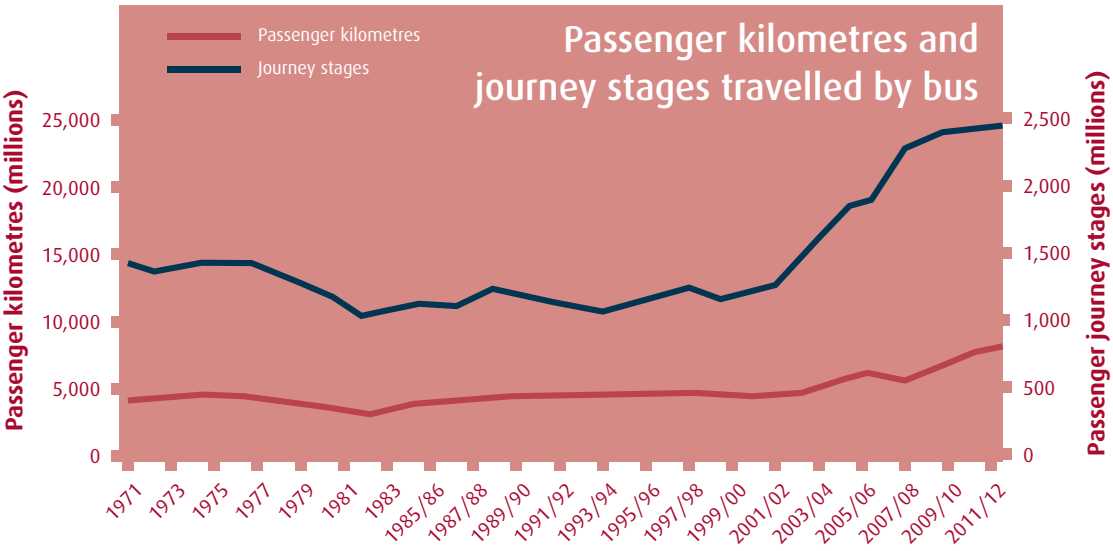


Figure 14.3



Source: Transport for London, Travel in London, Report 5 - TfL Service Performance data.

Progress

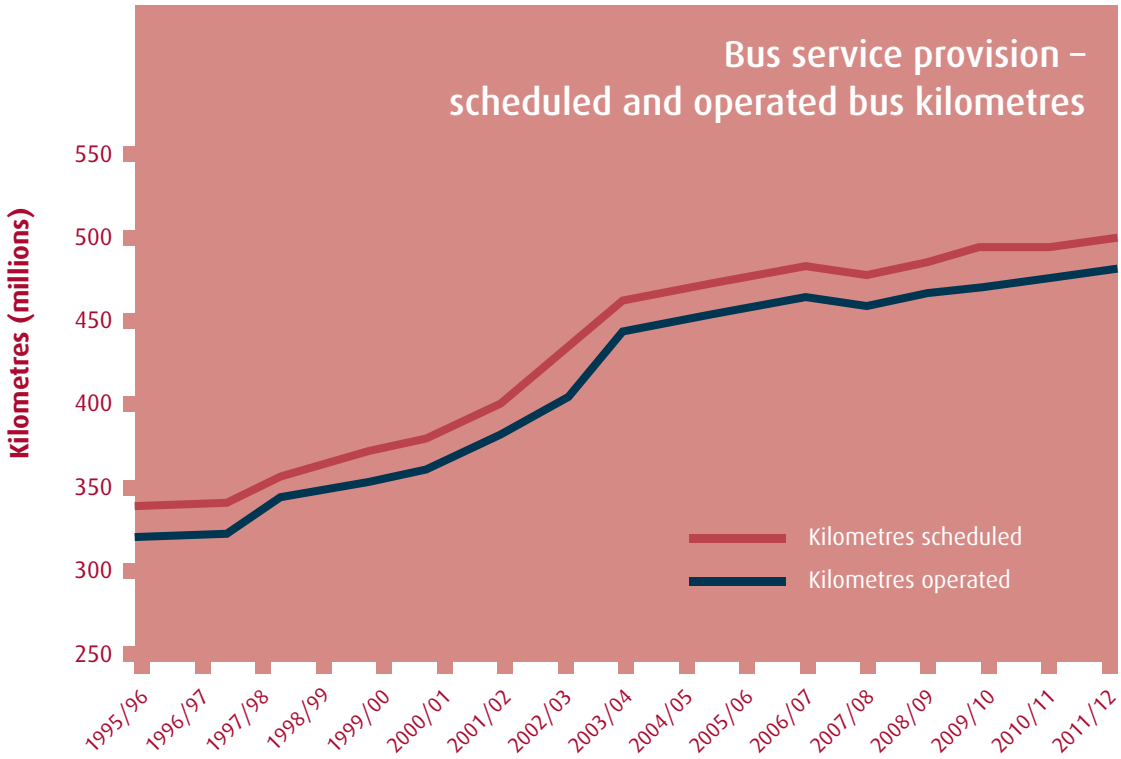
London Buses must rank as one of the capital's greatest success stories. Its bus network can truly be described as world class, in size, frequency of service, reliability and accessibility. Approximately 7,500 buses carry over six million passengers each weekday, more than since the early 1960s.

London is ranked top city in the world by a study by Imperial College that benchmarks bus provision in London against a number of other world cities: Barcelona, Brussels, Dublin, Lisbon, Madrid, Montreal, New York, Paris, Sydney and Vancouver. Key conclusions of the study were that London has the lowest subsidy requirement per passenger; its operating cost per vehicle has decreased since 2006 to the fourth lowest without loss of quality and with increased ridership; fares paid are at the group average; it was the first to achieve a fully accessible fleet; carbon dioxide emissions per passenger have decreased to the third lowest; and London has double the number of daily passenger boardings compared with the next nearest city in the study. Demand has also grown more, in absolute terms, in London than any other city in the study.

The success of London's buses is best reflected in the statistic that shows London now accounts for 50% of all bus journeys in the UK, up from 40% in 2000. This is primarily down to the growth in London rather than decline in the rest of the UK. Between 2003 and 2010 there was an impressive 7% modal shift towards buses due to the growth in the number of buses and the performance of the bus network.

Buses in London are by far the most used mode of public transport with nearly two billion journeys a year compared with around one billion on London Underground, 800 million on the National Rail network and around 200 million journeys by bike. They also have a good utilisation rate with an average of 17 passengers on any bus at any time (higher than the Tube and higher than bus utilisation outside London) as well as high permeability – more than 90% of Londoners live within 400m of one of the 19,500 bus stops in the Capital.

Figure 14.4



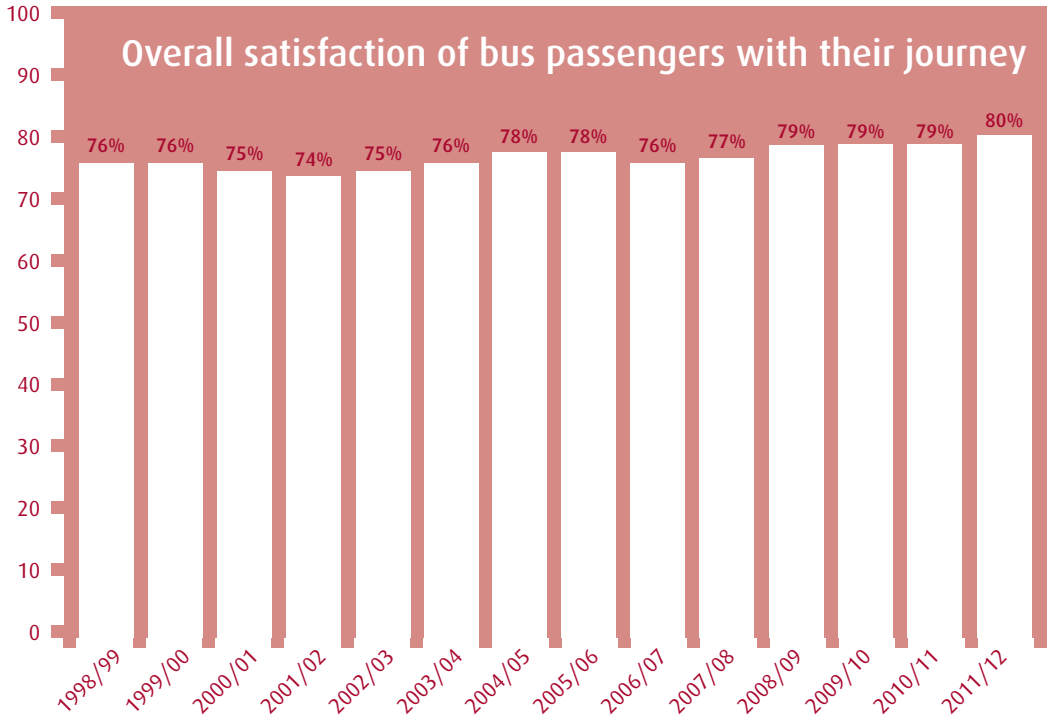
Source: Transport for London, Travel in London, Report 5 - London Buses.

Figures show that bus service reliability has been steadily increasing. Since 2000/01 there has been a 21% improvement in actual waiting time, with excess waiting time reduced by more than half from 2.2 minutes to 1 minute. 34% more bus kilometres are currently operated compared with 2000/01. Over the ten year period since 2001, total bus trips increased by 59.7%.

London has one of the world's largest fleets of modern, accessible buses, with all vehicles (except Heritage Routemasters) accessible to wheelchair users. Since 2006 it has been greening its fleet through the introduction of new diesel-electric hybrid buses. There are 368 diesel-electric hybrid buses in London and the Mayor has committed TfL to introduce 600 New Buses for London (diesel-electric) by 2013. Plans have been implemented for buses to be fitted with technology to reduce emissions of oxides of nitrogen (NOx) to meet air quality targets for Greater London by 2015. By 2016 nearly 1,600 buses on the capital's streets will be hybrid – the largest fleet in Europe. New York currently leads the world on its hybrid bus fleet with 1,675 hybrid buses in operation in 2010.

Transport for London is a world leader in the acceptance of contactless payment technology (contactless EMV debit, credit or charge cards) with use already being rapidly adopted on London Buses. Approximately 8,500 bus journeys per day are being paid for using this method after being launched in December 2012. It also has world class bus information provision with one the world's largest integrated automatic vehicle location systems – iBus – which tracks all of London's buses to provide passengers with on-board audio visual announcements so that when the bus approaches the stop, the on-board system will announce and display the bus stop name. This has dramatically improved the accessibility of buses to deaf passengers, or passengers with hearing difficulties, and blind or visually impaired passengers.

Figure 14.5



Source: Transport for London, Travel in London, Report 5 - TfL London Buses Customer Satisfaction Surveys, 1998/99 to 2011/12.

"There has been a vast improvement in the quality of the bus services across London which has revolutionised people's attitudes towards the bus as a quality, reliable way to travel. This has been achieved by a combination of significantly increased resources, effective management and regulation of private sector providers through a sensible competitive tendering process. The procurement method is a shining example of how relations between public authorities and private providers should work."

Professor Stephen Glaister CBE
Director, RAC Foundation

Its Countdown system – a real-time bus arrival information system – provides information to displays at a large number of stops and also provides information for any stop online and to mobile phones.

Transport for London has also installed bus priority at 1,800 of the main route traffic signal junctions in London. This facility provides signal priority to buses that are running late. The priority effect is linked back to TfL's Urban Traffic Control (UTC) System which then accommodates this as far as adjacent signalled junctions are concerned.

Buses in London have been, and continue to be, particularly important for providing affordable transport to people on low incomes and those whose working hours may make it difficult to use other forms of public transport.

It is this fact that led to the previous Mayor introducing one of the most generous concessionary schemes in the UK by providing – in addition to the freedom pass for pensioners – free travel to young people aged between 16 and 18 in full time education and to all injured war veterans travelling in London whether resident or visitors. Through an oil deal struck with socialist leader of Venezuela Hugo Chavez in 2007, bus fares for people on benefits were halved (thanks to the resulting discount TfL received on the price of bus fuel, taking £14m a year off the bill). In real terms after inflation, bus fares went down by 9% under Ken Livingstone. The subsequent Mayor protected the concessions for London's elderly, young people and those on low incomes (40% of bus passengers are non-paying due to the concessionary scheme) but raised fares on buses in real terms as a means to alleviate the financial challenge of accommodating the concessions as well as other budgetary pressures.

"The big challenge is how we continue funding the bus network and getting the proper recognition of its role in coping with London's future population growth"

David Brown
Group Chief Executive,
Go-Ahead Group

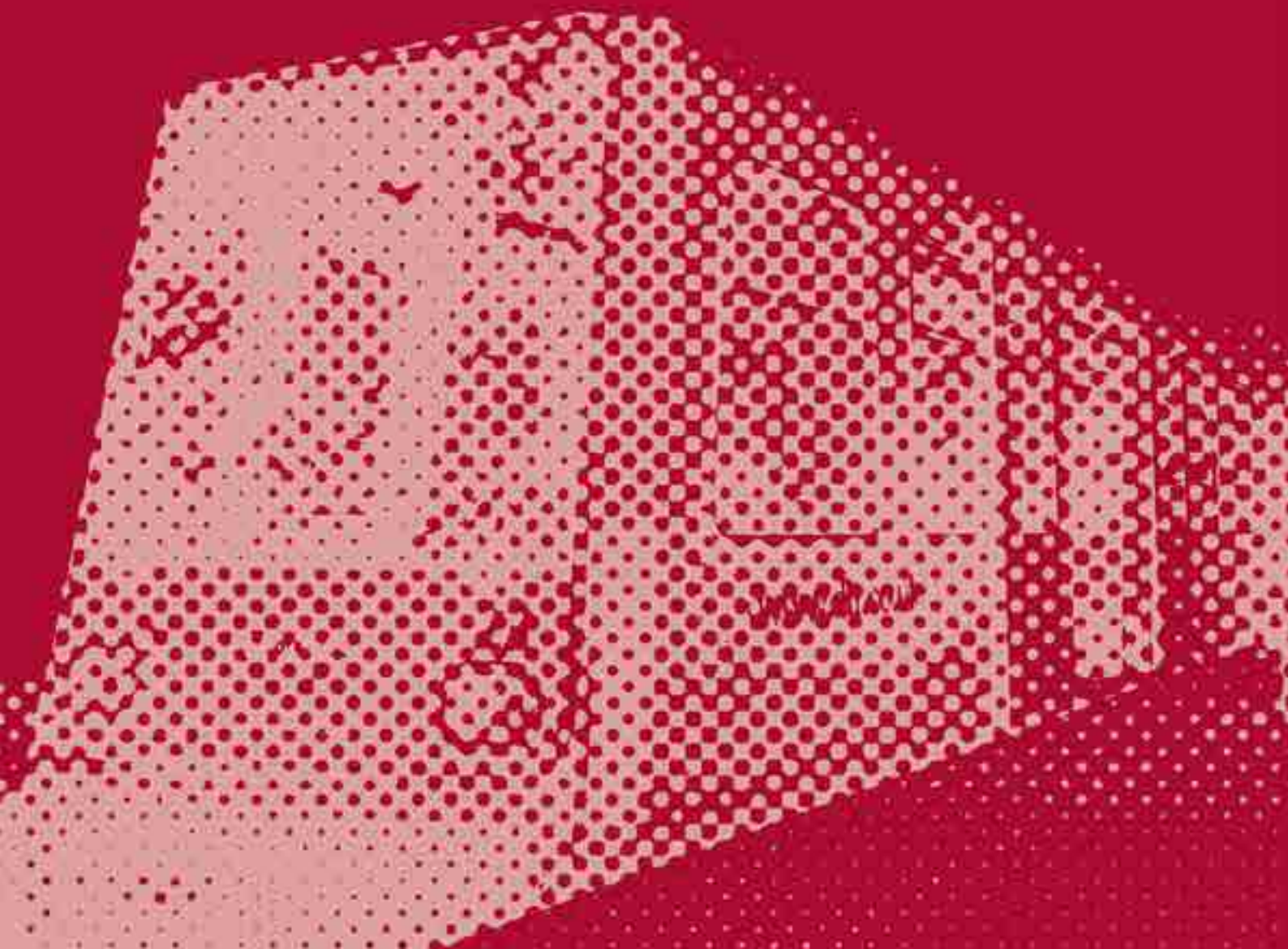
Future challenges

Whilst under the former Mayor the bus network expanded and the bus operating subsidy grew significantly, from £41m in 1999/2000 to £653m in 2007/08, the current Mayor has focused on reducing the bus subsidy. TfL's 2008 Business Plan had anticipated a gradual rise in subsidy from 2009/10 to over £700m by 2017/18. In November 2008 under the new Mayor, TfL commissioned KPMG to undertake a review of London's bus services with a specific focus on how the subsidy could be reduced. TfL's 2009 Business Plan stated the subsidy would fall from £700m in 2008/09 to around £450m by 2017/18. The 2011/12 Business Plan, which only projects as far as 2014/15 because of the existing grant settlement with Government expiring at that time, allocates the further reduced amount £404m for 2014/15.

The challenges will be to prevent this cut in funding – as well finding the future means to sustain even reduced funding – having a number of negative knock-on effects on the wider transport network as well as directly on low-income groups, who rely on buses most and who would be regressively affected by any significant rise in bus fares to make up the funding. The huge population and employment growth forecast in the capital inevitably means that transport demand overall will rise, as will congestion. With no further commitment to congestion charging, road congestion risks undermining the operational reliability of the bus network and with TfL operating on the basis that the bus network will remain in its current size and shape, there will be no extra bus capacity to help reduce congestion itself or to play a larger role in absorbing this increased demand.

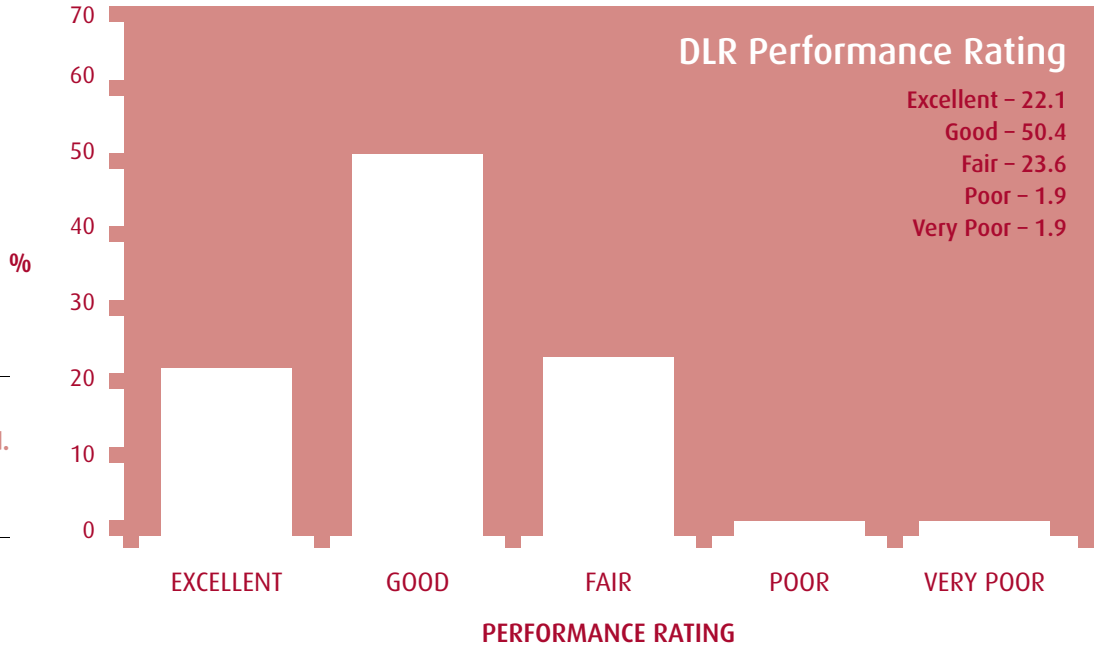
With less bus subsidy available going forward, there is also a challenge for bus operators themselves to find improved efficiencies.

15. Docklands Light Railway



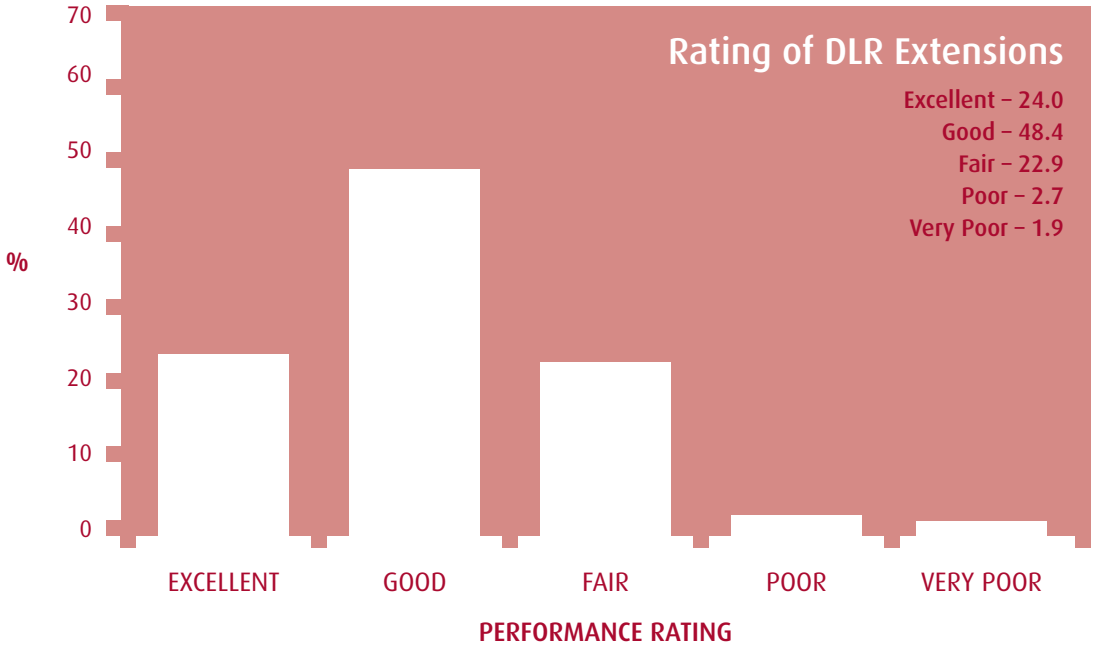
DOCKLANDS LIGHT RAILWAY

Figure 15.1 Transport Times Survey



73% thought it was either excellent or good. East London would not cope without it.

Figure 15.2 Transport Times Survey



Progress

The Docklands Light Railway (DLR) is one of Britain's great transport success stories. It is generally perceived as being the main catalyst for the regeneration of Docklands, helping to bring in investment and development and aiding job creation in a deprived area of London.

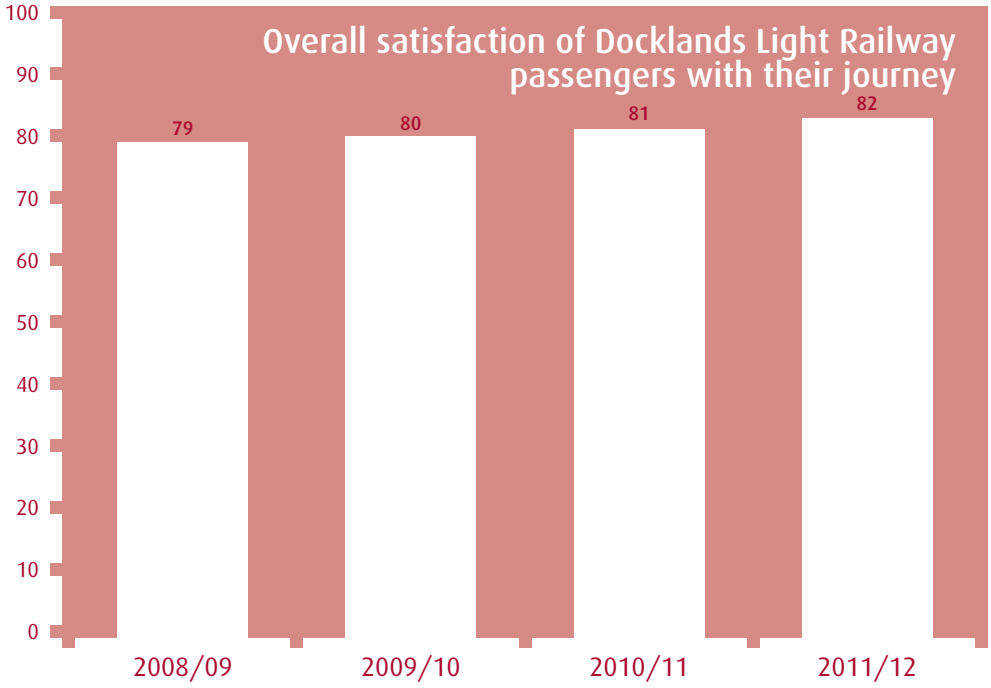
One of the first light rail systems in Britain, with one of the world's most advanced automatic train control systems, the DLR has expanded faster than any other UK railway. Since opening in 1987 it has been extended to Bank (1991), Beckton (1994), Lewisham (1999), London City Airport (2005), Woolwich Arsenal (2009) and Stratford International (2011).

Managed by TfL's London Rail division, DLR Ltd's operation and maintenance are provided by concession operator, Serco Docklands. Tough performance targets have been set as part of the concession agreement to ensure that high standards of customer service are maintained.

Serco Docklands has consistently achieved – and in many cases exceeded – its targets since it was appointed operator in 1997. Serco has recently been awarded an 18-month extension to operate, maintain and market the busiest light railway in the UK, to run from April to September 2014.

The DLR is a popular and well recognised "brand" that has permeated the very diverse communities and social groups that it serves. It is perceived very much as a "community railway" (despite being the main server to Canary Wharf and Docklands business district).

Figure 15.3

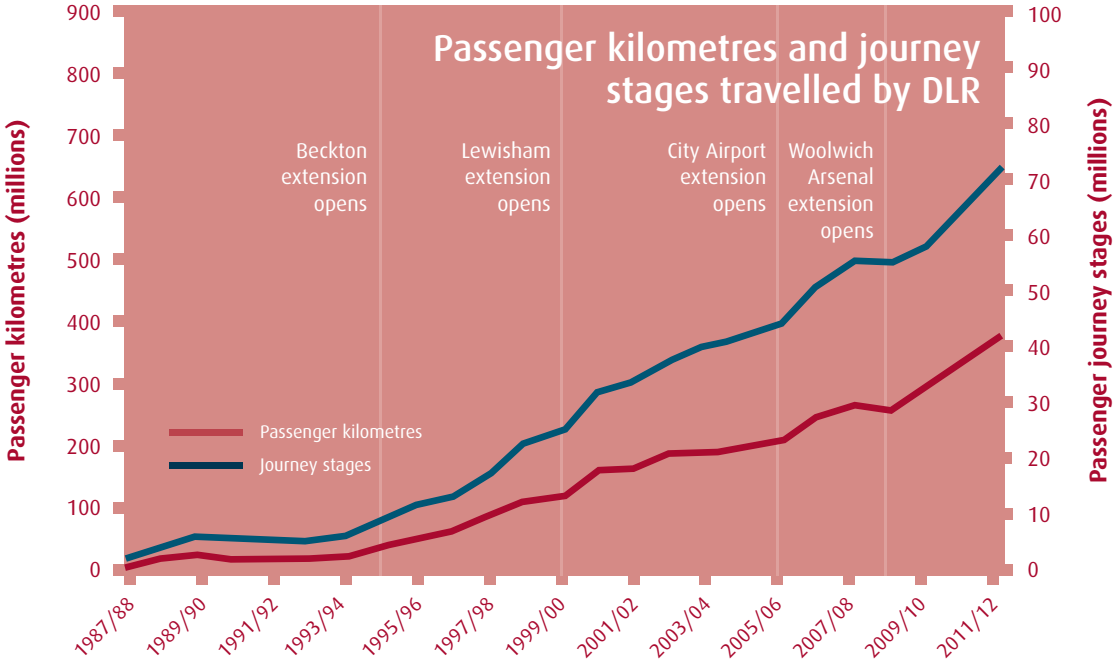


Source: Transport for London, Travel in London, Report 5 – DLR Customer Satisfaction Surveys, 2008/09 to 2011/12

Its engagement strategy to increase transport accessibility among these communities is impressive. Of particular note is its Community Ambassador programme which helps hard to reach groups (including the elderly, disabled and foreign speaking residents) access the railway. In 2011/12 DLR's Ambassadors took 6,364 residents out on the railway for the first time, an increase of 52% on previous years. 98% of these went on to make independent trips as a result of initial help. Operator Serco Docklands' "Serco for Skills" offers funding and business support to community groups and charities working in east London and encourages applications for projects that improve the skills and opportunities of local people.

The DLR carries more than 80 million passengers a year with consistently high levels of reliability and passenger satisfaction. In 2010/11 96.5% of passengers were satisfied (or better) with overall service (92.9% in 2010). The mean score for customer satisfaction was 82 in 2011/12, considered to be a 'good' score and is up on the score in 2010/11. Reliability continues to increase, with the percentage of scheduled services operated increasing from 97.5% in 2010/11 to 97.7% in 2011/12.

Figure 15.4



Source: Transport for London, Travel in London, Report 5 - TfL Service Performance data

Since 2000/01 the DLR has increased the number of kilometres operated from 2.9 million to 4.9 million, an increase of 68%. Over this time period the percentage of scheduled services operated has fallen slightly, from 98.2 to 97.7%, although generally being sustained at very good levels.

Upgrades have delivered 50% more capacity, greater frequency and improved reliability. The network now has the capability to run three-car trains. There have been continuous improvements in safety and security management and in Real-time information. In February 2012, Serco Docklands with DLR built and moved operations to a new control centre with more staff to respond to bigger and busier network.

During the rioting and unrest of 2011, the notion of the DLR as a community railway was particularly consolidated when a team of Serco Docklands staff at Woolwich Arsenal station kept premises open for as long as it was safe to do so, manning the doors to allow members of the public to safely seek refuge there as well as providing food and water. Once the station was closed, the team pro-actively arranged for a special train to be brought into the station to take stranded members of public to London City Airport and then arranged for taxis to take people home from London City Airport so they could avoid the rioting in and around Woolwich Arsenal station and the town centre.

During the 2012 Olympics the DLR, which connected so many of the east London sporting venues and was the mode most affected by the increased demand generated, played an exemplary role. It carried nearly 90% more passengers compared with the previous 'normal' year (this equated to carrying 11 million passengers throughout the Games period) and achieved a world class 99% reliability.

Future Challenges

The DLR's track record in increasing accessibility to and from east and south-east London, its role in regeneration across this large area and its ability to provide new capacity remain its challenges for the future as it is in the east and south-east London that half the capital's total population and employment growth will occur over the next 20 years.

The latest census showed that Tower Hamlets and Newham were the only authorities in England and Wales to show population growth of more than 20%, with the fastest growth of all being 26.4% in Tower Hamlets. In recent years east London has also led the way on growing its business bases. The latest census data from ONS shows Newham, Redbridge and Waltham Forest have seen the biggest relative growth to their business base, with each of these three boroughs outstripping the national average. Not surprisingly, the Mayor's London Plan has a particular focus on housing and employment growth in east London. Tens of thousands of new homes and jobs are planned and the sheer scale of this growth means a new part of London will be built. Further public transport capacity will have to be provided to support such developments if this area is to be shaped in a sustainable way. With almost half of households (46%) in inner London boroughs like Hackney and Tower Hamlets not owning a car, new public transport facilities are needed to facilitate transport accessibility. Furthermore, given the Mayor's Transport Strategy seeks to encourage an increase in the proportion of trips made by sustainable modes and that the east sub-region is expected to accommodate about half of the growth, the DLR will need to play a significant part in this.

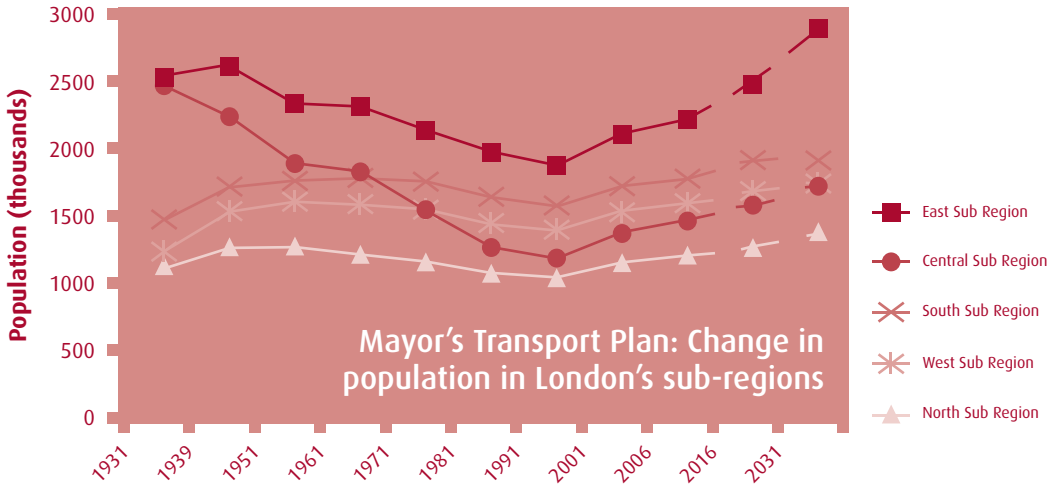
Future plans for the regeneration of the east and south-east London area extend beyond the end of the current DLR line at Beckton through Barking Riverside and further east into the Thames Gateway area. Government plans for this area include up to 20,000 new homes in the London Riverside area. Within this, the Barking Reach development (now called Barking Riverside) is a 324ha site situated between the A13 and the River Thames just to the east of the River Roding. By extending the DLR through the Barking Riverside development, this new community would be connected to other parts of east London such as the Royal Docks and Canary Wharf. Furthermore, an extension of the DLR to Dagenham Dock would provide an opportunity to serve existing and planned communities in this area and provide an interchange with other transport services at Dagenham Dock station.

Building Crossrail will clearly have an impact on DLR and its services. The most notable impact will be the rebuilding of Pudding Mill Lane station, because the Crossrail tunnel portal for the line to Stratford lies where the station currently is. As part of plans for Crossrail, a new station is under construction at Canary Wharf, located underneath the dock south of Poplar DLR station. This will also include an extension to the Canary Wharf development. Once the development is complete on the adjoining North

Quay site a direct link will be provided between the Crossrail Canary Wharf station and Poplar DLR station. DLR track to Stratford and between Royal Victoria and Custom House will both be relocated to accommodate Crossrail tunnel portals, and new platforms will be constructed at Custom House station. DLR's challenge will be to ensure that during these works it achieves the same minimal disruption to passengers and services that was evident during its recent upgrade programme prior to the Olympics.

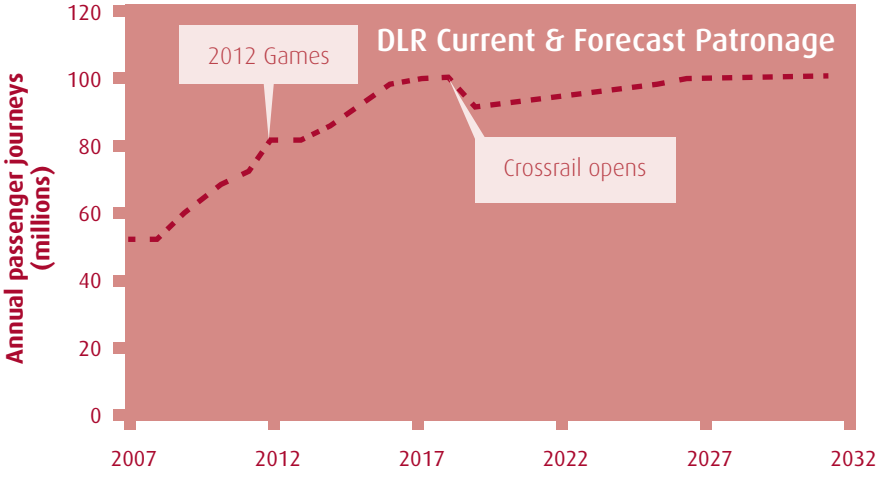
In the medium term, the DLR also needs to expand its Poplar and Beckton depots, its station capacity schemes at Shadwell and Canning Town along with life extensions of rolling stock. In the longer term, extensions to Hackney, Forest Hill, Victoria and Euston represent future, but uncosted, options. There are questions over whether expanding the DLR network at the same rate that has been achieved previously is financially viable.

Figure 15.5



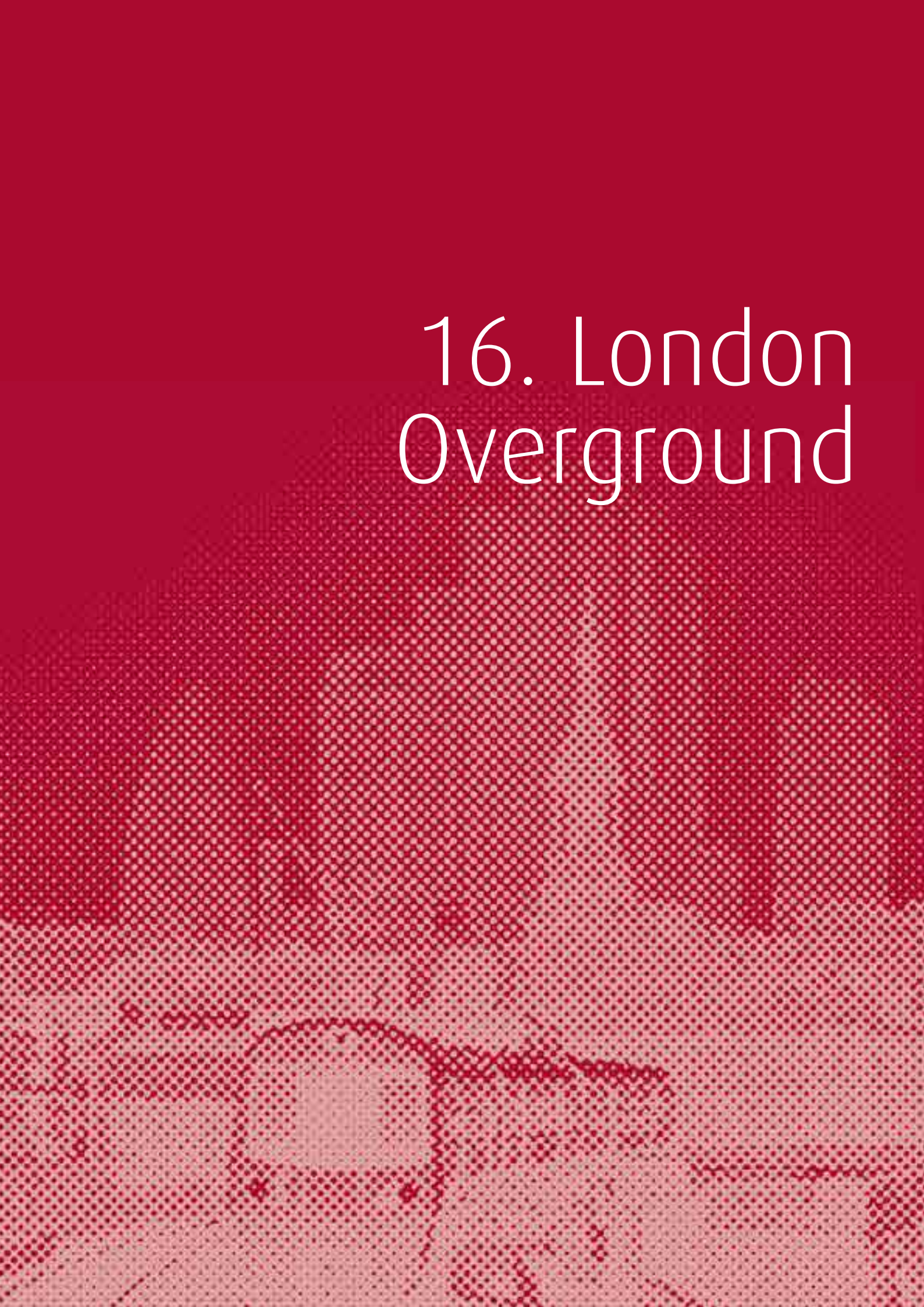
Source: Mayors Transport Strategy 2010

Figure 15.6



Source: TfL

16. London Overground



LONDON OVERGROUND

If you want stunning visual proof of the transformation that has taken place under TfL then look no further than the revamped Overground. 77% thought it was either excellent or good.

Figure 16.1 Transport Times Survey

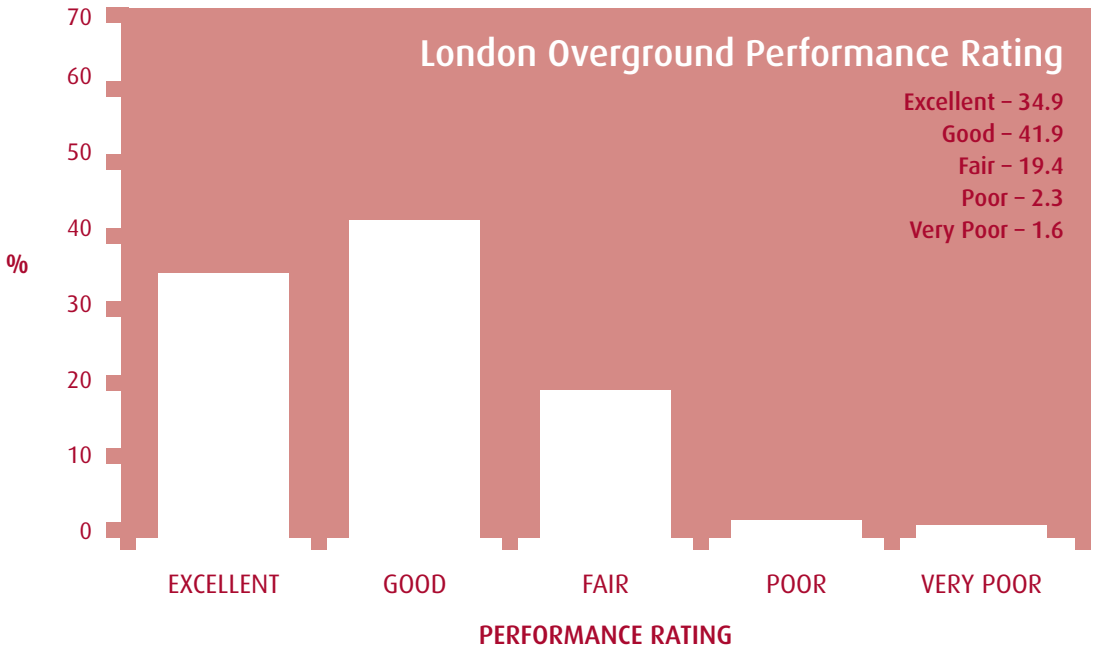
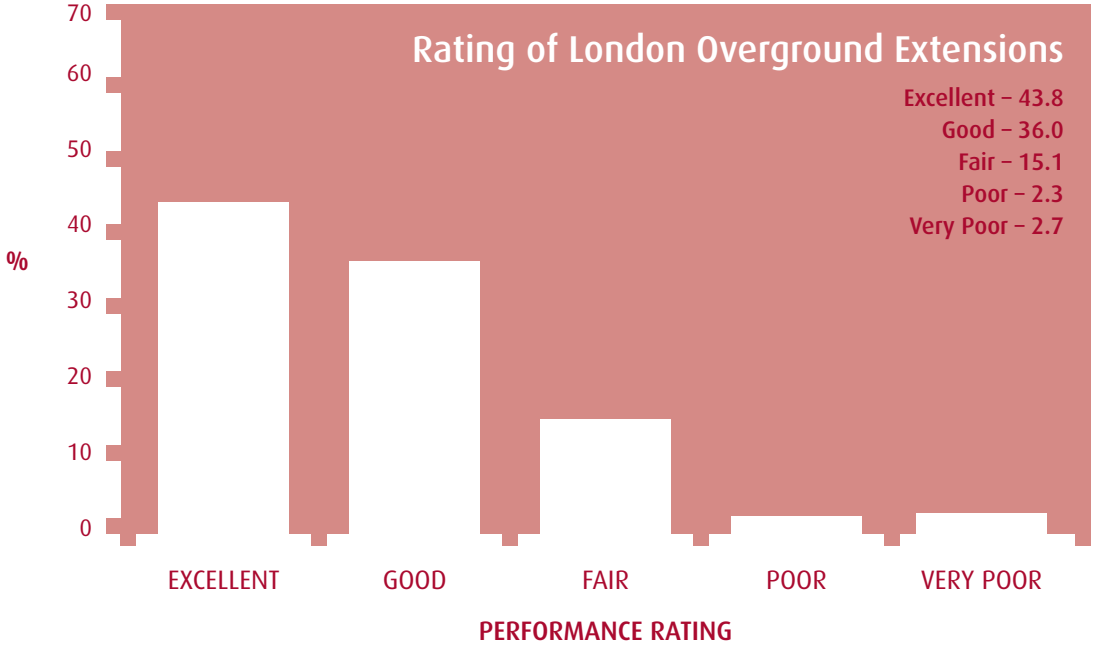


Figure 16.2 Transport Times Survey



In February 2006, the Department for Transport announced that TfL would take over management of services then provided by Silverlink Metro. This comprised services from Stratford-Richmond (the North London Line), Willesden Junction-Clapham Junction (the West London Line), London Euston-Watford Junction via Willesden Junction, and Gospel Oak-Barking. In September 2006, London Overground branding was announced, and it was confirmed that the extended East London Line, then undergoing a complete renovation, would also be included when it re-opened.

Tenders were invited to operate the service and a concession was granted to London Overground Rail Operations Ltd (LOROL), a joint venture of MTR and Laing Rail, in 2007. (Laing Rail was subsequently acquired by Deutsche Bahn).

TfL took over the franchise On 11 November 2007.

The concession is unlike the franchises granted to operators on national rail by the Department for Transport. TfL sets fares, procures rolling stock and decides service levels. TfL takes most of the revenue risk: it takes 90% of the revenue with 10% retained by the operator, which is responsible for revenue collection. Track and signalling remains the responsibility of Network Rail.

At launch, TfL undertook to revamp the routes by improving service frequencies, staffing all stations, improving station facilities, and introducing new rolling stock. Stations were staffed and Oyster pay as you go was accepted throughout the network from the outset. All stations were deep-cleaned.

In September 2009, a new station opened at Imperial Wharf station on the West London Line, between West Brompton and Clapham Junction. In April 2010, the East London Line became part of the London Overground network when the phase 1 extension to the line was completed. The former London Underground line had been extended northwards, mostly along the former Broad Street viaduct of the North London Line, to the re-opened Dalston Junction, and southwards to Crystal Palace and West Croydon along the Brighton main line. In February the following year, the line from Dalston Junction to connect to the North London Line at Highbury & Islington was opened.

By October 2010 new rolling stock had completely replaced the units previously operated by Silverlink.

A multi-million pound signalling renewal project allowed a substantial increase in service frequency, completed a year before the Olympics – the North London Line being one of the routes serving the Olympic Park in Stratford.

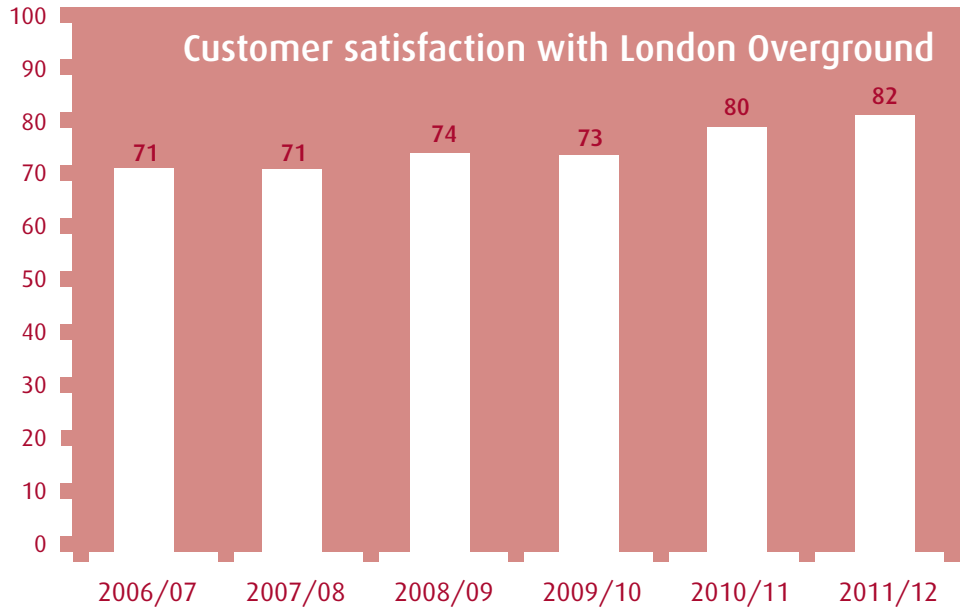
By November 2010 passenger numbers were ahead of forecast at 92,000 a day and the previously high incidence of ticketless travel between unstaffed stations under the former franchise had been eliminated.

In February 2009 funding, including £64m from the DfT and £15m from TfL, was secured for a link from Surrey Quays to Clapham Junction to complete an inner London orbital route, with construction beginning in May 2011. This opened in December 2012. It runs via the Network Rail Inner South London line and uses an alignment between Rotherhithe and Peckham which had been disused since 1911.

It was announced in February 2013 that five-car trains would be introduced by the end of 2015 to meet increasing demand on all Overground routes in a £320m programme which also includes the construction of longer platforms.

London Overground gained the joint highest passenger satisfaction rating (with C2C) of any franchise or concession in the UK, scoring 93% in the autumn 2012 survey by the independent watchdog Passenger Focus (published January 2013). This compared with an average of 85% for satisfaction in the London and South East region. Overall satisfaction with Overground journeys has consistently and markedly increased since TfL assumed responsibility for the service (Figure 16.3).

Figure 16.3



Source: Transport for London, Travel in London, Report 5 / TfL London Overground Customer Satisfaction Surveys, 2006/07 to 2011/12

Network Rail figures for period 10 of 2012/2013 (9 December 2012-5 January 2013), showed that the Overground had achieved 96.9% on the public performance measure (PPM) target for punctuality and reliability set by the ORR. The moving annual average PPM for the 12 months to 5 January 2013 was 96.8%[7].

Since TfL took over in 2007, demand on London Overground has grown by 160% in the five years to autumn 2012 on the "original" network (more than doubling from 2.57m per four-weekly period to 6.78m). When the East London line is included the demand has increased 280% (quadrupling from 2.57m to 9.83m per four-weekly period). 120m passengers have been carried in the last year (2012). The Clapham extension is forecast to add around a further 12 million passengers annually.

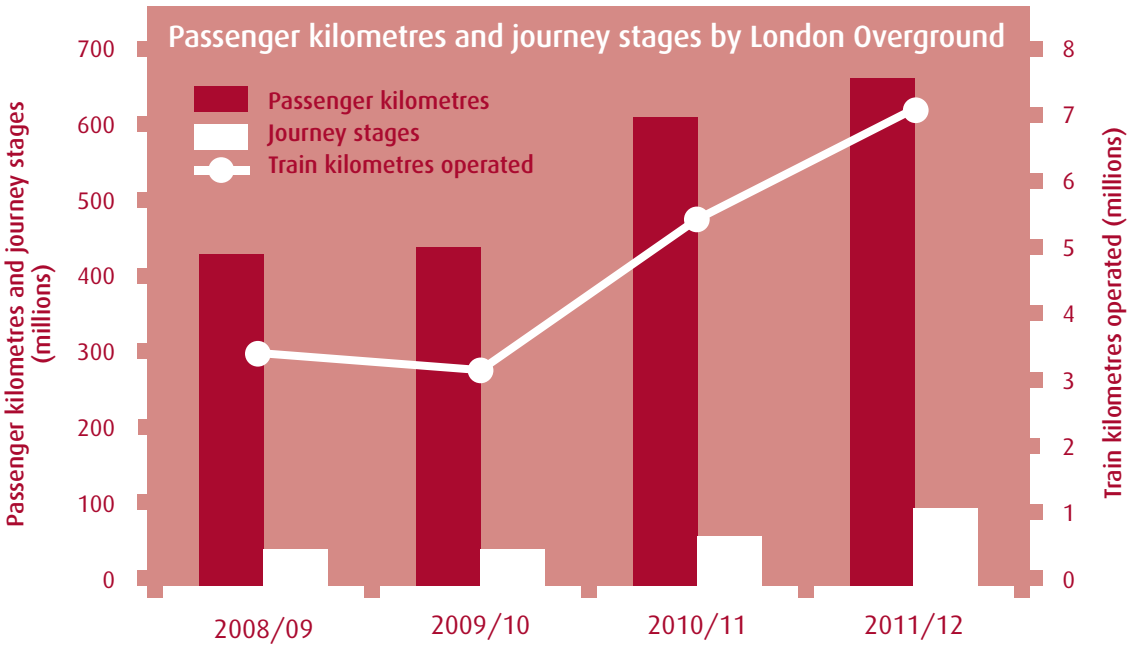
Transport for London's Travel in London Report 5 stated in 2012:

Since the first full year of operation of the London Overground in 2008/09, passenger kilometres have increased by 51%, with a 210% increase in passenger journey stages and a 109% increase in train kilometres operated. This reflects the comprehensive transformation of the network. In 2011/12 a major infrastructure upgrade project led to the introduction of the May 2011 timetable which provides four peak trains an hour from Stratford to Richmond and four peak trains an hour from Stratford to Willesden, and a 'turn up and go' service of eight trains an hour in the central section.

In 2011/12, passenger kilometres increased by 6% on the previous year, to 645 million and passenger journey stages increased by 91% to 103 million.

[7] Transport for London, Travel Report 5, TfL 2012

Figure 16.4



Source: Transport for London, Travel in London, Report 5 – TfL Service Performance data

Future challenges

Following the completion of the orbital route, TfL has expressed its ambition to operate several other suburban lines within the London area. In the next four years, six London-area franchises come up for renewal.

TfL's management of the Overground network demonstrates how a neglected and under-exploited service can be transformed into a real asset given a vision and the availability of funds to invest in improved services.

A report by the Campaign for Better Transport (CBT), Going Local, in February 2012 looked at the lessons for rail policy from London Overground and Merseyrail[8]. It concluded:

Our research has shown that London Overground and Merseyrail are successful rail operations and have improved significantly since the previous arrangements. Their performance in terms of punctuality and reliability is good, and the passenger satisfaction is among the highest on the rail network. They have also invested in and improved stations and trains, there are generally good staff relations and usage has grown significantly. London Overground and Merseyrail also have lessons to teach on revenue protection, station management, accessibility and other aspects of service quality.

CBT recommends locally specified concessions should be used more widely (and notes that the model is also expected to be used for Crossrail services).

Richard Brown's franchising report to Transport Secretary Patrick McLoughlin in January 2013, commissioned after the collapse of the West Coast main line franchise competition, also recommended the consideration of concessions in some circumstances[9].

TfL is already conducting advanced negotiations with the DfT over transferring the management of more suburban rail services. The Mayor's Rail Vision published in February 2012 specifically identified the highest priorities for devolution as being the Southeastern network inner-suburban services from Dartford, Sevenoaks and Hayes, and the West Anglia inner-suburban services from Enfield Town, Hertford East and Chingford.

[8] Going Local: Lessons for rail policy from London Overground and Merseyrail' Campaign for Better Transport, February 2013

[9] The Brown review of the rail franchising programme, DfT, January 2013

These come up for renewal in 2014. For these two franchises TfL estimated that the gross saving from the transfer of revenue risk was £100m over 20 years, which could be invested in improving customer service quality.

A report from the Transport Commissioner to the London Assembly in February 2013 reported on the progress of negotiations with the DfT[10].

The final Rail Devolution Joint Working Group with the Department for Transport was held on 13 December 2012. The group produced a joint report which concluded that there were no barriers to further rail devolution in the London area. Where complex issues were identified, possible mitigating measures have been suggested.

The preferred model for decentralisation is a stand-alone concession for relevant West Anglia and Southeastern inner suburban services. The review of rail franchising led by Richard Brown, chairman of Eurostar, is broadly consistent with this model. The Brown review recommends DfT carry out further detailed work to finalise devolution proposals by April 2013.

It is anticipated that an announcement will be made in April 2013, in line with the timetable set out in Richard Brown's report on franchising. It seems highly likely that the Overground approach will be extended to other London suburban services.

The challenge for TfL was expressed by consultant Jim Steer writing in Transport Times in March 2013. He said that TfL would need to demonstrate: "how it is going to respond to the responsibilities it may obtain for services that stretch into the adjoining parts of shire counties and ensure that the conflicting needs of longer distance services and London suburban services running over a very constrained network are reconciled."

There should be no objection to TfL gaining control of more rail services providing its approach avoids: "creating another franchise (which would add cost) or disrupting efficient train service provision. In other words, TfL's standards at stations and on trains and the Oyster card system et al should be capable of application within a wider franchise. But further prizes like the orbital Overground and, in due course, Crossrail, rely on operational separability and on the ability to create a memorable brand and service offer."

Steer also noted, however, that rather than handing part of the "underachieving national network" in London to TfL on a piecemeal basis, it would be both preferable and in the long run cheaper to: "take a strategic look at the big south London picture and develop a coherent service-led improvement plan."

An additional challenge will be the need to work effectively with Network Rail on upgrades to track and signalling, though this has been successfully demonstrated on the Overground so far.

[10] Transport for London Board 6 February 2013. Commissioner's Report

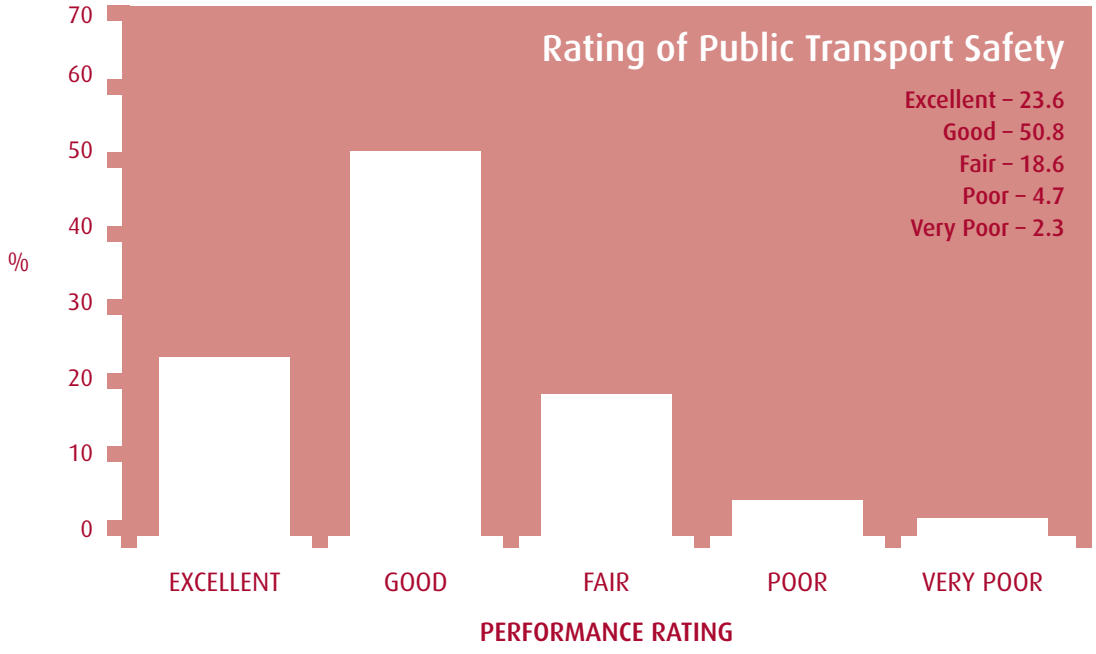
17. Safety of London's Travel Environment

SAFETY OF LONDON'S TRAVEL ENVIRONMENT

Progress

Public transport in London continues to be a relatively safe and low crime environment. Currently, over ten million passengers travel on the TfL's public transport services each day with very few of them ever experiencing or witnessing crime. Recent years have seen strong improvements to safety and security on London's public transport network. Reported crimes on or near the bus network reduced by 57% since comparable records began in 2005/06, while those on the London Underground and DLR have reduced by 48% over the same period.

Figure 17.1 Transport Times Survey



Over the last year, the levels of bus-related crime in 2011/12 were 9.4% lower than in 2010/11 and the rate of crime for the bus network has fallen to 9.3 crimes per million passenger journeys (from 10.5 in 2010/11). Crime on LU/DLR has also fallen during 2011/12, being 10.1% lower than in 2010/11, with the rate of crime also falling to 9.6 crimes per million passenger journeys (from 11.4 in 10/11). Crime on London Overground has increased during 2011/12 being 16.1% higher than in 2010/11. For the first time reliable passenger figures for this service are available yielding the rate of crime of 7.5 crimes per million passenger journeys; hence, despite the rise in recorded crime upon London Overground, the service has

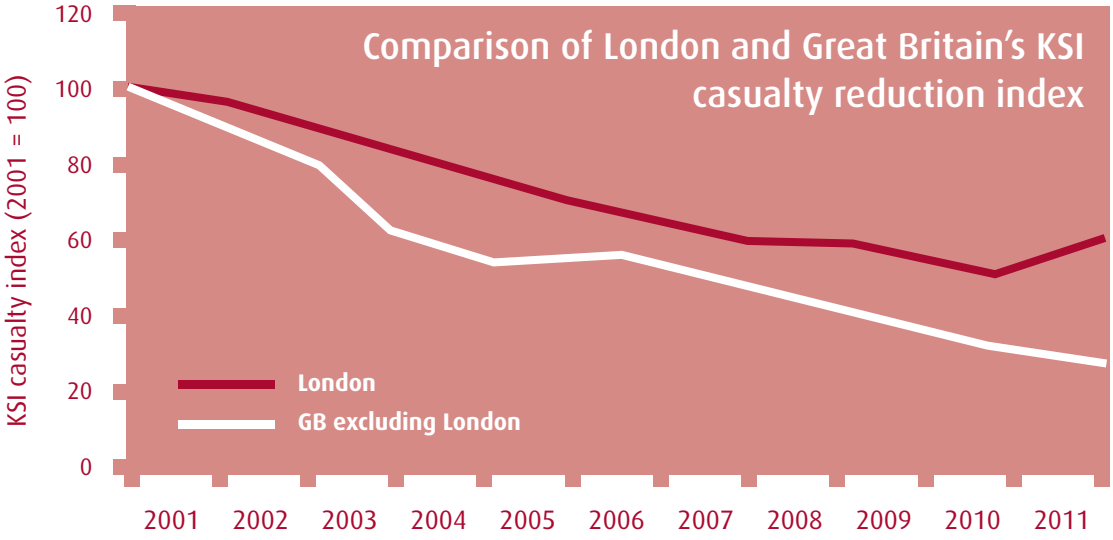
the lowest rate of crime of all TfL public transport services.

Transport for London monitoring shows people's perceptions of safety while accessing the public transport network have also improved.

Overall there are almost 2,000 Police Officers and PCSOs dedicated to the bus network in London – more than ever before. Funded by TfL, the Metropolitan Police Service's Safer Transport Command (STC) role is to fight crime on buses, tackle illegal taxi touts; and assist with the control of traffic congestion. There are 32 Safer Transport Teams (STTs) covering every borough in the capital which patrol on and around the bus network. There are around 700 British Transport Police officers (up from 470 in 2003) who undertake Tube-related police patrolling on London Underground and are underpinned by approximately 12,000 CCTV cameras.

London has also achieved substantial reductions in road casualties and collisions over the last decade. Relative to the rest of Great Britain, London's road safety record is a good one. There were 58% fewer people being killed or seriously injured on London's roads in 2011 compared with the average between 1994 and 1998.

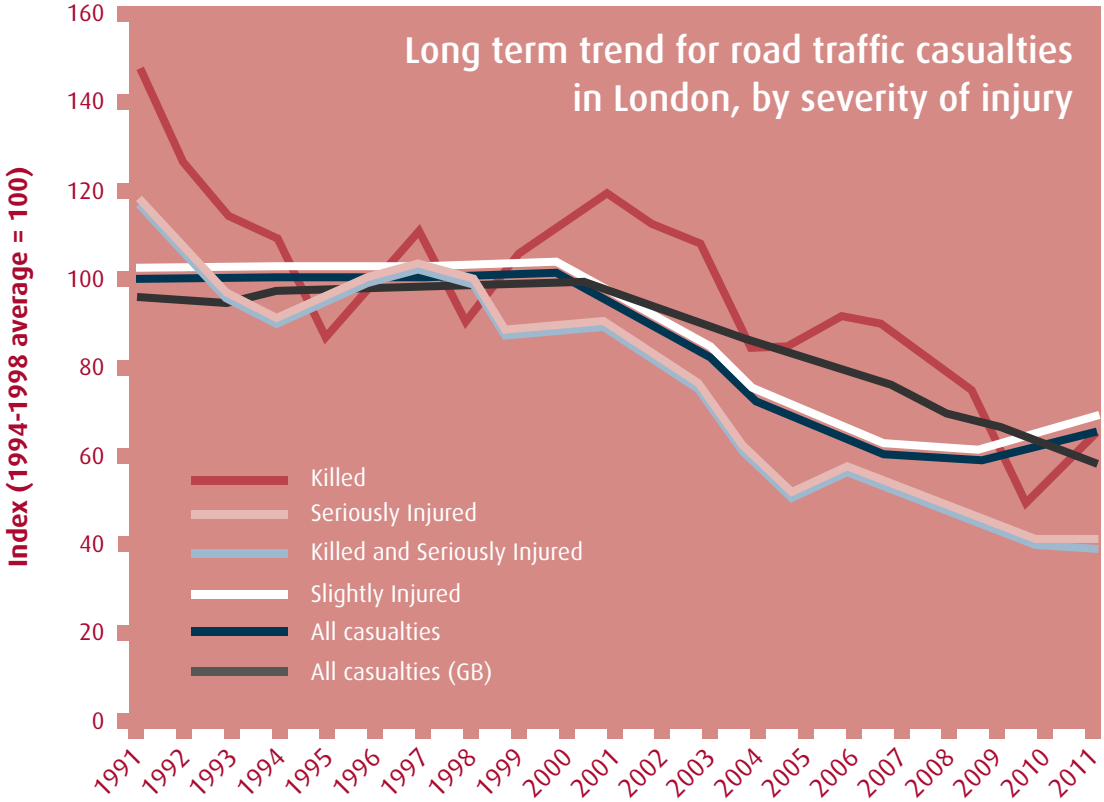
Figure 17.2



Source: The Mayor's Road Safety Action Plan for London: 2020

The previous casualty reduction targets had an end date of 2010. By this date, the number of people killed or seriously injured in road traffic collisions in the capital had fallen by 57%, the number of reported slight injuries had fallen by 33%, and the number of children killed or seriously injured had fallen by 73% compared with the 1994-8 baseline. This meant that 3,798 fewer people were killed or seriously injured on London's roads and 12,994 fewer slight injuries were reported in 2010 compared with the baseline years. Casualty reduction targets for cyclists and powered two-wheeler users, however, were not met. In 2011, the number of car drivers hurt or killed fell, however the number of pedestrians and cyclists killed and injured went up.

Figure 17.3



Source: Transport for London, Travel in London, Report 5 – TfL Delivery Planning, Surface Transport

More than half of all cyclist deaths in London are caused by collisions with heavy goods vehicles (HGVs) even though HGVs only make up 15% of traffic on London's roads. TfL, along with the London boroughs, is engaged in a range of schemes to improve HGV safety, involving retrofitting safety equipment, mandating cycle safety training and using levers such as minimum standards in procurement where their own vehicles and those of the contractors and sub-contractors they use comply with certain requirements regarding the safety of cyclists. One interesting innovation is the fitting of 'Trixie' mirrors to signal poles at road junctions. These convex mirrors give HGV drivers good visibility of any cyclists on their blind side.

The Mayor's new Road Safety Action Plan for London: 2020 proposes to establish a new target to reduce the number of people killed or seriously injured in London by 40% by 2020. The proposed new target will be based on the aim of reducing killed and seriously injured casualties from a baseline of the 2005–9 average which would reduce the number of killed and seriously injured casualties from 3,627 to 2,176 by 2020.

Future Challenges

While progress continued to be made in reducing killed and seriously injured casualties, in 2011 2,805 people were killed or seriously injured on London's roads. Cyclists and pedestrians killed or seriously injured (KSI) increased by 22% and 7% respectively between 2010 and 2011. Although TfL has sought to establish a natural, causal link between growth in cycling numbers and the rise in casualty rates, this is at odds with evidence from other cities in European countries such as the Netherlands and Denmark, which have experienced a drop in cycling casualties when

cycling numbers have grown and a critical mass for that mode has been established.

If future improvements are to be achieved in road safety, a strengthened commitment will be needed.

To achieve the target reductions set out in the Mayor's new Road safety Action Plan, particular attention will need to be paid to the road users who are over-represented in the casualty figures, in order to focus actions. Walking accounted for 2% of daily journeys, but 35% of KSI casualties in London in 2011. Powered two-wheelers accounted for 1% of daily journeys, but 21% of KSI casualties in London in 2011. Pedal cycles accounted for 2% of daily journeys, but 20% of KSI casualties in London in 2011 (see Cycling section for detailed focus on cycling safety).

One could suggest that if the same trends on the number of deaths of cyclists, pedestrians and those on powered two-wheelers applied to those occurring on public transport, there would be an outcry.

HGV safety is likely to be one of the biggest helps in reducing casualties and research has shown that taking health and safety as it is applied 'on site' to 'off site' is likely to lead to very material improvements in safety. This will require co-ordinated activity across TfL, DfT, HSE and the industry.

If the Mayor is to ensure that the capital is a safe and pleasant people-focused city to live and work in and to visit, then keeping citizens safe while they are travelling around it in the course of conducting their daily lives must be the top priority. It is therefore of concern that road safety spending compared with previously high levels of investment has declined in recent years. In this financial year (2012/13) funding amounts to £23m compared with 2008 when it was £59m. There are now a third fewer road safety officers compared with five years ago, with some London boroughs now offering no road safety provision at all.

The Mayor's current political mantra is the need to smooth the traffic flow. For pedestrians, this policy can result in longer wait times at junctions, fewer pedestrian crossings and re-sequenced traffic signals which give people less time to cross the road. For cyclists it can mean road layouts and junctions that facilitate faster vehicle speeds, which on a network characterised by constrained space makes conditions for cyclists dangerous (see Cycling section for more detailed focus on solutions).

Reducing the speed limit on London's road network is clearly one policy solution that would have an immediate impact on casualty levels, as it is a well established fact that reducing speed from 30mph to 20mph has a significant impact on level of injury and survival rates. The London Borough of Islington has been the first borough to introduce a 20mph speed limit on all its roads with a public consultation showing 61% support. Southwark and Camden have followed suit, with Hackney soon to extend the lower limit from its residential streets after accident numbers were halved as a result. In Munich, 80% of the road network has a 30km/h limit with some residential areas having even lower limits and in Graz, Austria, over 80% of the network has 30km/h limits. The GLA's Transport Committee believes implementing a borough-wide 20mph limit all at once would prove more cost-effective and have a more dramatic impact than the current piecemeal approach of individual 20mph zones.

As befitting a world Mayor, Boris Johnson must be prepared to enact decisions that may not be popular from a political point of view, but that are right from a policy perspective, and where the safety of Londoners is his utmost concern. Ultimately the most effective measures to improve safety on the roads will come from a reversal of political priorities to favour more space and time for pedestrians and cyclists, creating a calmer, safer and equally shared experience of the capital's roads.

18. Air Quality & Climate Change

AIR QUALITY & CLIMATE CHANGE

Figure 18.1 Transport Times Survey

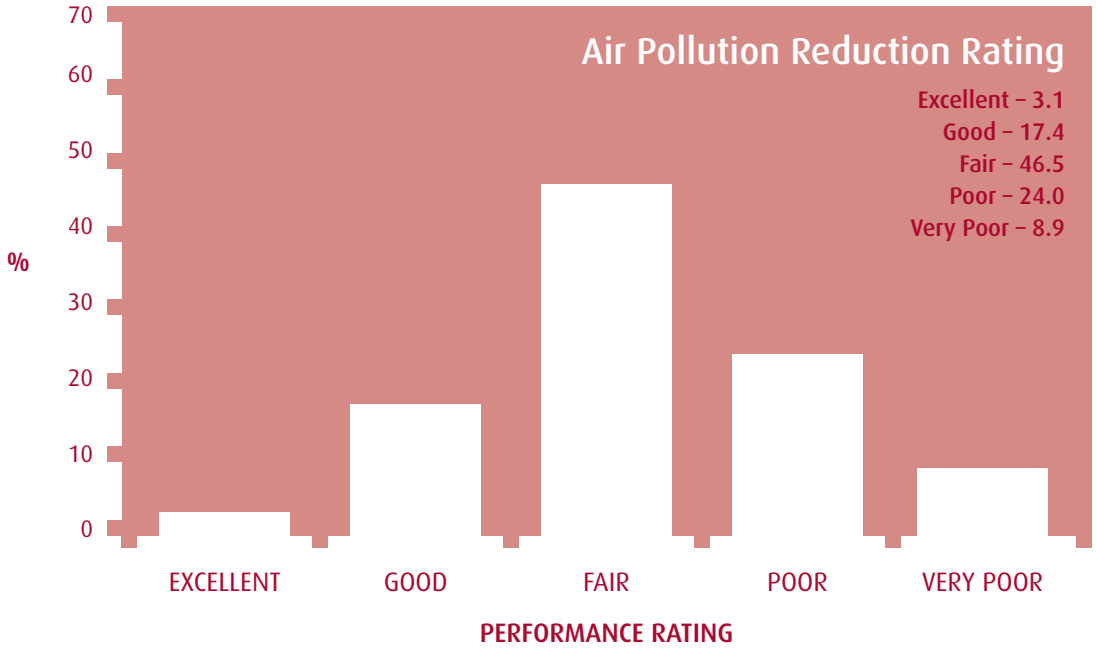
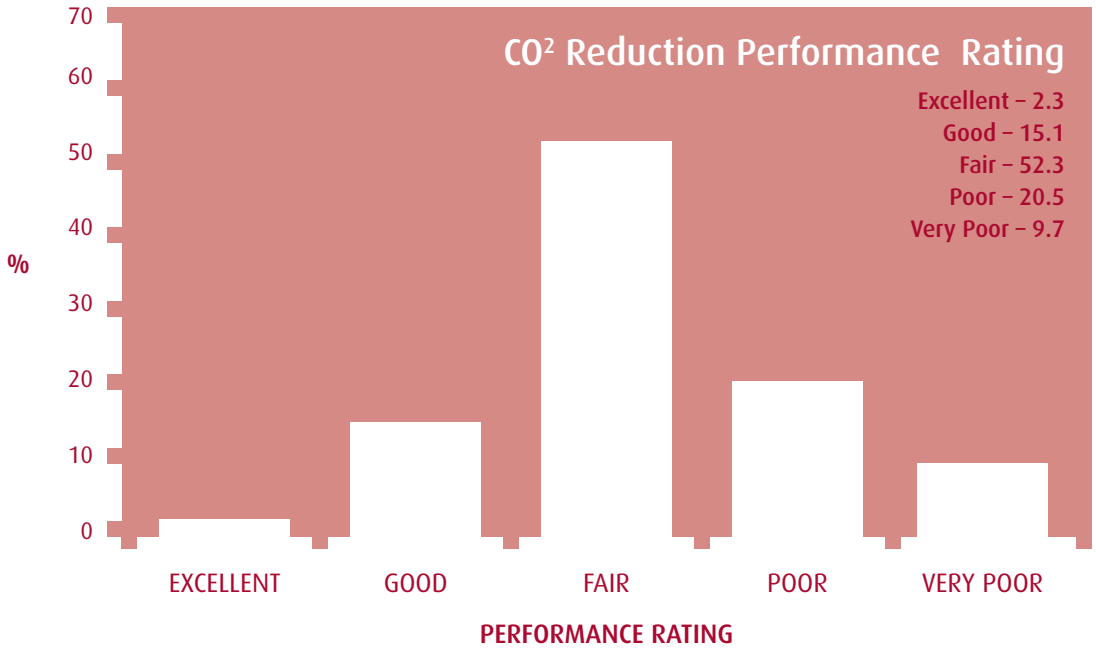


Figure 18.2 Transport Times Survey



Progress

While air quality (measured by levels of PM10 and NO2) improved under both Mayoralties of Ken Livingstone and Boris Johnson, the speed of real pollution reduction tailed off around the time the post of Mayor was first created in 2000. Almost 4,500 Londoners die prematurely each year because of the poor quality of air that they breathe. As for most of the UK and European cities, EU limit values for air quality are still widely exceeded in London and last year was one of the most polluted years in London since 2003. Transport currently accounts for almost a quarter of the city's greenhouse gas emissions.

When Ken Livingstone took office the capital had the worst air pollution in the UK and among the worst in Europe. More than one million Londoners lived in areas that exceed statutory air quality limits. Two-thirds of emissions of the most dangerous air pollutants in London came from road traffic. With this fact in mind, together with his target to reduce carbon dioxide emissions by 60% by 2025, he implemented two major policy tools to reduce the impact of traffic on human health and the environment. The first, in 2003, was the congestion charging zone for central London and the second, in 2008, a Low Emission Zone for Greater London.

The London Congestion Charging scheme is a road pricing scheme which charges vehicles to drive within a designated cordon within central London. Green vehicles which emit 100g/km or less of CO_2 and that meet the Euro 5 standard for air quality qualify for a 100% discount In its Sixth Annual Impacts Monitoring Report for London's congestion charging zone in 2008, Transport for London found that traffic in the zone had been cut by 14%. The beneficial environmental impacts of the scheme occurred between 2002 and 2003, which showed reductions of 8% to emissions of NOx, 6% to emissions of PM10 and a reduction of 16% in emissions of CO_2. Between 2003 and 2006, annual improvements from this source in central London were of the order of 6% for NOx, 7% per year for PM10 and 1% per year for CO_2. Over time therefore, and while valuable, the emissions benefits from the scheme became subsumed within the wider trend towards reduced road traffic emissions in London.

When Ken Livingstone launched the UK's first Low Emission Zone it made London one of the first cities in the world to have taken such a radical step to tackle air pollution and safeguard the environment. The scheme targeted heavy commercial vehicles that failed to meet strict emissions standards, charging them £200 to enter Greater London. Such a charge was designed to act as an effective incentive for operators to modify or replace dirty vehicles. The Mayor planned to make the zone more stringent by decreeing that light goods vehicles failing to meet standards would also be charged. Mayor Boris Johnson adopted these proposals (as well as the CO_2 reduction target) albeit with a delay of a year and a half, and the zone is now widely considered to be world class. Covering the whole of the GLA metropolitan area and all heavy duty vehicle classes and vans within it, the standards set are regularly tightened to drive further air quality improvements. Age limits have been set for taxis and minimum euro standards (Euro 5) for newly licensed taxis. However, further standards that were due to start in 2015 will now only apply to Transport for London's own bus fleet so that they will meet Euro 4 Standard or better, for NOx emissions by the end of 2015.

"The biggest challenge facing London Transport will be dealing with air quality issues. If this is neglected, EU penalties will start to be applied."

Nick Lester
Corporate Director, Services,
London Councils

The Low Emission Zone is likely to continue but as the compliance rate is already very high (>95%) it cannot make huge improvements in air quality on its own in the future. The Mayor has recently announced his plan for a new 'ultra low emission zone' where almost all the vehicles running during working hours are either zero or low emission. This will be a world first for a big city but will not be introduced until 2020.

As part of the continuing drive to reduce transport carbon emissions by greening London's bus fleet, in 2008 Boris Johnson commissioned a design for a New Bus for London which is the cleanest, greenest bus of its type. However its green credentials are slightly tainted given this model replaced the low floor articulated 'bendy buses' which were good prototypes for increasing bus use and encouraging mode shift through their ability to efficiently move large numbers of passengers while providing full accessibility and allowing quick boarding. The Mayor has converted one bus route to zero-emission hydrogen fuel. By 2016 over 1,600 hybrid buses, including 600 New Bus for London vehicles, will be running.

His £20m Air Quality Fund is also designed to help boroughs target new spending on local air pollution hotspots. All London boroughs and local businesses in partnership with the boroughs will be eligible to bid for the funding to develop innovative schemes to address air quality in localised areas. The Mayor has followed Stockholm's lead by trialling new measures such as dust suppressants which have reduced concentrations of PM10 emissions by up to 59% at certain sites.

Future Challenges

Although progress has been made on reducing the emissions of key atmospheric and greenhouse gas pollutants from transport, the reductions achieved so far fall short of those required if targets are to be met and if penalties from the EU are to be avoided.

While CO_2 emissions from ground-based transport fell by 4.2% between 2008 and 2010, the gap between London's total carbon-reduction targets and actual reductions between 2006-10 has widened each year, and significantly faster after 2008, when the carbon gap was 2.1m tonnes. By 2010 this had more than doubled to a 4.5m tonne gap. The original ambition for the Mayor's carbon-reduction programme was a 430,000 tonne reduction in 2012-2013, while only 64,000 tonnes are expected to be cut. While transport exhaust emissions of PM10 fell by 12.4% between 2008 and 2010, emissions of NOx only fell by 16.4% meaning London's air continues to exceed limit values.

The Mayor ambitiously committed himself to making London the electric car capital of Europe with his Electric Vehicle Delivery Plan in 2009 where he announced that 100,000 electric vehicles would be introduced "as soon as possible" and that an infrastructure of 25,000 charging points in public streets, car parks and shops would be built by 2015. The GLA's environment committee has stated that while there has been visible progress, there is much still to do on charging points and on the GLA's own car fleet. The committee found that to date only 588 extra electric vehicles had been registered in London. There are now 2,313 electric cars in the capital which represents 0.08% of the city's total 3 million cars. The Mayor revised the original target on charging points to 1,300 by the end of 2013 which also looks unlikely to be met. There are fewer than 50 electric vehicles in the Greater London Authority fleet compared with the Mayor's aim of 1000 by 2015. In both Paris and North East England, figures for EV charge points per head of population are better than London's. Additional measures are clearly needed to provide the stimulus for increased EV use in London.

A renewed focus is required on increasing the number of electric taxis, light goods vehicles and buses. Stockholm has one of the highest percentages of clean vehicles in Europe with 75% of its public transport network running on renewable energy. Several other cities across the world are also successfully operating electric buses: Seoul plans over 2000 by 2020 and the Italian cities of Genoa and Turin have already introduced them. Other necessary measures include making home charging infrastructure more accessible and for the GLA to lead by example.

Clean air is a major factor in making a city a safe and pleasant place to live, work and visit. Improving air quality offers a better quality of life and health for Londoners, as well as enhancing the city's offering to tourists and international investment. The current Mayor's environmental vision for the city is epitomised by his bold 'ultra low emission zone' where almost all the vehicles running during working hours are either zero or low emission. This will be a world first for a big city. However, given the progress still to be achieved, if the Mayor wants to establish London as one of the greenest, cleanest and most sustainable world cities, he needs to start to take more action over the short-term to make a significant impact on air quality and lower CO_2 and consider implementing the 'ultra low emission zone' earlier that the planned date of 2020.

Ultimately though, it is a reduction in traffic overall and an increase in walking, cycling and public transport that will best assist in progressing the capital's environmental status, which requires a strategy of further demand management in the near future as well as the prioritisation of space for sustainable modes.

19. 2012 London Olympics and Paralympics

2012 LONDON OLYMPICS & PARALYMPICS

Figure 19.1 Transport Times Survey

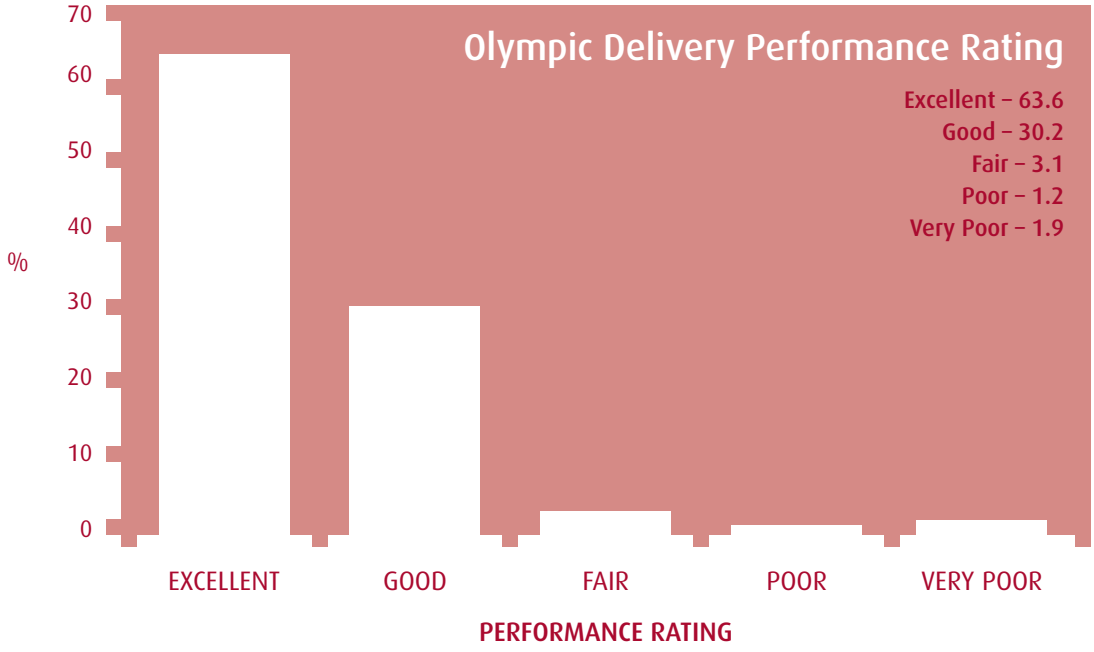
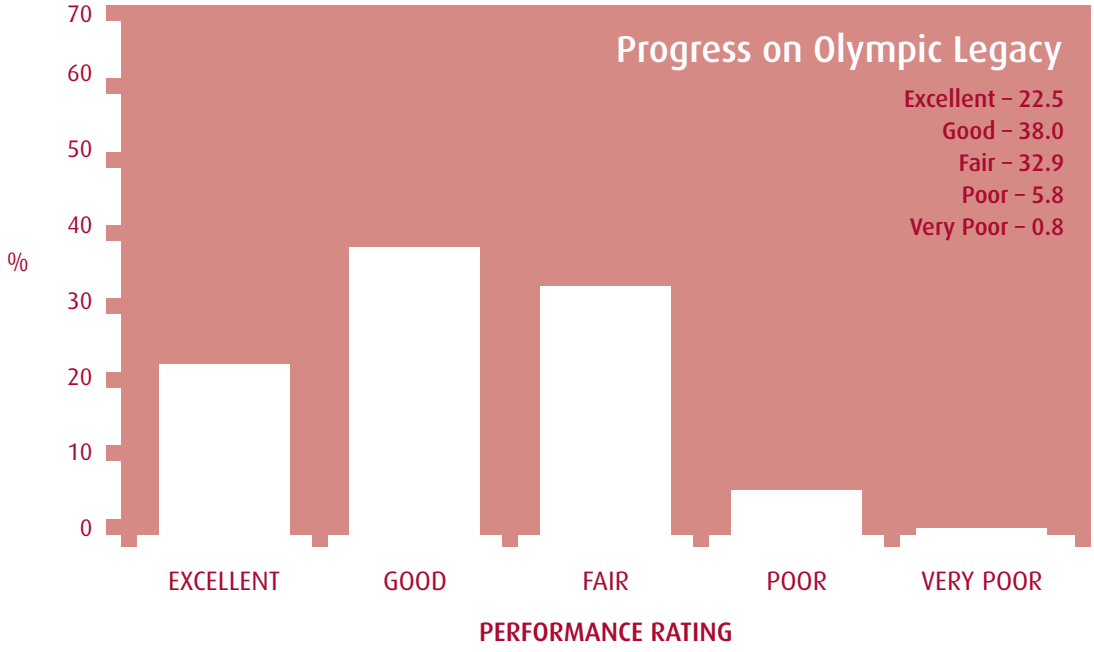


Figure 19.2 Transport Times Survey



What many critics had anticipated would be the main weakness of the London Olympics – transport – turned out to be one its main strengths. The performance of London's transport during the Olympics compares favourably with that of any other Olympic Games. It was a "Gold Medal" for operational performance.

"I have been truly impressed by the strength and depth of inter-agency co-operation that was developed during the preparation for the 2012 Games; this is a real legacy that should help to simplify the resolution of complex transport challenges in future."

David Mapp
Commercial Director, ATOC

The One Team Transport approach – which brought together all transport providers, TfL, Network Rail, train operating companies, the Highways Agency and logistics companies – was crucial to the success of London 2012. The highly successful Transport Coordination Centre will now be resurrected for future major events but its legacy of closer working is being made part of business as usual daily activities.

The London 2012 Games focussed on the complete journey experience of customers from beginning to end on public transport and roads, including step change partnerships with the freight and logistics industries. There was unprecedented partnership-working, record levels of operational performance and world-leading integrated marketing and communications programme, including highly successful travel demand management campaign 'Get Ahead of the Games' (where 30% of regular travellers did something different to avoid the hotspots while public transport carried record numbers of passengers). Active traffic management, flexible introduction and operation of the Olympic and Paralympic Route Networks and innovative signage are also part of the big legacy to take into business as usual operations.

During the Games the public transport networks carried record numbers of people. On the roads, while traffic was reduced in central and Inner London around the crucial Olympic and Paralympic Route Networks (the ORN and PRN), traffic in outer London was sometimes congested. Cycling was at record levels, and more pedestrians took to the streets.

- During the Olympics, more than 62 million journeys were made on London Underground – up 35% on normal summer levels.
- The DLR carried up to twice as many passengers as normal – almost 6.9 million journeys being made over the Olympic Games and 4 million journeys during the Paralympic Games
- London Overground saw around 6.4 million journeys during the Olympic Games – up 26% on expected summer levels.
- London Buses carried around 6.5 million passengers each weekday during the Olympics, and about 7.5 million during the Paralympics, while London River Services saw 44% more passengers than normal.
- On the roads, traffic levels in central London and other areas directly affected by the ORN and PRN were down, by up to 10% in central London against normal levels for the time of year and by up to 15% against 'typical' (non summer holiday) levels.
- Traffic in Outer London, which accounts for over two-thirds of London's traffic, was actually up slightly against normal summer levels – a pattern that suggests that Active Traffic Management was successful in reducing traffic around games venues in central London and diverting traffic to Outer London. However this resulted in traffic queuing in those areas of outer London where the SCOOT system had not been installed.
- Barclays Cycle Hire had 642,000 hires during the Olympic Games, and 442,000 hires during the Paralympics, 43% and 30% up respectively on levels that would otherwise be expected.

The number of cyclists on major roads was between 22% and 23% higher than would otherwise be expected for both the Olympics and Paralympics. In central London, increases of 7% (Olympics) and 17% (Paralympics) in pedestrian numbers were recorded.

In addition to running more services for longer each day and with record numbers of passengers, public transport operated reliably during the Games, continuing and in some respects surpassing the trend of improving performance in recent years.

- London fulfilled its promise as a host city to get athletes to where they needed to be, on time and in safety during the Games. A 95.6% level of journey time reliability for Games Family journeys was achieved for the Olympics and 97.8% for the Paralympics – against a target of 95%.

The evidence suggests that this travel demand management campaign was a major and unprecedented success. London's travellers and businesses adapted their travel to an almost optimal degree.

Re-timing of journeys was also much in evidence – again relatively small adaptations by many individuals and businesses making all the difference and freeing vital capacity at key times. For example, during the Olympics in central London, there was 13% more road traffic in the overnight period than normal, 13% less in the morning peak, 12% less during the daytime inter-peak and 11% less in the afternoon peak. This was seen to greatest effect for freight and servicing vehicles.

It is estimated that between 95 and 100% of Games-related trips used public transport – fulfilling the "public transport games" pledge. Indeed, there were high-profile reports of athletes abandoning their Games Family vehicles and using London's efficient public transport to get to and from Games venues. The extent to which this happened was both unprecedented and highly commended by the International Olympic Committee.

London 2012 Games Transport Legacy

The most visible Games legacy is the £6.5bn invested in new and improved transport infrastructure. This was completed a year ahead of the Games, providing an early legacy of better transport options, particularly for people living in east London, which will support population growth and economic development for generations to come.

Upgrades on the Tube, DLR and London Overground have also delivered more capacity, greater frequency and improved reliability for customers.

On the Tube, upgrades were delivered ahead of the Games on the Central and Jubilee lines, with the latter benefiting from an increase in capacity of around a third, linking central London with Canary Wharf, Stratford and successfully serving several key Games venues.

During the Games, the Tube carried over 101 million passengers – up by 28% on normal levels – including the most ever carried on a single day, 4.52m. Services were extremely reliable, with over 97% of scheduled services operated. The record levels of performance delivered during the Games have been maintained, with the Tube continuing to run more reliably and carrying more passengers than at any time in its history.

Ahead of the Games, the DLR benefited from an increase in capacity of 50% across the network. It carried almost 11 million passengers during the Games, up by 88% on normal levels, and continues to support the regeneration of London's docklands and east London.

The London Overground is unrecognisable from the railway that TfL took charge of just a few years ago. It also carried record numbers during the Games, up by 48% at over 10 million passengers. It has new signalling, trains and refurbished stations – many of them step-free. It is now a frequent and reliable metro service moving over 100 million customers per year and the recently completed extension of the East London line to complete its orbital route will further cement its legacy for London.

Better operation and performance of the public transport and road networks

Innovative maintenance plans and procedures were put in place before the Games, such as the Tube's Emergency Response Unit (ERU) travelling to fix signal, track and train problems in vehicles driven by the British Transport Police (BTP) under an emergency blue light to speed up response times.

Although the ORN and PRN were themselves temporary, there is a significant legacy both in the enhanced traffic signal capacity installed in and around the ORN and PRN (principally through additional SCOOT installations), and also in the experience of operating Active Traffic Management across London on a scale never previously undertaken. This experience will feed directly into the Mayor's Roads Task Force, which is currently establishing a long term vision for the development of London's road network.

Partnership working

In the planning and operation of transport for the Games, the UK's transport operators collaborated more closely than ever before. In advance of the Games the nationwide Games Transport Board, chaired by the TfL Commissioner, brought together all transport partners for unprecedented joint planning, providing the foundation for excellent operational performance.

TfL's relationships with the London boroughs and a wide range of other stakeholders, such as the NHS and places of worship, have also strengthened as a result of continued engagement prior to and during the Games. Links with businesses have also been strengthened as a result of the Games.

During the Games themselves, the Transport Coordination Centre (TCC) brought transport organisations from across the UK together to share information, work together in response to issues and incidents, and integrate communication with customers. The lessons learned from partnership working and the TCC

are now being applied by TfL through a new planning process for major events in the capital, growing in number following the success of the Games.

Volunteering

Volunteers – whether London 2012 Games Makers, London Ambassadors, TfL's Travel Ambassadors or Network Rail's Travel Champions – were one of the great success stories of the Games.

TfL Travel Ambassadors have already been used during the recent festive period and TfL will continue to roll them out on the transport network for large event like Notting Hill Carnival.

Freight and logistics

TfL worked closely with businesses and freight operators in advance of the Games, supporting innovative approaches such as out-of-hours deliveries, to ensure shops, restaurants, hospitals and others could remain stocked and serviced during the Games.

It intends to build on this success after the Games using the partnerships established through the Freight Forum. Specific tools such as the Freight Journey Planner will also be maintained to support freight and other road users, and to help prioritise kerbside access during peak periods for buses and cyclists.

Travel demand and communication with businesses and customers

One of the key reasons the transport network operated so smoothly during the London 2012 Games was that businesses and many Londoners followed the advice of TfL, London 2012 and transport partners to change the way they travel, avoiding the busiest times and places.

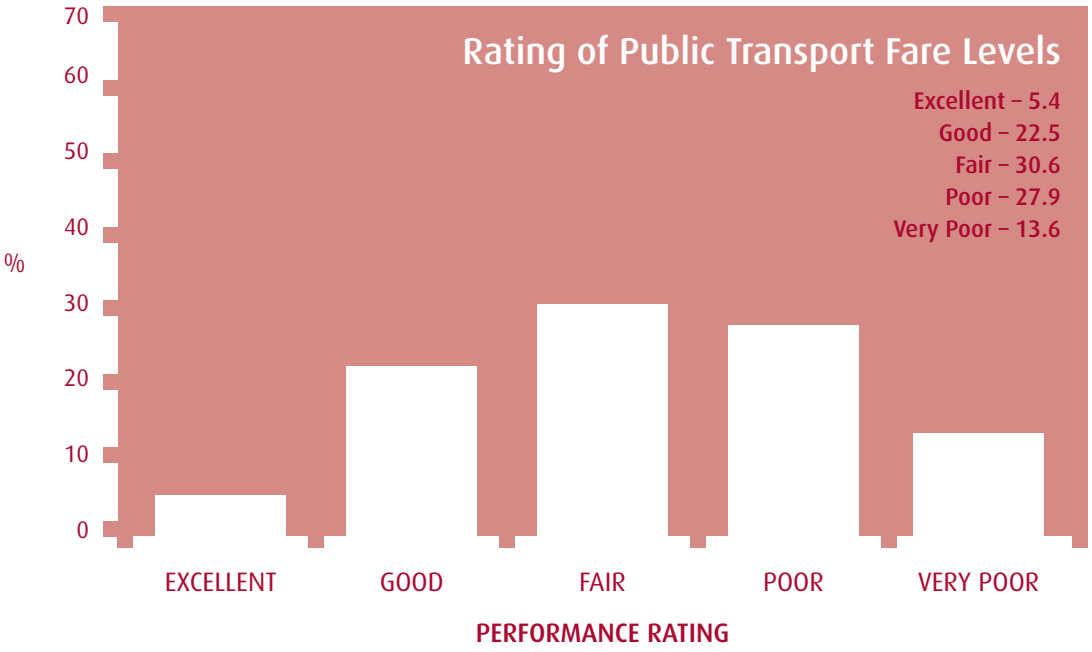
TfL is learning the lessons from the Get Ahead of the Games demand management campaign, to see how communication and relatively modest changes in behaviour could help make the most of the available capacity on transport networks.

Travel demand management will also provide benefits during planned closures of the Tube or rail network for upgrade works, such as the major upgrade of London Bridge station, which TfL and Network Rail are working together to address.

Much greater and more effective use was made of digital and social media channels (particularly Twitter) for the provision of real-time travel information and advice during the Games. TfL has continued to build on this provision post-Games, improving the level of information provided on the road, rail and bus networks and adding further channels. TfL now has over 317,000 Twitter followers.

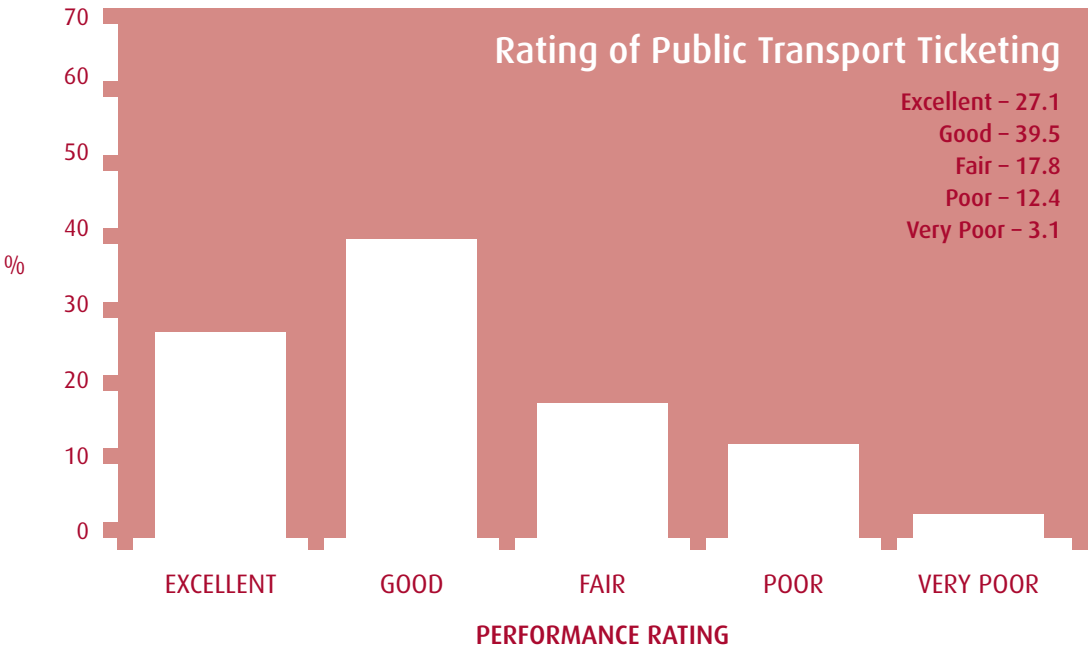
20. Customer Service, Information and Ticketing

Figure 20.1 Transport Times Survey



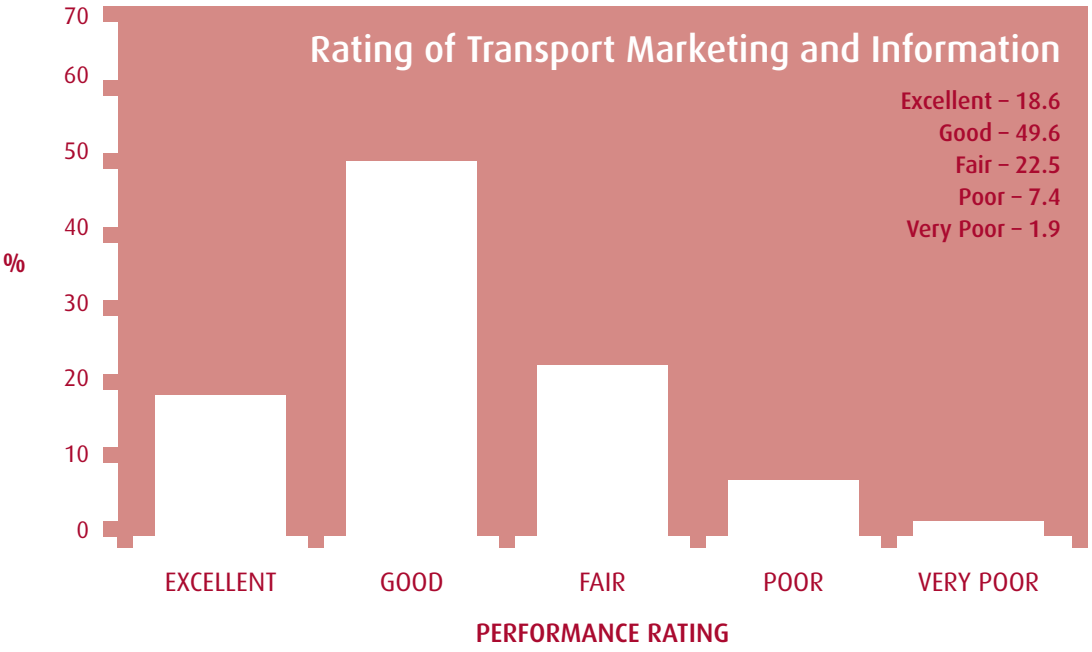
Both Mayors have had to increase fares above inflation to fund investment. 42% thought fare levels were either poor or very poor.

Figure 20.2 Transport Times Survey



67% thought this was either excellent or good. I voted for excellent.

Figure 20.3 Transport Times Survey



68% thought it was either excellent or good. One of the most improved areas of service delivery in the last few years.

Progress

Transport authorities are often so preoccupied with operational delivery that they neglect customer service. This is not a criticism that can be levelled at TfL in recent years as it has made significant improvements to how it interacts with its customers. This has put it at the forefront of transport authorities in the world who can genuinely claim to be "customer focused".

At a corporate level TfL has set itself ambitious goals in its relationship with customers. It believes that its customers want reliable services and information; consistent delivery day-to-day and across all areas; personalised service; and a service that is safe, secure and accessible. Customers should believe that they are getting value for money and should have confidence in the ticketing and fare systems, and that TfL is working to improve their journey. [1] What our customers want – TfL document.

Within an overall goal of "delivering a transport system than secures London's position as a world-leading city" TfL's strategy is to demonstrate that every journey matters. Its people will be accountable and will actively seek solutions to problems. It will deliver safe, reliable, clean, sustainable and accessible transport; and it will continually ask "can we do this better, simpler, or cheaper, delivering value for money to help secure continued funding for major infrastructure improvements.

It aims to achieve consistently improving standards of operational performance, deliver its investment programme on time and to budget, and will continually strive to be collaborative, innovative, lean and integrated[11].

It is now turning around all customer queries much faster than it has ever done before – 65% of correspondence is answered within 24 hours (the remainder needs deeper investigation and so takes longer). It has also adopted a much more empathetic tone with customers and assumes that, if people take the time to complain, then TfL has probably got something wrong along the way.

[11] The Transport for London story – TfL document

"No other change or innovation has so dramatically changed passengers' lives or willingness to use the system as the Oyster card. Oyster had a bigger impact on bus usage than the frequency improvements, in my opinion. Given the complexity of the Tube fare structure, the development of Oyster on the Tube was a world best management change."

Tim O'Toole
Chief Executive, FirstGroup Plc

The quality of its information provision has improved with real-time information across all modes (including on system/on train announcements, and Countdown on the bus network). It should also be credited for its iconic mapping, signage and design which help improve the quality of experience for millions of customers.

TfL is making an already hugely popular website even more useful so that customers can personalise their view of TfL in the way most convenient to them. This will be based around a "mobile first" approach recognising that customers increasingly want their information on the move (especially with the advent of Wi-Fi on the Tube).

It has a customer relationship management database of around 4.5 million email addresses which it uses to send tailored travel information on the roads and public transport to its customers – it knows the main stations its customers use and is able to target messages accordingly.

Real-time Twitter feeds cover virtually every service and road and, within that, every Tube and rail line. It has over 317,000 followers of these feeds (many of whom, such as the BBC, have many thousands of followers themselves for retweets), which is probably the largest following any transport authority has in the world. These are invaluable sources of information, particularly at times of disruption.

It runs a whole range of information campaigns for customers. These include Safer Travel at Night, Check Before You Travel and numerous others. These are delivered in a completely integrated way, combining research, marketing, social media, media relations and stakeholder management. The transport communications strategy for the Games and LU150 are examples of this fully integrated approach. The team has won numerous awards for the outcomes they have delivered.

Transport for London's open data policy is also world-leading. It now has over 5,100 takers of its real-time information feeds whereas National Rail Enquiries has achieved a community about 4% of that size. This filters through to the apps themselves creating diversity, choice and competition. There are several hundred London Tube related apps on the Google Play store alone for example. Some of these apps on their own, have delivered several million downloads and have over 1 million active users. Apps built with TfL open data represent good value for money with apps typically retailing at under £1 (and many are free) while apps featuring NRE data typically retail at between £2.50 and £5 according to a recent ORR report. This disparity seems to be generated by the levy made on the sale of each app by NRE of around £1.50.

One of the factors encouraging the reversal of a long-term decline in patronage during the mid-1980s on London Underground was the introduction of a simplified zonal ticketing system and Travelcards which allowed unlimited travel on the Tube, buses and, later, on rail services for periods from a day to a year.

By the mid-1990s, passenger numbers had increased to the extent that gatelines in many central London stations were operating at maximum capacity at peak times, leading to congestion. In many cases there was insufficient space to extend the gatelines without embarking on inordinately expensive station alterations.

The Oyster card – a credit-card sized stored value contactless smartcard – was a response to this. The electronic card could be processed faster at the entrance and exit to stations than a paper Travelcard, which had to physically pass through a mechanism in the gate in order to be read. It allowed TfL to increase passenger throughput at congested stations without the need for physical alterations to the station itself.

Oyster satisfied another important goal of TfL, to reduce the cost of collection revenue. Pre-Oyster this stood at more than 14p in the pound; it is now around 10p in the pound. It also provides a wealth of information for TfL about passengers' travel habits.

Oyster also allowed the introduction of daily capping so that passengers no longer needed

to make a decision in advance about whether they would undertake enough trips in a given day to warrant buying a one-day Travelcard. Instead if the sum of the cost of the individual journeys reaches the price of a Travelcard, Oyster automatically applies a cap at that level and all subsequent trips are free.

Oyster was launched in July 2003 under a £190m PFI contract signed in 1998, initially for Travelcards only. Pay as you go was added in 2004 with capping following in February 2005. Freedom passes for the over-60s have been issued on Oyster since 2004; Oyster photocards, allowing free travel on TfL services for students over 18 and children under 18 were introduced in 2005. Oyster was extended to national rail stations in London in 2010.

For the passenger, Oyster allowed the user to top up pay as you go balances online. Journey history can also be viewed online or at ticket machines on TfL stations and passengers can have regular journey statements emailed to them. Once registered on the TfL website, if a ticket is lost it can be cancelled and any Travelcards or pay as you go balance transferred to a new card – this is a considerable advantage over a paper card, given the considerable cost of an annual Travelcard, for example.

Oyster has been a great success. By June 2012, 43 million had been issued and Oyster accounts for over 80% of all public transport journeys in London. Take up has been encouraged by a steadily widening gap between Oyster fares and their cash equivalent (a single cash bus fare in 2013 is £2.40 to Oyster's £1.40).

A disadvantage, particularly since the extension of the system to national rail where card readers rather than gates were installed at most stations, is the prevalence of touch in or touch out errors. Passengers must touch the card against the reader at the start and end of a journey and at interchanges to be charged the correct fare. If they fail to do this the journey is deemed incomplete and a maximum fare is charged. The maximum fare can be reclaimed by contacting the Oyster helpline; recently it has become possible to do this online for one instance per month. In 2011, London Assembly member Caroline Pidgeon obtained figures from the Mayor of London which revealed that in 2010, £60m had been taken by TfL in maximum Oyster fares.

TfL is currently in the process of introducing the next phase in the rapid evolution of ticketing with the introduction of payment by contactless EMV bank card, initially on buses, from 13 December 2012.

Where accepted in shops the new cards allow payment for sums up to £20 in total by touching the card against a reader, with no need to enter a PIN. On transport the cards are touched on the reader in exactly the same way as an Oyster card. Their use by TfL has been made possible by advances in and the reducing cost of communication technology, and the fact that banks are issuing customers with the new EMV contactless card as standard as their existing credit and debit cards come up for renewal.

For TfL's initial phase each journey is charged separately and there is no daily capping. In phase two, due for completion by the end of 2013, bank card payment will be extended to other modes and both daily and weekly capping will be introduced.

From phase two, passenger journeys will be stored in a back office system and the total calculated and charged to the customer's account on a daily basis. For the customer the advantage is said to be the convenience of not having to carry a special card for transport, and eliminating the need to buy a ticket or top up the card before the start of a journey.

Bank card payment means people will never again run out of Oyster credit (which 30-40,000 customers do every day); and refunds will be able to be made directly to bank accounts immediately without the need for the customer to "pick up" the value next time they use their card at a designated station within a certain time limit.

For TfL the advantage of the new card is that the organisation becomes a "merchant" in the same way as a retail outlet, avoiding the cost involved

in maintaining a system for adding products to millions of Oyster cards.

In Oyster, transactions and journey cost calculations take place between the reader and the card and are limited by the card's storage capacity and processing power. Under the new system they will take place in the back office, allowing more sophisticated calculations to take place. Weekly capping is the first example of this. In the future incentives to travel off-peak, for example, could be added.

TfL has undertaken to keep Oyster available for those who prefer it. Research has shown that the most common reason for not wanting to use a bank card on public transport is that the user is on a tight budget and wants greater control of what funds are taken out of the account.

TfL can justifiably claim to be world-class in the area of ticketing. It has consistently adopted ambitious and cutting edge solutions – Oyster and contactless bank cards – on a scale unmatched anywhere in the world.

This puts it in the forefront of operationally efficient fare collection. With the vast majority of passengers on smartcard technology, bus boarding and throughput at stations is more efficient. Visual inspection of tickets has been eliminated. Pay as you go has eliminated ticket types that require a high ratio of sales to trips made, such as single tickets.

In addition ticketing is highly integrated across most of the modes operated by TfL (except river boats, cycle hire and the Emirates cable car) and including private rail operators.

Future challenges

Since the introduction of Oyster, the number of journeys in which interaction with ticket office staff is needed has dropped to one in 20. TfL plans to close some ticket offices and redeploy station staff to assist passengers in stations has met resistance from trade unions. TfL will need to continue to push for this to make the most efficient use of resources.

In some parts of the UK the introduction of free concessionary travel for the over-60s has resulted in concessionary users forming the dominant group of passengers on buses outside peak hours. The consensus from our round table discussion was that this is not a problem to the same extent in London, where bus patronage is generally higher, and 40% of users still pay the full fare. Concessionary users tend to travel at off-peak times when buses are not crowded. However concessionary users are believed to be a factor in a rise in the proportion of shorter journeys, and a group that does add to crowding on buses at peak times is children travelling to school. There was some support in the round table for restricting free travel, particularly for short journeys, to this group.

It has been suggested that LU could be more commercially-minded and raise more revenue by introducing bigger fare differentials between peak and off-peak travel. At present a distinction between peak and off-peak is made in single fares on the Underground and one-day Travelcards. Oyster pay as you go fares, except on buses, are also higher in the peak than off-peak and a higher daily cap applies if any trips are undertaken in the peak. 7 Day, Monthly and Annual Travelcards make no distinction between peak and off-peak.

Off-Peak Day Travelcards can be used from 09:30 Monday to Friday and all day Saturday and Sunday. Peak Oyster single fares apply from 06:30-09:30 and in the afternoon from 16.00-19-00 Monday to Friday. However travel into Zone 1 on Tube, DLR, London Overground and some National Rail services between 16:00 and 19:00 on Mondays to Fridays is charged at the off-peak rate.

Differentials between peak and off-peak are greater on Oyster pay as you go fares which include a National Rail element than those on TfL infrastructure alone.

Considerable outcry has greeted recent above-inflation fare rises, so it could be reliably assumed that any proposal to increase the difference between peak and off-peak fares would be even less popular. In addition, to a greater extent than other networks, transport in London is vital for getting people to work.

Higher off-peak fares would face criticism for making it potentially more difficult for people on low incomes to gain access to employment, which would make it particularly unwelcome given the prevailing economic climate of the last five years.

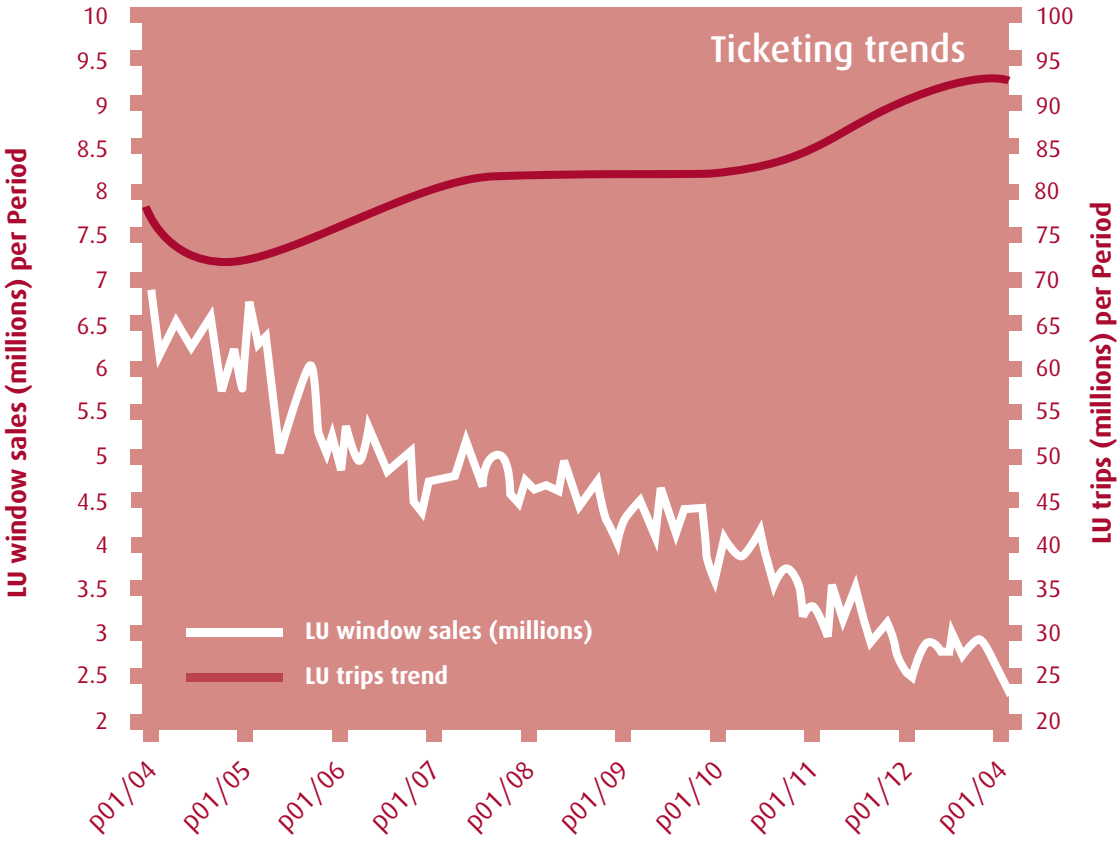
There was support in the round table discussion for the view that transport in London fulfils a social need. There was more support for creating a differential by reducing off-peak fares and one participant pointed out that London has enormously long and under-used (outside the peak) suburban approaches to the centre. The new ticketing technology currently being introduced allows for incentives to be provided to encourage the use of these lines for leisure purposes much more.

Ticketing technology has diversified immensely in recent years and involves transport operators making considerable investment to keep pace, and to provide for whatever preference users may have.

In TfL's case Oyster readers have been upgraded on buses and are being upgraded over the rest of the networks it is responsible for (including on national rail) – a total of 23,000. At the same time the readers are being made compatible with ITSO smartcards.

The new readers will also be able to communicate with mobile phones when it becomes possible to use these devices as EMV bank cards. However in future TfL is likely to be faced with continuing decisions over which ticketing technologies to invest in and support.

Figure 20.4


Ticketing trends
LU window sales (millions) per Period
LU trips (millions) per Period
10
9.5
9
8.5
8
7.5
7
6.5
6
5.5
5
4.5
4
3.5
3
2.5
2
100
95
90
85
80
75
70
65
60
55
50
45
40
35
30
25
20
LU window sales (millions)
LU trips trend
p01/04
p01/05
p01/06
p01/07
p01/08
p01/09
p01/10
p01/11
p01/12
p01/04

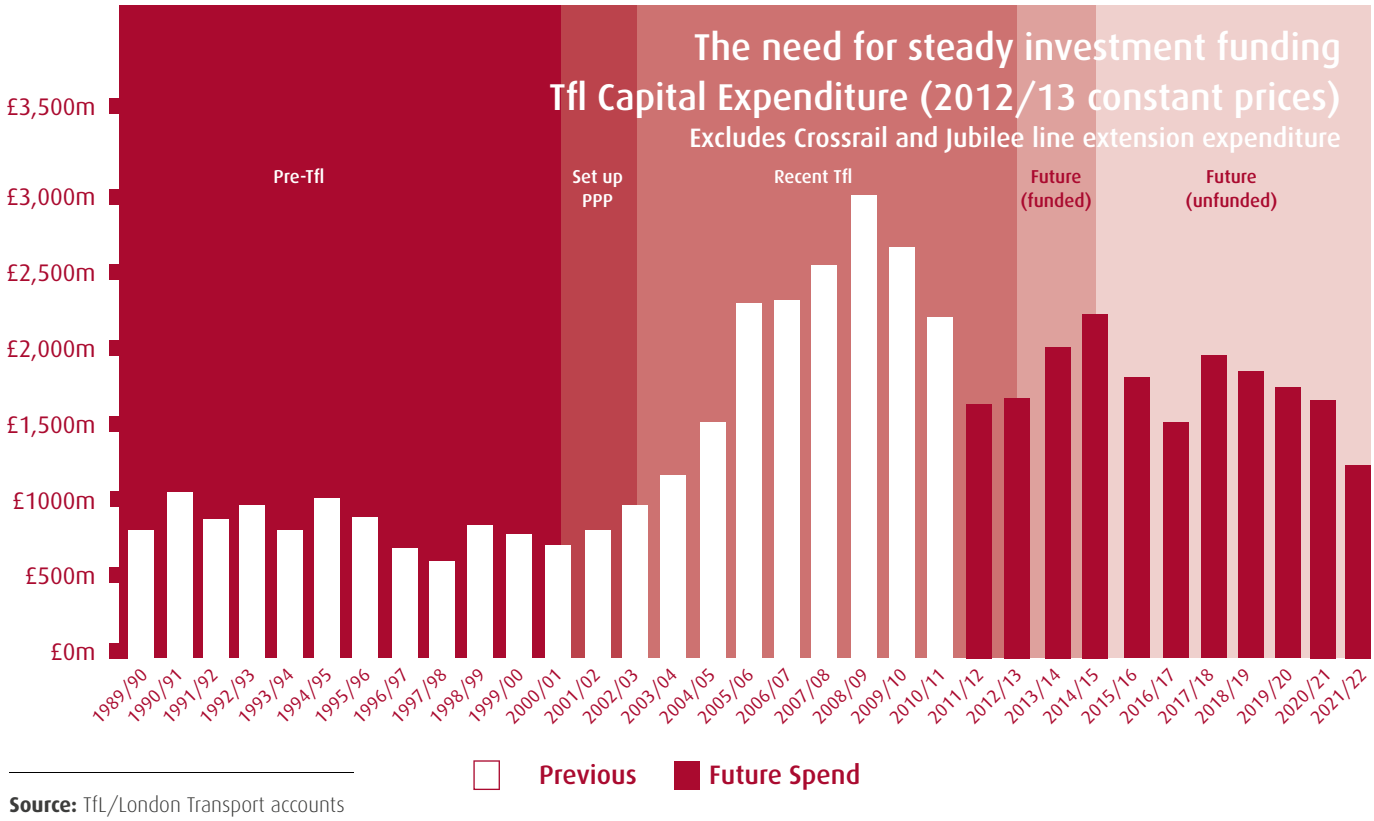
21. Funding & Finance

FUNDING & FINANCE

Progress

London's transport infrastructure had been neglected prior to the establishment of TfL in 2000. Not only was there a failure to increase capacity in line with growing demand but the assets had been neglected and failed to be maintained properly.

Figure 21.1



Source: TfL/London Transport accounts

While the deficiencies in the PPP have been well documented it did provide certainty on long term funding for the tube and it ensured that the Treasury had responsibility for funding.

Figure 21.1 sets out TfL's (and prior to 2000, London Transport's) past capital expenditure and proposed plan in constant prices. The expenditure related to the construction of Crossrail and the Jubilee line extension has been removed to provide a clear basis for comparison of investment in TfL's core network.

The graph demonstrates that, prior to the creation of the office of the Mayor of London and TfL, funding was inconsistent and at a level insufficient to maintain and renew the asset base.

TfL, supported by business organisations such as London First, CBI and British Chambers of Commerce have been very successful in winning the argument with Whitehall on the importance of transport investment to the economy. The debate has moved on considerably in the last decade. This has been of benefit to the rest of the UK in elevating the importance of transport.

TfL have demonstrated a high level of competence on finance and business panning. They have been innovative and successful in borrowing smartly through bond issues as well as in their investment plan which has reduced costs internally and given suppliers stability to create jobs.

Future Challenges

To continue to keep pace with the projected population growth with new capacity and maintain assets in a good condition, TfL's capital requirement is between £1.5bn and £1.8bn per annum.

There is a compelling case for the Treasury ensuring that TfL has the ability to spend this sum in future years to maintain the asset base. It is imperative that London does not revert to stop-start investment in infrastructure as this creates huge uncertainty for the supply chain.

The public sector is able to borrow cheaply and is the most efficient and cost effective source of finance to fund this investment. However if the squeeze on public finances makes this difficult then alternative models such as the regulated asset base (RAB) approach should be examined. What is unacceptable is any decision which leads to a decline and deterioration in London's transport infrastructure.

Network Rail benefits from five year funding settlements in the High Level Output Statement (HLOS). This should be considered by the Treasury for TfL, giving it the certainty that is required for long term planning. This approach could open the door for private sector investment in London's transport infrastructure if public finance proves to be inadequate.

The Mayor's London Finance Commission, chaired by Prof Tony Travers, will report later this year. It is anticipated that its recommendations will be radical and focus on how London can control more of its tax base to fund transport investment.

22. 10 Key future challenges for transport in London

1. Funding the investment programme during a decade of austerity. TfL needs to continue making the case for transport investment at Whitehall. With public transport fares on the high side(highest for any world city) and congestion charging ruled out, this will put more pressure on the Community Infrastructure Levy and tapping into increases in the business rate that result from new transport infrastructure. The key large scale projects that will require funding going forward are Crossrail 2 and new East London river crossings.
2. Delivering value for money. TfL has made progress but much more needs to be done. Benchmarking studies show bus and London Overground in a good light. London Underground come out less favourably but has made good progress in the last few years. It will need to continue this trend if it is to show that public sector operation of the network is more efficient than franchising it out to the private sector. There will be continued scrutiny to ensure that it is making the most of new technology – in ticketing and driverless trains in particular – to deliver better value to the customer.
3. Ensuring London becomes a higher density city in the future. TfL needs to have as much influence as possible over the London Plan to ensure that the capitals footprint grows less than its population. The one million extra houses London requires over the next 30 years should be built as close as possible to good public transport links with higher residential densities.
4. Tackling the forecasted rise in traffic congestion. To have any hope of reducing the congestion that will be generated from London's rising population, congestion charging needs to be kept alive as a policy tool. While Active Traffic Management, travel demand management and more public transport capacity are all necessary policy tools to combat growing congestion, they are no substitute for congestion charging. In addition these tools all cost money rather than provide a valuable source of revenue that congestion charging is able to.

5. Achieving the right balance on the allocation of road space. The prioritisation of the allocation of constrained road space in London needs to reflect the type of journeys TfL wants to encourage. This should mean more space for cyclists, pedestrians and buses at appropriate locations. TfL needs to convince the Mayor to re-introduce a roads hierarchy. The car is the most inefficient user of road space and also the least environmentally friendly mode of transport. This is why every effort needs to be made to reduce car trips.

6. Improving London's air quality record. While good progress has been made in reducing atmospheric emissions and greenhouse gas from transport, they still fall short of TfL's targets. If penalties are to be avoided from the EU on air quality then more has to be done. The Mayor's planned ultra-low emission zone is a welcome, bold initiative but could be introduced quicker than planned.

7. Protecting vulnerable road users and reversing recent casualty increase in cycling. Spending on road safety needs to be protected from budget cuts and targeted at cyclists and pedestrians, who make up a disproportionate, number of those killed or seriously injured in London.

8. Growing bus patronage against a background of substantial cuts in funding. The forecast growth in congestion – especially in East London- will impact on the operational reliability of the bus network. This will make it even more important that buses are given as much priority as possible on the road network.

9. Lack of road capacity across the Thames in East London. Work needs to start as quickly as possible to address the chronic lack of road capacity in this area of London identified as hot spot for future employment and population growth.

10. Retaining world-class staff at Transport for London. Success in any organisation is dependent on the quality of people employed. TfL is no exception and its success to date is thanks to the high calibre of dedicated people currently working there. It cannot afford to suffer from a prolonged period where the remuneration gap is widening with the private sector. Unless this is addressed it will find it difficult to compete with the private sector in the recruitment and retention of all levels of its staff.

23. Conclusion

This report has tried to make three types of assessment of transport in London: what progress has been made on transport since its transport delivery agency, Transport for London, was formed in 2000; whether the current performance and delivery can be described as "world-class"; and what challenges does TfL face going forward?

Over the past 12 years there has been a step change in the quality and capacity of transport across the capital. Reliability and customer satisfaction are at all-time highs. I am one of the millions of regular users of London's public transport system and for one would like to thank everyone at TfL and all their contractors for making my life so much easier and more comfortable. We tend to take progress for granted and quickly forget what the system was like in the past.

Who would have thought a decade ago that people would talk about not just being proud to be a Londoner, but proud of the transport system? The way the system stood up to the stiffest of all tests during the London 2012 Olympics changed the way many people perceived transport in the capital.

There is justified recognition in our survey of the progress that has been made on transport in London since TfL was formed. I would be surprised if such a positive response was matched by such a survey in any other part of the UK, or indeed from most other cities around the world. The reasonable response that would be made by those who run transport in the conurbations outside London is that they have not been blessed with the financial support that London has benefitted from. This is only part of the explanation. You also need a strong and stable structure of devolved government, bold and brave political leadership and a highly professional and competent organisation to deliver. London has had all of these.

Quantifying and assessing progress that has been made is an easier task than scrutinising and benchmarking performance and delivery to ascertain if it is "world-class." When I started on this exercise I was reluctant to use the term. It is a hostage to fortune as the assessment can only be as good as how the system is performing on a given day. My initial instinct was to say that London's transport system is getting nearer to the description of "world-class". However, studying performance data and the benchmarking data that was available, together with the feedback from the stakeholders I objectively and dispassionately interviewed, the more accurate and credible this status became. The following elements of London's transport system can robustly be described as 'world class': the performance of the transport system during London 2012; the extensive and often undervalued bus network; record high performance of the tube and the good progress made on upgrading a 150 year old asset; the transformation of an antiquated and declining railway into the impressive London Overground network; customer information, marketing and ticketing which have improved out of all recognition; the management of traffic flows on the road network; congestion charging and the Low Emission Zone.

The response to our survey of London transport professionals came back with scores that were much better than I had anticipated. It is unheralded to receive so many "excellent" and "good" responses to questions on transport performance in this country. Sometimes operational performance is poor and you can fully understand why many passengers who use transport in London will find it difficult to relate to this report. If I were a commuter on the southern end of the Northern Line at Balham, facing gross overcrowding, then it would colour my perspective. London's transport is work in progress – and always will be.

Recognition for a job well done is rare in transport. The norm is to criticise and for a sceptical public and media to be frustrated with their transport system. That is understandable, and is common world-wide. However, as our report objectively illustrates, Transport for London deserves praise for being one of the world's leading transport authorities who deliver an often world class transport service in the capital city, having succeeded in transforming large parts of the network in the relatively short period of time it has been in existence.

24. Bibliography

- Annual Report 2010/2011, Independent Investment Programme Advisory Group (IIPAG).
- Analysis of Cycling Potential, Transport for London, December 2010.
- Air Quality in London, Fuller & Mittal Environment Research group, Kings College London, July 2012.
- Better Junction Review, Transport for London, February 2012.
- Business Plan: Transport for London's plans for the next decade, Transport for London, December 2012.
- Central London Congestion Charging Impacts Monitoring: Sixth Annual Report, Transport for London, July 2008.
- Charging Ahead: An overview of progress in implementing the Mayor's Electric Vehicle Delivery Plan, Environment Committee, London Assembly, February 2012.
- Cities fit for Cycling, The Times.
- Clearing London's Air, Mayor's Air Quality Strategy, December 2010.
- Cycle Safety Action Plan, Transport for London, March 2010.
- Cycling in London, Transport Committee, London Assembly, July 2012.
- East London leads the way on business base growth in the Capital, Centre for Cities, January 2013.
- East London: Who's gained from its growth?, K. Swales, New Start, January 2013.
- Frustration Rising: IBM Commuter Pain Index, 2011.
- Gearing Up, Transport Committee, London Assembly, November 2012.
- 2062: The future of London transport, Future of London, April 2012.
- London School of Economics Cities Research Unit.
- Low Emission Zone Impacts Monitoring: Baseline Report, Transport for London, July 2008.
- Mayor's Transport Strategy, May 2010.
- Response to Tfl's Consultation on a Road Safety Action Plan for London, Transport Committee, London Assembly, September 2012.
- Submission to 'Get Britain Cycling', London Cycling Campaign, December 2012.
- TfL Rail and Underground Annual Benchmarking Report, Transport for London, June 2012.
- The Future of London's Buses, Transport Committee, London Assembly, January 2010.
- The performance of London buses compared to other world cities, Imperial College London.
- Towards a Road Safety Action Plan for London: 2020, Transport for London, July 2012.

- Travel in London: Report 5, Transport for London, December 2012.
- Underground: How the Tube shaped London, David Bownes, Oliver Green and Sam Mullins, published by Allen Lane 2012.

25. Appendix A

	Excellent %	Good %	Fair %	Poor %	Very Poor %
Tube performance	12.4%	63.6%	20.5%	2.7%	0.8%
Tube Upgrade programme	10.1%	58.1%	26.7%	4.7%	0.4%
London Overground performance	34.9%	41.9%	19.4%	2.3%	1.6%
London Overground extensions	43.8%	36.0%	15.1%	2.3%	2.7%
Bus performance	17.4%	53.1%	25.2%	2.7%	1.6%
Bus network	21.3%	50.4%	22.1%	3.9%	2.3%
DLR performance	22.1%	50.4%	23.6%	1.9%	1.9%
DLR extensions	24.0%	48.4%	22.9%	2.7%	1.9%
Public transport fares	5.4%	22.5%	30.6%	27.9%	13.6%
Public transport ticketing	27.1%	39.5%	17.8%	12.4%	3.1%
Public transport accessibility	9.7%	47.7%	27.9%	10.9%	3.9%
Public transport safety	23.6%	50.8%	18.6%	4.7%	2.3%
Transport marketing and information	18.6%	49.6%	22.5%	7.4%	1.9%
Cycling infrastructure	8.1%	27.9%	37.6%	18.6%	7.8%
Cycling safety	2.3%	13.2%	39.9%	29.1%	15.5%
Walking and public realm improvements	3.9%	36.8%	41.9%	15.1%	2.3%
Operation and Management of the Transport for London Road Network	4.7%	32.2%	43.8%	16.3%	3.1%

	Excellent %	Good %	Fair %	Poor %	Very Poor %
Allocation of road space	2.3%	23.3%	43.0%	23.3%	8.1%
Modal shift	8.9%	34.5%	37.2%	15.9%	3.5%
Road safety	4.3%	34.1%	45.3%	13.6%	2.7%
Air pollution	3.1%	17.4%	46.5%	24.0%	8.9%
Climate change	2.3%	15.1%	52.3%	20.5%	9.7%
Transport planning	8.1%	39.5%	39.5%	10.5%	2.3%
Travel demand management	8.9%	34.1%	41.5%	13.2%	2.3%
Olympic delivery	63.6%	30.2%	3.1%	1.2%	1.9%
Olympic legacy	22.5%	38.0%	32.9%	5.8%	0.8%
Crossrail delivery	14.3%	45.3%	32.9%	5.0%	2.3%
Transport for London as a client/ stakeholder	12.0%	42.2%	33.7%	9.3%	2.7%
While Mayor (2000-2008), how would you rank Ken Livingstone's performance on transport?	26.0%	45.7%	19.0%	7.0%	2.3%
As Mayor (2008) how would you rank Boris Johnson's performance on transport?	10.5%	46.5%	29.1%	10.5%	3.5%
Transport for London's overall performance	15.5%	57.8%	22.1%	3.9%	0.8%

26. Appendix B

To help me in my research I posed the following questions to key people within transport:

Question 1: Which three aspects of transport delivery in London since 2000 have impressed you most?

Question 2: Which three challenges do you consider to be most critical for the future of transport in London?

To which I received the following responses:

Lord Andrew Adonis – former Secretary of State for Transport

Question 1

- The successful introduction of the congestion charge.
- The transformation of the buses and tube.
- The successful partnership to agree and build Crossrail.

Question 2

- Capacity in the light of an extra 1.5m Londoners and 700,000 extra jobs in London over the next 20 years.
- Planning and building Crossrail 2 and HS2.
- Keeping fares down while continuing to invest in significant extra capacity.

Tony Armstrong – Chief Executive, Living Streets

Question 1

- The improvements and modernisation of the public transport system in London, greater accessibility and better quality service have made public transport an attractive option for Londoners and visitors. As a result underground trips (41.9%) and bus trips (13.5%) are up and car driver trips down (13%) between 2001 and 2011.
- I've been particularly impressed by ambitious schemes such as the construction of the Millennium Bridge and the redesign of sites such as Trafalgar Square and Exhibition Road. What they all have in common is the transformative effect on the public realm changing the way people walk, spend time and view these locations. The introduction of the congestion charge was a bold measure to attempt to address the high density of traffic in central London and achieved some success, although reducing the number of vehicles in London remains a challenge.

Question 2

- As the population continues to grow in London, the challenge has to be how Londoners will be able to get to work, home and leisure safely and easily while protecting the environment. It's no surprise that I'd identify the largest challenge as whether collectively we will sufficiently prioritise walking and cycling.

This should include huge increases in investment and taking some difficult choices which include re-allocating road space away from vehicles, calming and slowing traffic where we live work and shop and using the planning system to reduce travel demand and prioritise active travel modes.

- Accessibility is a huge problem which doesn't get the attention it needs. With the UK population growing older, mobility issues will inevitably become more of a priority, whether it's ensuring people can access local shops and services, are able to use public transport or can cross the road safely. The challenge will be securing commitments to making London streets accessible for everyone - not just those able to sprint across difficult crossings - and a public transport system which is fully accessible to wheelchair users.
- London is already failing to meet EU targets for improving air quality and this will continue to be a huge challenge. While initiatives to change transport modes to more environmentally friendly options are to be applauded, any significant impact on the pollution in London is only going to be achieved with a shift towards travel which doesn't rely on a combustion engine!

David Brown – Group Chief Executive, Go-Ahead

Question 1

- Bus network expansion and quality improvements.
- Tube Upgrade programme and customer service/information provision.
- Delivery of transport for the Olympics and recognition of the role of travel demand management.

Question 2

- Continued funding for the Tube Upgrade programme.
- Continued funding for the bus network and the recognition of its role in coping with London's population growth.
- Assimilating Crossrail/Thameslink into London's overall transport provision.

Janet Cooke – Chief Executive, London TravelWatch

Question 1

- The ever increasing scale of the daily operation to transport passengers around the city, and the fact that this has been combined with an increased frequency of service and improved performance of the network overall.
- Improved availability of information for transport users given through an ever increasing number of channels.
- The introduction of new services and choices of transport, such as the London Overground and Tramlink.

Question 2

- Congestion – however people choose to travel the various transport modes are becoming more congested and the continuing growth of London's population means that investment is needed just to maintain the status quo let alone improve the situation for transport users.
- Meeting the cost of maintaining and improving London's transport network without further increasing the burden on fare payers.
- Changing the culture so that transport operators recognise what is important for passengers and train and empower their staff to provide excellent customer care.

Stephen Glaister CBE – Director, RAC Foundation

Question 1

- The successful implementation of congestion charging in 2003 in spite of the opposition to it. Closely based on a thorough piece of research it met its objectives and significantly improved the quality of life in London. Studied with great interest by other cities round the world.
- The vast improvement in the quality of the bus services across London. This has revolutionised people's attitudes towards the bus as a quality, reliable way to travel. Achieved by a combination of significantly increased resources and effective management and regulation of private sector providers through a sensible competitive tendering process. The procurement method is a shining example of how relations between public authorities and private providers should work.
- The development of the London Overground. Developed from a run-down, poor quality and neglected line to a whole new set of services encircling inner London. Done at astonishingly low cost to the taxpayer, partly by use of existing, under-used assets and partly through realisation that in a big city quality vehicles offering a high frequency, reliable service will generate passengers who will pay.

Question

- Providing adequate capacity on all modes (including the roads) and managing the demands created by meeting the transport needs of the expected increases in population and employment.
- Finding an adequate level of capital and operating funding to secure (1), which is stable over a period of many decades and can therefore support economic and efficient provision by all the relevant authorities.
- Finding the right policies and technologies that will actually deliver sensible greenhouse gas reduction targets, while enabling the London economy to continue to function for the greatest benefit of its residents and the nation as a whole.

Stephen Hammond MP – Parliamentary Under-Secretary of State for Transport with responsibility for London

Question 1

- The performance of London's transport network during the Olympic and Paralympics Games, carrying record numbers of passengers with no notable problems.
- The results of a huge increase in investment in London's rail and underground networks. TfL is only part way through its Tube Upgrade programme, and there's a lot of investment still to come, but the upgrades to the Jubilee and Victoria lines have increased capacity in the rush hour by 33% and 21% respectively, with a train every two minutes at peak times. And the redevelopment of Kings Cross station, which is nearly complete, will transform the station and the surrounding area.
- TfL's use of innovative technology to provide a better, more efficient service to passengers. For example, people can now get real time bus information on their mobile phones, and Oyster cards have enabled passengers to benefit from cheaper fares and quicker travel.

Question 2

To maintain London's position as a global city and support its continued economic growth, we'll need continued investment in London's transport network. Recognising that public funds are limited, this will mean:

- Making the best use of the existing network, to improve capacity and reliability. For example, through the roads pinch point funding that Government has made available to local authorities, including TfL, following the Autumn Statement.
- Agreeing to finish the necessary upgrades and agreeing priorities for future investment. It won't be possible to fund every transport project, so we need to identify and support those projects which are most important.
- Continuing to improve the efficiency of spend, to ensure money is spent on investment rather than operating costs; to leverage as much money as possible from other sources; and to drive down the costs of capital projects.

Stephen Joseph OBE – Chief Executive Officer, Campaign for Better Transport

Question 1

- Congestion charge.
- London Overground.
- Transport at the Olympics.

Question 2

- Integrating transport with land use planning, so as to reduce the need to travel.
- Creating attractive safe cycle routes, including in outer London.
- Managing traffic, especially in outer London.

Nick Lester – Corporate Director, Services, London Councils

Question 1

- 2012 games.
- Maintaining transport investment, especially Crossrail.
- Implementing the initial congestion charge.

Question 2

- Maintain level of transport investment.
- Keeping fares affordable.
- Dealing with air quality issues (as without this EU penalties will start to be applied).

David Mapp – Commercial Director, ATOC

Question 1

- The successful negotiation and implementation of Oyster on all modes of transport in London; this has revolutionised ease of access to the system for customers and led to a step change in the degree of commercial co-operation between TfL and the National Rail train companies;
- The strength and depth of inter-agency co-operation that was developed during the preparation for the 2012 Games; this is a true legacy that should help to simplify the resolution of complex transport challenges in future;
- The speed with which TfL has carried out its strategy to invest in and develop the Overground network, offering a practical demonstration of the customer benefits that can be delivered by adequate funding.

Question 2

- The ever more urgent need to provide additional capacity to cater for growth;
- Ensuring that ticketing and fare collection systems continue to keep pace with developments in technology;
- Reaching a conclusion about the extent to which the Mayor will take responsibility for the control and direction of the "heavy rail" suburban network in London.

Caroline Pidgeon – Chair, London Assembly Transport Committee

Question 1

- London Overground – orbital rail link in London with a 93% satisfaction rating with passengers.
- Expansion of the bus network.
- Now it is fully operational an over its teething problems, the Jubilee upgrade.

Question 2

- Securing the funding for the rest of the Tube Upgrades.
- How to expand rail capacity on the suburban rail network with the existing infrastructure.
- Rebalancing limited road space for cycling and buses.

Dr Ashok Sinha - Chief Executive, London Cycling Campaign

Question 1

- An increase in cycling budgets from around £3m p.a. to £100m+ p.a., supporting a doubling of cycling in a decade.
- Reduction in motor traffic volumes via the Congestion Charge.
- Reallocation of road space away from private motor vehicles towards public transport and cycling (bus priority lanes).

Question 2

- Implementing the Mayor's headline commitment to LCC's Love London, Go Dutch campaign, i.e. to make London's streets 'as safe and inviting for cycling as Holland'.
- Using increased active travel (i.e. walking and cycling) to help revitalise local neighbourhoods and the local high street economy.
- Using active travel to substantially improve public health, air quality and climate change mitigation.

Anthony Smith – Chief Executive, Passenger Focus

Question 1

- The Olympics. Outstanding delivery, information and staff attitudes.
- Oyster. Transformed the simplicity of travel, managing costs and information. Extension to National Rail pivotal.
- Coping with ever increasing numbers of passengers.

Question 2

- Passenger numbers are just to go up and up. Physical delivery and information will be key.

- Increasing numbers of cyclists will force a re-appraisal or road space – they cannot or will not be demand managed. What will give?
- Helping bring metro National Rail services up to the standard of the Overground.

Jim Steer – Founder and non-executive director, Steer Davies Gleave

Question 1

- Transformed cleanliness and improved reliability of London Underground.
- Successful launch of the congestion charge.
- London Overground.

Question 2

- Providing a segregated cycle network.
- Exploiting the further potential of the successful and highly cost-effective DLR technology across a much wider geography.
- Creating selected traffic-free streets in the West End.

Tim O'Toole – Chief Executive, FirstGroup Plc

Question 1

- The Oyster Card – No other change or innovation so dramatically changed passengers' lives or willingness to use the system. Oyster had a bigger impact on bus usage than the frequency improvements, in my opinion. Given the complexity of the Tube fare structure, the development of Oyster on the Tube was a world best management change;
- Congestion charge – this put London at the front of the queue among major cities in delivering transport innovation;
- Rebuilding the Underground – an infamous project given the PPP, but no other project over this time has had such a dramatic impact on so many users. The Olympics was the proof that the ongoing programme is delivering.

  The obvious omission is the London bus system. The transformation in service has been substantial but it is in many ways a diabolical development for two reasons: it was accomplished simply by way of a massive grant from central government for operations, as opposed to investment, and this has created the misleading lesson for other urban areas that quality contracts are a sensible structure, which is incorrect.

Question 2

- Getting everyone to understand that continuous investment is a requirement of a world city. We should not be looking to devise justifications for Crossrail2 to blunt arguments that London has had its share of investment. London will never have its "fill" so long as it continues to be the engine of growth for the country.
- Integration with the national rail system – ticketing and information systems, ease of use are the big wins that passengers are demanding.
- Leadership – London has had the benefit of Livingstone's programme and the delivery also due to Johnson's leadership. This era will pass and there is a risk that transport will lose its first among equals status in the public debate. Leadership as bold and big as "Ken and Boris" delivered will be required.

Baroness Jo Valentine – Chief Executive, London First

Question 1

- The approval and start of Crossrail's construction was a vote of confidence in London's ability to spearhead the UK's growth. Building it presents an opportunity to showcase our ability to deliver major transport infrastructure on time and on budget.
- Devolution in the form of the Mayor gave us a transport budget and an integrated strategy – great strengths for a world city as it plans for growth.
- The congestion charge was a signature innovation for London which came with political benefits and above all a measurable cut in traffic.

Question 2

- Growing our vital air links to established and new markets in the next 10 or 15 years, when our rivals have the capacity and are stealing a march in the fierce battle for international trade.
- Completing the modernisation of the Tube when there is so much left to do to relieve overcrowding and meet growing demand, and severe downward pressures on the public money required to do it.
- Cutting road congestion when politicians remain wary of road charging in London. When there is so little room to build new capacity, rationing use is the only big bang solution available.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