

Assuring the future of our Low Carbon Energy supply

“Working with Fujitsu to deliver ATOM has been a pleasure; teamwork has achieved what we believe an excellent, market leading solution.”

Dik Third, Nuclear Materials Advisor, UKAEA



SUMMARY OF KEY FACTS

Organisation

UK Atomic Energy Authority (UKAEA)

Service/s delivered

Development of ATOM (Accountancy and Tracking Of Material) - a comprehensive track and trace application, specifically designed for the processing, movement and reporting of nuclear and radioactive materials throughout the supply chain right up to nuclear decommissioning.

Key Metrics

- Employs 2,000 people
- Manages over 115,000 radioactive item records in the UK

Benefits

- **Increased efficiency** – led to operational efficiencies of 40%
- **Ensured compliance** – tracks and reports on all material to meet existing and planned UK and European regulations
- **Controlled costs** – detailed records mean costs can be accurately budgeted
- **Improved productivity** – staff can quickly and easily access a complete history and detailed overview of all materials
- **Enhanced security** – access to potentially sensitive information is strictly controlled
- **Simplified support** – system maintenance is much simpler and more cost-effective.

Business Challenge

The UK Atomic Energy Authority (UKAEA) uses, handles and stores a wide range of radioactive materials as part of its role in restoring the environment of nuclear sites.

For this reason, its Nuclear Materials Accountancy (NMA) has to be of a very high standard. As far back as 1996, however, legacy systems for the tracking and reporting of nuclear items at UK sites such as Harwell, Windscale and Dounreay were clearly becoming obsolete. Issues of cross-compatibility and intercommunication were becoming apparent. Users or support staff were often experts of their own systems, but couldn't understand or maintain others in the UK industry, so 'comparing notes' was proving unnecessarily difficult.

What's more, nuclear power's growing part in the low carbon economy meant the industry needed to consider:

- an increasing need for industry-wide regulatory compliance, and more strictly enforced requirements on the tracking and reporting of materials.
- a desire to increase public confidence in nuclear power as it grows and looks to fill the 'energy gap'.

It became clear that vast improvements could – and should – be made.

Fujitsu Solution

UKAEA approached Fujitsu at this time with no major plan, just a problem that needed solving. This is where the partnership that would come up with ATOM (Accountancy and Tracking Of Material) began. From the outset it was obvious - it wasn't going to be a simple case of making modifications to existing warehouse-management software.

Dik Third, Nuclear Materials Advisor, UKAEA, worked closely with Fujitsu on the project:

“...one of the problems with radioactive materials is that they have properties that computer-based logistics packages don't handle. Unlike tins of beans, radioactive materials with short half-lives can transform into another isotope entirely.”

The complex and changeable nature of nuclear / radioactive materials therefore called for new, industry-specific software to deal with these additional factors.

Fujitsu chose a combination of Microsoft and Oracle systems with web portal technology to make this possible, i.e. to successfully design and implement a package to process, update and report on nuclear and radioactive materials throughout the supply chain.

The good working relationship with UKAEA throughout the development process meant that nothing was overlooked or forgotten. Rather than just a brief, Fujitsu had an active and knowledgeable partner with constructive involvement.

Business Benefits

ATOM first rolled out in 2001 to UK sites. Since then, the UKAEA has enjoyed a 40% increase in NMA efficiency, and this has largely been due to a significant drop in maintenance and support costs.

It has also offered UKAEA compliance with UK, European and international reporting regulations such as RSA, IRR, Security and Site License conditions, and the Euratom Treaty. Euratom's revised reporting requirements became mandatory in March 2008, so the UKAEA continues to work with Fujitsu to resolve problems, each bringing its particular expertise to bear. This combination means that ATOM is well-equipped to deal with future legislation as its role expands and changes. Its clear upgrade pathways mean it is geared for the long haul.

In terms of the wider industry, ATOM offers many benefits:

- Low CAPEX compliance with industry regulations and guidelines.
- Equipping the nuclear industry for the future as it fills the energy gap and becomes a bigger part of the low carbon economy.
- Improving public perception and confidence in the industry as its role expands.
- Easier and more effective communications across the industry.
- Better security for potentially sensitive information.
- Automated reporting.
- An industry-specific package that's easy to understand, train and use; a professional tool for a professional job.
- Fujitsu hosting means professional, expert support and reduces the need for technical in-house knowledge.

A major part of ATOM's success and appeal is that it offers the global nuclear industry a common language and therefore better communication, at low cost. This means regulatory compliance throughout the industry and increased public confidence in the industry as it grows. Its clear success across UKAEA sites since 2001 suggests it may be the wider industry standard of NMA that makes all this possible.

As Dik Third of UKAEA suggests, *"We believe that there is no other system in the world capable of dealing with such complexity and breadth of plant operations and regulatory accounting requirements."*

Our Approach

Fujitsu and UKAEA have continued to work together since 2001 to make ATOM the obvious accounting choice for anyone involved in the use, handling, storage or transportation of nuclear materials. A view echoed by the tenants now sharing UKAEA sites, such as REVISS and Canberra UK Ltd.

As a result, interest in ATOM from the wider industry is growing. As the industry grows and adapts, so does the need for an accountancy package that makes this growth easier and more effective.

Through Fujitsu's work with UKAEA and the development of ATOM, this industry standard is now available, not only to nuclear power generating companies, but also to university and company research laboratories, defence establishments, hospitals (radiography departments, for example) and major engineering and construction firms (who use radiography on buildings or oil rigs to assess faults).

Next steps...

To take advantage of ATOM and look to the future in terms of improved NMA and how it can help nuclear power continue to grow, get in touch with Fujitsu for an ATOM consultation. You could be fully compliant before you thought possible.

ASK FUJITSU

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