



Case Study

Improving Collaboration

Helping the Submarine Operating Centre Manage Information Across the Enterprise

THE CHALLENGE

In 1999, the Submarine Operating Centre needed to prepare for the first major refit of HMS Vanguard – timely completion was critical to maintaining availability of the UK strategic nuclear deterrent – delay was not an option.

Driven by the Maritime Industrial Strategy there was a recognition of the need for greater long term alliancing between MOD and Industry and improved information sharing.

SOLUTION

The initial business requirement, driven by the refit in 1999, was to reduce the refit time and associated costs. The MOD and its Tier 1 industry partner, Babcock Marine, teamed with LSC Group to establish a fully functional Collaborative Working environment (CWE) Tool, incrementally expanded over time to satisfy business need:

- A secure portal (allowing single sign on to key MOD and Industry systems)
- Custom built business process automation (workflow) solution – allows the rapid development of new automated processes
- An advanced, secure document management vault
- A comprehensive business intelligence tool (providing a real time digital dashboard)

CUSTOMER BENEFITS

Currently with over 3000 users, the CWE is enabling the Submarine Operating Centre to continue to reap significant business benefits.

- Saving over £10m+ from reduced support costs through availability of key data sources
- Improved visibility of business performance through enhanced reporting
- Data 'entered once - used many times'
- Creation of a truly enterprise wide collaborative culture crossing MOD and Industry boundaries
- Improved visibility and accountability of processes



BACKGROUND

Fundamental to the Ministry of Defence strategy for driving down through-life costs is the belief that all stakeholders—both MOD and Industry—should be able to communicate more effectively, and have the ability to access and share relevant business processes and information in a controlled fashion.

PROBLEM

The overhaul and refit of a nuclear submarine is an enormously complex programme. A survey carried out to evaluate the actual condition of the submarine is compared with a set of standard engineering tasks to decide the work that needs to be carried out, with information on the engineering state of the submarine since its last refit also being taken into account. The resulting list of engineering tasks must be analysed, approved and contracted out to the contractors and subcontractors who will carry out the work.

During the refit programme the progress and status of each engineering task must be fully recorded and processed in order to ensure the safety and integrity of the submarine.

As can be imagined, this process generates huge amounts of information that must be made available to the right people at the right time if the refit is to proceed in anything approaching an efficient manner.

With a conventional paper-based system, it is extremely difficult to manage such large amounts of continually changing information, and delays and mistakes are almost inevitable due to crucial information being delayed, lost or not seen by the right people.

LSC GROUP'S SOLUTION

A far better means of managing such a complex set of information and business processes is to use a Collaborative Working Environment (CWE) that stores all project information in a secure central repository, from where it can be automatically passed to all those who need to see it, when they need to. This ensures that everybody is looking at the most current information and can easily see how work on which they are dependent is progressing. For instance, if someone in the dockyard raises a Survey or a Concession which requires MOD approval, he or she would be able to track the progress of that document throughout the decision process. This awareness also allows personnel from other departments to make better informed decisions for planning related activities.

By improving visibility of the programme status the CWE enables better quality decisions, leading to reduced rework and faster turnaround times. This in turn reduces costs, increases profitability and above all, achieves greater customer satisfaction.

Case Study

A major factor was a focus on delivering business value, quickly and over a notional 90-day period with the following guidelines adopted to minimise risk and ensure a quick return on the investment:

- Each 90-day module to have its own cost and benefit statement.
- Larger phases would be broken into smaller projects, again with 90-day deliverables.
- Project momentum would be maintained by keeping the project stakeholders involved at each approval stage.
- Risk and reward would be contained within the 90-day envelope.

By following this methodology, the implementation progressed as a series of well-defined and controlled stages that will eventually encompass all major activities across the submarine support business.

Since its initiation in 1999, the CWE has been incrementally expanded to provide ten business process applications to its end users, including:

- **Project Office** - the main document control and management system;
- **Specification Change Inquiries (SCI)** – LSC Group initially introduced an “Industry-centric” SCI process that linked seamlessly with the MOD’s own-build electronic SCI application. Since the MOD application became obsolete, LSC Group has delivered a single SCI workflow application that embraces the complete pan-

stakeholder process.

- **Surveys** - This application ensures that engineering survey data move smoothly through the formal workflow process. Also included is a discussion forum, allowing maximum collaboration between users at any point in the formal process.;
- **Concessions** – The Concessions workflow application provides the quality based process on which “Concessions” and “Customer Non-Conformance” authorisations are granted. Of critical importance when determining if a vessel is “safe for sea”, these authorisations are used to confirm safety and acceptability for use. Efficient document management is crucial.

MEASURABLE BENEFITS

The CWE has improved collaboration and communication between all stakeholders involved in the refit process. Overall submarine refit turnaround has been significantly reduced and cost benefits amounting to a saving of £10m+ over a 5 year period.

The improvements and benefits so far gained from the CWE include:

- Provision of the first in-service concession system to HMS Tireless’s Revalidation and Assisted Maintenance Period.
- A significant number of defects on HMS Talent processed, enabling for the first time an efficient method of providing all defect information to a Design Authority or Engineering PT.
- Provision of a centralised repository to solve HMS Victorious and HMS Triumph distribution problems and to remove significant storage problems.
- Provided an automatic primary plant surveys distribution to Rolls-Royce to satisfy the submarine safety case requirement.
- Provision of an electronic Legacy Concession data repository that brings a single point of access to the enterprise and removes numerous requests placed on the distributors.
- Provision of a CWE Information Knowledge Management solution to



support various Submarine Operating Centre’s.

- Improved collaborative working relationships by expansion of the CWE to include stakeholders throughout the MOD and Industry.
- Dealt with over 16000 surveys for the Vanguard refit

The implementation of a collaborative tool provided the Submarine Operating Centre with some significant cost and process savings. However, the creation of a truly collaborative culture, crossing MOD and industry boundaries, is perhaps the most significant improvement - the technology has merely facilitated this process.

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