



**London  
Underground**

# **Northern line upgrade**

**Upgrade Delivery Manager, Paul Naylor**

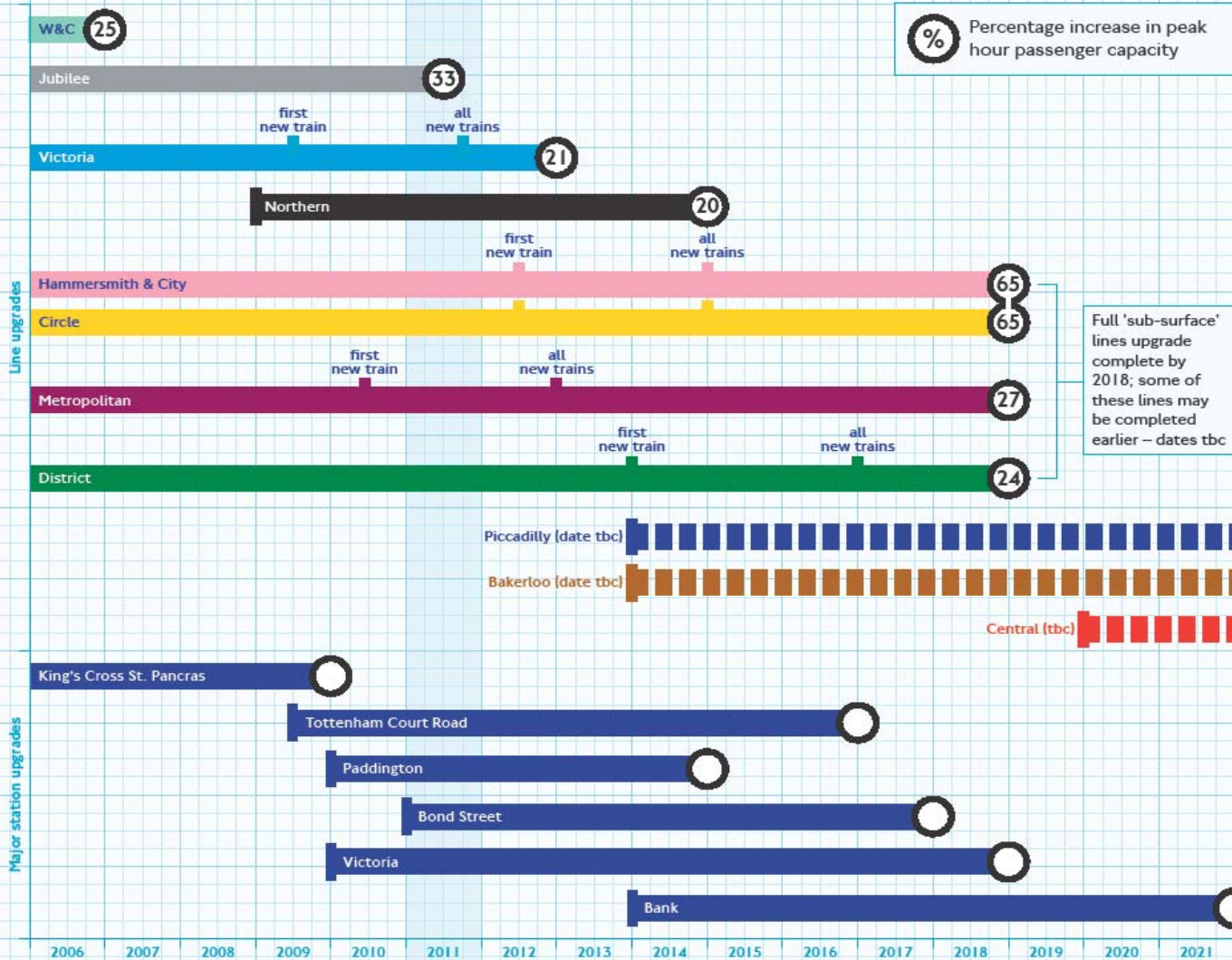
**Access and Olympics Manager, Matt Blanks**

**6 July 2011**

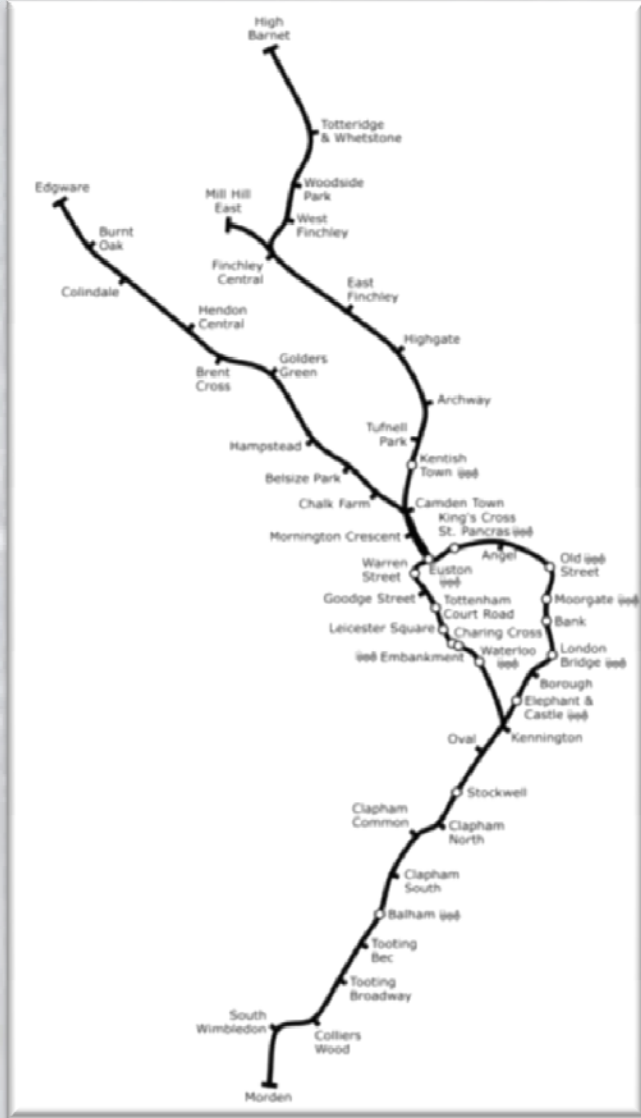


# LU upgrade plan

## OUR UPGRADE PLAN



# Northern line: growth and demand



- **Busiest line on the Tube network  
900,000 customers / day**
- **6 branches – most complex  
manually operated railway in  
Europe**
- **18.5 per cent growth in demand  
in last five years**



# Northern line upgrade (NLU)

## Benefits

New computerised signalling and control system (same system as the Jubilee), meaning trains can be driven automatically, faster and closer together

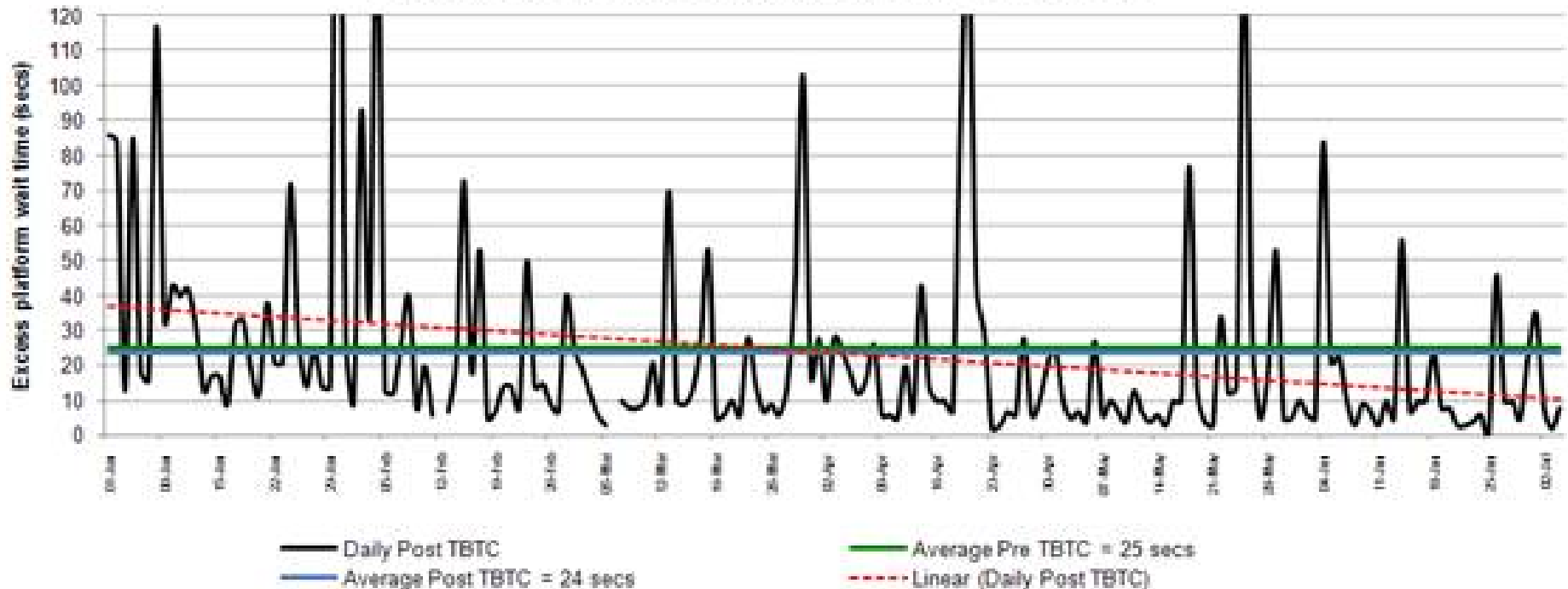
- **20 per cent increase in capacity**
- **18 per cent faster journey times**
- **Improved reliability**
- **Complete by 2014**



# Jubilee line: how performance has improved

On average, journey times are half a minute faster than they were a year ago.

Trend in Excess Platform Wait Times Pre & Post TBTC



# Delivering the upgrade

How can we deliver the same benefits with less disruption?

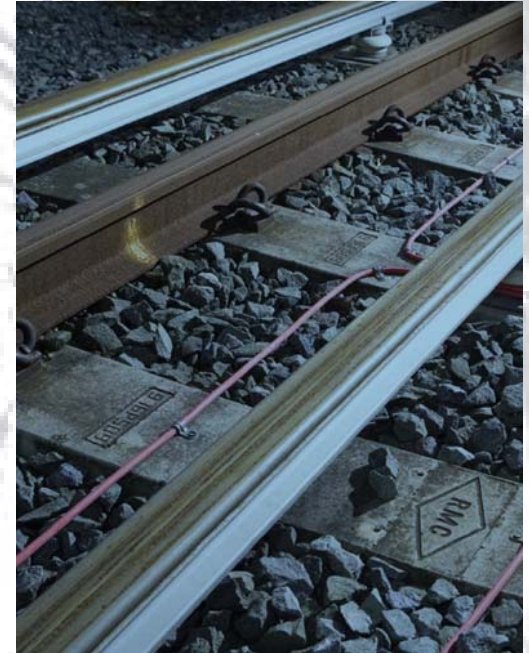
- **New approach**
- **Lessons learned**
- **Work already completed**



# Delivering the upgrade

## New approach

- **Improved testing to ensure reliability**
- **Fewer closures**
- **A 60 per cent reduction in disrupted customer journeys**



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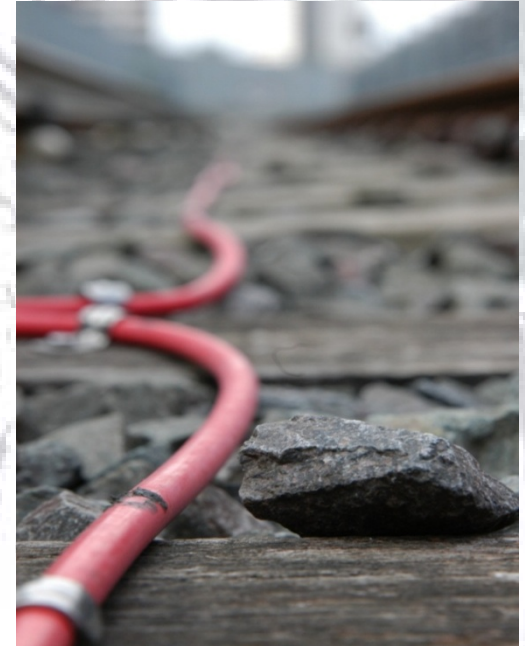
# Delivering the upgrade

## Work already completed

- **Trackside installation – 40%**
- **Train fit-out – 100%**
- **Power upgrade – 78%**

## Work left to do

- **Completion of works above**
- **Testing**
- **Commissioning**



# Delivering the upgrade

## Old plan (2010)

65 closures, 20 of which were full line

16 months of early closing  
(Monday – Thursday)

## New plan (2011)

16 closures, 8 of which are full line

6 partial line closures during Easter and Christmas

Sunday late starting from 08:30



# Northern line: ongoing maintenance

## Essential track renewal

- **Unrelated to the upgrade**
- **Critical to keep the line moving**
- **Begins August this year**



# Minimising impacts

## Northern line upgrade and essential maintenance

- **Works require access, sometime closures**
- **Can we carry out the work in sections?**
- **How much of the line must we close at one time and when?**
- **Working with key stakeholders on the closure programme**



# Alternative transport strategy

## Key Considerations

- **The number of customers and where they are going**
- **Existing services**
  - Tube, rail, bus, etc
- **How to ‘replace the route’ to provide the best journey times possible?**
- **Supporting our customers**
  - Targeted communications campaign
  - Customer information assistants to help with alternative transport arrangements



# Alternative transport strategy

## Examples

- **North of the line**

  - Rail replacement bus services

  - Boost existing bus services

  - Railhead to other branches or Lines

  - Ticket acceptance for existing bus services, First Capital

    - Connect

- **Central London**

  - Existing Tube, rail and bus services

- **South of the line**

  - Rail replacement buses

  - Ticket acceptance for existing bus services

  - Boost existing bus services

  - Use of Southern Rail services from Balham





**Questions?**

