

METRONET RAIL ELLIPSE BUSINESS PROGRAMME



About Metronet Rail...

“Ellipse is not first and foremost an IT project; it is a business change programme, which will play a crucial role in helping people decide how the business should be managed to meet its objectives”
David Harmsworth, Metronet Programme Manager.

Metronet Rail is a Transport for London Business responsible for upgrading, replacing and maintaining two-thirds of the London Underground, including trains, stations, signalling, track, tunnels, bridges and other related infrastructure. This is set out in a PPP services contract with London Underground, which retains responsibility for running the Tube, including operating trains and stations, collecting fares and public safety.

Formerly a private company, in May 2008 Metronet Rail transferred to Transport for London and in December 2008 all Metronet Rail employees TUPE transferred to London Underground.

Metronet Rail is responsible for Bakerloo, Central, Victoria and Waterloo & City Lines – known as “deep tube” lines and is responsible for Circle, District, Metropolitan, Hammersmith & City and East London Lines – known as “Sub-surface lines”.

The need for Ellipse...

Metronet’s key drivers based on PPP Service Contract Requirements are to ensure:

- Asset condition is improved to reduce the risk to safety and service loss
- Assets will achieve a life expectancy that meets the PPP contract requirements
- Asset management decisions are made on an economic whole life basis
- Knowledge and understanding of assets is constantly improved.

Equally, Metronet recognises that the assets it maintains are unlike many assets used within other industries (e.g. the utility sectors), mainly because they have a combination of very different types: a) linear; b) moving; c) point assets.

To assist both Metronet BCV and SSL achieve its ambitious programme of work and to satisfy contractual requirements, a huge business change programme has been in operation for the last two years. The Ellipse Enterprise Resource Planning (ERP) solution has been introduced into both Metronet Rail companies to satisfy some of the PPP contractual requirements and to replace existing dysfunctional mainframe systems. This includes replacing some 35 old financial, materials and procurement systems with as little interface work as possible. In addition, in the region of 150 asset related legacy systems had been identified for inclusion into the new system.

Ellipse was selected and validated by Woodhouse Partnership as the most appropriate asset work planning tool for Metronet. The system also satisfied Metronet and London Underground's strict safety and assurance procedures.

The programme was not seen as an IT project but about significant business change. It was considered that the programme embraced some 70% business change compared with 30% systems implementation.

Metronet's information systems strategy dictated that the following would be enforced:

- One major system change
- Single integrated software solution
- Flexible/modular will grow with business
- Off the shelf solution, NOT bespoke except for the Fault Reporting Centre
- System architecture that minimises costs
- Minimises IT costs over the duration of the contract
- Delivers the right solution for the business requirements

What is the Ellipse Solution doing for Metronet?

The Ellipse solution at Metronet has been implemented across multiple disciplines such as finance; materials & procurement and five maintenance disciplines. In addition a single fault reporting process has been adopted and implemented across all asset areas: track, civils, rolling stock, signals and stations.

Ellipse supports all maintenance work management processes for these asset areas, from the creation of work orders, through issuing of work, to the recording of work done. These processes cover both work arising and cyclical maintenance.

Implementation of the work management processes now gives Metronet the ability to review and implement new working practises and work groups across the asset disciplines, these included:

- Planners
- Schedulers
- Data Entry Clerks

So what else did Ellipse give Metronet?

Firstly and probably most importantly, it gave each Metronet Rail company a new asset register that not only satisfied the contractual requirements from the PPP but also formed the basis of a “single source of truth” for assets. The assets and their hierarchies are consistent across all asset areas and conform to the Category 1 Standards defined by London Underground for asset maintenance. Also, all maintenance tasks are consistent in their design therefore a standard approach to planning work is achievable.

Managing work and providing KPI reports help management to plan their work and staff more effectively.

The Ellipse solution within Metronet was delivered by a workforce that peaked at 65 and consisted of business staff, AMT-SYBEX (the software provider) and external programme and project managers.

How was it implemented?

The Programme was implemented using structured project management techniques and consisted of a complete end-to-end lifecycle process. The initial work was to map the business processes through workshops, which enabled the business to understand and revise how their work flows could be improved. At each stage of the implementation the business gave a sign off by the appropriate business manager and the overall project approach was signed off by the Assurance Asset Engineers.

Each asset area took responsibility for their own implementation and had a mixed project team that worked with the asset areas.

Loading and verifying asset work & data

This involved setting up inspection schedules and transferring work banks into Ellipse. This data would then be verified to ensure the work schedules were accurate and complete.

Roll-out of new work management processes

A whole set of new work management processes were rolled out and these ensured that the correct information was captured prior to a job being created and the correct information was captured once a job had been completed.

Retirement of legacy systems

Once it had been proved that the work schedules produced from Ellipse were accurate, the legacy system was retired.

Establishing Asset Data Maintenance Processes

New processes were put in place so that changes or additions were made to assets, inspections or work orders then the details of this could be captured in Ellipse in a timely manner.

What information can now be provided?

Ellipse has enabled Metronet to change and unify business processes, and has been a tool in cultural change. In its simplest form, Ellipse has, for the first time, provided Metronet with a single, consistent view of it's assets and maintenance activities.

Ellipse produces online system reports which can be used by users to review information on:

- Asset
- Maintenance
- Backlog
- Standard jobs
- Scheduled tasks
- Work orders
- Work groups

Ellipse can be used in order to deliver compliance with company standards by using scheduling compliance comparisons, and help deliver against KPI's for process efficiency in terms of:

- Decreasing backlog
- Delivering maintenance compliance
- Managing future work banks
- Improving data quality
- Improving maintenance scheduling

Statistics:

AMT-SYBEX's Ellipse solution helps both Metronet Rail BCV and SSL to maintain:

- *347 trains*
- *471 miles of track*
- *155 Stations*
- *806 bridges*
- *77.5 miles of deep tube tunnels*
- *103 miles of embankments and cuttings*
- *1,263 points and crossings*
- *187 escalators*
- *36 lifts*
- *2 travelators*
- *7 signalling control rooms*

Moving Forward

Metronet and AMT-SYBEX continue to work in partnership to improve systems capability and meet demands of the business.

- Ellipse is now integrated with the FDCS mobile solution for Track and Civils.
- Ellipse supply Asset Management Planning.
- Ongoing improvement to data quality and capture of data changes.
- Integration with LUL systems.

For more information on our full range of services visit
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