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creating sustainable business advantage

## Case study

Name: Leading International Public Transport Operator

Sector: Site/Depot Based Maintenance

Location: The Midlands

# Transformation of Engineering Performance in a Bus Maintenance Depot

This leading international public transport operator runs coach and local bus services across the UK from a number of depots.

A national transformation programme had been developed and initiated by the Operator to address some of the issues hindering the business, focused on digitalisation of the work management system. In 2021, the Operator also faced some challenging cost reduction targets, which would require a substantial improvement in engineering productivity in order to achieve them.

### Key challenges

- Elongated and duplicative paper-based processes
- Operation not ready for digitisation
- Substantial delays and rework
- Disjointed management review structure
- Institutionalised poor behaviours
- Weak interfaces between departments

### Key gains

- Reduced contractor FTE by 41%
- Reduced breakdowns and engineering interventions by 25%
- Reduced repeat defects (as a percentage of overall defects) by 43.6%
- Reduced open carried forward jobs by 75%
- Reduced average age of carried forward defects by 38.5%
- Re-engineered 16 processes to lay strong foundations for digitisation

## Introduction

With the impending implementation of the digital work management system, there was a recognition amongst the senior management team of the need to ensure that strong foundations were in place before any technological solution was implemented within the depots. Senior management had concerns that digitisation would not, on its own, address the significant underlying issues hampering the business: poor productivity, inefficient processes, complacent behaviours and weak interfaces between departments.

Management recognised the need to review the existing processes and re-engineer them to ensure they were "fit for digitisation" as well as to develop a new "blueprint" for effective depot maintenance, and to pilot these new processes and ways of working before the technological solution landed.

## The Challenge

Managementors undertook a 2-week analysis of the engineering team within one of the Operator's depots to review current performance, the extent to which the Operation's processes were "fit" for digitisation and the overall willingness and readiness for change of the workforce. The findings revealed substantial gaps in the Operation's readiness for digitisation, both in terms of the existing processes, as well as an institutionalised attachment to the paper-based system, combined with a deep-rooted fear of change and culture of blame amongst depot supervisory staff.

Whilst digitisation would potentially improve the availability and visibility of information within the depot, without the supporting behaviours and processes in place, there was a considerable and probable risk that the technology investment would not deliver the desired benefits to the business.

The findings also showed a substantial opportunity to improve the productivity of the depot, with significant underutilisation of engineers and excessive use of overtime and subcontractors seen due to poor planning and passive supervision. Performance was also being impacted by poor quality and missing information, resulting in delays and rework in the workshop, as well as a fragmented interface between the Engineering and Operations functions. Furthermore, the existing KPIs provided a misleading review of performance whilst driving the wrong behaviours on the shop floor, causing regular repeat defects to go unnoticed. The lack of consequence and accountability for poor performance was compounding complacency within the supervisory team.

> *"I wasn't going to take the supervisor job, but throughout this project the communication in the supervisor team has improved immensely. It's made it a much better place to work – I've decided to take the job instead of picking the spanners back up."*
>
> Engineering Supervisor

## Our Approach and Outcomes

Following on from the analysis, a 12-week project was agreed focused on the engineering teams within the chosen pilot depot to get the depot “fit for digitisation”.

The key objectives of the project were to:

- Develop and test a new Target Operating Model (TOM) to act as a blueprint for digitisation
- Review, develop and test to-be processes and tools to align with and support digitalisation
- Clarify roles and responsibilities and shift management behaviours from a passive to a more active style, driving improved performance of the engineering team and embedding revised managerial roles
- Reduce the amount of waste and drive out inefficiencies to realise operational and financial benefits in a sustainable manner

Working closely with key stakeholders, a complete review of the key processes impacted by the digitisation project was one of the first activities kicked off by the project team. With Managementors acting as facilitators, a series of process workshops were held to identify what process flows were required as part of digitisation, which of these existed in some form already and which were missing altogether. The processes that existed already were reviewed with the key stakeholders to highlight wastage and duplication and to identify smarter, optimised ways of working that were aligned to the incoming digital solution. Defining clear ownership of each step was a key focus in order to facilitate a smoother transition and to ensure strong foundations were being laid for digitisation.

*David Beggs, Practice Director at Managementors commented, “A digital work management system needs to be supported by robust, tried and tested processes, with clear owners and control measures in place. Without these, the wrong behaviours can quickly start creeping in, steering the operation off-course.”*

Alongside the process work stream, a programme of ‘quick win’ activities was developed and implemented. These activities were aimed at demonstrating to the operation that change could and would happen, as well as starting to alter behaviours and mind-sets.

One of these early activities was to improve engagement with performance on the shop floor, installing a performance whiteboard and involving engineers in a ‘daily huddle’ to raise visibility of performance and ensure issues were being raised and addressed. Processes for overtime and contractor pre-authorisation were quickly put in place to help bring spend under control, as well as to remove the institutionalised overtime that had become commonplace. A suite of standard times or ‘PGLs’ were also created to enable the engineering management team to better plan, control and review performance, and which could later be built into the digitalised system.

Dave Titley, Senior Consultant at Managementors reflected, “The supervisors really grabbed the bull by the horns with the ‘quick win’ activities, engaging with the engineers from the outset to draw out the issues and frustrations. This was matched by a very positive response from the engineers, who finally felt like they were being listened to.”

A core focus for the project was the development of the skills of the managers, supervisors and key staff, and changing some of the behaviours that had become institutionalised over time. This was a continuous process taking place throughout the life of the project. Formal coaching sessions for the Engineering Supervisors and Manager focused on helping them achieve objectives which were important to them. One-to-one, ‘on the floor’ coaching was conducted on a daily basis as supervisors carried out the day-to-day requirements of their job. Several classroom-based training workshops were also held with the engineering supervisory team, designed to accelerate their understanding of the project and its role in preparing the operation for digitisation, as well to develop their understanding of key active management principles. The Engineering Manager commented that “the management workshops have been really helpful and have helped create a new focus for us.”

To strengthen the working relationship between Engineering and Operations and remove some of the frustration and blame, Managers also took part in a 'day in the life of' programme, with managers from engineering spending time with operations and vice versa. This was a powerful tool in helping each function build a greater understanding of the other's role, break down the day-to-day frustration experienced by each side and take an action-focused approach to developing a stronger, more collaborative interface going forwards. One of the Engineering Supervisors commented that, "morale in the workshop is a lot higher than it used to be. We're working together as a team a lot better now."

Targeted initiatives were launched to reduce the number of interventions, repeat defects and jobs being carried forward from one inspection cycle to the next. These went hand-in-hand with the development and roll-out of a Performance Dashboard, providing clear and user-friendly visibility over breakdowns, repeat defects, carried forward defects, overtime and contractor hours, as well as the Availability, Utilisation, Effectiveness and overall Productivity of the workforce. The Performance Dashboard developed now acts as the backbone and single source of truth for the depot's management review structure.

Tooling development was supported by close coaching of the Engineering Management team to support the review of current data, identify issues and trends, and ensure that actions were put in place to tackle the root causes of repeat breakdowns and defects. Emma Sacchi, Programme Director, commented, "This shift to a more proactive and data-driven management approach is increasingly enabling supervisors at each level to ask the right questions, identify issues and take action. The new ways of working and processes developed will stand the operation in strong stead for their transition to digital and for continued improvement in their engineering performance."

> *"Introducing the breakdown and interventions reporting has been a really good thing, we used to miss out on so much valuable information"*
>
> Engineering Manager

> *Dave Titley, Senior Consultant at Managementors commented, "The introduction of the performance dashboard was a pivotal moment for the project. For the first time, the Engineering Manager had visibility over the true performance of their garage, and was able to pinpoint exactly where their issues were coming from, enabling them to pull the levers to drive performance. Once the dashboard embedded, everything started to fall into place."*

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