

# Mayor's Transport Strategy – Part three

## Delivery



# Chapter seven – Implementation plan

## 7.1 Short, medium and long-term plan

<sup>697</sup> Implementation of the schemes identified in the MTS can be grouped into three time periods:

- Short term: The period up to and including 2012
- Medium term: From 2013 up to and including 2020
- Long term: From 2021 up to and including 2031

<sup>698</sup> Figure 86 below sets out the phasing for the implementation of an indicative list of schemes for the implementation of the strategy<sup>1</sup>. It describes the scheme itself, the phasing and whether funding has already been

or is yet to be secured. Some schemes are labelled as unfunded as they require further funding to be made available before they could be taken forward, or because they fall outside the timeframe of TfL's current Business Plan.

<sup>699</sup> The implementation plan reflects the current delivery priorities. The plan will be regularly reviewed through the TfL Business Plan, the GLA Corporate Plan and the DfT's Network Rail and Highways Agency investment programmes to ensure ongoing alignment with priorities. Longer-term unfunded schemes are at varying stages of development. Scheme development will be regularly reviewed to ensure alignment with policy priorities, value for money, deliverability and to take account of opportunities for funding that may become available.

**Figure 86:** Transport Strategy Implementation Plan (indicative list)

| Scheme  | Description   | Scheme cost | Anticipated completion |            |           | Proposal |
|---|---|-------------|------------------------|------------|-----------|----------|
|   |   |             | 2010–2012*             | 2013–2020† | Post 2020 |          |
| <b>Rail</b>                                     |   |             |                        |            |           |          |
| High Speed 1                                    | International services stopping at Stratford  | L           |                        |            |           | 1        |
| High Speed 1                                    | Enhanced domestic services  | L           |                        |            |           | 4        |
| High Speed 1                                    | Direct services to a wider range of European destinations (making use of new European infrastructure) | L           |                        |            |           | 4        |
| High Speed 2                                    | London to the west Midlands and beyond  | H           |                        |            |           | 4        |
| Improved rail freight terminals to serve London | New and/or expanded rail freight terminals to serve London  | L           |                        |            |           | 2        |

<sup>1</sup> TfL schemes will be reviewed by the TfL Board as part of the business planning process

| Scheme                             | Description  | Scheme cost | Anticipated completion |            |           | Proposal |
|------------------------------------|--|-------------|------------------------|------------|-----------|----------|
|                                    |  |             | 2010–2012*             | 2013–2020† | Post 2020 |          |
| Improved rail freight routes       | Rail link from Barking to Gospel Oak line to West Coast Main Line  | M           |                        |            |           | 3        |
| Improved rail freight routes       | Further capacity enhancement for the Felixstowe to Nuneaton route  | M           |                        |            |           | 3        |
| Crossrail 1                        | Core scheme: Maidenhead and Heathrow in the west to Shenfield and Abbey Wood in the east   | H           |                        |            |           | 5        |
| Crossrail 1                        | Westerly extension(s) and/or increased frequency west of Paddington  | M           |                        |            |           | 6        |
| Crossrail 1                        | Easterly extension   | M           |                        |            |           | 6        |
| Chelsea Hackney line (Crossrail 2) | Enhanced southwest – northeast London capacity and connectivity  | H           |                        |            |           | 9        |
| London Overground                  | Programme of expansion and enhancement of services, including new orbital services through Inner London and new, longer trains by 2012 | M           |                        |            |           | 14       |
| London Overground                  | Further train lengthening  | L           |                        |            |           | 8 and 14 |
| London Overground                  | Diversion of Watford Junction services to Stratford (instead of Euston) to release capacity for High Speed 2 at Euston                 | M           |                        |            |           | 4        |
| London Overground                  | Barking to Gospel Oak line – electrification and train lengthening   | L           |                        |            |           | 8 and 92 |
| West Anglia                        | Twelve-car capability to Stansted and Cambridge. Additional capacity also on inner services (HLOS CP4)                                 | L           |                        |            |           | 7        |
| West Anglia                        | Lea Valley four-tracking and improved access to Stratford  | H           |                        |            |           | 8        |
| Thameside south Essex              | Twelve-car capability on all routes (HLOS CP4)   | M           |                        |            |           | 7        |
| Thameside south Essex              | Further capacity increases   | M           |                        |            |           | 8        |
| Chiltern                           | Enhanced inner suburban service (HLOS CP4)   | L           |                        |            |           | 7        |
| South central London               | Ten-car capability on inner suburban (HLOS CP4)  | M           |                        |            |           | 7        |
| South central London               | Twelve-car capability and additional fast services (HLOS CP4)  | L           |                        |            |           | 7        |
| South central London               | Further capacity increases   | M           |                        |            |           | 8        |

| Scheme                   | Description   | Scheme cost | Anticipated completion |            |           | Proposal |
|--------------------------|---|-------------|------------------------|------------|-----------|----------|
|                          |   |             | 2010–2012*             | 2013–2020† | Post 2020 |          |
| Southeast London         | Train lengthening on services to Cannon Street/Charing Cross (HLOS CP4)                             | M           |                        |            |           | 7        |
| Southeast London         | Further capacity increases  | M           |                        |            |           | 8        |
| Southwest London         | Ten-car capability on inner suburban and Windsor lines (HLOS CP4)                                   | M           |                        |            |           | 7        |
| Southwest London         | Further capacity increases  | M           |                        |            |           | 8        |
| Great Western            | Train lengthening (HLOS CP4)  | L           |                        |            |           | 7        |
| Great Western            | Electrification   | H           |                        |            |           | 92       |
| Great Northern           | Train lengthening (HLOS CP4)  | L           |                        |            |           | 7        |
| Great Northern           | Further capacity increases  | L           |                        |            |           | 8        |
| Great Eastern            | Additional and longer outer services (HLOS CP4)   | L           |                        |            |           | 7        |
| Great Eastern            | Additional inner services (HLOS CP4)  | L           |                        |            |           | 7        |
| Great Eastern            | Further capacity increases  | L           |                        |            |           | 8        |
| West Coast               | Train lengthening and frequency improvements (HLOS CP4)   | L           |                        |            |           | 7        |
| West Coast               | Further capacity increases  | L           |                        |            |           | 8        |
| Thameslink               | Phase 1: 12-car capability on most of mainline and 16 trains per hour through core                  | H           |                        |            |           | 7        |
| Thameslink               | Phase 2: 24 trains per hour through core, expanded network  | H           |                        |            |           | 8        |
| Thameslink               | Make greater use of 12-car capability coverage  | M           |                        |            |           | 7        |
| Rail termini enhancement | Passenger congestion relief/onward movement capacity enhancement works. Schemes under development   | M           |                        |            |           | 11       |
| Strategic interchanges   | Programme of schemes under development  | M           |                        |            |           | 46       |
| Improved rail            | For example, enhanced bus services and interchange at selected Crossrail and/or Thameslink stations | L           |                        |            |           | 45       |
| Airtrack                 | Link south west London railway network to Heathrow (part-funded)                                    | M           |                        |            |           | 50       |
| <b>Tube</b>              |   |             |                        |            |           |          |
| Jubilee line             | Jubilee line upgrade to provide additional capacity and improve journey times                       | M           |                        |            |           | 17       |

| Scheme  | Description   | Scheme cost | Anticipated completion |            |           | Proposal |
|---|---|-------------|------------------------|------------|-----------|----------|
|   |   |             | 2010–2012*             | 2013–2020† | Post 2020 |          |
| Northern line                                 | Phase 1: Northern line upgrade to provide additional capacity and improve journey times by the end of 2012  | M           |                        |            |           | 17       |
| Northern line                                 | Phase 2: Northern line Upgrade 2 to deliver a further 20 per cent increase in capacity through the simplification and recasting of service patterns   | M           |                        |            |           | 17       |
| Northern line                                 | Developer-led extension: Kennington to Battersea to support the regeneration of the Vauxhall/Nine Elms/Battersea area   | M           |                        |            |           | 22       |
| Victoria line                                 | Victoria line upgrade including new rolling stock and signalling to provide additional capacity and improve journey times   | M           |                        |            |           | 17       |
| Piccadilly line                               | Piccadilly line upgrade to provide additional capacity and improve journey times  | M           |                        |            |           | 17       |
| Sub-Surface Railway (SSR)                     | Circle, District, Hammersmith & City and Metropolitan lines upgrade (including new air-conditioned rolling stock and new signalling) to provide additional capacity and improve journey times | H           |                        |            |           | 17       |
| Croxley rail link                             | Metropolitan line link to Watford Junction  | M           |                        |            |           | 22       |
| Bakerloo line                                 | Bakerloo line upgrade: Including new energy efficient and high capacity rolling stock and signalling  | M           |                        |            |           | 17       |
| Bakerloo line                                 | Potential Bakerloo line southern extension  | H           |                        |            |           | 22       |
| Station refurbishment/modernisation programme | Continuing programme of refurbishment/modernisation of stations   | H           |                        |            |           | 18       |
| Cooling the Tube programme                    | Enabling operation of services post line upgrades and improved passenger comfort  | M           |                        |            |           | 20       |
| Core asset renewal                            | Programme of core asset renewal to lock-in benefits from the upgrades and maintain assets in a state of good repair   | H           |                        |            |           | 17       |
| Tube station congestion relief schemes        | Congestion relief schemes at Victoria, Tottenham Court Road, Bond Street, Bank (part-funded) and Paddington (Hammersmith & City line)   | H           |                        |            |           | 19       |

| Scheme  | Description   | Scheme cost | Anticipated completion |            |           | Proposal |
|---|---|-------------|------------------------|------------|-----------|----------|
|   |   |             | 2010–2012*             | 2013–2020† | Post 2020 |          |
| Further Tube station congestion relief schemes      | Targeted station capacity expansion programme   | H           |                        |            |           | 19       |
| Energy-saving initiatives                           | Initially, a programme of trials to include low energy lighting, smart electricity metering at stations and low loss conductor rails  | L           |                        |            |           | 106      |
| Regenerative braking and automatic train control    | To be implemented as an integral part of the Tube upgrade programme   | M           |                        |            |           | 106      |
| <b>DLR</b>  |   |             |                        |            |           |          |
| Network-wide capacity upgrade to three-car services | Infrastructure enhancement to enable a 50 per cent increase in capacity   | M           |                        |            |           | 15       |
| Extension: Stratford International to Canning Town  | Extension to be completed in summer 2010  | M           |                        |            |           | 15       |
| Further DLR network enhancements                    | Potential extensions and/or capacity increases  | M           |                        |            |           | 15       |
| <b>Tramlink</b>                                     |   |             |                        |            |           |          |
| Tramlink further enhancements                       | Potential extensions and/or capacity increases  | L/M         |                        |            |           | 16       |
| <b>Buses and bus transit</b>                        |   |             |                        |            |           |          |
| East London Transit                                 | Phase 1b (Barking to Dagenham Dock via Barking Riverside), services starting in 2013  | L           |                        |            |           | 23       |
| Bus network development                             | Regular review of bus network, including reviews of the strategic priorities underlying the process approximately every five years, to cater for population and employment growth, maintain ease of use, attractive frequencies and adequate capacity, reliable services, good coverage and good interchange with other modes | M           |                        |            |           | 23       |
| Development of a New Bus for London                 | Pilot to create a new iconic bus for London   | L           |                        |            |           | 25       |
| Phasing out of 'bendy' buses                        | Anticipated by the end of 2011  | L           |                        |            |           | 25       |

| Scheme  | Description   | Scheme cost | Anticipated completion |            |           | Proposal |
|---|---|-------------|------------------------|------------|-----------|----------|
|   |   |             | 2010–2012*             | 2013–2020† | Post 2020 |          |
| Low emission buses                              | Intention that all new buses entering London's fleet post 2012 be low emission (initially diesel hybrid)  | M           |                        |            |           | 92       |
| Enhanced real time service information          | Delivery of Countdown 2; enhanced real time information at stops, on internet and mobiles   | L           |                        |            |           | 24       |
| Bus priority                                    | Implementation of bus priority measures to maintain service reliability   | M           |                        |            |           | 24       |
| <b>Cycling</b>                                  |   |             |                        |            |           |          |
| Central London Cycle Hire scheme                | Around 6,000 bikes for hire in central London, scheme opening in 2010   | M           |                        |            |           | 54       |
| London Cycle Hire scheme enhancement            | Expansion of area covered and/or additional bikes in London Cycle Hire scheme   | L           |                        |            |           | 54       |
| Additional cycle parking                        | Around 66,000 additional cycle parking spaces in London   | L           |                        |            |           | 54       |
| Cycle Superhighways                             | Two initial trial radial routes to central London, followed by further routes   | L           |                        |            |           | 54       |
| Cycling initiatives                             | Biking borough initiatives  | L/M         |                        |            |           | 52       |
| <b>Walking and urban realm enhancements</b>     |   |             |                        |            |           |          |
| Enhanced urban realm and pedestrian environment | London-wide 'better streets' initiatives to improve pedestrian connectivity and urban realm   | M           |                        |            |           | 60       |
| Access to stations and surroundings             | Targeted programme of works to improve accessibility and personal security on walk and cycle routes to stations and bus stops                         | M           |                        |            |           | 60       |
| Walking information and campaigns               | Walking campaigns, including the '2011 year of walking', that will focus on walking routes, wayfinding, events and activities                         | L           |                        |            |           | 62       |
| Improved wayfinding                             | Targeted introduction of on-street wayfinding specifically designed for pedestrians, for example, Legible London                                      | L           |                        |            |           | 61       |
| Increased tree and vegetation coverage          | Additional 10,000 street trees by 2012 (funded), with a target of an additional two million trees in London's parks, gardens and green spaces by 2025 | L           |                        |            |           | 113      |

| Scheme  | Description  | Scheme cost | Anticipated completion |            |           | Proposal |
|---|--|-------------|------------------------|------------|-----------|----------|
|   |  |             | 2010–2012*             | 2013–2020† | Post 2020 |          |
| <b>Roads</b>  |  |             |                        |            |           |          |
| Improved road management to smooth the flow of traffic            | Measures to smooth traffic flows, manage congestion and improve journey time reliability for all people and freight movements, and maximise the efficiency of the road system from a business and individual perspective | M           |                        |            |           | 30       |
| Permit scheme for roadworks                                       | Introduction and development of a permit scheme and lane rental system aimed at utility companies undertaking roadworks  | L           |                        |            |           | 32       |
| Bounds Green (A406)   | Safety and environmental improvements  | L           |                        |            |           | 35       |
| Henlys Corner junction works                                      | Safety improvements, consents yet to be obtained   | L           |                        |            |           | 35       |
| Removal of Tottenham Hale gyratory                                | Existing one-way system to be converted to two-way, improved pedestrian crossing and cycling facilities  | L           |                        |            |           | 35       |
| Blackwall Tunnel (northbound)                                     | Refurbishment of tunnel  | L           |                        |            |           | 34       |
| Further gyratory, one-way system and bottleneck improvement works | Works to improve facilities and conditions for pedestrians and cyclists, and to smooth traffic flow  | M           |                        |            |           | 35       |
| Achievement of state of good repair of road infrastructure        | Ongoing programme of maintenance   | M           |                        |            |           | 34       |
| Support development of intelligent speed adaptation               | Continue trials of intelligent speed adaptation technologies   | L           |                        |            |           | 72       |
| Average speed camera technology                                   | Encourage further implementation of average speed camera technology  | L           |                        |            |           | 73       |
| Car club support  | Support expansion of car clubs   | L           |                        |            |           | 91       |
| LEZ   | Further LEZ enhancements and vehicle coverage  | L           |                        |            |           | 95       |
| Provision of infrastructure to support low emission road vehicles | Introduction of electric vehicle recharging points by 2015 (funded) and support distribution networks for other alternative fuels such as hydrogen and biofuels (unfunded)   | L           |                        |            |           | 105      |




| Scheme   | Description  | Scheme cost | Anticipated completion |            |           | Proposal |
|--|--|-------------|------------------------|------------|-----------|----------|
|  |  |             | 2010–2012*             | 2013–2020† | Post 2020 |          |
| Light emitting diode (LED) traffic signals                         | LED traffic signals at 300 junctions across London (funded) and ongoing programme to replace life-expired conventional signals with LED signals (unfunded)   | L           |                        |            |           | 108      |
| Continue to work with DfT on road pricing feasibility programme    | Review the option of road user charging and/or regulatory demand management measures to influence a shift to more CO2-efficient road vehicles and lower carbon travel options, such as walking, cycling and public transport | L           |                        |            |           | 109      |
| Promote emission-based parking charges                             | Boroughs and car park operators to be encouraged to expand coverage of parking charges to vary by duration of stay and vehicle emissions   | L           |                        |            |           | 125      |
| Congestion Charge Western Extension                                | Remove the Western Extension of the central London Congestion Charge (subject to consultation on a variation order )   | L           |                        |            |           | 128      |
| Core central London Congestion Charging zone                       | Ongoing reviews to enable variations to ensure the continued effectiveness reflect best practice, improve operation, or help deliver desired outcomes of the strategy  | L           |                        |            |           | 129      |
| <b>London river services and river crossings</b>                   |  |             |                        |            |           |          |
| Encourage improved passenger Thames services                       | Consistent service standards, examine opportunities for enhanced pier facilities (including at North Greenwich and Isle of Dogs) and development of the River Concordat  | L           |                        |            |           | 37       |
| New vehicle ferry between Gallions Reach and Thamesmead            | To be implemented in advance of a potential fixed link   | L           |                        |            |           | 39       |
| Promote the use of Thames and other waterways for freight movement | Enable freight access to waterways   | L           |                        |            |           | 38       |
| New walk/cycle Thames crossings                                    | Including schemes in central London and walk/cycle links to access Isle of Dogs from east and west   | M           |                        |            |           | 39       |

| Scheme   | Description   | Scheme cost | Anticipated completion |            |           | Proposal |
|--|---|-------------|------------------------|------------|-----------|----------|
|  |   |             | 2010–2012*             | 2013–2020† | Post 2020 |          |
| New and enhanced road vehicle river crossing(s) in east London (package of measures) | Programme of works under development to improve cross-Thames links in east London   | M           |                        |            |           | 39       |
| <b>Other</b>   |   |             |                        |            |           |          |
| Integrated fares and ticketing   | Integrated fares collection system and ticketing across all London public transport services, including Oyster zonal fares on all suburban rail services and Oyster on river services     | M           |                        |            |           | 122      |
| Enhanced travel planning tools   | Ongoing programme of enhancements to information availability, including TfL Journey Planner  | L           |                        |            |           | 115      |
| Richmond 2009 to 2012 Smarter Travel Programme                                       | Complete the three-year programme of smarter travel initiatives in Richmond   | L           |                        |            |           | 116      |
| Targeted smarter travel initiatives  | Smarter travel initiatives to reduce the environmental impact of travel, make more efficient use of limited transport capacity and/or encourage active travel such as walking and cycling | L           |                        |            |           | 116      |
| Increased use of travel plans  | Increased use and power of travel plans for workplaces, schools and individuals   | L           |                        |            |           | 116      |
| Continued development and roll-out of TfL Freight Plan initiatives                   | Town centre and area-based DSPs, CLPs and promotion of collaborative approaches such as consolidation centres and/or break-bulk   | L           |                        |            |           | 117      |
| Promotion of freight best practice   | Development and incentivisation of membership of the FORS and develop functionality of the freight information portal   | L           |                        |            |           | 117      |
| Integrated transport policing  | Establish joint transport policing intelligence unit and reporting systems to enable integrated working between the agencies policing London's transport system                           | L           |                        |            |           | 74       |

| Scheme                                     | Description   | Scheme cost | Anticipated completion |            |           | Proposal |
|--|---|-------------|------------------------|------------|-----------|----------|
|  |   |             | 2010–2012*             | 2013–2020† | Post 2020 |          |
| Tackling antisocial behaviour              | Programme of initiatives to tackle antisocial behaviour, including preventative and enforcement measures  | L           |                        |            |           | 75       |
| Enhanced CCTV capability and Help points   | Including introduction of two-way audio-visual communication at Help points and further expansion of CCTV coverage and enhanced 'smart' monitoring capability | L           |                        |            |           | 74       |
| Transport system climate change adaptation | Risk assess the transport system and prioritise actions to improve resilience and safety to the impacts of climate change                                     | L           |                        |            |           | 110      |

**Costs:** L: £0 – £100m M: £100m – £1bn H: More than £1bn

 Funded

 Unfunded

**DfT:** Department for Transport

**TfL:** Transport for London

**NR:** Network Rail/DfT

**HLOS CP4:** High Level Output Statement for control period 4 – the Government's railway investment programme for the period 2009 to 2014

**TOC:** Train operating company

**TWA:** Transport and Works Act

**BAA:** British Airports Authority

\*2012 for TfL schemes and 2014 for Network Rail schemes (as per HLOS CP4)

† 2013 for TfL schemes and 2015 for Network Rail schemes (post HLOS CP4)

## 7.2 Accessibility Implementation Plan

<sup>700</sup> This section, together with section 5.9 (A more accessible transport system), constitutes the Mayor's proposals for the provision of transport which is accessible to people with mobility impairments as required by the GLA Act 1999.

<sup>701</sup> Figure 87 represents the phasing for the implementation of the accessibility element of the strategy, as detailed in section 5.9. Figure 87 also includes proposals that will deliver accessibility benefits from other chapters in the MTS.

**Figure 87:** Accessibility Implementation Plan (indicative list)

| Scheme   | Description   | Scheme cost | Anticipated completion |             |           | Proposal  |
|--|---|-------------|------------------------|-------------|-----------|-----------|
|  |   |             | 2010 - 2012*           | 2013- 2020† | Post 2020 |           |
| <b>Rail</b>  |   |             |                        |             |           |           |
| Crossrail  | All stations through central London and the majority of stations in Outer London to offer step-free access  | H           |                        |             |           | 5         |
| National Rail step-free access station programme                   | DfT's Access for All, augmented by Crossrail and other committed investment, will increase the number of step-free rail stations in London to 160 (46 per cent) by 2017, from 101 in 2010 | M           |                        |             |           | 40        |
| Common service standards on London's railways                      | Including staff presence at stations over the entire traffic day who can provide assistance if required   | L           |                        |             |           | 13 and 43 |
| Chelsea Hackney line (Crossrail 2)                                 | All new infrastructure will be fully accessible   | H           |                        |             |           | 9         |
| <b>Tube</b>  |   |             |                        |             |           |           |
| New Tube and rail rolling stock                                    | New rolling stock will be compliant with rail vehicle accessibility regulation (RVAR)   | M           |                        |             |           | 17        |
| Continuing roll-out of step-free access schemes on the Underground | Continuing programme of station step-free access schemes  | M           |                        |             |           | 18 and 19 |
| Tube platform to train level access                                | Platform humps rolled-out across the Tube system as new rolling stock is introduced to provide level access from platform to train  | L           |                        |             |           | 40        |

| Scheme                              | Description   | Scheme cost | Anticipated completion |             |           | Proposal |
|-------------------------------------|---|-------------|------------------------|-------------|-----------|----------|
|                                     |   |             | 2010 - 2012*           | 2013- 2020† | Post 2020 |          |
| Tube station upgrade programme      | To include some of the following features at upgraded stations: <ul style="list-style-type: none"> <li>- Audible and visual information at all platforms and ticket halls</li> <li>- Improved handrail colour contrast and design</li> <li>- Improved visual contrast at leading edge of each riser and tread on steps</li> <li>- Removing, modifying or highlighting obstructions</li> <li>- Induction loops at Help and Information points</li> <li>- Listening points at some larger stations</li> <li>- Improved lighting and public address systems</li> <li>- Improved signs and wayfinding</li> <li>- Tactile warning surfaces on every platform and staircase</li> <li>- Increased amounts of seating</li> <li>- Accessible unisex toilets at all step-free stations where toilets already exist</li> </ul> | L           |                        |             |           | 18       |
| Tube wide-aisle ticket gates        | Explore opportunities for further implementation of wide-aisle ticket gates   | L           |                        |             |           | 40       |
| Tube travel information             | Accessible Tube map showing step-free and mostly step-free routes   | L           |                        |             |           | 21       |
| <b>DLR</b>                          |   |             |                        |             |           |          |
| DLR fully accessible extension      | Canning Town to Stratford International   | M           |                        |             |           | 15       |
| <b>Buses and bus transit</b>        |   |             |                        |             |           |          |
| Bus network development             | Regular review of bus network, including reviews of the strategic priorities underlying the process approximately every five years, to cater for population and employment growth, maintain ease of use, attractive frequencies and adequate capacity, reliable services, good coverage and good interchange with other modes   | M           |                        |             |           | 23       |
| Bus stop accessibility              | Improved accessibility of bus stops, for example, through removal of street clutter   | L           |                        |             |           | 83       |
| Development of a New Bus for London | New Bus will include enhanced accessibility design features   | L           |                        |             |           | 25       |

| Scheme  | Description   | Scheme cost | Anticipated completion |             |           | Proposal |
|---|---|-------------|------------------------|-------------|-----------|----------|
|   |   |             | 2010 - 2012*           | 2013- 2020† | Post 2020 |          |
| <b>Walking and urban realm enhancements</b>                 |   |             |                        |             |           |          |
| Accessible crossings programme and urban realm improvements | Improve the physical accessibility of the streetscape, particularly in town centres and on routes to stations and bus stops, taking account of the whole journey approach         | L           |                        |             |           | 83       |
| <b>Staffing measures</b>                                    |   |             |                        |             |           |          |
| Staff availability  | To ensure staff are available to provide assistance, information and reassurance throughout service hours   | L           |                        |             |           | 43       |
| Staff training  | To ensure the needs of disabled passengers are understood by all frontline staff  | L           |                        |             |           | 43       |
| <b>Other accessibility specific measures</b>                |   |             |                        |             |           |          |
| Attitudes of staff and Londoners                            | Stakeholder, staff and public initiatives to improve staff and public attitudes and raise awareness of peoples accessibility needs  | L           |                        |             |           | 42       |
| Travel information  | Improve the availability, quality, quantity and timeliness of accessibility-related travel information  | L           |                        |             |           | 41       |
| Enhanced Dial-a-Ride service                                | New Dial-a-Ride fleet and review of operations  | L           |                        |             |           | 44       |
| TfL's Disability Equality Scheme (DES)                      | A statutory document, updated every three years, which sets out in further detail what TfL is going to do to ensure that the services it offers are accessible to disabled people | L           |                        |             |           | -        |
| Further extensions to the public transport system           | All extensions to the public transport system will meet the requirements of the Disability Discrimination Act   | H           |                        |             |           | -        |
| Blue Badge discounts  | Discounts on Congestion Charging schemes  | L           |                        |             |           | 129      |

**Costs:** L: £0 - £100m M: £100m - £1bn H: More than £1bn

 Funded

 Unfunded

**DfT:** Department for Transport

**TfL:** Transport for London

**HLOS CP4:** High Level Output Statement for control period 4 – the Government's railway investment programme for the period 2009 to 2014

\*2012 for TfL schemes and 2014 for Network Rail schemes (as per HLOS CP4)

† 2013 for TfL schemes and 2015 for Network Rail schemes (post HLOS CP4)



## 7.3 Delivery processes

### 7.3.1 Overall approach to delivery

- <sup>702</sup> Detailed delivery planning and budgeting for TfL-delivered services and schemes will be developed in TfL's Business Plan. Schemes delivered by TfL will encompass sustainability principles governing design, procurement, construction and operation. TfL will adhere to any statutory procedures and consents such as Planning Policy Statement 5: Planning for the Historic Environment, Strategic Environmental Assessment and Environmental Impact Assessment and also to best practice assessment for equalities, health, etc. This is particularly the case with respect to protection of the integrity of Natura 2000 sites within, and in close proximity to, the Greater London boundary, with updated or amended S159 funding guidance issued periodically thereafter.
- <sup>703</sup> A significant element of the MTS will be delivered by the London boroughs, with each borough setting out its contribution in its LIP. Guidance on LIPs is being published simultaneously with this strategy.
- <sup>704</sup> National Rail, the Highways Agency and other delivery agencies also play a key role in delivering transport solutions in London, and the revised strategy sets the framework for TfL to work in partnership with all relevant agencies.
- <sup>705</sup> The overall delivery of this strategy depends on action and support from a variety of agencies, including national Government (via funding

settlements and overall policy guidance), London boroughs, the Met and emergency services, the LDA and other areas of the public sector such as NHS London, Primary Care Trusts, local education authorities and private business, as shown in Figure 88. The need for joint action with the boroughs is recognised by the London City Charter, launched in July 2009 by the Mayor and London Councils.

#### Policy 27

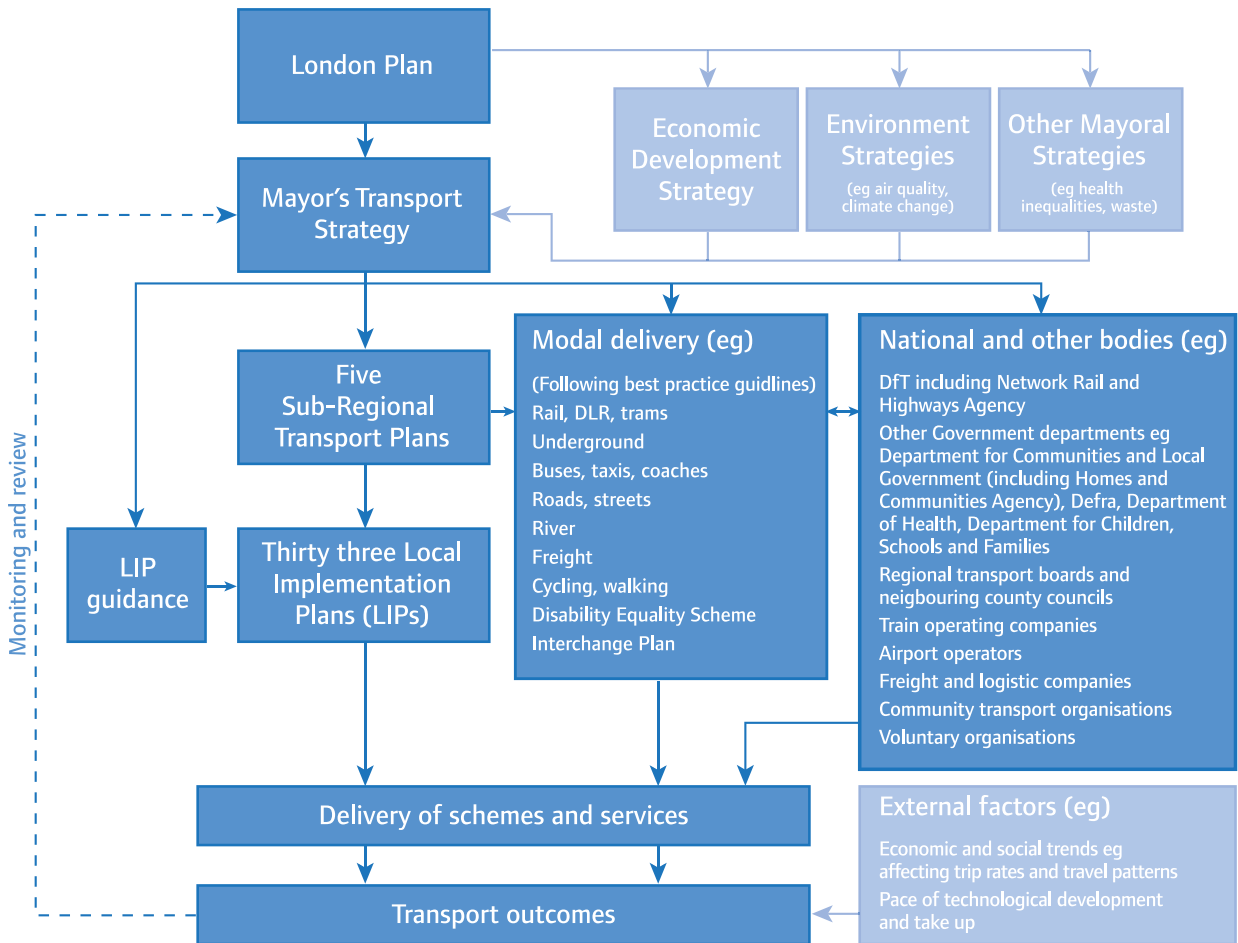
The Mayor and all parties involved in the delivery of this transport strategy will follow the spirit of the London City Charter and the principles (originally set out in 'Way to Go!') which underpin the strategy. These are: to provide value for money, work in partnership, ensure appropriate integration and phasing of programmes, a fair allocation of available resources across modes and delivery agents, London's regions and boroughs, and a fair funding regime for taxpayers and fare and chargepayers.

- <sup>706</sup> The Accessibility Implementation Plan which is required under the GLA Act is also supported by TfL's DES<sup>1</sup>, which is a statutory document setting out in detail what TfL will do to ensure that the services it provides are accessible to disabled people. TfL is required to produce a DES every three years, and it contains an outcome-based action plan, which sets out what will be achieved during that timescale.

<sup>1</sup> GLA Act 1999, section 142



**Figure 88:** Delivery process



### 7.3.2 Sub-regional strategy development

<sup>707</sup> TfL is working closely with the boroughs and London regional partnerships to develop more detailed sub-regional transport plans – referred to as London sub-regional transport plans. These address the specific challenges facing each region and the options for addressing them based on analysis of current and future demand, travel patterns, etc. TfL will also take steps to ensure the involvement of county and unitary strategic transport authorities immediately outside the Greater London area. These plans will provide more detail about the priorities for the regions, and how the policies and proposals set out in the MTS may apply. They will provide a framework for local and modal delivery through the development of borough LIPs and TfL implementation plans, the development of specific schemes or broader business planning processes.

<sup>708</sup> In parallel with the development of the London sub-regional transport plans, TfL will update its Interchange Plan. This plan will complement the MTS, London Plan and EDS and help TfL and the boroughs to prioritise how available resources should be put into the development and implementation of particular interchange proposals. It will build on the analysis at a regional level, identifying strategically and regionally important interchanges and provide a common benchmark for quality across all categories of interchange. It will provide a framework to enable consideration of arising opportunities to leverage funding as well as consideration of area and system-wide

initiatives, including facilities for walking and cycling, adjacent to the interchanges.

#### Policy 28

The Mayor, through TfL, and in consultation with the London boroughs and other stakeholders, will develop a London sub-regional transport plan for each of the five sub-regions of London.

### 7.3.3 Local Implementation Plans

<sup>709</sup> At the borough level the implementation of the MTS is delivered by the LIP, prepared by each London borough council (including the City). The MTS and non-statutory London sub-regional transport plans will provide the overarching framework for their development. The new LIPs must be prepared as soon as reasonably practicable after this new MTS is published in 2010, and when approved by the Mayor, will supersede any previous version.

<sup>710</sup> The GLA Act states that a LIP must contain each particular borough's proposals for the implementation in its area of the policies and proposals contained in the MTS. The LIP must also contain a timetable for implementing the borough's proposals, and a date by which all those proposals in the plan will be implemented. It is important that LIPs also link-up with other documents and mechanisms, for example, Local Area Agreements, Local Development Frameworks and Local Strategic Partnerships, to ensure delivery of wider community and economic development priorities.

- 711 It is for each borough to seek the financial resources it requires to implement its LIP proposals. For these, and for any other borough transport proposals that are conducive to the provision of safe, integrated, efficient and economic transport facilities, or services, to, from, or within Greater London, a borough may apply for such financial assistance as may from time to time be available from TfL. This assistance is provided by TfL under section 159 of the GLA Act 1999. Assistance may be made by way of grant, loan or payment, and be given subject to such conditions as TfL considers appropriate. The Second London LIPs Guidance (referred to below) sets out further information on funding.
- 712 In preparing its new LIP, the borough must consult the Metropolitan Police Commissioner (or City of London Police Commissioner in the case of the City's LIP), TfL and such organisations representative of disabled people as the borough considers appropriate. The borough must also consult other London boroughs whose area is, in the opinion of the borough preparing the LIP, likely to be affected by the plan, and any other person that the Mayor has directed should be consulted.
- 713 Each new LIP must be submitted to the Mayor for his approval and the GLA Act 1999 sets out the criteria that must be met before Mayoral approval can be given. Section 146 states that the Mayor shall not approve a LIP unless he considers:
- That the LIP is consistent with the MTS
  - That the proposals it contains are adequate for the purposes of the implementation of the MTS in its area
  - That the timetable for implementing those proposals, and the date by which those proposals are to be implemented, are adequate for those purposes
- 714 The Mayor may issue statutory guidance as to the implementation of the MTS to which boroughs must have regard. He also has reserve powers to issue general or specific statutory directions as to the manner in which a borough is to exercise its functions of preparing and implementing its LIP, with which they must comply.
- 715 Detailed guidance to boroughs on how to prepare and submit their LIPs is contained in the Second London LIP Guidance following consultation with the boroughs and key partners. The Mayor has recognised the autonomy of the boroughs as reflected in the City Charter and that they should be given greater flexibility to determine their own transport priorities consistent with the goals and outcomes of the MTS. Boroughs are expected to develop their own delivery and performance monitoring plans. The Mayor shares London Councils' desire to minimise the amount of work associated with the preparation, submission and monitoring of LIPs.

<sup>716</sup> To this end the guidance indicates how LIPs should best be structured, and the level of information they should contain, including monitoring, to assist the Mayor by providing him with a reasonable level of information so as to determine the LIP's consistency with the MTS, and with the other statutory approval criteria set out in section 146 of the Act.

### Policy 29

The Mayor, consistent with the approach of the London City Charter, will work with TfL and London Councils to seek to ensure the requirements for a LIP demonstrate consistency with the policies and proposals set out in this MTS, and that other legal requirements are kept to a minimum.

The boroughs will develop LIPs which set out their transport objectives, a delivery plan and a performance monitoring plan. The goals that are required to be addressed by the London boroughs in their LIPs, are:

1. Supporting economic development and population growth
2. Enhancing the quality of life for all Londoners
3. Improving the safety and security of all Londoners
4. Improving transport opportunities for all Londoners
5. Reducing transport's contribution to climate change and improving its resilience

<sup>717</sup> Delivering the London 2012 Olympic and Paralympic Games and its legacy is also a goal that boroughs may wish to include in their LIP submission. This will depend on the impact of the Games in each borough and whether significant Games-related transport projects need to be implemented in each borough after the next round of LIPs are effective in 2011.

<sup>718</sup> The Mayor also expects the boroughs to work towards achieving a number of specific outputs. More detail on these outputs is supplied in the Second London LIP Guidance.



# Chapter eight – Cost, resources and funding the strategy

## 8.1 Cost of the strategy

### 8.1.1 Introduction

<sup>719</sup> Meeting London's transport needs and successfully achieving all the strategy's objectives will require sustained investment beyond the 10-year funding settlement. The strategy sets out a significant and necessary investment in infrastructure and expansion of transport services through to 2031. Cost estimates assume a continuation of the policy and that levels of operational expenditure for the day-to-day provision of services, subject to the efficiencies programme set out in the TfL Business Plan, are funded by sources of recurring income, including grant.

### 8.1.2 Capital investment costs

<sup>720</sup> Committed investment in London's transport infrastructure, including the completion of Crossrail, over the years to 2018 is approximately £4.8bn per year. The proposed package of capital works beyond this will require continuing annual investment of around £3.5bn to £4.5bn (further analysis is underway to determine more precisely the scale of investment required) in the period to 2031. Careful phasing of investment in the period following the current committed programme will be required to ensure construction industry capacity to deliver the works and a balanced investment profile over time.

## 8.2 Funding the strategy

### 8.2.1 Funding sources

<sup>721</sup> Transport in London is funded through a combination of sources, including:

- Government grant direct to TfL
- Revenue from fares and other sources (for example, Congestion Charge)
- Secondary income (for example, advertising)
- TfL 'prudential borrowing' against future revenue, which is capped until 2018 under TfL's 'spending review 2007' funding settlement with Government
- Asset financing and property disposal receipts (although this is unlikely to be a significant source of further funds post 2018)
- Other forms of Government grant to parts of the transport network not controlled by TfL, for example, Network Rail, the DfT HLOS process, borough highway maintenance
- Contributions from the private sector, for example, developer funding for associated transport investments
- Direct borough funding
- Other Government funding sources including specific allocations to support regeneration, health, education, and the London 2012 Olympic and Paralympic Games Transport Plan

## 8.2.2 Approach

- <sup>722</sup> The policies and proposals in this strategy provide the necessary minimum levels of investment to enable London to continue growing and contribute to the UK economy. Further investment is required to meet London's population and employment growth and to address the challenges of climate change. It is essential that TfL continues to secure a fair allocation of funding from Government, reflecting the contribution that transport makes to London's prosperity and success as a world city.
- <sup>723</sup> The current funding settlement from Government provides for £39.2bn of funding through to 2017/18. This, along with funding generated through revenue including fares, borrowing and contributions secured through the private sector, will deliver the short-term policies and proposals of this strategy. In addition to this, funding through Network Rail will also provide major benefits for Londoners through increased capacity on the rail network.
- <sup>724</sup> The strategy underpins the importance of funding the current round of investments such as Crossrail and the Tube upgrades, and the value for money these schemes offer. It is essential that TfL continues to provide levels of service that passengers expect in a way that delivers greater value for money. The strategy covers the period to 2031, and this will require similar levels of funding to continue beyond 2018 to 2031. In a time of potential funding shortfalls, it is essential that TfL maximises the benefit of schemes and investments that are

already funded and secures the best possible return on future levels of investment.

### Policy 30

The Mayor, and TfL, will make the case to Government for long-term investment in the transport network to secure the outcomes set out in this strategy.

### Policy 31

The Mayor, and TfL, will maximise any available efficiencies, subsidise services at appropriate levels and ensure that value for money is otherwise achieved from the existing and planned transport network, while reviewing fares levels to provide, if required, a residual means of achieving the goals of this transport strategy. Innovative ways of financing investment and services, including making the most of the value of transport infrastructure, will be explored.

## 8.2.3 Bus funding

- <sup>725</sup> There are large and broad benefits of the bus service in London – directly to users by enabling access to jobs and services, and through wider social benefits, such as increasing social inclusion and addressing deprivation. It is therefore appropriate that the cost of bus operations is partly met through the Transport Grant from the DfT, and not entirely paid for by users through fares and by reimbursements for concessionary travel.
- <sup>726</sup> London is not unusual in requiring subsidy for its bus operations; indeed, many cities around

the world receive subsidies. Before TfL was set up in 2000 the level of operating subsidy – the difference between fares income and the cost of providing bus services was £41m in 1999/00 and has increased significantly to £560m in 2008/09 as the quantity and quality of bus services have been expanded and improved considerably, and extra free and concessionary travel has been introduced. Over, broadly, the same time period the number of bus kilometres operated in London have increased by over 30 per cent and bus ridership has increased by around 40 per cent.

- 727 The average bus fare revenue in 2008/09 was 47.8p per journey, while the average cost was 72.8p per journey – meaning that one third of the average bus journey is subsidised. Bus fares compare favourably with the cost of using other modes of transport in London and with bus fares in other UK cities.
- 728 In order to maximise the level of funding available for essential investment in capacity and other key priorities, it is essential to ensure that the long-term subsidy for operations is both affordable and sustainable.

### Policy 32

The Mayor, through TfL, will keep the level of subsidy for bus operations under constant review to ensure the correct balance between fares income, bus service levels and quality, social benefits and affordability, in the context of the overall level of funding available for transport.

## 8.2.4 Tube funding

- 729 The cost of operating and maintaining the London Underground system is met by its farepayer revenue and other taxpayer funding. Significant taxpayer funding is committed to cover the costs of the essential investment that is underway to bring Tube assets to a state of good repair and to increase the network's capacity to support London's future economic and population growth.
- 730 The investment in the Underground line upgrades has a very strong business case, and the new capacity will generate additional revenue, create benefits for users and generate wider economic benefits which over time will cover their cost many times over.
- 731 It is vital for the future of London and the national economy that this taxpayer-funded investment is maintained throughout the period of this transport strategy.

### Policy 33

The Mayor, through TfL, will work to secure the investment necessary to remove the backlog of life-expired assets and to deliver the transformation of the Tube.



## 8.2.5 Rail funding

<sup>732</sup> Many of the priorities set out in this strategy are not directly controlled by TfL but by other agencies such as Network Rail. Seventy per cent of all National Rail journeys across the UK start or finish in London and 50 per cent of all National Rail journeys across the UK are made by Londoners. Given this, it is not only fair but essential that a significant proportion of investment in the National Rail network is focused on London.

<sup>733</sup> The quality of National Rail infrastructure in the Capital, while greatly improving, still requires major investment. For example, the quality of National Rail stations in London is poor compared to those directly controlled and managed by TfL and extra funding is needed to secure comparable improvements. It is essential that investment continues to be made in London's National Rail network either directly by National Rail or through new franchises which offer more for Londoners in terms of level and quality of service.

<sup>734</sup> Rail refranchising also offers an opportunity to secure investment from the private sector train operating companies. Refranchising of rail services during the life of this strategy includes:

- Essex Thameside (c2c) – 2011
- Greater Anglia (National Express East Anglia) – 2011
- Integrated Kent Franchise (Southeastern) – 2014

- Greater Western (First Great Western) – 2016
- London Region (London Overground) – 2014
- South Central (Southern) – 2015
- West Midlands (London Midland) – 2015
- Thameslink/Great Northern (First Capital Connect) – 2016
- South Western (South West Trains) – 2017
- Chiltern (Chiltern Railways) – 2021

### Policy 34

The Mayor, through TfL, will work with the DfT, Network Rail, the train operating companies and other stakeholders to secure the necessary investment in London's rail network, including new stations where feasible, through additional capital funding and enhancements to rail services through rail franchises.

<sup>735</sup> Looking to the future, in a period with constrained funding, TfL will continue to be innovative about how transport investments are funded and financed. At the same time, strategic choices will have to be made about the overall subsidy of services, that is, between fare levels, the amount of free and discounted travel and the volume and quality of services provided, to maximise the funding available for necessary investments in the network. TfL has a strong track record of both delivering projects on time and to budget, as well as using a variety of innovative financing models, including private finance initiatives (PFI).

## 8.2.6 Developer contributions to transport

<sup>736</sup> Developments such as new offices, retail and housing often places significant demands on London’s transport system. This needs to be addressed in order to ensure the development is viable and sustainable. TfL will continue to work with the LDA and boroughs to secure developer contributions for the necessary transport improvements through existing planning obligations to facilitate the success of the development and mitigate its impacts on the current transport network, in accordance with relevant legislation and policy guidance.

## 8.2.7 Developer contributions to Crossrail

<sup>737</sup> In view of the strategic regional importance of Crossrail to London’s sustainable development and continued economic success, developments which contribute to the transport needs that the project will wholly or partly address will be required to contribute towards its funding through the use of planning obligations. Where it is appropriate to seek a Crossrail contribution, this should generally be given higher priority than other public transport improvements.

<sup>738</sup> Overall, £300m needs to be secured for Crossrail through planning obligations (with a further £300m to be raised through a Community Infrastructure Levy). While this is a relatively small proportion of the total cost of Crossrail, it is a vital element of the overall funding package for the scheme.

<sup>739</sup> TfL will work with boroughs and other stakeholders to put in place practical arrangements for administering the policy and assessing viability. A protocol to ensure efficient collection of the monies will also be developed.

### Policy 35

The Mayor, and TfL, will work with the London boroughs to secure developer contributions to transport through planning obligations in order to secure the success of each development and to mitigate any negative impacts on the existing transport system in accordance with relevant legislation and policy guidance. As set out in the proposed London Plan policy, where it is appropriate to seek a Crossrail contribution, this should generally be given higher priority than other public transport improvements. TfL will work with the GLA and boroughs to develop a protocol to implement the policy.

## 8.2.8 Other funding sources

<sup>740</sup> There are other sources of funding which the Mayor may pursue in order to assist with the implementation of this strategy. For example, to better integrate transport and other investment in Regeneration Areas, improve the urban realm, or to promote walking and cycling, including:

- London Boroughs
- Government's Community Infrastructure Fund
- NHS London/Primary Care Trust funding to support active travel initiatives
- European Union funds

### Policy 36

The Mayor, and TfL, will work with the London boroughs and other stakeholders, to seek to secure further investment from a variety of sources that help improve the quality and range of transport services available to Londoners.



# Chapter nine – Monitoring and reporting

## 9.1 Monitoring and review

### 9.1.1 Introduction

<sup>741</sup> This strategy outlines a series of challenges for the improvement and delivery of transport in London. The outcomes of this strategy are primarily monitored through the collection and publication of strategic outcome indicators. The strategic indicators quantify progress in the delivery of the strategy in order to facilitate a broad understanding of the ‘totality of effects’ of the strategy’s interventions on transport and wider quality of life in London. These indicators provide a straightforward way of monitoring and reporting progress in delivering the MTS. However, in order to fully understand and interpret developments, a wider range of information is also needed.

<sup>742</sup> The strategic outcome indicators are therefore related to, and interpreted alongside, appropriate supporting and contextual information about specific trends and developments in transport in London. This includes background factors such as economic and demographic change, and the specific actions taken by TfL and delivery partners as part of the implementation of the MTS. This allows changes and the relative contribution of specific policies, to be interpreted. Where appropriate and possible, findings are divided on a spatial (borough, network, region), modal or temporal basis.

### 9.1.2 Mayoral targets

<sup>743</sup> The anticipated outcomes described in chapter six are not statutory targets, however, the Mayor may set, from time to time, statutory targets with respect to the implementation of the strategy, for example, with regard to:

- Mode share
- CO<sub>2</sub>
- Road safety
- Cycling
- Use of the Thames
- Better streets
- Air quality

### 9.1.3 Framework of indicators

<sup>744</sup> The MTS strategic outcome indicators (SOIs) are, deliberately, based on outcomes, rather than outputs (such as particular projects or policies) or inputs (for example, amount of money spent). Likewise, they are multi-modal.

<sup>745</sup> The SOIs for the MTS will sit at the head of a framework of indicators and support information designed to measure delivery against the strategy’s goals by TfL, local authorities and other delivery partners in London, and measure the outcomes of that delivery. This framework, set out in Figure 89, can be envisaged in two dimensions:

- First, a ‘reporting’ framework, whereby the strategic indicators are aligned with the KPIs for the TfL Business Plan, which are in turn connected with performance indicators for

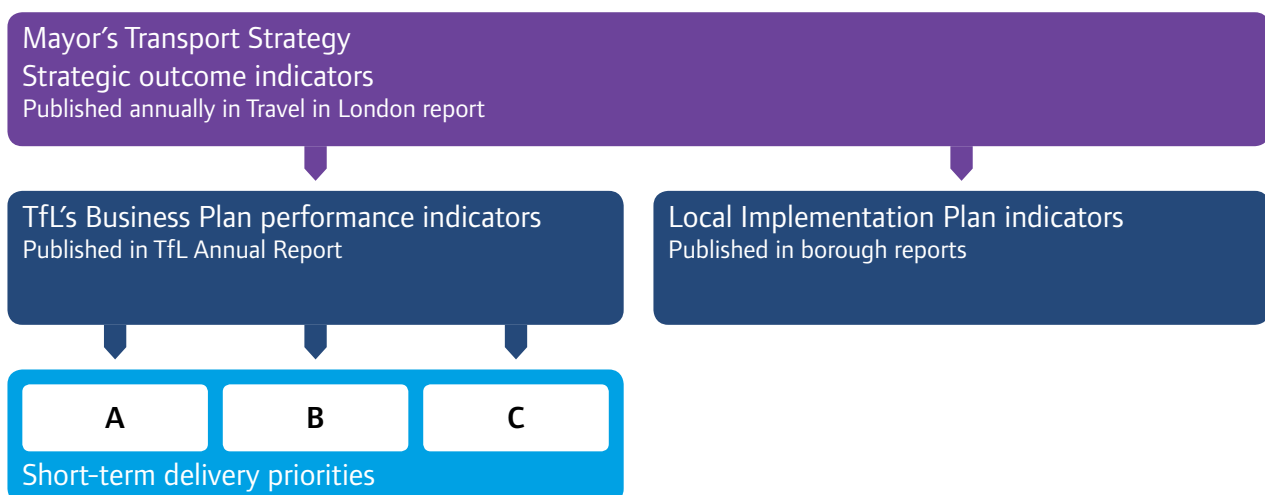
boroughs through the revised arrangements for LIPs. The former has a longer timescale than the latter two; but the KPIs are consistent, once timescales are taken into account. The framework and reporting process also include the transport KPIs and targets in chapter eight of the draft London Plan. There are also envisaged to be shorter term (up to one year) delivery indicators, which consider the short-term outputs that have been achieved, and provide a basis to assess their contribution to change in the strategic 'outcome' indicators

- Second, an 'analysis' framework, where SOIs can be broken down – by mode, borough, time of day, etc, according to specific policy analysis requirements to understand how these outcomes are being achieved

## 9.2 Reporting processes

<sup>746</sup> The SOIs set out in Figure 90 are published in TfL's annual Travel in London report. This report describes key trends and developments affecting how people travel around London. It provides an understanding of what has been achieved to date and interprets the direction of movement of the strategic performance indicators within the context of wider travel, economic and societal conditions. Many of the strategic outcome indicators are published annually, some less frequently; findings are separated out to as local a level as possible. Where the data exist and permit, the report shows a time series and the latest data.

**Figure 89:** Framework of indicators



**Figure 90:** Indicators proposed to monitor the outcomes of the MTS

| Goal  | Strategic outcome indicator                       | Brief definition   |
|---|---|--|
| Contextual indicators                                 | Travel demand                                     | The number of trips (or journey stages) made to, from, or within London per calendar year  |
|   | Mode share  | Proportion of trips (or trip stages) undertaken by each mode to, from, or within London per calendar year                              |
| Supporting economic development and population growth | People's access to jobs                           | Employment accessibility maps – number of jobs within 45 minutes travel time (three-yearly)  |
|   | Smoothing traffic flow – journey time reliability | For a selection of key road corridors, percentage of journeys completed within five minutes of a specified typical journey time        |
|   | Public transport reliability                      | Existing reliability indicators for each principal public transport mode will be presented separately                                  |
|   | Public transport capacity                         | Calculated using planning capacities for the various modes multiplied by kilometres operated   |
|   | Operating costs per passenger kilometre           | Operating cost per passenger kilometre, by principal public transport mode   |
|   | Asset condition                                   | Composite multi-modal indicator measuring the percentage of in-scope asset that is deemed to be in good condition                      |
| Enhancing the quality of life for all Londoners       | NO <sub>x</sub> emissions                         | Emissions from all identifiable ground-based transport sources in London per year, expressed as tonnes of NO <sub>x</sub>              |
|   | PM <sub>10</sub> emissions                        | Emissions from all identifiable ground-based transport sources in London per year, expressed as tonnes of PM <sub>10</sub>             |
|   | Public transport customer satisfaction            | Overall satisfaction of those travelling on the network with the operation of principal public transport modes                         |
|   | Road user customer satisfaction                   | Satisfaction of private road users with the maintenance and operation of the road network  |
|   | Public transport crowding                         | Satisfaction of those travelling on the network with the level of crowding inside the vehicle, on the principal public transport modes |
|   | Perception of journey experience                  | Perception of London residents of their overall journey experience when travelling in the city   |
|   | Perception of noise                               | Perception of London residents of noise levels in their local area   |
|   | Perception of the urban realm                     | Perception of London residents of the quality of the urban realm in their local area   |

| Goal   | Strategic outcome indicator  | Brief definition   |
|--|--|--|
| Improving the safety and security of all Londoners                                 | Volume of road traffic casualties  | Number of people killed or seriously injured in road traffic collisions in London per year   |
|  | Crime rates on public transport  | Crimes per million passenger journeys by principal public transport modes  |
|  | Perception of crime/safety   | Perception of London residents of their sense of safety and fear of crime when travelling in the city  |
| Improving transport opportunities for all Londoners                                | Access to services   | Local area score of average journey time by public transport, walking and cycling to work, education, health services, quality food shopping and open spaces |
|  | Physical accessibility to the transport system   | Level of step-free access across the public transport and streets network  |
|  | Real fares levels  | Cost for a selected, representative 'basket' of trips  |
| Reducing transport's contribution to climate change and improving its resilience   | CO <sub>2</sub> emissions  | Emissions from all identifiable ground-based transport sources in London per year, expressed as tonnes of CO <sub>2</sub>                                    |
| Supporting delivery of the London 2012 Olympic and Paralympic Games and its legacy | Convergence of social and economic outcomes between the five Olympic boroughs and the rest of London | The measure of convergence is to be determined through the Transport Legacy Action Plan  |