

# UK Ministry of Defence controls frontline aircraft cost-effectively by partnering with IBM



## Overview

### ■ Client Challenge

- Improve the management of engineering assets and reduce through-life costs
- Enhance financial management.

### ■ IBM Solution

- IBM Business Consulting Services systems integration services – managing the design, development and implementation of an engineering and asset management system
- Training and support.

### ■ Client Benefits

- Reduces through-life costs via more efficient use of resources
- Increases productivity through reduced manual manipulation of data
- Improves management decisions through the availability of reliable information.

Like all areas of Defence, the Royal Air Force, the Fleet Air Arm and the Army Air Corps face challenging and exciting developments. The pace at which innovative equipment becomes available drives the evolution of each Service, but progress must be achieved efficiently and cost effectively. With this in mind, the UK Ministry of Defence (MoD) strives to give its air stations logistics support that provides the best possible value for money.

In the early 1990s, information system strategies were defined for the Ministry of Defence and the three Armed Services – RAF, Army and Royal Navy. At that time, RAF Logistics Command had a collection of separate systems for managing the status and support of its engineering assets – aircraft and the components that make up those aircraft. Some of these systems were computerised and some were manual, paper-based systems.

The RAF alone currently has around 2 million individual stock items, approximately 500 aircraft flying an average of 10,000 sorties a month worldwide and hundreds of different versions of engine that fit on a Tornado aircraft alone. It is easy to appreciate the challenge in gaining visibility and control of these assets.

### Working together to manage expectations

IBM won a competitive tender to become systems integrator and provide training and support for the RAF Logistics IT Strategy (LITS) programme. The contract required IBM to design, develop and implement a seamless IT system covering asset management, maintenance management, cost management and desktop end user facilities.

*“IBM was very willing to work with us as a partner during our early teething troubles. A very strong relationship developed enabling delivery of the full scope of this intricate programme in the planned four year timescale.”*

*Wing Commander Bill Walker, Head of Service Management (IBM) for the LAIPT*

When the LITS programme started, the MoD wanted a 'big bang' approach with the entire logistics capability delivered to air stations and support units as one single implementation. As the programme advanced, however, it became obvious how difficult this would be to achieve. By working together, IBM and the MoD re-evaluated and prioritised requirements. The original contract was renegotiated to enable an accelerated phased implementation that delivered manageable components of the programme to deliver benefits progressively.

The LITS system is now the responsibility of the Logistics Applications Integrated Project Team (LAIPT) within the MoD's Defence Communication Services Agency (DCSA). Wing Commander Bill Walker, Head of Service Management (IBM) for the LAIPT says: "To its credit, IBM was very willing to work with us as a partner during our early teething troubles. It was the only way to resolve the complex problems the LITS programme presented. A very strong relationship developed enabling delivery of the full scope of this intricate programme in the planned four year timescale."

*"IBM and the MoD have worked together throughout to deliver a highly successful engineering and asset management capability to the front line aircraft fleet."*

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### **LITS – instantly available to support aircraft operations**

LITS supports front line combat aircraft, transport aircraft and helicopters. Complete aircraft and the individual assets that make up those aircraft are managed through the asset management system. This provides aircraft configuration, asset tracking and aircraft usage information as well as fleet management and fault management functions. LITS follows an aircraft out into operations, providing both real-time airworthiness assurance and a record of its configuration and flying history throughout its life. The life history of a major assembly, for example an engine, can also be traced back showing the different aircraft it has been fitted to over time.

Originally, LITS was a back office system where information was first recorded on paper and then entered into the system. Now, Service personnel enter information directly into the system; for example pilots input their sortie information as soon as they land. LITS is deployed in 37 air stations, 20 industry sites and wherever aircraft are operating in the UK or overseas.

Large work packs for the scheduled maintenance of aircraft are generated and managed through the maintenance management system. If an engineer tries to fit an incorrect component to an aircraft during maintenance, LITS highlights the error and prevents confirmation of the maintenance task until it is correct, enforcing the correct configuration of components for each aircraft.

The cost management system delivered under the LITS programme was implemented successfully and pioneered the use of resource accounting in the RAF Logistics Command. However, shortly after implementation, resource accounting was introduced as a Defence-wide initiative. The Defence Logistics Organisation (DLO) (the successor to RAF Logistics Command) was able to make a seamless transition from the LITS cost management system to the MoD-wide system that replaced it.

### **Bringing visibility and financial benefit**

The introduction of LITS has dramatically reduced the amount of paperwork completed by Service personnel, increasing the availability of up to date, reliable and accurate information organisation-wide and freeing staff to work more productively. Decisions are better informed and can be made more quickly as the relevant facts are easily available. Aircraft can be rapidly prepared for action, providing particular benefit when mission criteria change at the last minute. It is also now far easier to identify the location of resources and despatch them to areas of need from the closest or most effective source.

Increased visibility of information across the DLO Integrated Project Teams (IPTs) and the Front Line Commands has reduced the through-life costs of aircraft in many ways. For example, LITS has identified aircraft parts worth millions of pounds that IPT Supply Managers weren't aware were sitting in hangars. Maintenance checks are easier, quicker and, therefore, more cost effective. Before LITS was introduced, if an IPT found a problem with an aircraft component within a range of serial numbers, engineers had to complete a check on an entire fleet of aircraft to find out which had been fitted with the problem components. Often parts had to be removed from the aircraft to reveal serial numbers. Now engineers simply check the LITS system to find out which aircraft is affected. It is also much simpler to identify frequently occurring faults, which can then be targeted and addressed to improve the availability of aircraft.

LITS provides the ability to easily and quickly test and refine the complex algorithms used to calculate aircraft life, enabling that life to be safely extended. Wing Commander Walker pointed out that IBM is always mindful of the caution needed when critical matters like aircraft safety are involved. He says: "The information we obtain from LITS is used for making decisions on airworthiness, in other words, should a particular aircraft fly or not? IBM understands the need to be risk averse when dealing with aircraft systems and we appreciate working with a partner we know we can trust."

### **A reputation for excellence**

The LITS programme has developed an excellent reputation within the MoD for large scale programme management and systems integration delivery. As a result, the original 10-year agreement with IBM has been extended for a further three years.

"The LITS programme has been a major undertaking of strategic significance to the RAF and therefore Defence. Like any large IT project, LITS had its difficulties but IBM and the MoD have worked together throughout to deliver a highly successful engineering and asset management capability to the front line aircraft fleet. In partnership, we continue to manage the delivery of that service to a large and ever expanding user community throughout the world on a daily basis," says Wing Commander Walker.

### **For more information**

To find out more about IBM Business Consulting Services contact your IBM sales representative or visit:

**[ibm.com/services/bcs](http://ibm.com/services/bcs)**

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**IBM United Kingdom Limited**

PO Box 41  
North Harbour  
Portsmouth  
Hampshire  
PO6 3AU

Tel: 0870 010 2503

**ibm.com**/services/uk

**IBM Ireland Limited**

Oldbrook House  
24-32 Pembroke Road  
Dublin 4

Tel: 1890 200 392

**ibm.com**/services/ie

**IBM South Africa Limited**

Private Bag X9907  
Sandhurst  
2146  
South Africa

Tel: 0860 700 777

**ibm.com**/services/za

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