

LU. London's Upgrade.

Our city is evolving. So is our Underground.





Moving forward

A 21st century Tube for a modern-day London.

The Tube has never been as important to London's economic, social and cultural life. Each weekday the Tube sees around three and a half million journeys made on our 11 lines and through the 270 stations we serve, rising to four million on the busiest days. In the last year we carried more than a billion passengers for the fourth year in succession – that's almost as many as the entire National Rail network.

But much of the infrastructure we rely on to meet this demand is very old, with some of it dating back to the 1860s. The Tube is the oldest underground system in the world (in 2013 we'll celebrate our 150th anniversary) and, with a legacy of underinvestment, it's vital that we rebuild the network, piece by piece to meet today's demand and ensure we can deliver for the future.

Our programme of upgrading every line is the cornerstone of the Tube's transformation. Without the line upgrades the infrastructure will continue to deteriorate – the Tube would gradually grind to a halt, unable to maintain current service levels or meet future demand. The line upgrades are not therefore a luxury, they're absolutely essential.



By the end of the current programme in 2020, there will be 30% more capacity through the introduction of new trains, signalling and track. By then we will also have rebuilt some of our busiest and most complex stations, such as Victoria and Tottenham Court Road. We've already made great progress at other key stations, including the complete redevelopment and doubling in size of King's Cross St. Pancras.

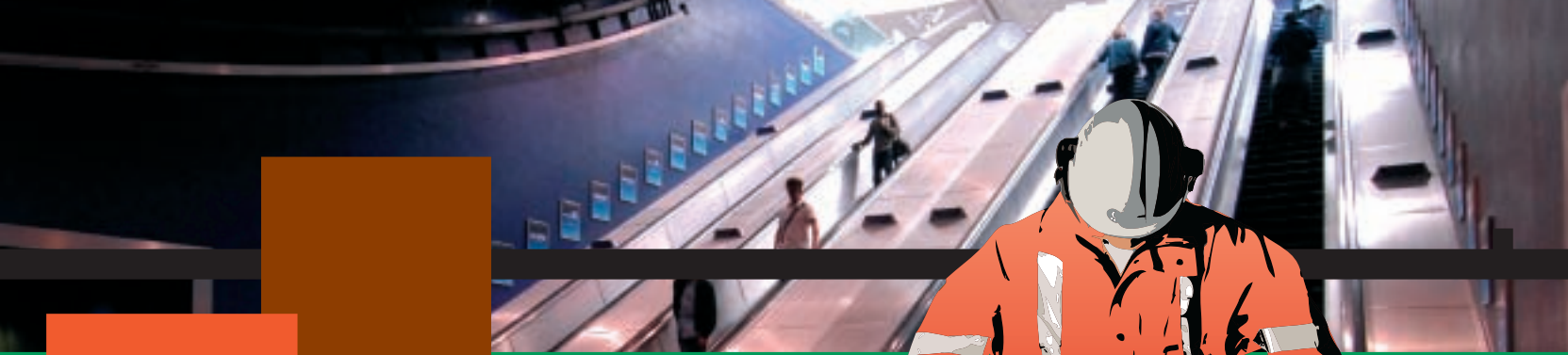
No other railway network has been so ambitious in delivering change over such a short period of time. As we do this, we also have to ensure that we keep the service running for the millions who rely on it every day. We are acutely aware that in the short term many of our customers face disruption, particularly at weekends, and we plan our work as carefully as we can to keep this to a minimum so that we can keep London moving.

The ultimate prize will be a world class Tube that makes the Capital a better place to live, work, visit and do business. That's why continued investment is crucial and why we have to maintain momentum.

Mike Brown, Managing Director
Spring 2010

Transforming the Tube

Understanding the needs
of our city



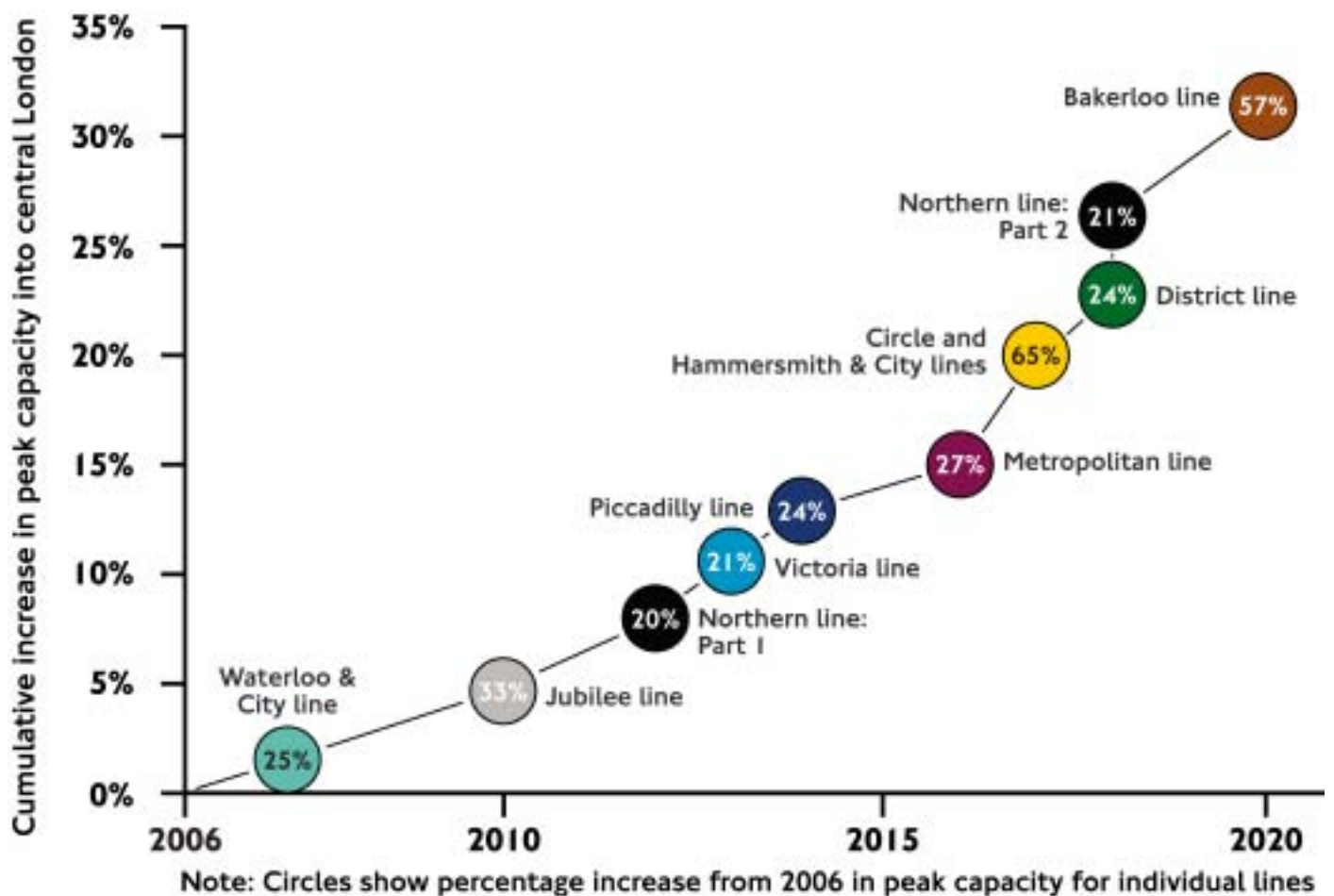
Transforming the Tube

London calling

Over the last decade the Tube has experienced unprecedented growth in demand and is running a higher volume of service than ever. Only through the upgrade of each line, and associated improvements in stations and other infrastructure, will the Tube meet future demand.

A more efficient service

The graph below illustrates the percentage capacity increase to be achieved by 2020 as part of our current investment programme.





Building for the future

Historically, the Tube has played a vital role in positioning London as a world city. It is part of the fabric of the Capital and is fundamental for the smooth running of business and tourism. Therefore we are:

- > **Delivering 30% more capacity across the network, with new trains, track and signalling including the first ever air-conditioned trains**
- > **Rebuilding key stations like Victoria, Tottenham Court Road and Bond Street to make them bigger and more accessible**
- > **Improving other stations to make them more secure, more accessible, cleaner and brighter**
- > **Improving network accessibility, along with the introduction of step-free access at key stations, including Green Park and Southfields which will serve 2012 Games venues**



The journey so far

Already, we have achieved significant goals.

The Waterloo & City line was upgraded in 2006, adding 25% more capacity, with customers benefiting from a smoother ride, enhanced reliability and reduced journey times of around 12%.

As part of the Jubilee line upgrade, a seventh carriage was added to trains at the beginning of 2006, providing around 17% more capacity; this has already been absorbed by the increase in demand accompanying growth at Canary Wharf.

The flagship project to rebuild Wembley Park station has meant that we have been able to consistently meet the demands of the new stadium since it reopened in 2006.

The Victoria line upgrade is progressing apace, with new trains now in customer service, a new control centre opened, the track renewed and new signalling installed.

The upgrade of the Circle, District, Metropolitan and Hammersmith & City lines - the Sub-Surface Railway - is one of our greatest challenges and will be completed in stages over the next eight years.

The first of the new air-conditioned trains is now being tested and procurement for the signalling upgrade is underway.

2007 saw the completion of a project to relieve congestion at Covent Garden, significantly increasing the number of exit gates for passengers.

Former Silverlink stations on the Bakerloo and District lines were transferred to us at the end of 2007. Since we took over, the stations have benefited from staffing throughout operational hours and improvements to station décor, security and the overall environment. LU has also started a programme of substantial refurbishment

of the stations, which will provide greater CCTV coverage, improvements to lighting, enhanced Public Address systems and accessibility improvements. This is expected to be complete in summer 2010.

January 2008 saw the completion of the new Heathrow Terminal 5 link on the Piccadilly line – the first extension of the Tube since the Jubilee line extension. This was completed in advance of the new terminal opening in March and is making a significant contribution to BAA’s target of having 50% of passengers arrive by public transport.

The first new Tube station on an existing line in 70 years, Wood Lane, was opened in October 2008. It features state-of-the-art design and is fully accessible between street and platform.



New Wood Lane station

In November 2009 the new Northern ticket hall at King’s Cross St. Pancras Tube station opened on budget and ahead of target. In mid-2010 the station will be fully accessible with the opening of a lift to the Northern line platforms. Step-free access to the other five lines serving the station is already in place.



New ticket hall at King’s Cross St. Pancras

This £800 million project provides a huge increase in capacity to cut congestion. King’s Cross St. Pancras already sees more passengers a year than Heathrow airport and by the time of the 2012 Olympic and Paralympic Games, more than 100,000 people will pass through the station at peak times every day.

A new communication system – Connect – has been successfully rolled out across all LU lines to deliver a more resilient system, with benefits including fewer delays caused by equipment failure, better customer information and improved safety.

Network upkeep

Trains, stations, signalling, track, tunnels, bridges and structures, lifts and escalators and other related infrastructure all need regular upkeep and repair.

This is an enormous daily challenge involving the maintenance of (mainly at night during a four-hour window):

- > **260 stations**
- > **600 trains**
- > **1,150 km of track**
- > **415 escalators**
- > **163 lifts**
- > **more than 9,000 signals**

all set in a variety of differing tunnels, embankments, cuttings and bridges.



Upgrading the lines

Keeping London running smoothly



Upgrading the lines

Tracking improvements

The line upgrades are fundamental to the Tube's transformation. Without them the infrastructure would continue to age and deteriorate and the Tube would gradually grind to a halt, unable to maintain current service levels or meet the demands of the future. If we don't upgrade the Tube, overcrowding would increase by 40% and capacity would decrease by 30% as more people use an ageing network.



Managing the impact of closures

The massive task of upgrading the network cannot be achieved overnight – and not without some disruption to our services. In order to progress the upgrades, replace track and other infrastructure while carrying out regular maintenance, weekend closures are necessary. There is no 'good' time to close a line. Different options have been considered, and where appropriate and where

we can manage the demand through other options, we do introduce 'extended closures', early evening and weekend closures. As the work to improve the Tube has intensified, the number of closures necessary to facilitate this work has increased.





Weekend closures

These have become more frequent and our high-profile campaign advising customers to check before they travel will continue. TfL has developed a suite of 'Travel Tools' to help customers plan their journeys:

- > **Online at www.tfl.gov.uk/traveltools**
- > **Online six-month look-ahead at www.tfl.gov.uk/check**
- > **Ceefax p436**
- > **Targeted emails sent to customers**
- > **Articles and advertisements in the London media including the Metro newspaper**
- > **Posters and leaflets at Tube stations, and at National Rail's stations in the south east**
- > **Train and station announcements**
- > **Travel information telephone line on 0843 222 1234 (24 hours) or customer services on 0845 330 9880 (8am – 8pm, 7 days)**



LU is aware of the impact of closures on customers and businesses. We work closely with the major events venues, planning in advance to ensure we can provide a service for those events with the highest attendance. LU also has continuous dialogue with Network Rail, the Train Operating Companies and other parts of the TfL network to co-ordinate closures. During closures LU will always ensure that alternative travel arrangements are in place.

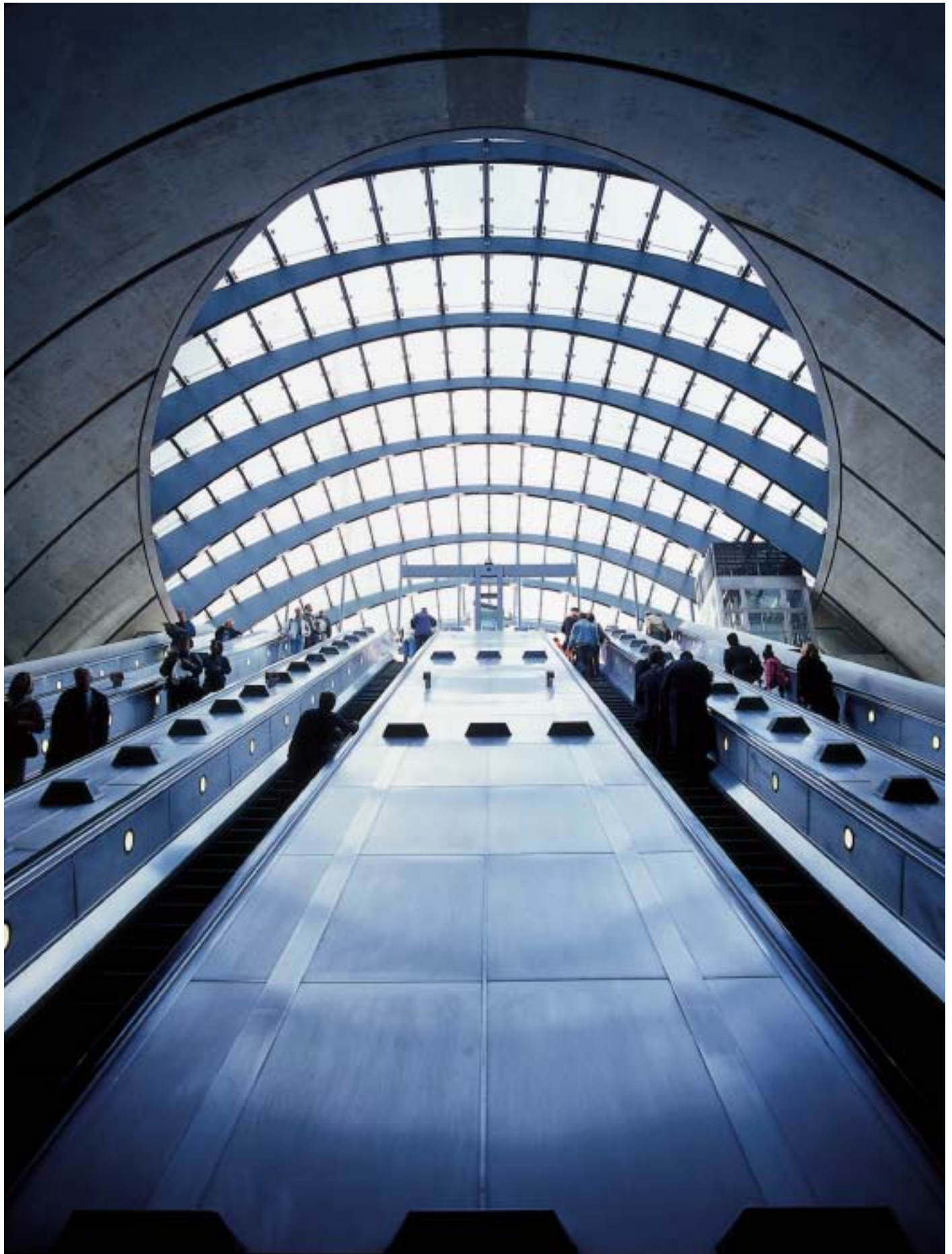
Jubilee line

The Jubilee line has seen the most dramatic demand growth, linked to the development of Canary Wharf. This was supported by the addition of a seventh car to all trains at the beginning of 2006 which boosted capacity by 17%.

The upgrade involves the installation of a new signalling system, which will allow trains to be driven automatically – meaning faster, more frequent trains for customers. In total the upgrade will provide 33% more capacity, equivalent to carrying around 5,000 additional passengers per hour. Journey times will be reduced by 22%.



Jubilee line train seventh car



Unfortunately, Tube Lines did not meet its contractual obligation to complete the work by the end of December 2009. Under a revised programme the delivery of the upgrade has been delayed until the autumn of 2010.

Circle, District, Hammersmith & City and Metropolitan lines – the Sub-Surface Railway (SSR)

This upgrade is the most ambitious project being undertaken on the Tube and will be delivered progressively over the next eight years.

Later this year we will pass a major milestone in the upgrade when the first of 191 new, larger, S stock trains enter passenger service on the Metropolitan line. We are currently testing the first of these trains on the network.

The new trains feature walk-through carriages, air-conditioning, improved customer information (audio and visual) and enhanced security through CCTV. The replacement trains on the Circle and Hammersmith & City lines will be seven carriages rather than the current six, adding dramatically to capacity. The trains will also be more accessible, including four dedicated wheelchair areas per train, lower passenger alarms in these areas and a smaller gap between the platform and the train.

Regenerative braking is also included in the new design, which recycles energy and helps reduce our carbon emissions.

A great deal of work is going on behind the scenes to support the introduction of new trains. Earlier this year we finished the work necessary to prepare the Metropolitan line signalling for S stock operation and work is already underway at a number of sites to alter and lengthen platforms.



The biggest part of the upgrade is the installation of a brand new signalling system which will allow more trains to run on the tracks. This contract is expected to be let later this year.



S stock test train at Neasden depot

Metropolitan line

The new S stock trains will operate on the Metropolitan line later this year. When the upgrade is complete line capacity will increase by 27%.

Circle and Hammersmith & City lines

The first of the new S stock trains for the Circle and Hammersmith & City lines are scheduled to be delivered to London Underground in late 2011, before the fleet is introduced in to service in 2012. When the upgrade is complete the combined line capacity will increase by 65%.

District line

The upgrade has already delivered a full refurbishment of trains with renewed interiors, CCTV cameras inside the cars, passenger information displays, fire-retardant seats and flooring and improved accessibility features such as tip-up seats to accommodate wheelchairs, buggies and luggage. This was completed in March 2008. The new, fully air-conditioned and more accessible trains will operate on the line from 2013 and when the upgrade is complete in 2018, line capacity will increase by 24%.

Northern line

The Northern line upgrade will deliver faster, more frequent trains and in total the capacity of the line will be boosted by 20% and journey times will decrease by around 18%. The same state-of-the-art signalling system being installed on the Jubilee line will also replace the signalling on the Northern line, some of which dates back to the 1950s.

Following the completion of some preparatory work, the main programme of work to upgrade the Northern line has started in 2010. The upgrade is due to be completed by 2012.

Victoria line

The Victoria line was the world's first 'automatic' railway and is now, 40 years on, undergoing complete renewal. The upgrade will deliver a 21% increase in capacity and a 16% improvement in journey times.

For customers, this will mean:

- > **New, faster and higher-capacity trains, with more seats, better ventilation and CCTV in every carriage**
- > **Improved accessibility enabling more Londoners to use our services independently**
- > **More trains during peak hours; up to 33 trains per hour, instead of the current 27, and better on-train customer information**
- > **A new signal control centre and system, enabling London Underground staff to provide up-to-the-minute support and information for staff and customers**
- > **Improved track and power systems, providing a more comfortable ride whilst keeping the system as efficient as possible**

The upgrade is on budget, on schedule and due to be delivered in 2012. The new signalling system has now been installed, and testing continues. New trains are now operating in customer service, and the rollout of the full fleet of 47 will start shortly.





New Victoria line train being delivered to the depot



First new Victoria line train in customer service



Piccadilly line

The upgrade of the Piccadilly line, which will deliver new trains, new signalling and a new control centre, is due to be completed by 2014. Planning has already started for this major engineering project which will improve reliability, increase capacity on the line by approximately 24% and reduce journey times by around 19%.

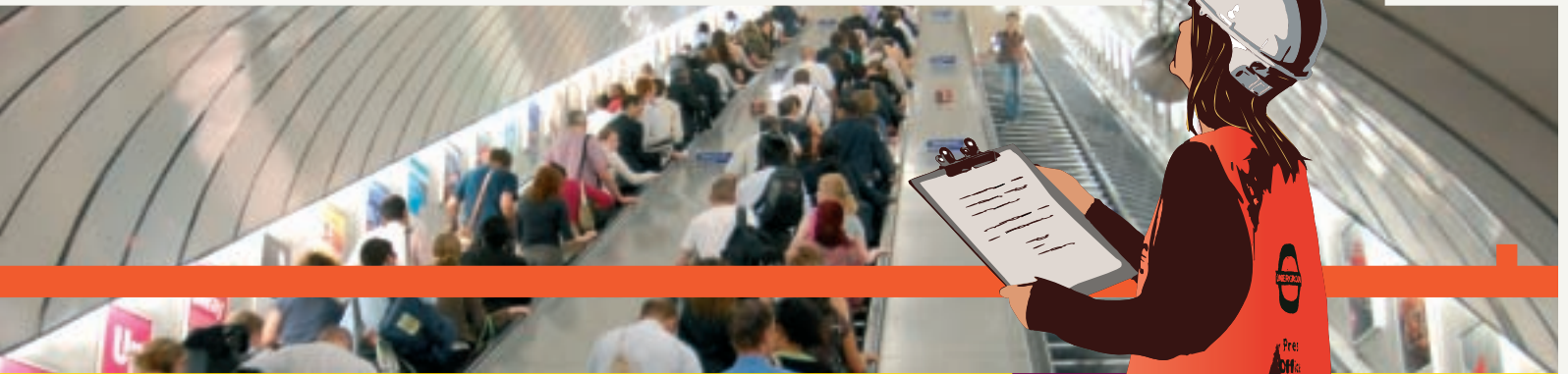
Bakerloo line

The line is scheduled to be fully upgraded by 2020, with new trains, signalling and a new control centre. Once completed, average journey times should improve by over two minutes and capacity will increase by almost 57% in the peak periods.

- **In total the Jubilee line upgrade will provide 33% more capacity, equivalent to carrying around 5,000 additional passengers per hour. Journey times will be reduced by 22%.**

Enhancing stations

Progressive developments



Enhancing stations

Enhancing stations

Meeting ever-increasing demand

Improving stations is another core part of our programme. We are enhancing some stations to make them brighter, more secure and easier to use, and we are increasing capacity at key stations so they can cope with the increased demand that the line upgrades programme will bring.

More than half of LU's 270 stations have been modernised or refurbished. Each station project is different, but could include an improvement to accessibility features like tactile strips and colour-contrasted handrails for the visually impaired, installation of CCTV and passenger Help Points, new electronic information displays in ticket halls and on platforms, new Public Address systems, and improved seating and lighting.

Some stations may have more extensive improvements, for example, new floors, walls, doors and ceilings and improvements to passenger flow.

As a result of funding pressures, it is not possible for us to upgrade or modernise every one of our stations during this business planning period (to 2018). However, funding has been set aside to ensure that we can provide any necessary station repairs or new equipment.

Stations that have been completed so far are:

1. Acton Town	17. Brent Cross	33. Ealing Common
2. Alperton	18. Bromley-by-Bow	34. East Acton
3. Angel	19. Burnt Oak	35. East Finchley
4. Arnos Grove	20. Caledonian Road	36. Eastcote
5. Arsenal	21. Camden Town	37. Edgware
6. Balham	22. Canons Park	38. Elephant & Castle
7. Bayswater	23. Chalk Farm	39. Elm Park
8. Becontree	24. Chigwell	40. Epping
9. Belsize Park	25. Clapham Common	41. Euston
10. Bermondsey	26. Cockfosters	42. Fairlop
11. Bethnal Green	27. Colindale	43. Finchley Central
12. Bond Street	28. Covent Garden	44. Finchley Road
13. Borough	29. Dagenham East	45. Gloucester Road
14. Boston Manor	30. Dagenham Heathway	46. Golders Green
15. Bounds Green	31. Debden	47. Goodge Street
16. Bow Road	32. Dollis Hill	48. Great Portland Street



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|-------------------------|-----------------------------|-----------------------------|
| 49. Green Park | 84. Oakwood | 119. Sudbury Town |
| 50. Hainault | 85. Old Street | 120. Swiss Cottage |
| 51. Hampstead | 86. Osterley | 121. Theydon Bois |
| 52. Heathrow T4 | 87. Oval | 122. Tooting Broadway |
| 53. Hendon Central | 88. Park Royal | 123. Totteridge & Whetstone |
| 54. High Barnet | 89. Perivale | 124. Tower Hill |
| 55. Highgate | 90. Piccadilly Circus | 125. Tufnell Park |
| 56. Holborn | 91. Pinner | 126. Turnham Green |
| 57. Holloway Road | 92. Plaistow | 127. Turnpike Lane |
| 58. Hounslow Central | 93. Preston Road | 128. Upminster Bridge |
| 59. Hounslow West | 94. Putney Bridge | 129. Uxbridge |
| 60. Hyde Park Corner | 95. Queensbury | 130. Walthamstow Central |
| 61. Kennington | 96. Queensway | 131. Wanstead |
| 62. Kentish Town | 97. Ravenscourt Park | 132. Waterloo |
| 63. Kilburn | 98. Regent's Park | 133. Watford |
| 64. Knightsbridge | 99. Roding Valley | 134. Wembley Park |
| 65. Lancaster Gate | 100. Ruislip | 135. West Finchley |
| 66. Leicester Square | 101. Ruislip Gardens | 136. West Hampstead |
| 67. Leyton | 102. Ruislip Manor | 137. West Ruislip |
| 68. London Bridge | 103. Russell Square | 138. Westminster |
| 69. Loughton | 104. Shepherd's Bush | 139. White City |
| 70. Maida Vale | 105. Shepherd's Bush Market | 140. Willesden Green |
| 71. Manor House | 106. Snaresbrook | 141. Woodford |
| 72. Mill Hill East | 107. South Ealing | 142. Woodside Park |
| 73. Morden | 108. South Harrow | |
| 74. Mornington Crescent | 109. South Ruislip | |
| 75. Neasden | 110. South Woodford | |
| 76. North Ealing | 111. Southgate | |
| 77. North Greenwich | 112. Southwark | |
| 78. North Harrow | 113. St. John's Wood | |
| 79. Northfields | 114. St. Paul's | |
| 80. Northolt | 115. Stamford Brook | |
| 81. Northwick Park | 116. Stanmore | |
| 82. Northwood | 117. Stockwell | |
| 83. Northwood Hills | 118. Sudbury Hill | |

The following stations are having major work done to increase capacity and reduce overcrowding:

Paddington

We have started work to rebuild the Hammersmith & City (H&C) line station at Paddington. When the project is completed in 2015 the new station will have a larger concourse, including a new ticket office, gate-line, staff accommodation, step-free access to the platforms via lifts and three stairways where there is currently only one. There will also be a new station entrance from the Paddington Basin.



New H&C line concourse at Paddington

- **Due for completion in 2015, Paddington will have a larger concourse, including a new ticket office, gate-line, staff accommodation, step-free access to the platforms via lifts and three stairways where there is currently only one.**



Tottenham Court Road proposed plaza and entrances

Tottenham Court Road

When Tottenham Court Road station first opened in 1900, it was never anticipated that it would handle nearly 150,000 passengers every day. As a key West End interchange, this number is set to grow, especially with the arrival of Crossrail in 2017, when passenger numbers will increase to 200,000.

The rebuilding of Tottenham Court Road station is now underway. When complete, in 2016, this will deliver:

- > **A new ticket hall, nearly six times the current size**
- > **Step-free access from street to platform**
- > **New escalators serving the Northern line**
- > **An interchange with Crossrail**
- > **Urban realm improvements, including bold new station entrances from a pedestrianised plaza outside the landmark Centre Point building**



Proposed new Tube entrance on Marylebone Lane

Bond Street

Bond Street is in the heart of London's West End and in the middle of the busiest shopping district in the UK. Over 155,000 passengers use the station every day, and with the arrival of Crossrail, this will increase to 225,000. Bond Street station will be step-free from street to platform and have increased capacity thanks to a new station entrance on the north side of Oxford Street, on Marylebone Lane.

The new station entrance will provide step-free access and direct underground access to new high-frequency, high-capacity Crossrail services. Passengers will also benefit from additional escalators and station enhancements.

Bank

We are planning to increase capacity on the Northern line platforms at Bank – one of the major pinch points for congestion at this complex station. We are also refurbishing or replacing all escalators within the station. Whilst causing disruption in the short-term, this work is vital to ensuring that the station can cope with future demand, by reducing the risk of failure and possible closures of the station.



Escalator replacement at Bank



Entrance to new North ticket hall at Victoria

King's Cross St. Pancras

The redevelopment of King's Cross St. Pancras Tube station is now almost complete. In November 2009 the new Northern ticket hall opened early and on budget. In mid-2010 the project will be completed with the opening of a lift to the Northern line platforms.

This £800 million project, funded by the Department for Transport provides a huge increase in capacity, cutting congestion and improving accessibility. The work is already benefiting hundreds of thousands of passengers by making their journeys easier.

King's Cross St. Pancras already sees more passengers a year than Heathrow and by the time the Olympic and Paralympic Games take place in 2012, more than 100,000 people will be passing through the station at peak times every day. This upgrade, which quadrupled the size of the station, is essential to effectively manage future passenger numbers.



The newest ticket hall at King's Cross St. Pancras

Victoria

Almost 80 million customers use Victoria Underground station each year, making it one of London's busiest Tube stations. Currently the station is closed on an almost daily basis for short periods during the peak to avoid overcrowding. With a predicted increase in demand to nearly 100 million customers each year by 2016, the upgrade of the station is crucial.

The station upgrade will reduce congestion at the Underground station, provide extra capacity, reduce journey times and improve access in and out of the station.

The proposals include:

- > **New ticket hall beneath Bressenden Place**
- > **Enlarged existing ticket hall**
- > **New interchange link between the new ticket hall and the enlarged existing ticket hall**
- > **Nine new escalators**
- > **Seven new passenger lifts providing step-free access**
- > **Improved access between the National Rail and Underground stations**
- > **New fire-fighting and emergency access shafts to improve safety at the station**

A Transport & Works Act Order was approved by the Secretary of State in July 2009 and came into effect on 18 September 2009. The station upgrade is set to be completed in 2018.

A step-up to step-free

London Underground is committed to making the Tube more accessible for everyone. To ensure the best possible value for money, we are delivering step-free access as part of wider station projects, such as the upgrade at Victoria.

Work to make a station step-free usually means installing lifts and sometimes making other improvements to ensure that passengers can get from street to platform level (and interchange between lines) without using stairs or escalators.

59 stations are step-free and six more will be delivered by the end of 2012.

These are:

King's Cross St. Pancras

Kingsbury

Southfields

Green Park

Blackfriars

Farringdon



- Over 80 million customers use Victoria Underground station each year, making it one of London's busiest Tube stations.

Green Park

Green Park will have step-free access in time for the 2012 Olympic and Paralympic Games. A number of improvements are in progress at the station and surrounding area, including:

- > **Three new lifts to provide step-free access from street level to all platforms and between all three lines serving the station**
- > **Increasing the size of one station entrance on the south side of Piccadilly**
- > **Improving access to the park by creating a new ramped walkway from the station ticket hall**
- > **A new canopy over the new staircase and lift waiting area on Piccadilly**
- > **Better ventilation to help tackle heat at the station**
- > **New bicycle storage facilities**



Green Park station entrance

LU is working with partners including Westminster City Council and The Royal Parks to deliver other improvements at street and park levels.

Blackfriars / Farringdon

Blackfriars Underground station opened in 1870 and is one of the oldest stations on the network. A key station on the Thameslink service, it is being completely upgraded. Once complete, customers will benefit from step-free access to the National Rail station and to street level, increased capacity with a bigger ticket hall, refurbished platforms and better interchange facilities between the Tube and National Rail services.

To enable these works, Blackfriars Underground station closed on 2 March 2009 and will reopen late in 2011.

Step-free access will also be delivered at Farringdon Underground station as part of the Thameslink Programme.



Artists' impression of Blackfriars station

- **Southfields will be a key station during the 2012 Olympic Games. By the end of 2010 the station will have been fully refurbished and have step-free access.**

Southfields

Southfields will be a key station during the 2012 Olympic Games, with the tennis events being held at the All England Club. By the end of 2010 the station will have been fully refurbished and have step-free access. The refurbishment includes improvements to the ticket hall, a larger entrance and more ticket gates which will help London Underground manage increased demand during major events.

Lifts and escalators: heightening efficiency

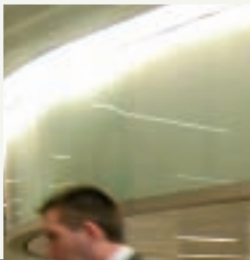
Reliable lifts and escalators are essential for transporting large numbers of passengers to and from platforms deep underground, quickly and safely. There are currently 415 escalators and 163 lifts at stations across the Tube network.

Many of these escalators and lifts are extremely old and in need of repair. Failure can mean that stations have to close.

LU escalators are unique and custom-built for each station with the escalator structure often being built into the surrounding concrete. Their heavy-duty construction allows them to last much longer and withstand more stress, but it also means work to refurbish or replace escalators can be complex. Replacement means completely dismantling the machine and moving it out of the station piece by piece. Some parts can weigh up to eight tonnes. New equipment is then transported into the station where parts are assembled, installed and tested.

This can take over a year for one escalator or lift.

Although escalators and lifts clearly cannot remain in service while they are being replaced or refurbished, we try to keep disruption to a minimum.



Taking the initiative

Progressive thinking for an advancing city



Taking the initiative

A cooler feel

Removing heat on the Tube is a huge challenge that will take innovation and time to deliver results. On the Circle, District, Hammersmith & City and Metropolitan lines we are introducing air-conditioning on trains, but on the deeper-level lines we have to look at more innovative solutions.



We are using a variety of different ventilation methods to remove heat from the network, improving air flow and comfort levels for passengers.

We are currently upgrading the mid-tunnel ventilation fans between stations on the Victoria line so that twice as much heat can be removed and temperatures can be controlled. In addition, we have installed large fans at key locations, to help improve ventilation and customer comfort.

- **Many sustainable and energy efficient initiatives are already being put in place, such as regenerative braking on new Tube trains, which recycles up to 25% of energy that would be lost during braking.**



Increased footfall. Reduced footprint

Tackling climate change is a key part of London Underground's transformation programme. Over the next few decades, London's transport system can make a significant contribution to reducing carbon emissions in the Capital.

London Underground is seeking to reduce, and where possible eliminate, adverse environmental impacts, and maximise the opportunity for using energy efficient solutions.

LU's Carbon Emissions Reduction Plan outlines how we can reduce our carbon footprint by reducing energy demand and using low or zero carbon energy where possible. Many sustainable and energy efficient initiatives are already being put in place, such as regenerative braking on new Tube trains, which recycles up to 25% of energy that would be lost during braking.

In February 2010 London Underground achieved the Carbon Trust Standard. This recognises our work and commitment to reduce our carbon footprint across all our activities.



- We are currently upgrading the mid-tunnel ventilation fans between stations on the Victoria line so that twice as much heat can be removed and temperatures can be controlled.



Stratford station

Peak performance for the 2012 Games

The Tube will have a vital role to play in delivering a successful Olympic and Paralympic Games in 2012. Improvements to support the Games have already been delivered, including the Piccadilly line extension to Heathrow Terminal 5 and the rebuilt Wembley Park station.

Additional work is planned, specifically to meet requirements for the Games, including step-free access at Green Park and Southfields stations. Work is also planned at the two major 'Gateway Stations' for the Olympic Park - Stratford and West Ham:

Stratford is a major public transport interchange and the station currently already experiences occasional periods of passenger congestion. A package of improvements is being implemented which will provide a long-term legacy benefit, as well as additional temporary measures to meet the specific needs of the Games. The work planned for the Tube station is part of a larger scheme which includes works related to the Stratford City Development and the proposed DLR extension to Stratford International Station.

West Ham is an integral part of the overall transport strategy for the 2012 Games. An estimated 17% of the total Olympic passenger traffic arriving by rail is expected to originate/end at West Ham station (13% of overall Olympic Park demand).

The Olympic Delivery Authority (ODA) is enhancing West Ham station to meet demand during the Games. This work will be completed in early 2011.

LU is also currently forecasting demand to plan a safe and reliable service on the network during the Games for the millions of expected spectators as well as our day-to-day customers. This service-planning work is expected to be completed in 2011 and will form part of the ODA's Olympic test events.



Key facts

- > The London Underground was the world's first underground railway and opened in 1863
- > More than one billion passenger journeys are made each year
- > There are 11 lines covering 402km and serving 270 stations; 45% of the network is in tunnels
- > In the peak hours, more than 500 trains are in operation
- > Every train travels around 76,800 miles/123,600km each year – more than three times the circumference of the earth
- > There are 415 escalators and 163 lifts to keep passengers moving throughout the system
- > Waterloo station has the most escalators, with 23 plus two passenger conveyors
- > During the three-hour morning peak, London's busiest Tube station is Waterloo, with 51,000 people entering. The busiest station in terms of passengers each year is Victoria with 78 million
- > Average train speed is 33km per hour (20.5mph)
- > In Central London trains cannot reach speeds of more than 30 – 40mph because of the short distance between stations
- > On the Metropolitan line, trains can reach over 60mph because stations are wider apart



TfL: Transport for London

TfL was created in 2000 and is the integrated body responsible for the Capital's transport system. Its main role is to implement the Mayor's Transport Strategy for London and manage transport services across the Capital for which the Mayor has responsibility. London Underground has been part of TfL since July 2003 when it transferred from the Department for Transport.

TfL key priorities to 2017/18

The TfL Business Plan defines the priorities and programmes to be delivered over the period of TfL's funding settlement with the Government. The Mayor's goals are at the heart of the Business Plan. They are:

- > Supporting economic development and population growth
- > Enhancing the quality of life for all Londoners
- > Improving the safety and security of all Londoners
- > Improving transport opportunities for all Londoners
- > Reducing transport's contribution to climate change and improving its resilience
- > Delivering for the London 2012 Games and securing a lasting legacy

