

# Central Line Depot Visualisation

- 80:20 alignment objective comfortably achieved
- 50% increase in level of alignment in local depot performance measures

## The Background

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The London Underground (LU) is a public rapid transit system serving London and parts of its adjacent counties. The network comprises of 11 lines, and employs around 24,000 people. The performance and reliability of LU is key in enabling it to deliver its customer promise of Every Journey Matters, and is ultimately vital to the safe and effective operation and growth of London more widely.

Following the launch of the LU Visualisation Process, as part of the LU Reliability Improvement Programme, it became clear that there were significant opportunities for improvement of asset reliability on the Central Tube Line.

Project7 Consultancy were engaged to assist the Central Line Fleet Maintenance Depots with the development and establishment of an effective visual management system.



# Challenges

A scoping review was completed across Central and Victoria Line Maintenance Depots, focussing on their Visualisation processes.

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The review determined a list of observations and recommendations for the enhancement of Visualisation, to drive availability and reliability of fleet assets in service.

Within the entire LU network, it is the Central Line fleet that suffers the most in terms of reliability. This is true for both the number of 'Lost Customer Hours' (LCH) and the 'Mean Distance Between Failures' (MDBF). The actual number of faults reported per week on the Central Line is around 5 to 10 times that of other lines.

The review of the existing Visualisation activities at the Central Line Depots had identified:

- White Boards were not in use
- Electronic Vis Data integrity was not trusted
- No clear link between Asset Functional Vis and local priorities
- No discussion of gap between performance and target
- No visual representation of 'Reliability' issues on fleet
- Action recording poor and tracking non existent
- No evidence of escalation

This was creating a number of problems:

- Difficulty in understanding daily priorities
- Firefighting of repeat issues
- Lack of resolution had become the norm
- The same people discussing the same problems every day
- Missing performance targets had become the norm

However, a number of opportunities to accelerate the establishment of the visualisation process were now available.

# Solutions

UNDERGROUND

In order to overcome the challenges identified during review, and due to the limited time available for the new Visualisation system to become established, it was determined that an emphasis on skills transfer, relating to the principles of Visual Management should form part of the wider programme.

The programme for the re-introduction of the Visualisation process and structured meetings at the Hainault and Ruislip Maintenance Depots included the following activities;

- 1.** Alignment of the depot Visualisation to Fleet Functional and Asset Operations Visualisation. Specific care was taken to ensure that the focus of the visual management activities within the Depots were aligned effectively to the wider KPI cascade; covering all 6 of the KPIs and each of the agreed Hot Metrics. A top level Depot Performance board was established at each site to ensure that this was the start point for all Visualisation activity.
- 2.** The overall scope and content of the Visualisation materials at each site were designed to underpin the top level KPIs & metrics being managed. Each of the KPIs would be underpinned by Visual Management Boards, able to support decision-making, and capable of influencing performance in an appropriate way.
- 3.** The actual design of each Visualisation Board aspired to enable effective decisions to be made ahead of a potential problem being realised. The general objective was to provide a '2 week' forward view of operational requirements and a visual representation of capabilities and capacities, so that risks could be identified and addressed ahead of their causing damage to performance.
- 4.** Daily Visualisation meetings were introduced, reviewing planned operational demands and progress during the previous day, and readiness for Night Shift working.
- 5.** Full review of meeting governance was undertaken at both depots, including external meeting and/conference call requirements. An optimised process of operation for the meetings was defined and displayed within the Visualisation meeting rooms. Daily coaching of the meetings was undertaken, supported by formal use of the Visualisation Process Confirmation system to continuously improve meeting effectiveness and sustainability.
- 6.** A good level of skills transfer in the principles and establishment of Visual Management systems was achieved with the key management team figures at each Depot and the nominated LU Improvement Team representative.

# Impact on Performance

The dramatic improvement in the ability to identify and respond to upcoming concern is expected to deliver real and meaningful operational performance results, within the next few months. Decisions are already being made that are affecting performance, and preventing problems that would inevitably have impacted on performance.

As a result of P7's implementations, the level of teamwork and interaction across Depots has improved significantly. This is particularly evident where departments had previously withdrawn completely from the morning meeting activities, and are now playing an active part in promoting the contribution they make to the effective operation of the Depot, getting involved in helping other areas solve site level performance problems.

Following the Visualisation project, significant deliverables for the Client have included:

