

Date: 12 March 2014

Item 17: **Transforming London's Roads – Road Investment Programme**

This paper will be considered in public

1 Summary

1.1 In response to actions from the Projects and Planning Panel and the Finance and Policy Committee, this presentation provides an overview of Surface Transport's Road Investment Programme.

2 Recommendation

2.1 **That the Committee notes the presentation.**

List of appendices to this report:

Transforming London's Roads – Surface Transport's Road Investment Programme Presentation.

List of Background Papers:

None

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Transforming London's Roads

Surface Transport's Road Investment Programme



Presentation for Finance and
Policy Committee: 12 March 2014



Contents:

- 1. Where are we now?**
- 2. Where are we going?**
 - London is growing
 - The challenge for the road network
- 3. What are we doing about it?**
 - The Surface Road Investment Programme and the outcomes it will deliver
- 4. How will we ensure delivery?**



1. Where are we now?



Economic Significance of London's roads

- Over 80% of all passenger journeys (including around 10m car trips/day), and nearly all freight movements, use the road network in London
- London's strategic roads are on average 40% more densely trafficked than roads in other UK conurbations
- London has around 20% of the UK congestion, costing London's economy at least £2bn a year
- Over 3/4 of this is on the Transport for London and Borough Principal Road Networks.



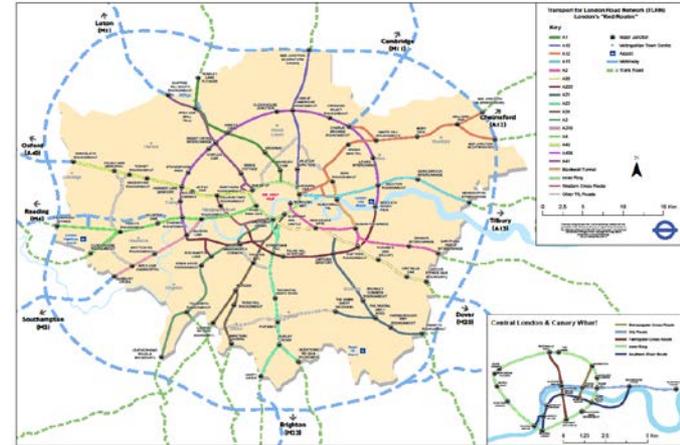
Therefore around 15% of the UK's traffic congestion is concentrated in London, on just 1,500km of the country's 400,000km of roads



TfL's Road Management Responsibilities

- Full operational responsibility for the TLRN:

- Only 5% (580km) of London's road length;
- Carrying over 30% of traffic, and;
- Up to 40% of estimated value (GVA) of traffic movement across the city.



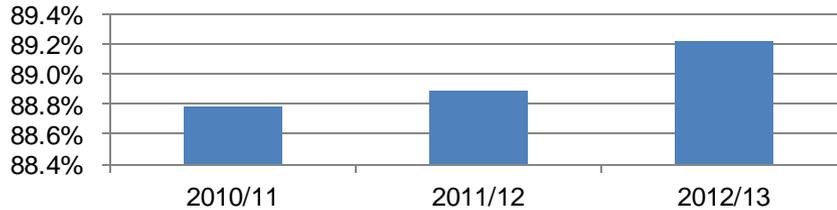
- Strategic responsibility for coordinating works and ensuring the free flow of traffic on the Strategic Road Network (SRN) – a further 500 km of the busiest borough 'A' roads.
- Responsibility all of London's 6,000 traffic signals on roads across London, and for the real time operational control of the road network through the London Streets Traffic Control Centre (LSTCC).
- Responsibility for allocating LIPS and Borough principal road maintenance funding

...and (of course) operating London's bus network.

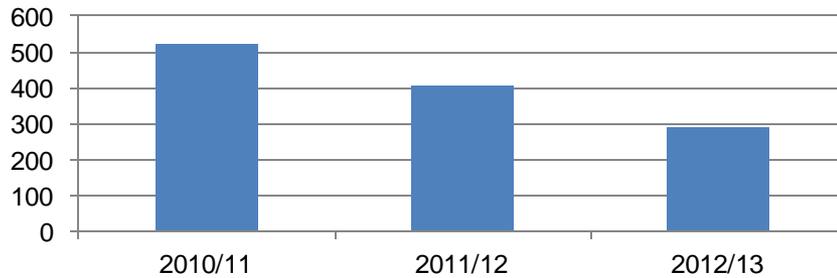


Performance Improvements Since 2010/11

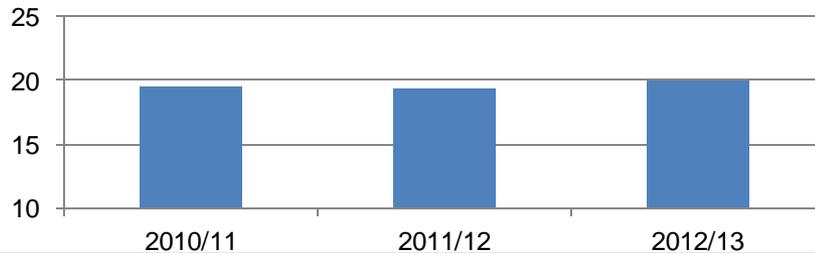
Journey Time Reliability on the TLRN (am peak)



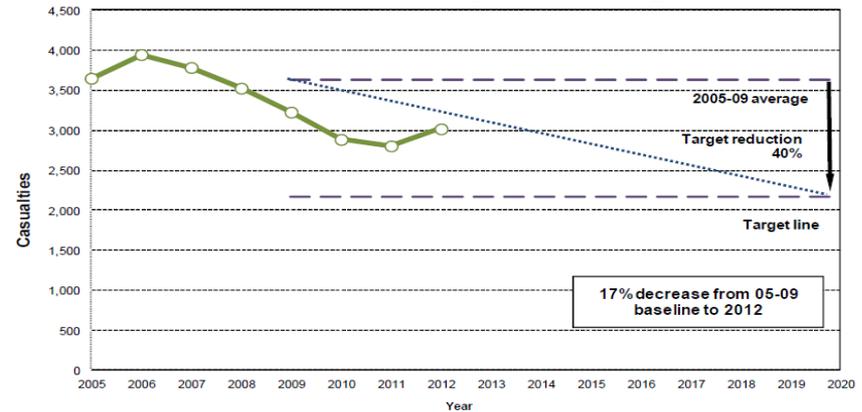
TLRN - Hrs of serious & severe Disruption (planned)



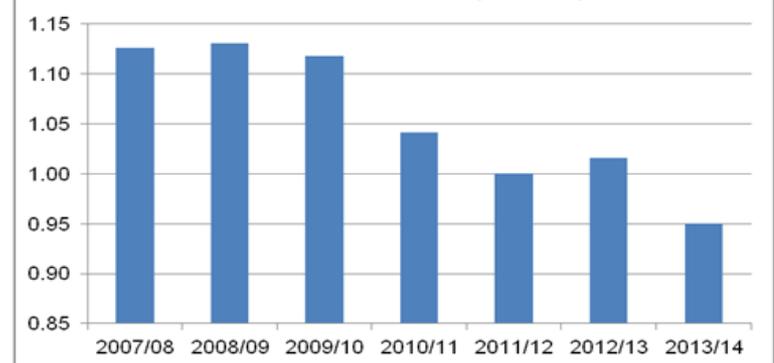
TLRNAM Peak Speeds (mph)



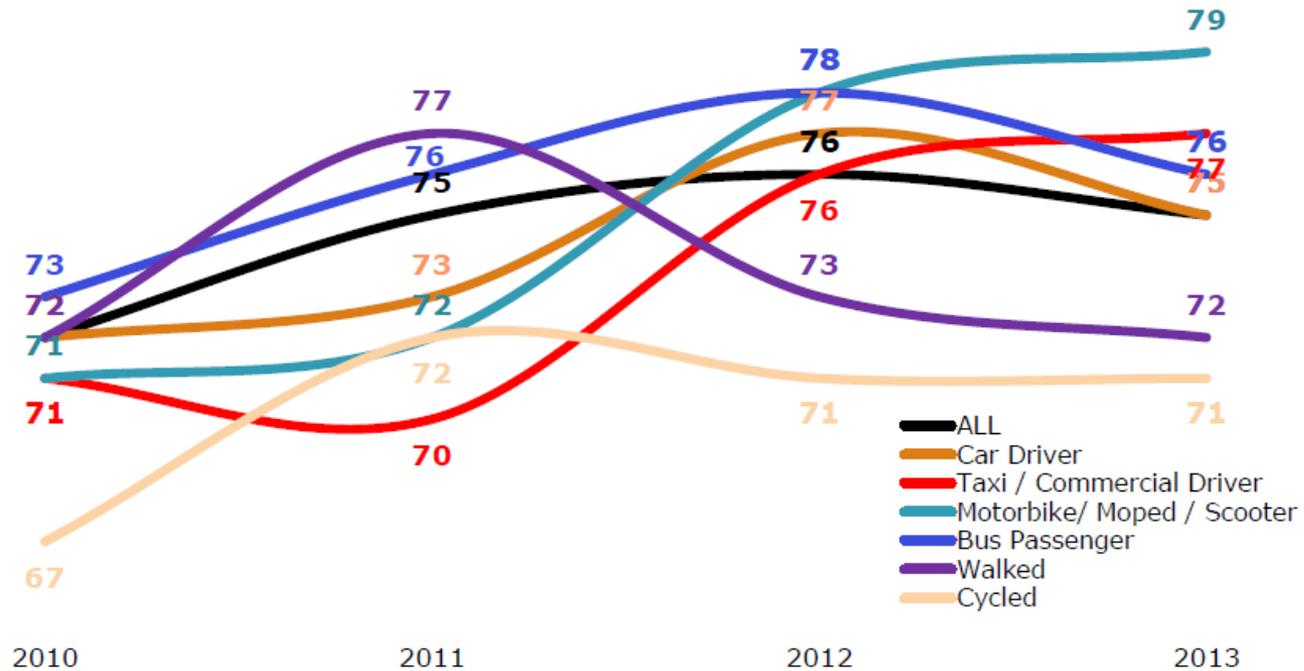
Trend in London-wide KSI Casualties 2005 – 2012 compared to target



Bus Excess Wait Time (Minutes)



TLRN Customer Satisfaction Levels 2010-2013



Comparable overall satisfaction scores for Public Transport Services in 2013/14:

- Bus Services = 83
- Underground = 82
- Taxi = 83
- Private Hire = 82



2. Where are we going?

**London is growing -
the challenge for the road network**



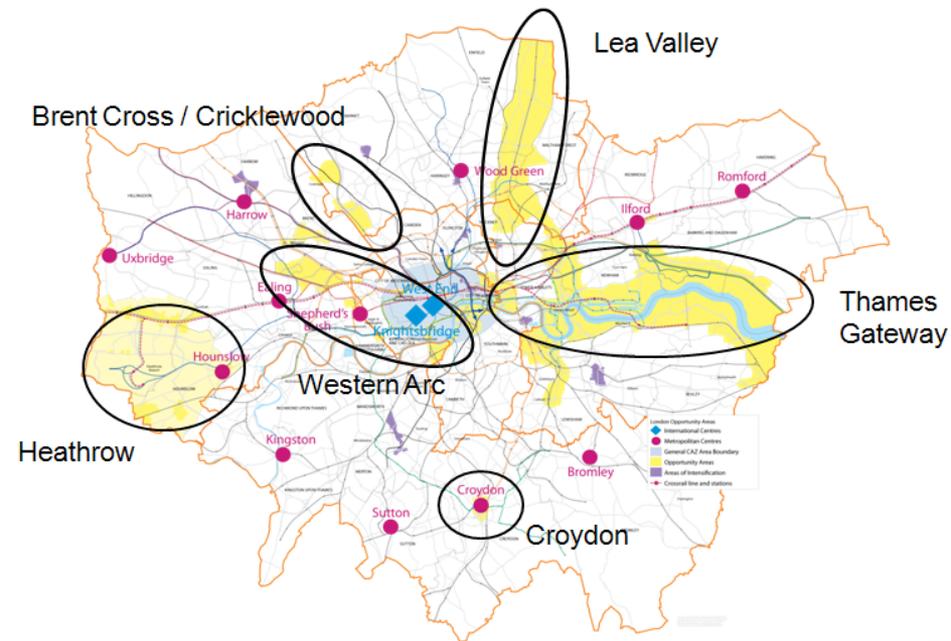
London is growing

Up to an extra 1.6m people are expected to be living in London by 2031, (equivalent to the population of Leeds or Birmingham) and London's economy is expected to grow by 42%.

As a result, by 2031, we expect to see increases in:

- Vehicle km by 10%
- Bus travel by 30% (& capacity by 10%)
- Cycling to triple in volume
- Freight traffic by 22%
- More competition for road-space for both movement and place-making.

The London Plan sets out Opportunity Areas for major development



**On what will remain an essentially
finite road network**



The Roads Task Force

To respond to this growth, the Mayor set up his Roads Task Force (RTF) in September 2012. They were responsible for considering how to:

- Keep people and goods moving
- Transform the environment for cycling, walking and public transport – including in terms of safety
- Facilitate all the activities that a world city like London needs.

The vision and direction for London's streets and roads

Roads Task Force



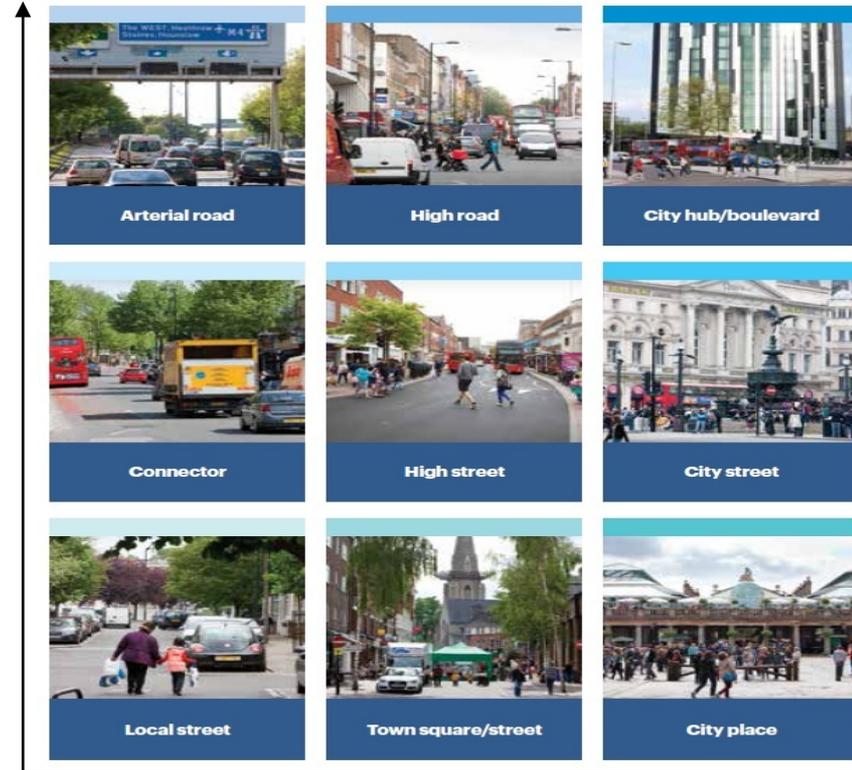
The RTF Recommendations

The RTF vision was released in June 2013. Their vision was of a great city, with vibrant spaces and a reliable efficient transport system, enabling access by sustainable modes to service its needs.

Its recommendations to achieve this included:

- Adopt the 'street types' approach across London
- Develop substantial new infrastructure in key locations (such as tunnels)
- Improve governance to efficiently deliver
- Engage like never before
- Innovate to flexibly use existing capacity.

Movement



Place



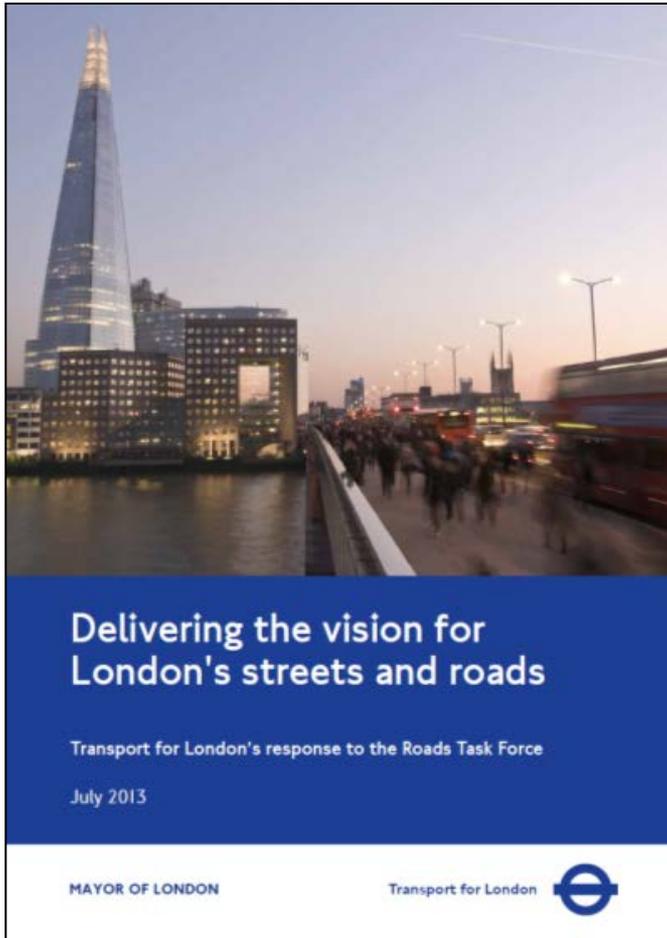
3. What are we doing about it?

**The Surface Road Investment Programme
and the outcomes it will deliver**



Our Vision

In response to the RTF, TfL set out its vision to keep London moving, optimise the use of road space and support economic and population growth:



- tackling congestion
- improving urban realm
- getting more from the road network
- making it more attractive to walk, cycle and use the bus
- ensure our assets are fit for purpose
- deliver a better managed road network
- make our streets safer and greener
- help London grow.



Our Investment Strategy:

Focuses on five key objectives to support this vision:

- 1 Ensuring our roads assets are fit for the future,
- 2 Delivering a programme of major highway improvements to:
 - » unlock economic growth & regeneration;
 - » Optimise use of road space (for all modes);
 - » improve pedestrian, cycling and bus facilities;
 - » enhance urban realm and 'place' function;
 - » deliver safety improvements;
- 3 Delivering the Mayor's vision for cycling;
- 4 Delivering a further 40% reduction in fatalities and serious injuries on London's roads;
- 5 Keeping London moving.



1. Investing in Assets:

£1.8bn to maintain performance & lower whole life costs

| £m | 2014/15 | 2015/16 | Total from 13/14 to 21/22 |
|--|------------|------------|------------------------------|
| Assets | | | |
| TLRN Capital renewal: annualised programme of asset (carriageway, drainage, tunnels, footways etc) renewal | 62 | 59 | 560 |
| TLRN Maintenance: on-going revenue funding for maintenance of the TLRN | 44 | 44 | 400 |
| Traffic Signal Modernisation: on-going renewal and modernisation of traffic signals, including boroughs. | 23 | 24 | 210 |
| Bus infrastructure: annualised programmes of works to maintain and renew bus infrastructure | 13 | 18 | 110 |
| Bus stop accessibility | 4 | 5 | 20 |
| Sub TOTAL Assets | | | 1,300 |
| Structures and Tunnels, Phase 1 (STIP1) | 82 | 72 | 210* |
| Structures and Tunnels, Phase 2 (STIP2) | 0 | 6 | 250 |
| London Tunnels Traffic Control System (LTRACS) | 2 | 3 | 30 |
| TOTAL Assets | 230 | 232 | 1,790 |

* The full Expected Final Cost (EFC) of STIP1 is £230m which includes £20m incurred prior to 2013/14.



...Including £1.3bn for Ongoing Capital Renewals

For example:

- Resurfacing over 150km of carriageway
- Re-laying over 30km of footway
- Replacing over 1,000 street lights and using energy efficient LEDs
- Modernising over 300 traffic signal sites
- Re-planting over 500 trees a year
- Renewing white lines and studs
- Clearing, repairing and upgrading drainage
- Renewing and repairing deteriorated bridge and tunnel elements
- Preventing deterioration by re-painting and re-waterproofing bridges.



... and an additional £0.5bn for Structures & Tunnels

STIP Phase 1 (£ 230m) includes:

- Strengthening Hammersmith Flyover - £76.8m
- Replacing Power Road Bridge - £33.5m
- Replacing Ardleigh Green Bridge - £31.7m
- Replacing Highbury Corner Bridge - £25.9m
- Replace Upper Holloway bridge deck - £25.4m
- Repair Chiswick Bridge - £11.4m
- Replace Woodlands retaining wall - £4.5M

STIP Phase 2 (£250m) includes work on:

- A further seven Thames crossings plus: Westway, Brent Cross structures, Country Way Viaduct, and George Green and Green Man Tunnels
- Works range from major repainting and waterproofing, to Mechanical and Electrical renewals, to repairing and refurbishing concrete bridges.



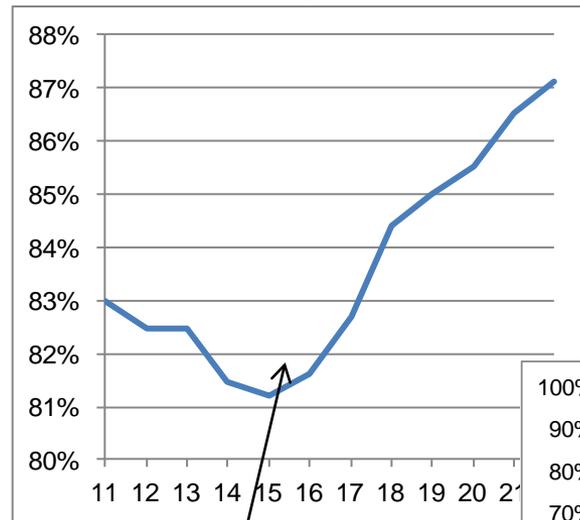
Asset Renewal Programme: Outcomes

A steady programme of capital investment will restore our highway assets to a good state of repair and minimise whole life costs:

Percentage of carriageway in good repair

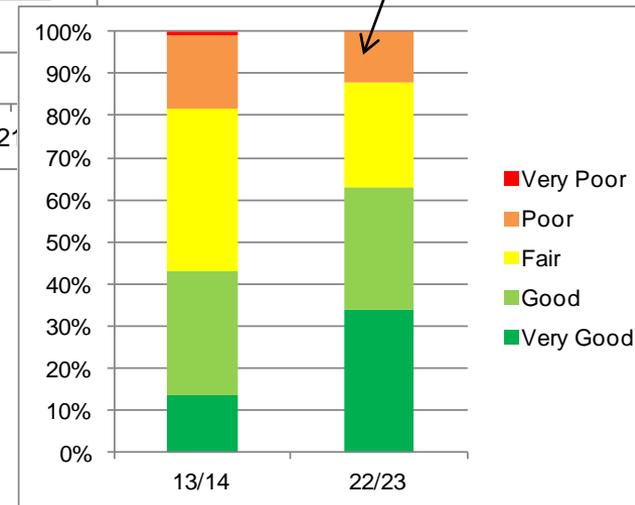


Percentage of bridges and highway structures in good repair



Condition bottoms out now and then improves as STIP kicks in

Proportion of bridges and highway structures in Poor/Very Poor condition decreases by 6.4%



2. Major Highway Enhancements

£0.6bn to support growth and deliver RTF outcomes

| £m | Total from 13/14 to 21/22* |
|--|----------------------------|
| Major Highway Enhancements | |
| Major growth related schemes (also Better Junctions locations) | 105 |
| Major growth related schemes (non Better Junctions locations) | 65 |
| Sub TOTAL Major growth related schemes | 170 |
| Gyratory improvements | 100 |
| Greater places schemes | 120 |
| Targeted network improvements | 110 |
| TLRN minor improvements | 100 |
| TOTAL Major Highway Enhancements | 600 |

* Cost are costs to TfL, net of any 3rd party contributions



£170 million to support schemes delivering redevelopment and economic growth



- Elephant & Castle Peninsularisation*
- Vauxhall Gyratory*
- Wandsworth Gyratory removal*
- Bromley-by-Bow improvement
- Renwick Road Barking Riverside
- Fiveways Croydon

* These schemes are also Better Junction Locations



£330m for transport related major projects delivering the RTF Outcomes

- £100m for Gyratory Improvements
(eg: Kings Cross, Shoreditch, Stoke Newington, Purley Cross and Tulse Hill)
- £120m for Greater Places
(eg: Highbury Corner, Waterloo Imax, Victoria Circus, Euston Road and Catford Town Centre)
- £110m for Targeted Network Improvements
(eg: Bow, Mill Hill Circus, Hanger Lane, Sun in the Sands, Savoy Circus, Charlie Brown's Roundabout).

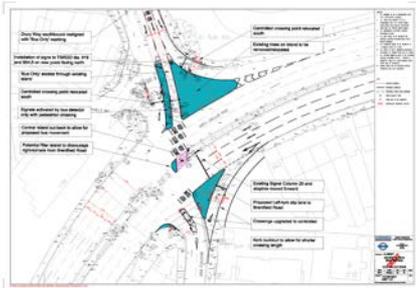


£100m for Minor Capital Improvements

£10 million a year to fund an ongoing programme of smaller scale improvement schemes on the TLRN. Examples include:

A406 Brentfield Road bus gate enabling re-routing

- In prelim design
- Forecast delivery Oct 2016



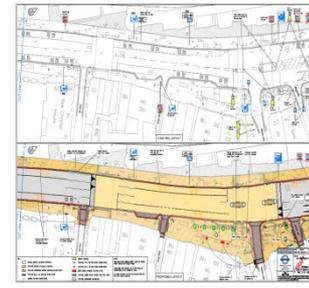
A4 Hyde Park Corner

- Crossing upgrade
- Completed 2012



A10 Bishopsgate City Corridor

- Urban Realm
- On Site Jan 2014



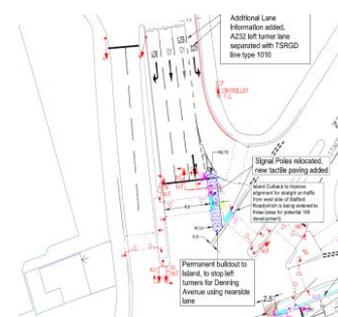
A12 Newbury Park

- Signalisation
- Road safety priority
- Completed Oct 2013



A3 Battersea Rise Diagonal Crossing

- Completed May 2012 in synergy with Capital Renewal work



A23 Fiveways South Bound approach - Quick Win

- Completed June 2011
- Southbound AM peak 17sec average journey time saving



Major Scheme Outcomes

....generally unique to each scheme, but including:

- **Delivering** the Roads Task Force objectives and **transforming** the way that people live, travel and experience the Capital
- **Supporting** London's continuing **development** as the 'go to' international city for business and tourism
- **Unlocking economic growth** and regeneration for generations to come
- **Improving network performance** at key locations for all modes of transport
- Providing **world class urban realm**, cycling and pedestrian facilities
- Making London one of the most **accessible** and safest large cities to travel in anywhere in the world.



3. Cycling Investment:

£0.9bn to deliver the Mayor's cycling vision for London

| £m | Total from 12/13 to 21/22* |
|--|----------------------------|
| Cycling Vision | |
| Transport for London Road Network: | |
| Cycle Superhighways, Better Junctions (core programme), Cycle Hire Phase 2 & southwest extension, TLRN Improvement schemes and Wayfinding | 303 |
| Non-Transport for London Road Network: | |
| Greenways, Biking Boroughs, Mini Hollands, Quietways, Central London Cycling Grid, Cycle to school partnerships, Hireable E-bikes, Cycle parking and Rail superhubs | 350 |
| Non-Infrastructure: | |
| Cycle Hire operations (net cost), Marketing and road events, Cycle safety initiatives, Police and company E-bikes Trial, Anti-social enforcement operations, Borough staffing, Portfolio management, Monitoring and research | 260 |
| TOTAL Cycling Vision | 913 |

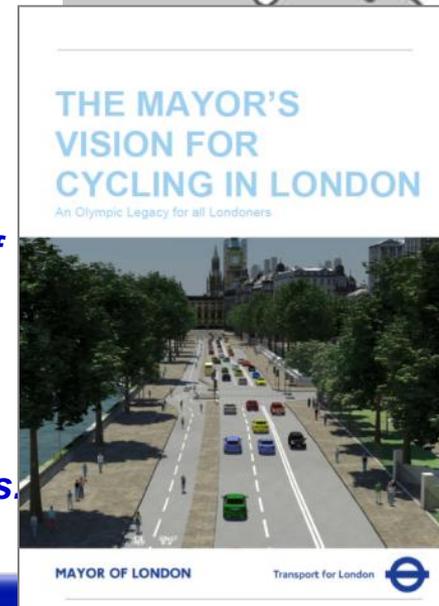
* Time period is from 2012/13 to 2021/22 to align with period of the Mayor's Cycling Vision.



The Mayor's Cycling Vision

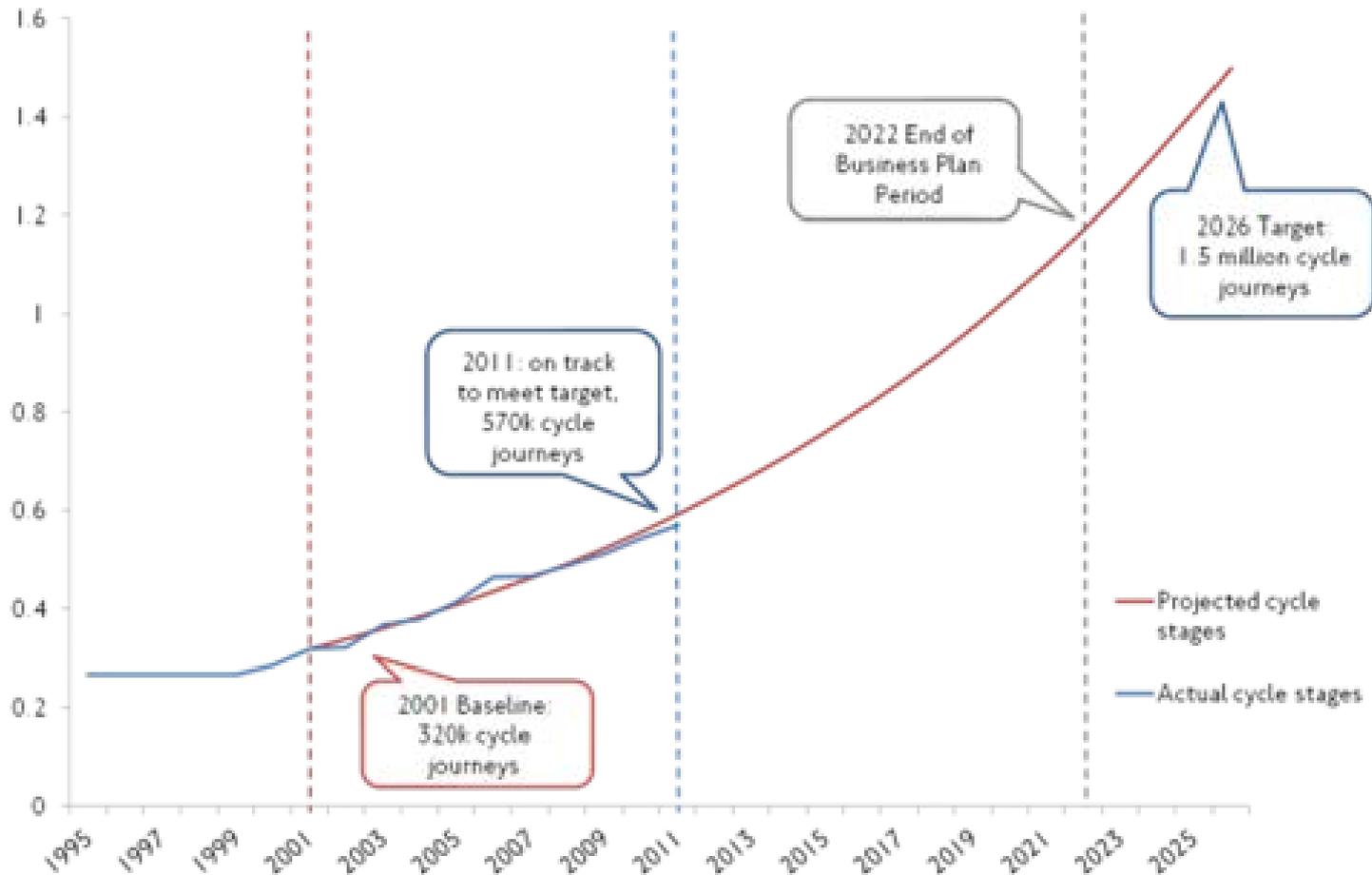
The Mayor's Vision for Cycling in London sets out the following four key outcomes:

- **A Tube Network for the Bike**
Providing a network of cycle routes across London
- **Safer Streets for Cycling**
A range of measures to improve cycle safety at junctions and targeting HGV safety
- **More People Travelling by Bike**
Making cycling a mainstream and popular mode of transport
- **Better Places for Everyone**
More cycling will benefit everyone, not just cyclists.



Cycling Programme Outcomes

A quadrupling of cycling on London by 2026:



4. Road Safety Investment:

£0.26bn to reduce deaths and serious injuries on London's roads

| £m | 2014/15 | 2015/16 | Total from 13/14 to 21/22 |
|---|-----------|-----------|---------------------------|
| Network Safety | | | |
| Education & training | 5 | 5 | 49 |
| Marketing and research campaigns | 4 | 4 | 36 |
| Innovation / evaluation | 2 | 2 | 18 |
| Engineering schemes on TLRN | 5 | 4 | 45 |
| Safety camera maintenance & enforcement | 6 | 6 | 67 |
| Safety camera replacement | 21 | 18 | 39 |
| Enforcement policing | 1 | 1 | 5 |
| TOTAL Network safety | 43 | 40 | 259 |



Delivering the Road Safety Plan



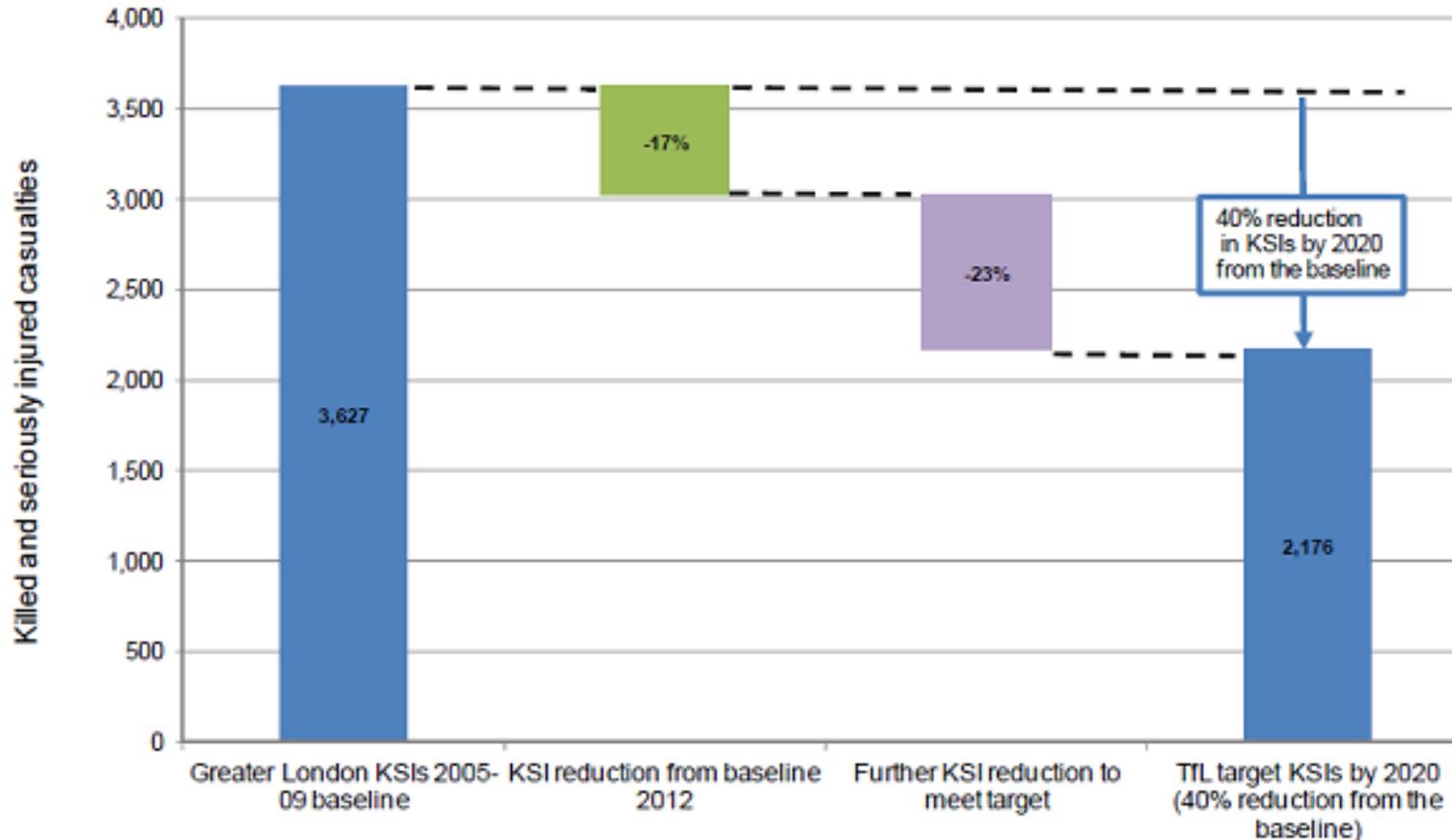
Targeting a 40% reduction in killed and seriously injured casualties on London's roads by 2020 (from a 2005-09 baseline)

- Safety Camera replacement programme
- £45m for road safety engineering schemes at the highest risk locations on the TLRN
- More than £3m per year for road safety marketing campaigns targeting behaviour change for the highest risk groups
- Road safety education and training campaigns to deliver safety improvements for those that are most vulnerable.
- Funding an increase in the activities of the Metropolitan Police Cycle Task Force and Motorcycle Tasking Team.



Road Safety Outcomes:

A further 40% reduction in KSI's by 2020:



5. Keeping London Moving:

£0.4bn to maximise the performance of the road network

| £m | 2014/15 | 2015/16 | Total from 13/14 to 21/22 |
|---------------------------------------|-----------|-----------|------------------------------|
| Network Performance | | | |
| Surface Intelligent Transport Systems | 7 | 13 | 100 |
| Corridor Improvement Programme | 2 | 5 | 44 |
| Intelligent traffic signals: SCOOT | 14 | 14 | 57 |
| Operational modelling | 3 | 2 | 10 |
| Bus pinch points | 2 | 14 | 100 |
| High quality bus priority | 1 | 5 | 100 |
| TOTAL Network Performance | 28 | 53 | 411 |



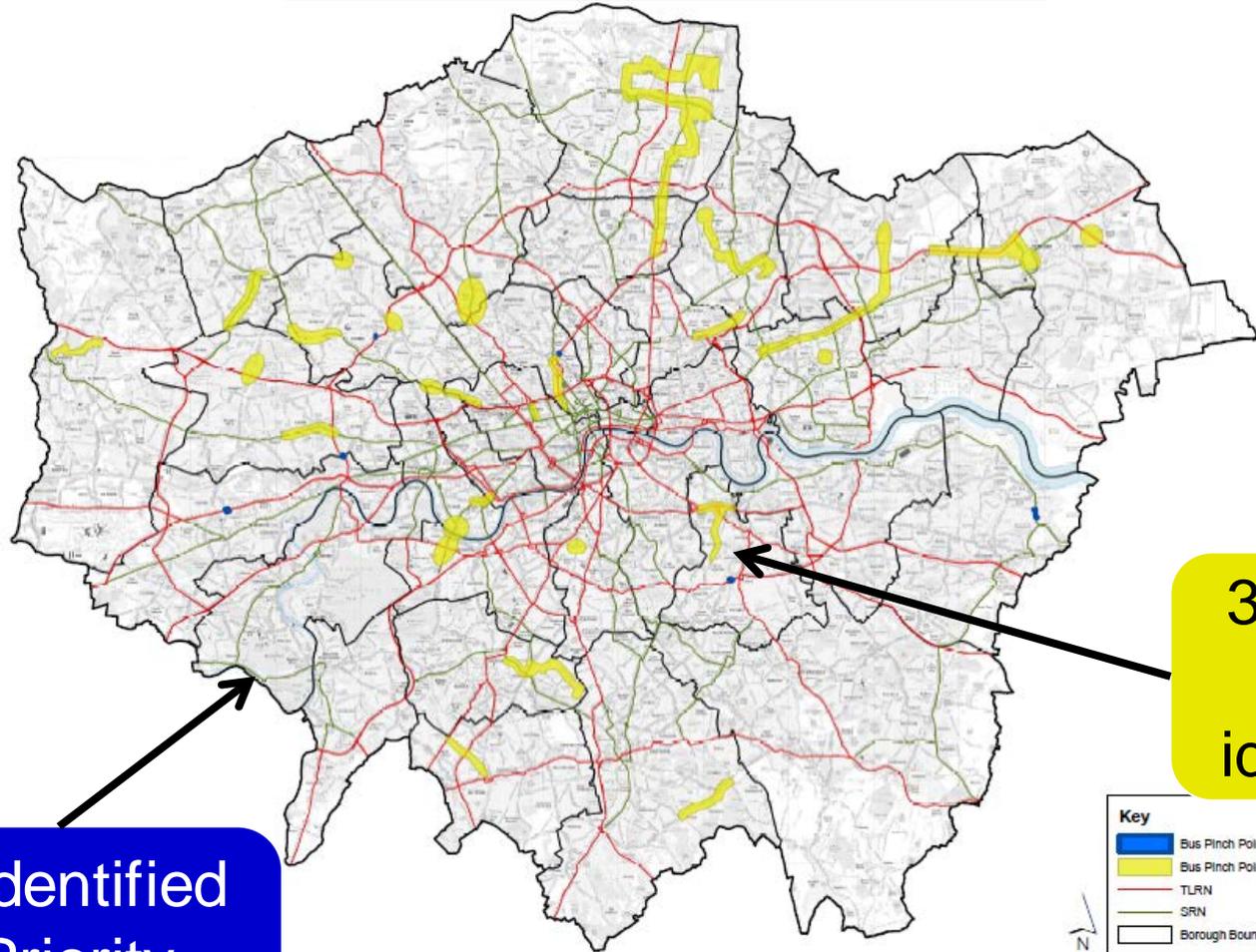
Traffic Management Technology

- £57m for a further 1,500 SCOOT junctions
- 84 further Variable Message Signs
- 1,000 additional CCTV cameras and existing cameras going digital
- Expanded programme of physical 'corridor improvement' measures (smaller scale traffic improvement schemes)
- Developing SCOOT to interact directly with iBus to optimise both traffic and bus service operation
- Improving TfL's operational modelling capability to enable the whole network to be 'actively' managed as central London was during the London 2012 Games



Maintaining Bus Reliability

£100m to tackle bus pinch points and;
£100m to prioritise access on high quality bus corridors



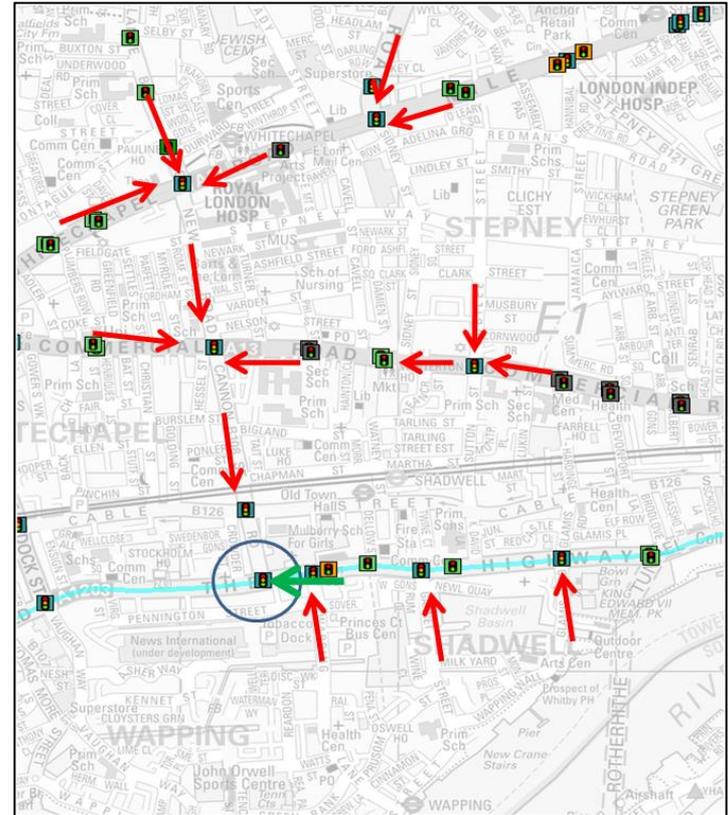
36 pinch
points
identified

6 identified
Priority
corridors

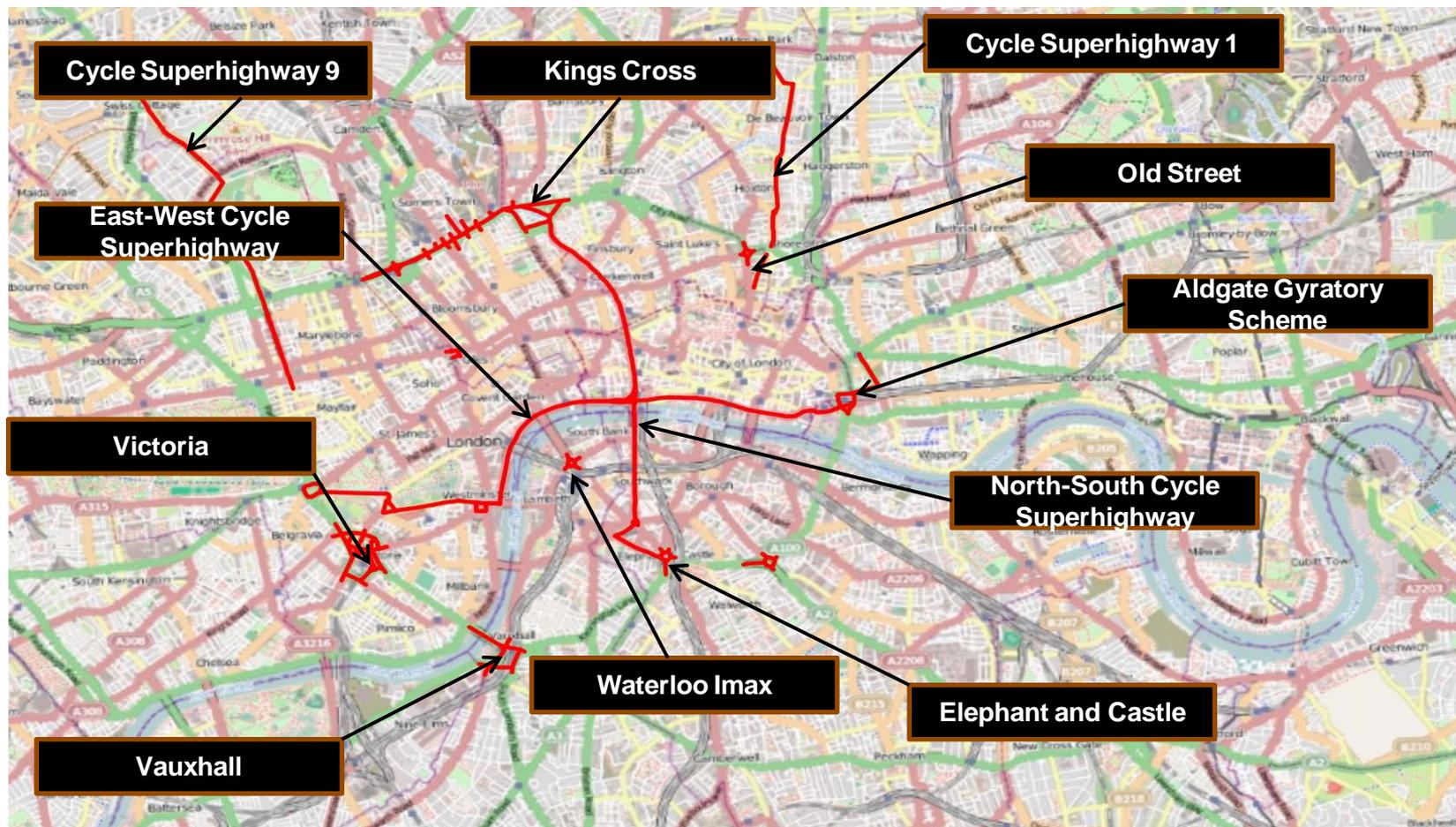


'Active' Traffic Management

- To Keep London Moving, we must also develop a new 'Active' Traffic Management Strategy to manage traffic flows on a London-wide basis
- Using SCOOT technology, enhanced network instrumentation and inter-active traffic modelling capabilities to:
 - 'balance' flows across the whole network
 - prioritise key movements (eg. buses)
- In central London in particular, the challenge is significant...

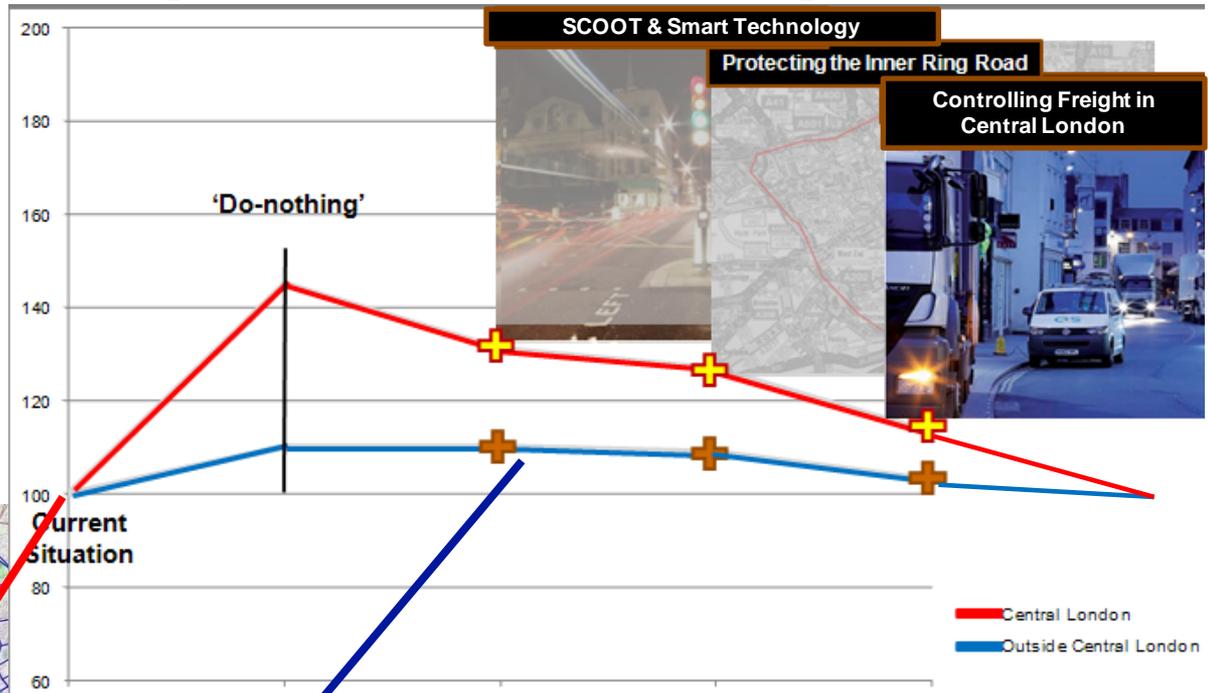
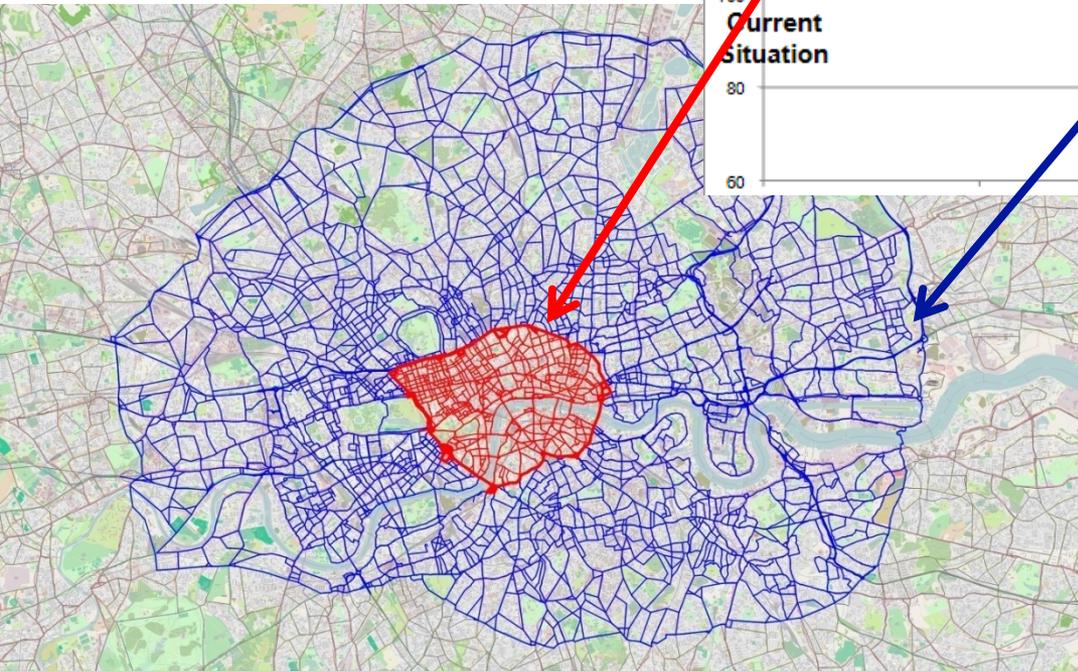


Major projects and developments impacting on traffic capacity in central London by 2016



Managing the Impacts of Development

Central London - Inner Ring Road and Congestion Charging Zone – already fully 'SCOOT' enabled

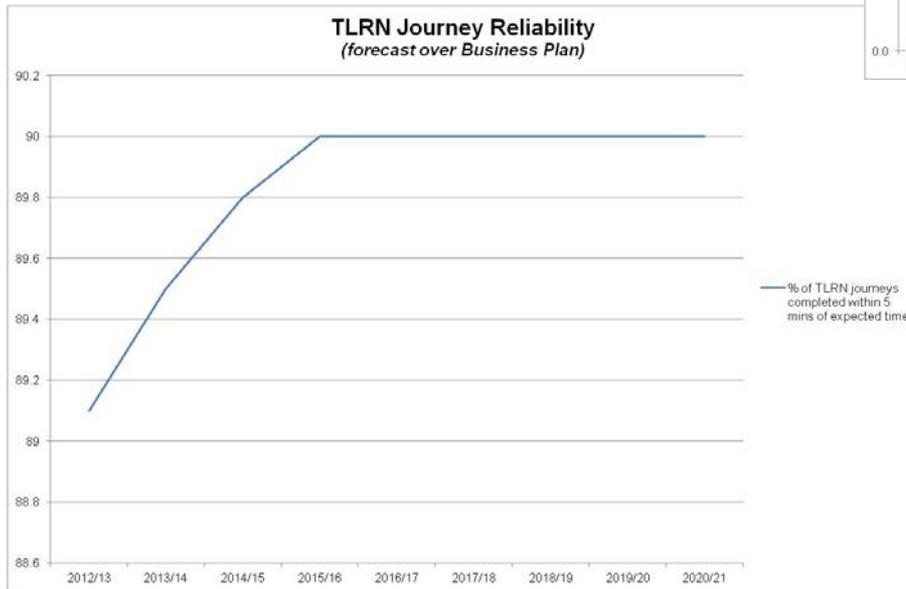
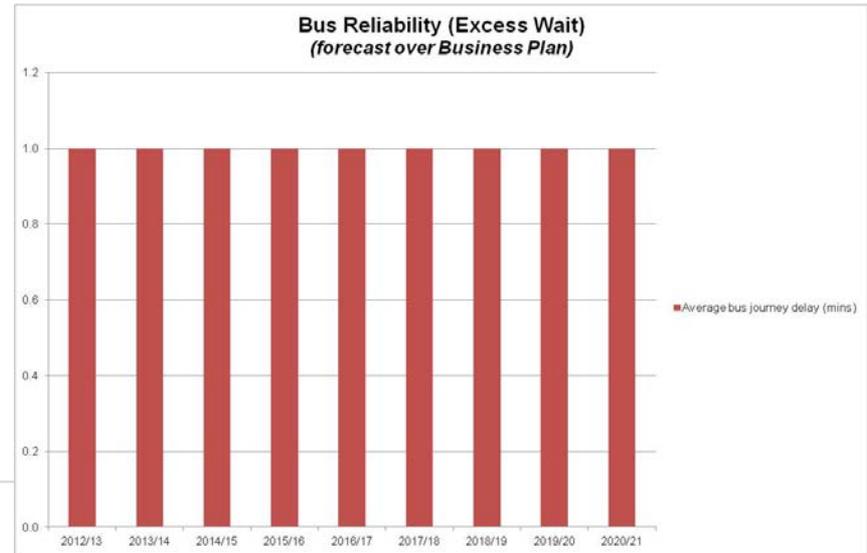


Outside Central London - North and South Circular to the Inner Ring Road – prioritised for further 'SCOOT' investment



Traffic Management Outcomes

The overall goal in traffic management terms is to keep traffic journey time reliability and bus reliability (EWT) broadly constant, whilst delivering all of the other Road's Task Force and the Mayor's Cycling Vision outcomes...



Set against the scale of economic development and population growth anticipated...

this is a very
challenging target



4. How will we ensure we deliver?

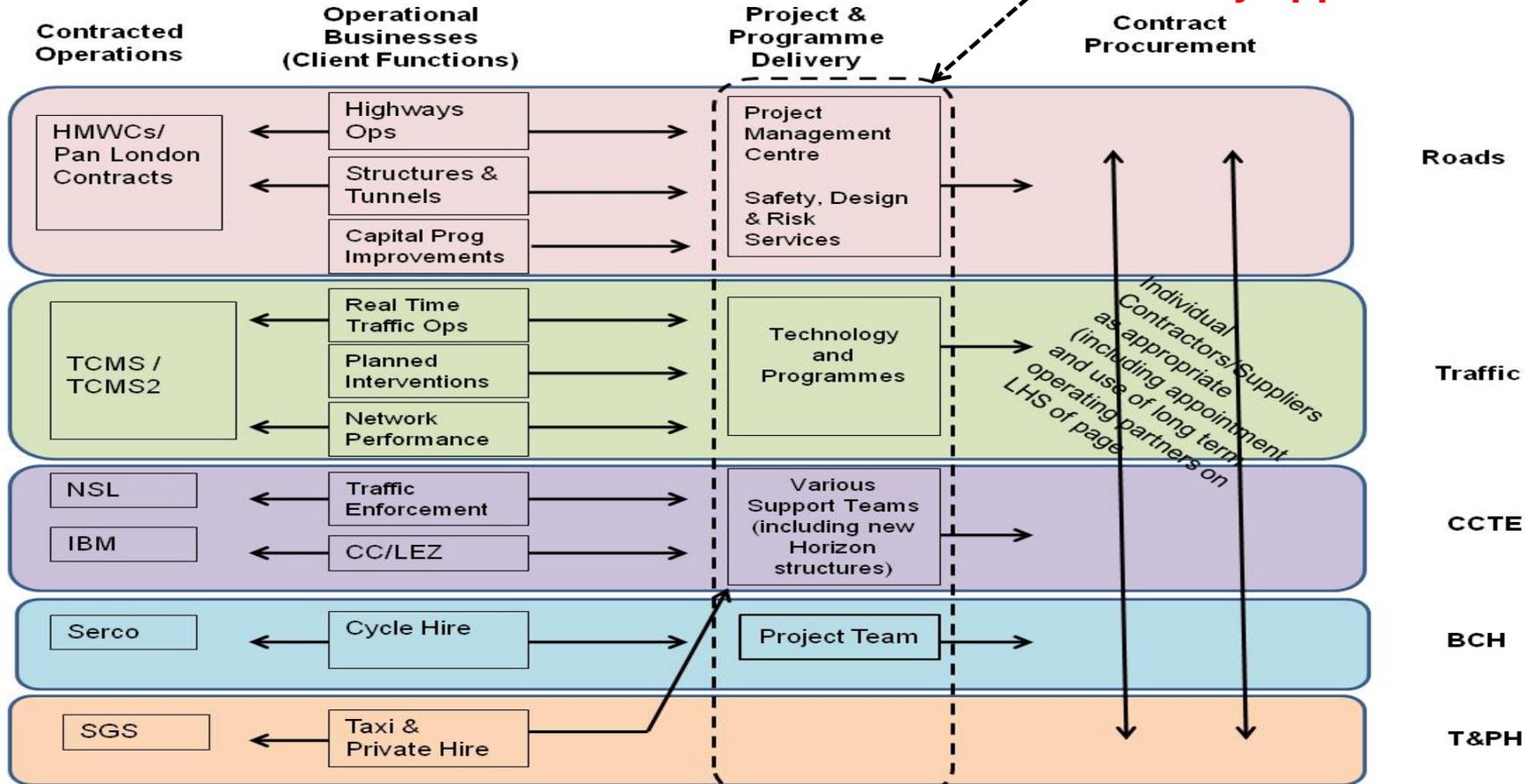
‘Project Integration’ and the Surface Integration Programme (SIP)



Surface Organisational Review

....from modally led to functionally led:

New 'integrated' project delivery approach

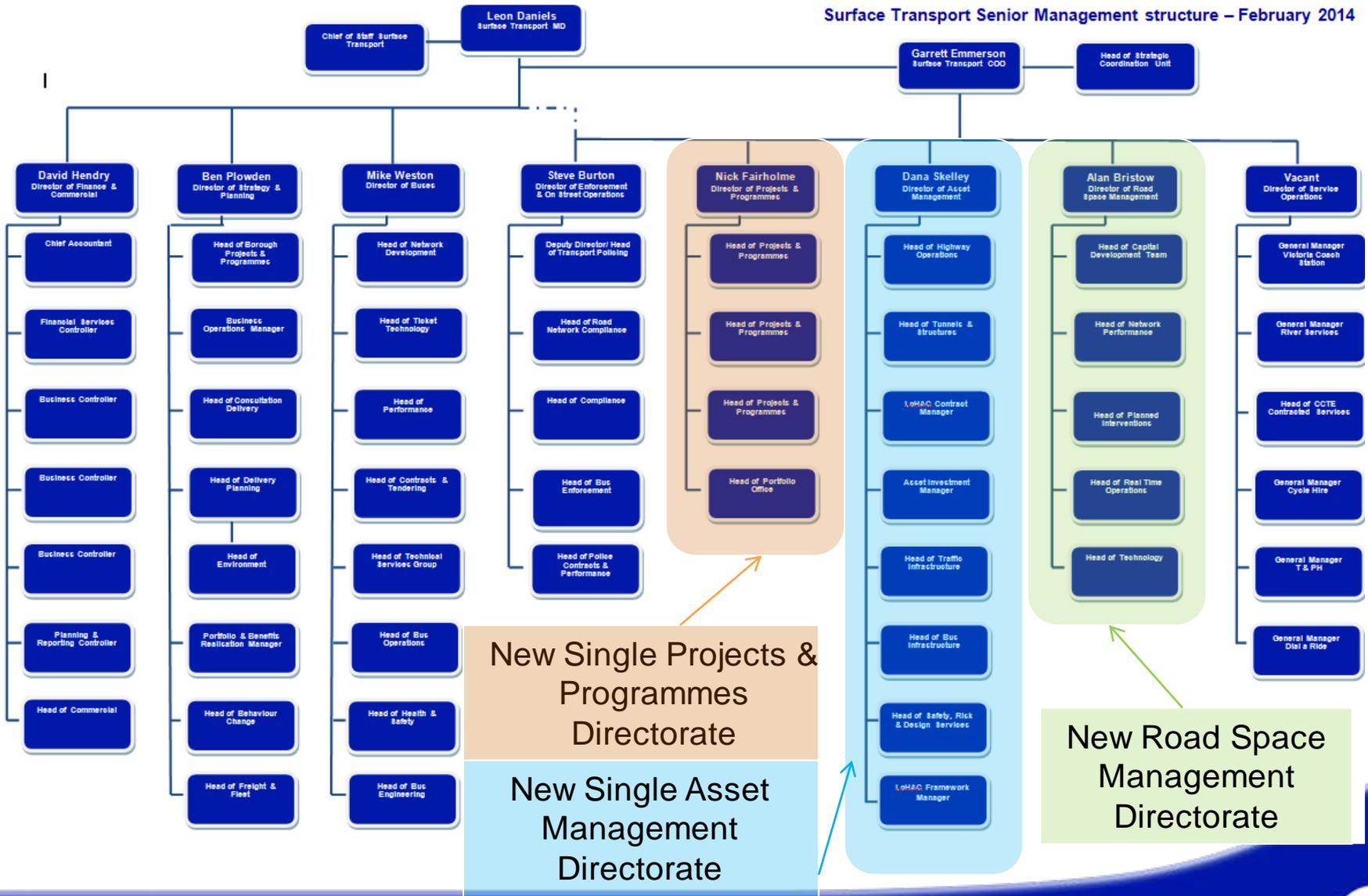


Old 'modally led' project delivery approach



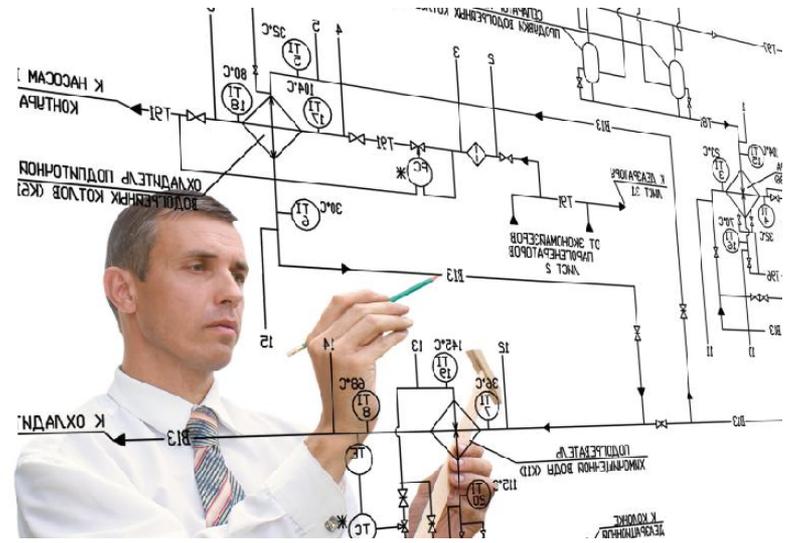
Wider Re-organisation of Surface Transport

Surface Transport Senior Management structure – February 2014



Increasing Resources:

- New integrated Project and Programmes Directorate (PPD) created in May 2013
- Brought together 210 people and 70 projects & programmes
- Clearly delineates 'delivery' from 'sponsorship'
- Projects span highway infrastructure, technology & systems, business transformation and contract re-lets; as well as complex delivery (annualised) programmes
- New PPD – estimated 14% increase in productivity as a result of new structure
- In addition to this, 130 additional technical and professional posts created across Surface to support expanding investment programme.



Governance, Controls, Reporting:

- All projects & programmes now have robust board structures
- New 'Portfolio' boards set up to assure packages of work
- Sponsors chair boards and hold delivery teams to account
- Agile resourcing model deployed
- Pathway methodology rolled out across all projects & programmes
- Delivery strategies with suppliers being developed
- Immediate focus on cost, risk, schedule and contract management
- Piloting integrated project controls methodology
- P3M 'Dashboard' reporting rolled out across all projects & programmes.

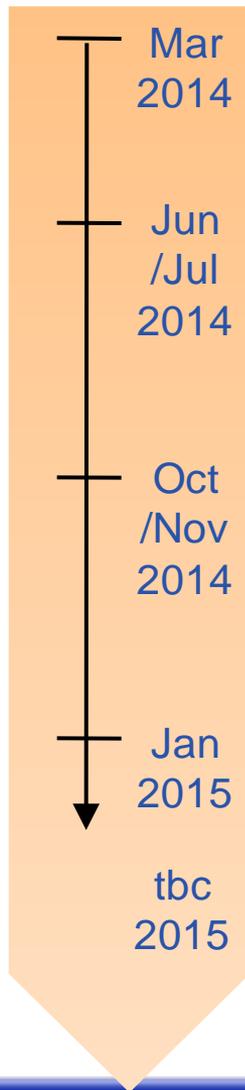


Efficiency & Capability Improvements:

- LoHAC delivering up to 15% efficiency savings over old HMWC (estimated at £450 million over Business Plan period)
- TCMS2 targeting similar operational and investment programme savings for traffic signals work (estimated at £15 million over Business Plan period)
- Early Contractor Involvement (ECI) targeting savings on new major projects (eg STIP packages)
- Closer Joint working with LU & Rail (eg. through Delivery and Commercial Capability Programme Board) to harmonise processes, exploit resourcing opportunities and leverage efficiencies (eg. using survey staff by day on road projects and by night on tube upgrade)
- New Business Process Improvement initiative (building on existing Lean process work in LoHAC contract development and including utilisation of LU Six Sigma resources) in improve efficiency and cut waste.
- Improving supplier relationship management (including engagement with second tier suppliers).



Finance & Policy Committee Approvals: forward programme...



- Structures & Tunnels Investment Programme (STIP) **£230m**
- Highways Capital Renewals (annual programme) **£62m**

- Bus Pinch Points **£100m**
- High Quality Bus Corridors **£100m**
- Surface Intelligent Transport Systems (SITS) **£100m**
- Brent Cross Highways works (s278) **£tbc***

- Cycling Vision (annual update) **£913m**
- Croydon Fiveways
- Wandsworth Gyratory
- Road Space Management SCOOT **£57m**

- Vauxhall Gyratory

- STIP phase 2 **£250m.**

* Estimated costs to TfL, net of any developer contributions



In Conclusion...

by the end of the Business Plan period, we will have:

Assets: Restored the 'state of good repair' of our roads, bridges, tunnels, signals & other highway assets, vital for the continuing reliable operation of our transport network;

Major Projects: Transformed London's major road network, delivering over 90 major improvement schemes (and numerous smaller projects):

- » unlocking **economic growth & regeneration**;
- » **improving network performance** at key locations for all modes of transport;
- » improving **pedestrian, cycling and bus facilities**;
- » enhancing **urban realm and 'place'** function of London's streets and;
- » delivering substantial **safety improvements**;

Cycling: Increased cycling in London by around 300% and delivered the Mayor's vision to transform the city into the best large cycling city in the world and;

Road Safety: Secured a further 40% reduction in fatalities and serious injuries;

Traffic Management: Kept London's traffic, buses and freight moving

