



Client: Defence Aviation Repair Agency (now Defence Support Group)
Assignment: Develop Lean Maintenance, Repair & Overhaul (MRO) facility for VC10 to achieve radical performance improvement

Lean Enterprise Transformation of VC10 Maintenance Facility

DARA won an extended contract to carry out deep level maintenance, repair and overhaul of the RAF's fleet of VC10 large bodied jets. This included the need to transfer in Minor maintenance activity from Brize Norton.

Despite a long history of working with VC10, the performance targets in the new contract presented a significant challenge. This, complicated by uncertainties about the future of the Agency following the Strategic Defence Review, demanded that the facility become a Lean showcase for winning new business.

Bourton Group had worked successfully with DARA for a number of years and we were a natural choice to partner with them. They asked us to work with them to lead the transformation of the facility.

Our approach

To achieve the vision, the entire enterprise, from shop floor and planning to logistics and technical support, needed to be transformed. As with all large and complex change programmes, we needed an approach that would:

- Generate a sustainable step change in performance
- Overhaul unwieldy processes without compromising quality or regulatory compliance
- Win over a technically capable but sceptical workforce
- Gain the support of a diverse group of stakeholders (the customer (the IPT), the users (the RAF) and the prime contractor (BAE Systems))

Getting started

Our initial diagnosis of the root causes of poor performance and the receptivity of the management and workforce to change revealed excessive waste in the processes, poor housekeeping and low levels of ownership. A *current state* value stream map of the entire MRO process exposed further serious weaknesses. A series of workshops with the facility management team raised awareness of the revised expectations of the customers, the business and the workforce and confirmed their vision for the future.

Managing Successful Implementation

A multi-disciplined, joint DARA and Bourton team led the programme with clearly defined deliverables and a challenging implementation plan. We conducted weekly and monthly progress reviews with stakeholders in order to ensure ongoing support, maintain the pace of change, capture and drive benefits realisation and ensure obstacles were rapidly addressed. In addition, we carried out audits after six and twelve months to evaluate the degree to which the changes had been sustained.

Process improvements

Delivering the *future state* value stream map depended upon applying the principles of Lean in three key areas: the underlying control of processes, the organisation of the workplace and the culture of the workforce.

From this starting point, Lean Ways of Working and routine disciplines were defined. The implementation strategy for the major servicing mirrored the progression of the aircraft through its three phase process, with fundamental step changes being introduced phase by phase over the first three aircraft. For the transferred Minor type services, the new processes were introduced from day one, with incremental improvements being identified and implemented as the new approaches were embedded. Management, employees, customers and suppliers were involved at every stage of shaping and delivering these changes.

Building capability

We delivered Lean awareness workshops for the workforce and trained key personnel in both the concepts and tools of Lean. This rapidly built 'buy in' to the changes. By working collaboratively with the leadership team and ensuring team members were involved in the developing details, we gave them the knowledge, skills and experience to continue to develop the Lean Showcase well into the future.

Value delivered

DARA's VC10 Team was able to deliver the new service provision successfully and become the best performing facility within DARA. The improvement programme was a finalist in the prestigious Manufacturing Awards in 2006 and shortlisted for the MCA Best Management Practice Operations Performance Award in 2007. The VC10 Facility has subsequently become a benchmark reference site for other organisations aspiring to Lean.

Specific benefits included:

- 33% reduction in booked hours for Major services
- Lead time reduced by 20% over first three major aircraft, with the capability to reduce lead time according to customer demand.
- Value of material returns on Major servicing reduced from £5m to less than £500k
- Project set up time for new aircraft reduced by 50%
- Smooth introduction of the Minor maintenance programme with all targets for the first aircraft through the facility met to the delight of the customer and end users
- Consistent achievement of customers target lead time for Minor services from the very first aircraft through the facility
- Absenteeism almost halved (from 10% to 6%) due to improved ways of working and increased participation
- Quality standards maintained throughout the transformation programme as a result of sustained ownership

“Our experience of working with Bourton Group has been excellent in both relationships and results”

Paul Henry, Head of VMF

“What is really impressive is how well the people have not just adapted to the changes but driven them. There has been as much a push for change coming up the organisation as there is going down. Our workforce embraced the new ways of working, delivered significant savings and improvements in support to our front line troops, and are still willing to adapt and achieve even greater results”

John Reilly, Chief Operating Officer DARA

“Simplified touch points inside DARA, better visibility of progress, the use of technology to improve processes and the shared drive to deliver the results are all very impressive. We and the DLO have great confidence in the output”

Head of Tankers and Transport, BAeS