



## Flying high

Actuate reporting solution earns its stripes at RAF, as support department tightens its supply chain and adds more value

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— Squadron Leader Alan W Moore

*Head of Reporting Services, Management Information Branch, Supply Chain Support Programmes, Defence Equipment & Support, RAF Wyton*

When your core responsibilities include keeping expensive, peace-keeping aircraft flying, the quality and immediacy of your maintenance and supply chain reporting activities will be paramount.

Yet, until two years ago, the British Royal Air Force's Defence Equipment & Support department had clipped wings when it came to information reporting from its air logistics engineering systems. Although a wealth of engineering, asset management and other essential data was being recorded and safely stored, the process of extracting and reporting on this information was far from easy or efficient. So when the RAF introduced the Typhoon multi-role combat aircraft, it decided something needed to be done.

So successful has been its employment of specialist reporting solutions from Actuate to provide Typhoon reporting efficiencies, that

the DE&S Air Logistics Reporting team is now exploiting the Actuate capabilities to replace other reporting solutions for other aircraft platforms.

## Manual manipulation

"Typhoon data is stored in two different data sources, which we need to pull together to produce reports," explains Squadron Leader Alan W Moore, head of reporting services within the Information Exploitation Branch, Supply Chain Support Programmes, within Defence Equipment & Support at RAF Wyton.

For other platforms, it didn't help that the main database – Informix – was an older, legacy system. To provide actionable decision-support information from this source to internal operations staff, contractors and clients, Sqn Ldr Moore's department had the painstaking task of extracting the data

### > COMPANY PROFILE

The Defence Equipment and Support Logistics (Air) organisation, DE&S, is part of the British Royal Air Force (RAF).

### > INDUSTRY

Government/Defence

### > COMPANY SIZE

29,000 employees

### > LOCATION

The department is based across 65 locations and represented at 150 specific sites.

### > CHALLENGE

#### BENEFITS

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using SQL queries and manipulating it using spreadsheet macros and then present the data in an appropriate way, a process which was not efficient for report customers to perform.

The Informix system holds logistics data, such as engineering and asset management records including vital maintenance and product life parameter information, as well as reference data about the structure of the aircraft. Comprehensive reporting depends on being able to pull together data and present it under the reference structure.

Although Moore's team did have some reporting capabilities in a business intelligence tool (IQ/Eureka from Computer Associates) with the introduction of the Typhoon aircraft, this had several limitations, not least its inability to draw data from more than one source. "Modern reporting tools are generally very good at manipulating data from modern data sources, but they are not so good at looking backwards and working with older systems," Sqn Ldr Moore notes. It became clear that the RAF needed a dedicated, powerful reporting capability with greater flexibility.

Across the disparate systems, the team needed to extract data from numerous discrete sources, including the RAF's Logistics Information Technology System (LITS) and the Maintenance Data System (MDS), data from the back-office system, plus the Management of the Joint Deployed Inventory Proof of Concept Management Information System (MJDI POC MIS) which tracks the flow of material.

"As it was, we only had one reporting tool for one application, and we couldn't employ this to get a complete picture of activities across whole fleets when fleet data was managed in different E&AM systems," Moore recalls. Trying to achieve this fuller picture was inefficient for his department, which at that time was populated with some 30 people dedicated to the job of generating reports.

## Multiple challenges, single solution

When the DE&S's Management Information Branch went to the market, its mission was to find a modern reporting tool that could effortlessly draw data from across new and older systems.

There were other critical requirements too. Says Moore: "We needed a solution that would comply with MOD Architecture and be run over the MOD RLI intranet; connect to multiple database sources of differing standards; produce output in multiple, graphical formats; and that would minimise development resources."

Crucially, the reporting application also needed to provide Web-based reports that could be manipulated by customers. The RAF needed complete flexibility, since a further objective was to maximise use of internal resources, as well as getting critical, meaningful, accurate information to the users that needed it without delay.

Requested reports can range from those with direct operational importance, as used by operating squadron personnel or support organisations, to those relating to customer support agreements and contract performance management. To ensure that accurate, up-to-date, comprehensive and relevant information was delivered to the right people at the right time, Moore's team needed to establish a fully network-capable system that extended from the technicians on the ground to customers in different support organisations, and which could be accessed flexibly across different locations, using workstations & laptops supporting both remote and autonomous use.

"Before, we didn't have network-based tools, so there was no web access," Moore explains. "We wanted the user to be able to log in wherever they were on the network, particularly for support staff who move from site to site."

## Flexible automation from Actuate

To reduce the burden on Moore's team, and ultimately to enable headcount reduction (the team has now shrunk by two-thirds, from 30 to 10 people), meant automating report generation so that users could request and process their own reports against live or operational data stores.

The RAF found all of the capabilities it wanted, and more, in Actuate.

"Whereas, before, we had to produce lots of individual reports for each piece of equipment, we can now rapidly generate a single, comprehensive, holistic report across the whole fleet, yet present this only in terms of what is relevant to a Harrier tradesman or a Tornado guy," Moore says.

This has significantly reduced the report maintenance burden as there are fewer reports to maintain, while, more importantly, ensuring users get the information that is directly relevant to them quickly.

By contrast, with CA's IQ/Eureka software, the department had been generating 368 separate reports (around 300 relating to asset management, the rest to maintenance management). Moore's team has now been able to whittle this down by more than two thirds (70%). The users benefit directly too, as reports are more immediate, and easier to digest. Whilst this work is not yet fully completed, and customers must confirm that the Actuate reports satisfies airworthiness requirements, it is expected that the IQ reports will be phased out in 12-18 months – this seems long but a period of parallel running is required by the users of airworthiness reports.

## Pixel perfect, clear graphics

"The functionality of Actuate is very impressive," Moore notes. "We can do a lot of the manipulation in the report coding structure itself, rather than having to extract the data and run macros first, which was very time-consuming. What used to take up to an hour now takes just a few minutes. We're employing more of a thin-client approach to reporting now, if you like, which is much more efficient."

Indeed, the RAF has now deployed its Actuate solution on a Citrix farm, for further efficiencies. This means report developers have the freedom to move about and can work from anywhere.

Moore also likes the 'pixel perfect' output he gets with his Actuate reports, and the ability to bring reports alive with interpretative graphics. "We need to be able to reproduce the exact structure of the page, and this is very easy with Actuate," he says. "We can also produce all of the data in graphical format, using traffic lights, dashboards or pie-charts to display problems.

"These are capabilities we are exploiting now and it's having a great impact," he says. "Our customers are happy with the data they are getting back from us. The next step is to hone this further by asking customers to give us their data preferences, so that we can focus our reports even more by drilling down using graphics."

## Customer control

To this end, the RAF has invested in Actuate's Query module, which allows objects to be created and made available to customers. "This gives our customers OLAP reporting functionality, so they can request specific columns of information or tables relating to specific products. They can order, sort and present the reports as they want to see them, whether by squadron, equipment name, or other parameters," Moore explains.

Equally importantly, the ability to set parameters and define log-in rights means the data can't fall into the wrong hands. "This is particularly important if the users are commercial organisations; it means we can be sure British Aerospace won't see data about Rolls-Royce faults, and vice versa," he adds.

Usage-based log-in also creates greater visibility of who is requesting the reports and how these are being used, so that Moore and his team can prioritise resources, and rectify any reporting problems efficiently.

## Field efficiencies

Such is the flexibility of the Actuate solution and the way it has been deployed, that the RAF has been able to extend its information flow to far-flung outposts such as Afghanistan and Iraq. "Very up-to-date information on material flow can now be run by the staff out there," Moore says.

Not all reporting needs to be up to the minute however, he notes, and it is an aid to overall efficiency that Moore's team can differentiate between time-dependent and less urgent reports. For example, fault trend reports do not need access to live faults data and data that is in excess of 24 hours old is fully acceptable.

The next steps in the deployment of Actuate, once it has completely phased out CA IQ reporting in favour of Actuate (during the transition, the two have been running in parallel), is to integrate more of the RAF's data into the system, to spread its benefits.

"We also want to make greater use of the graphical presentation, provide the customer with a greater ability to set trigger levels, add further data sources and possibly additional reporting team requirements," Moore concludes. "We may also move towards a service-oriented architecture [SOA] and make increasing use of our Enterprise Data Warehouse to produce federated reports," he says.

### About the RAF's Defence Equipment and Support Logistics (Air) organisation (DE&S)

The DE&S employs around 29,000 people, and has an annual budget spend of up to £16 billion, representing 43% of the Defence budget. The DE&S works closely with industry, with partnering agreements and PFIs (private finance initiatives).

DE&S's Integrated Project Teams are responsible for providing support to Air Command; managing support activities; managing a range of spares; developing modification program with the Design Authority; and managing industry contracts for repair and maintenance.

### About Actuate

Actuate Corporation is dedicated to increasing the richness, interactivity and effectiveness of enterprise data, for everyone, everywhere. Actuate delivers the next generation RIA-ready information platform for both customer and employee-facing applications. The Actuate platform boasts unmatched scalability, high-

performance, reliability and security. Its proven RIA capabilities and highly collaborative development architecture are backed by the world's largest open source information application developer community, grounded in BIRT, the Eclipse Foundation's only top level Business Intelligence and reporting project.

Global 9000 organizations use Actuate to roll out RIA-enabled customer loyalty and Performance Management applications that improve customer satisfaction and employee productivity.

The company has over 4,400 customers globally in a diverse range of business areas including financial services and the public sector, many of which have a long history of deploying Actuate-based solutions for dozens, or even hundreds of their mission-critical applications. Founded in 1993, Actuate has headquarters in San Mateo, California, with offices worldwide. Actuate is listed on NASDAQ under the symbol ACTU. For more information on Actuate, visit the company's web site at [www.actuate.com](http://www.actuate.com).

## AT A GLANCE

### Challenge

Improve efficiency; reduce internal staff and administration costs, while boosting the productivity, value and responsiveness of the DE&S's reporting function

Before Actuate, the department had to resort to:

- *Logistics Information Technology System (LITS) data, but no web-based reporting*
- *Limited reporting using IQ/Eureka from Computer Associates*
- *Smart Server scheduling*
- *Reports accessed via menus from within a single application*
- *Created Access database services*
- *Data Mart Service (using DEX - product QinetiQ licensed from ClearPace)*
- *MDS*
- *SQL data extractions to customer*

With Actuate, it has gained from:

- *Web-based reporting (greater visibility helps to diagnose problems)*
- *The ability to deliver engineering & asset management and material flow reports via the Air Command portal*
- *Access to a mix of live, operational and back-office data stores*
- *The availability of reports to deployed sites*
- *Multi data source reports*
- *Typhoon reporting*
- *The ability to introduce new services*
- *The ability to do MJDI, CSA & AwIS reporting*

### Summary of key benefits:

- *The need for fewer reports (from 360 legacy reports down to 120 Actuate reports)*
- *Reduced maintenance & resources = lower costs (enabled by Actuate report parameterisation). Reporting team has been cut by two-thirds, from 30 to 10 people*
- *Greater Visibility into reports with drill down capability*
- *The ability to combine data from multiple sources*
- *The addition of graphical data presentation*
- *No more need for macros to be run against report extracts*
- *The ability to do pixel-perfect layouts*
- *The ability to do the difficult jobs thanks to this highly configurable tool*
- *Easier meta-data management for developers (knowledge base & data table linking)*