

LONDON

TRANSPORT



London provides a successful model of transport integration through Transport for London (TfL), including the development and operation of tubes, buses, trams, river services and the London Overground rail system.

NATIONAL RECOMMENDATIONS

ICE has compiled State of the Nation reports each year since 2000, drawing on expertise across its membership and beyond to stimulate debate and to highlight the actions needed to improve the UK's infrastructure.

ICE's State of the Nation: Transport 2013 UK report presents a series of detailed recommendations – for the short, medium and long-term. While all are important, we believe that three are particularly critical to our success:

- 1. IMMEDIATE ACTION TO IMPROVE ROAD CONDITIONS, PLANNING AND FUNDING**
- 2. ENSURING CLEAR NATIONAL TRANSPORT STRATEGIES FOR ALL PARTS OF THE UK**
- 3. CONTINUING AND EXTENDING DEVOLUTION TO FULLY-INTEGRATED TRANSPORT BODIES**

Our emphasis is on making best use of existing assets and achieving the most with public money. The headline recommendations are backed by a series of further points requiring rapid action and a suite of detailed changes by mode and topic. The report concludes with a proposal to create the capacity to address the major social, economic, environmental and technological change which ICE anticipates through the 2020s.

The UK report, with the full detail behind our recommendations, can be downloaded at ice.org.uk/SoNTransport. This briefing sheet highlights how ICE's UK-level recommendations impact on business and communities across our region.

London faces a unique set of transport challenges. It is the fastest-growing region in the UK and London's population will rise to 10 million by 2031.

This scale of population growth, combined with extra jobs being created, requires a long-term commitment to invest in and improve London's transport infrastructure in a sustainable way.

Without this investment the full benefits of recent improvements will not be secured and transport conditions will deteriorate.

Certainty of funding will help the industry to move away from stop-start funding which would not only be good for business but would also give space to make efficiencies and innovate, improving the industry overall.

A mix of public and private funding sources is proving successful for Crossrail and the Northern Line Extension. More certainty of funding sources is necessary to secure the next generation of transport improvements, e.g. Crossrail 2.

ICE London welcomes the investment and political focus which has seen transport close to the top of the agenda in recent years.

Without a political consensus and more secure funding of London's future transport facilities, infrastructure and services, many of the mode-specific challenges and recommendations set out in the rest of this document may not be addressed fully, resulting in adverse impacts on London's vitality, economy, growth and environment. In a time of uncertain future funding, intelligent use of finance and clear priorities for London's transport infrastructure have never been more important.

ICE London members overwhelmingly support emerging major transport schemes such as Crossrail (95% support), Crossrail 2 (90%) and HS2 (80%). They also believe a high priority should be given to the highways, cycling and railways recommendations in this report.

ICE LONDON'S RECOMMENDATIONS:

1. The long-term funding horizon granted to TfL in recent years enabled them to work on major schemes with a reasonable degree of certainty. This arrangement must continue with time frames stretching beyond election cycles.
2. While London is good at building and operating transport infrastructure, the planning process can be too long and funding arrangements are never clear cut. Alternative funding and delivery models should be considered in order to strengthen London's ability to deliver new and improved infrastructure.
3. Planning of London's infrastructure should, as far as possible, be on a joint basis across political parties and across local authority boundaries.
4. As well as major new transport infrastructure, there is a continuing need to maintain, improve and better coordinate London's transport facilities and services. Lessons learned during the London 2012 Olympics, particularly careful demand management and close partnership working between all the transport providers, must continue to be developed and implemented.
5. More needs to be done to provide both quality transport services and choice, and to support London's economy and sustainable growth.

RECOMMENDATIONS BY TRANSPORT MODE

The following sections address key challenges for transport in London, as perceived by ICE London's membership. Set out by transport mode, each section includes key recommendations.

PEDESTRIANS

LONDON'S STRENGTHS

London remains one of the safest cities for walking in the world, with nearly 75% of Londoners agreeing that it is a 'city for walking'. (*Transport for London's Travel in London, Report 5*)

CHALLENGES TO MEET

To encourage more people to walk, and hence reduce demand on other modes of transport, it is important to make walking as safe as possible. This includes consistent approaches to pedestrian safety at road junctions and crossing places.



Exhibition Road Shared Space Scheme
ICE London Civil Engineering Award Winner 2012

ICE LONDON RECOMMENDATIONS:

- ICE London supports the innovation which surrounds shared space schemes but believes they need to have safety as a high priority in their design to reassure pedestrians. Funding needs to be allocated to implement and maintain such schemes.
- ICE London supports the Legible London scheme to improve pedestrian wayfinding. We commend progress on wayfinding made during the 2012 Games and encourage continuation of this work, including expansion into and out from London's stations and bus terminals. More needs to be done in Outer London Boroughs and to involve private sector partners.

Difficult junction designs have not been tackled to accommodate cyclists

ICE LONDON MEMBER

CYCLING

LONDON'S STRENGTHS

The Mayor of London's commitment to cycling is clear. London is set for further improvement through *The Mayor's Vision for Cycling in London report* (March 2013), which includes future schemes valued at £913 million.

A patchwork network of discontinuous cycleways

ICE LONDON MEMBER

The Mayor's recent announcement that £100 million will be shared between four Outer London Boroughs to improve cycle routes in their area extends that commitment to boroughs where cycling rates are much lower. The political leadership shown in support of cycling in London is an international exemplar.

CHALLENGES TO MEET

The key barrier to encouraging greater levels of cycling is cyclist safety, both actual and perceived. On cycle super-highways in London road space for cyclists on selected routes is much more visible, but even these routes do not have continuous and consistent provision.

The remainder of London has a network of cycleways, but quantity and quality of provision are highly variable.

Of all safety issues the most disturbing is conflict between large vehicles and cyclists. There are several ways this should be addressed:

- Better equipped vehicles
- Training for cyclists, HGV, bus and coach drivers
- Cycle infrastructure that minimises conflict (particularly for left-turning vehicles)

CASE STUDY

CYCLING IN HACKNEY

Hackney has London's highest proportion of people cycling to work at 15.4%. According to the 2011 Census, across London as a whole 4.3% now cycle to work, while the figure in Inner London is 7.2%.

Hackney has more London Cycling Campaign members than any other borough - currently around 1,000.

A number of schemes have led to this success including:

- Cyclists playing a leading role in making the Shoreditch Triangle road routes two-way and hence more cyclist friendly than the 1960s-era one-way system

We see a challenge around driver behaviour and near misses for cyclists, and believe recording these near misses could highlight potential sites of conflict. Consideration should be given to developing such a record.

ICE LONDON RECOMMENDATIONS:

- ICE London supports the Mayor's Transport Strategy aim that cycling should account for 5% of all trips in London by 2026 as part of a balanced programme across all modes.
- ICE London believes this can only be achieved by removing barriers to cycling as a mode choice and significantly improving safety for cyclists, for example by:
 - Addressing safety at key junctions by investing in appropriate schemes and tackling issues with route continuity.
 - Recording road accidents involving construction vehicles, ideally as a RIDDOR (Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 1995) reportable event associated with a particular construction site. Similar methods of accountability should be introduced for buses and coaches.
 - Ensuring enforcement of cycleways and cycle priority areas is implemented.
- ICE London wishes to play a part in the development and dissemination of new cycle infrastructure standards to significantly raise quality and conformity.
- ICE London wishes to see greater clarity regarding funding for schemes in *The Mayor's Vision for Cycling in London report*.

- Free two-hour cycle training sessions for people living, working or studying in Hackney
- A requirement for new residential developments to include secure storage areas for cycles
- The HomeBikePark project, which piloted retro-fit solutions for easier and more secure parking for Hackney's social housing
- Transport for London paying for good quality cycle parking at various Hackney schools
- The Hackney On-Street Cycle Parking Project
- Bike Parks at major events in Hackney to encourage people to cycle to events



King's Cross St Pancras underground tunnel under construction
ICE London Civil Engineering Award Winner 2010 © Morgan Bemo JV



Tottenham Court Road Station Upgrade
ICE London Civil Engineering Award Winner 2013
© Amey Photographer Peter Langdown

BUSES

LONDON'S STRENGTHS

Buses are the most used public transport mode in London, completing around a fifth of all journeys city-wide. Buses carry more than 2.3 billion passengers a year with around 80% of mileage outside Central London. More than 94% of London residents live within 400 metres of a bus service.

The accessibility and increasing reliability of the bus network has meant demand for the service has increased in London whereas it has fallen elsewhere in the United Kingdom. New technology is being used to improve the quality of the vehicles as well as providing improved real-time travel information for passengers.

CHALLENGES TO MEET

With London's continuing population growth, there will be more demand for additional, reliable bus services, often filling 'gaps' and/or supplementing the service offered by rail and underground modes.

London's night-time economy is also growing and bus services are often the only available mode of public transport through the night.

ICE LONDON RECOMMENDATIONS:

12. ICE London recognises TfL is predicting a 25% increase in the use of public transport by 2031, with much of that increase being on buses. It is essential that ongoing bus funding is sufficient to provide high-quality services that support this demand and associated economic growth.



New Bus for London completing its first route to Victoria, (photo courtesy Thomas Riggs) © Transport for London

LONDON UNDERGROUND



Tottenham Court Road Station Upgrade, ICE London Civil Engineering Award Winner 2013
© ICE London Photographer Piers Allardyce

LONDON'S STRENGTHS

London Underground provides a comprehensive network which is well used by commuters and tourists.

The sustained level of investment in the Underground network over the last decade is now providing cost savings, increased reliability and an improved passenger experience.

CHALLENGES TO MEET

TfL has been in a fortunate position with greater certainty of forward funding than other transport authorities. This focus must be maintained so that long-term planned major investment can be delivered.

It is essential that maintenance funding is sustained to avoid the gains made in recent years being eroded.

Increased use of public transport will mean further pressure on key stations which are already struggling to cope with the number of passengers using them each day.

Demand for extended operating hours to support the night-time economy creates major challenges as night-time running reduces the period available for maintenance of trains, track and stations.

ICE LONDON RECOMMENDATIONS:

13. ICE London supports TfL's bid to secure stable funding to maintain and upgrade the network beyond 2015.
14. ICE London is supportive of the Northern Line extension to Battersea and the Bakerloo Line extension to South-East London. We would urge that firm funding commitments are made to allow delivery of these and other medium-to long-term projects where they are shown to deliver a good business case, regeneration benefits and support for new jobs and housing.
15. ICE London recommends improvements to real-time travel information provided at Outer London stations, to upgrade them in line with the typical standard provided at Inner London stations.
16. ICE London supports the proposed extension of operating hours on upgraded lines, when maintenance requirements allow it.



DLR track with Olympic stadium between Stratford International and Stratford Regional
© Transport for London



King's Cross Northern Ticket Hall
ICE London Civil Engineering Award Winner 2010
© BBCEL

RAILWAYS

LONDON'S STRENGTHS

Planning and delivery of new rail infrastructure are key strengths for London which has benefited from a pipeline of projects. That pipeline has included:

- Completion of the London Overground network which positively enhanced public transport opportunities available to commuters and visitors
- Crossrail 1, which will add around 10% additional capacity to the network when it becomes operational in 2018
- Crossrail 2 which is in the early stages of planning and public consultation but would provide additional cross-London capacity and relieve pressure on Waterloo Station, which frequently exceeds its capacity

Continued close working between TfL and Network Rail is beneficial to such major projects and key interchanges, where both parties have critical roles to play.

 London Overground has demonstrated its ability to execute and deliver quality infrastructure

ICE LONDON MEMBER

CHALLENGES TO MEET

Significant and continuing increases in demand, both for passenger and freight rail services, create competing pressures on a busy network. Lack of capacity is a significant problem for much of London's public transport network, particularly for rail and especially at peak commuter times and on key freight routes such as the North London Line.

The mixed nature of railways in London, combined with high land value and dense development near railways, limits the scope to increase rail network capacity; tunnelling becomes key and we now have significant expertise in this area.

Assets should be used as efficiently as possible while improvements are planned.

London is the hub for the national rail network and it is essential that passengers arriving at key mainline interchanges are able to continue their journeys easily.

Capacity for existing main-line railway termini to cope with projected passenger demand is also an ongoing concern, requiring sustained attention and investment.

There are several large projects currently progressing through the planning and delivery process, including Crossrail 1, Crossrail 2 and Thameslink.

We recognise that, due to funding constraints, the largest schemes are typically delivered in a linear sequence rather than in parallel. In practice, without new funding models, this means there is little room for complementary major schemes to enter the programme, or be completed, within the medium to long term. For example, appropriate provision for an HS1 to HS2 link is a clear future requirement.

ICE LONDON RECOMMENDATIONS:

17. ICE London believes there is a need for long-term planning and faster delivery of railway infrastructure improvements in London.
18. ICE London strongly recommends an immediate and sustained focus on the expansion of mixed

funding sources for rail schemes, bringing together a range of suitable investors and funders to deliver a specific project.

19. Subject to (17) being in place, ICE London believes London's forecast growth in passenger demand supports an increase in the quantum of major scheme development work under way. This might extend to multiple major schemes progressing in parallel.
20. ICE London recommends expansion of the Oyster and emerging contactless card payment systems to all suburban rail services. This could include services to London's airports, the Emirates Air Line and services between Stratford International and St Pancras International.

CASE STUDY

LONDON OVERGROUND PHASE 2 ORBITAL LINK

TfL took over the concession to operate the London Overground (LO) network in November 2007. The extended East London Line (ELL) opened in May 2010, with new trains and new or refurbished stations. It was extended to Highbury & Islington in February 2011 and to Clapham Junction in December 2012.

LO operates 1,090 trains a day, employs 1,200 people and looks after more than 400,000 passengers every day.

LO passenger volumes are now four times the level when TfL took over management of the concession.

Crowding is already a concern on part of the West London, East London and Gospel Oak to Barking routes and, as no further capacity enhancements are planned, this is likely to become an increasing problem.



East London Line, ICE London Civil Engineering Award Winner 2011 © BBCJV



M25 DBFO Widening Junction
ICE London Civil Engineering Award Winner 2011
© SBBJV



Olympic/Paralympic Route Network
ICE London Civil Engineering Award Winner 2013
© Transport for London

HIGHWAYS



Blackwall Tunnel Northbound Refurbishment, ICE London Civil Engineering Award Winner 2012
© Transport for London

LONDON'S STRENGTHS

London's highway network benefits from a high level of sophisticated traffic management, including the congestion charging zone. This has helped to reduce and manage demand in Inner London, although forecasts suggest levels of congestion will rise significantly across Greater London by 2025.

CHALLENGES TO MEET

Generally, the highways sector has been neglected in recent years, in favour of major investment in rail and Underground networks. There is also a perceived lack of focus on whole-life cost of asset maintenance and renewal. Consequently there is a strong perception that London's roads are in a state of decline. Similarities can be drawn to the state of the rail networks more than 20 years ago.

As the highway network caters for 80% of trips in London and 90% of freight journeys, and is also the infrastructure upon which the vast majority of the cycle and bus networks function, the importance of a high-quality network is self-evident.

The roads of the future also need to meet the aspirations of London as a world city so creation of vibrant, safe and attractive – yet functional and efficient – road space is critical.

ICE London believes the time has come for a renewed focus on London's highway network.

A strategic framework with firm funding, clear leadership and identified targets is needed to guide the various investment, maintenance and renewal activities building on the forthcoming report from the Mayor's Roads Task Force.

Given that parts of the network appear to be in urgent need of investment to bring them to a satisfactory standard, initial funding levels may have to be substantially greater than existing levels to reduce the backlog of essential work. Once this is complete, the network could enter a steady state of asset renewal in future years. ICE London sees a major challenge to transform the highway network using similar principles to the ones applied to the Underground network in the past two decades.



Hammersmith Flyover, ICE London Civil Engineering Award Winner 2013
© Amey Photographer Peter Langdown

ICE LONDON RECOMMENDATIONS:

- 21. ICE London recommends investment in London's highways network, including its structural assets, should be substantially increased to compensate for inadequate funding over recent years. Additional funding should be used for both new infrastructure and maintenance or renewal of existing assets. The goal should be to make London's road network of similar quality to the Underground network, particularly where cycle and bus users can benefit most.
- 22. ICE London believes urgent consideration should be given to identification of new funding streams and alternative sources funding in this area.

Highways in London remain neglected, investment is like the railways 20 years ago

ICE LONDON MEMBER

- 23. ICE London wishes to see TfL and all London Boroughs work more closely to identify likely 'hotspots' for congestion and delay. Action plans can then be developed to address these pinchpoints, which may include improved management of traffic or new capacity.
- 24. ICE London recommends funding priorities be given to new river crossings where there are considerable development and regeneration opportunities.
- 25. ICE London considers lessons learned from the 2012 Games should be built into future plans. In relation to highways, extra layers of demand management, night-time freight deliveries and amendments to key junctions all played a role in keeping the city moving.



London Heathrow Terminal 5
ICE London Civil Engineering Award Winner 2009



Thames Clipper sailing
downstream from
Canary Wharf
© Thames Clippers

PORTS AND WATERWAYS

LONDON'S STRENGTHS

The River Thames and associated waterways are an underutilised transport system within London with capacity for further development.

Using the river to transport freight potentially reduces the number of heavy lorries on London's highway network.

CHALLENGES TO MEET

Passengers using river boat services find them expensive compared with other transport modes, as they are not aligned with the Oyster fare structure. They are often slower for the same journey, although this depends on exact start and end points.

Developers should be encouraged to use the river whenever possible as a transport option for delivering goods to site and/or removing unwanted materials.

The growth of London Gateway Port has the potential to cause major change to freight flows through London and the wider region.

ICE LONDON RECOMMENDATIONS:

26. ICE London welcomes the London Gateway Port as a major boost to London's economy, but recommends that a watching brief is maintained on the impact of freight flows by both rail and road from the development.
27. ICE London supports expansion of freight and passenger services on the River Thames and calls for major developments to give greater consideration to using the river as a viable transport option.
28. ICE London supports the need for improved signage to link river passenger services to other modes and also to provide real-time travel information for river boat passengers.



London Gateway, ICE London Civil Engineering Award Winner 2013 © DP World London Gateway

AVIATION



London Heathrow Terminal 5, ICE London Civil Engineering Award Winner 2009 © Morley von Sternberg

LONDON'S STRENGTHS

London has been well served with airports providing international and domestic services.

CHALLENGES TO MEET

To maintain its long-term global economic competitiveness, the UK is likely to require a hub airport on a single site with more than three runways and rapid connections to Central London. There is a need for a swift decision on the location of such a hub airport and then rapid progress towards its creation.

Expanding Heathrow physically or developing a new hub airport will require massive private sector

investment. This will not be achieved if investors do not believe the UK has an aviation strategy that can survive a change of government.

The current express trains to Heathrow, Gatwick and Stansted airports often suffer delays and are not integrated into the London transport network for ticketing purposes.

ICE LONDON RECOMMENDATIONS:

29. ICE London believes Heathrow, the UK's existing hub airport, is currently operating at very close to maximum capacity which presents virtually a binary choice: expand Heathrow or cease its operation as a hub in favour of a new facility elsewhere in South-East England.
30. ICE London believes an Act of Parliament should be passed to establish a Development Corporation or similar body tasked with development of a UK hub. Lessons should be drawn from the Olympic Delivery Authority in how to make such a body effective while maintaining high levels of public accountability.
31. ICE London would like to see the Oyster travelcard available for use on rail networks serving London's airports.



Emirates Air Line
ICE London Civil Engineering Award Winner 2013
© Transport for London



Hammersmith Flyover
ICE London Civil Engineering Award Winner 2013
© Amey Photographer Peter Langdown

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