CASE STUDY

Octave Tempo Operations Management evolves to meet the enhanced requirements of European Synchrotron Radiation Facility (ESRF)

Key facts:

Company: Synchrotron

Website: www.esrf.fr

Industry: Particle acceleration

Country: France

Octave products used: Tempo Operations Management *(j5 Operations Management Solutions)*

The European Synchrotron Radiation Facility (ESRF) is a 6 GeV X-ray source in Grenoble, France.

The accelerator complex comprises a linear accelerator, a synchrotron and a storage ring that have been routinely operating for over 20 years in a 24h mode.

This source simultaneously delivers 5,600 hours of the X-ray beam to 43 beamlines.

The challenge

The ESRF operation is managed from the control room by a two-person crew rotating over 24 hours in three shifts of eight hours. The crew must ensure that the beam meets required operating specifications. Many technical and decision-assisting procedures have been set up and the crew is responsible for documenting all observations and actions. Before ESRF implemented Tempo Operations Management solutions in 2004, most procedures were written in a template format and classified in a file.

In the control room, all events on the accelerators were handwritten in paper logbooks (30 logbooks per year / 6,000 pages per year). The main limitation of the handwritten logbooks was the difficulty in retrieving old information when needed. Several institutes have developed e-logbooks and offered to share them with ESRF. These e-logbooks fulfilled some of the ESRF specifications but none of them satisfied their requirements in term of flexibility. At that time, ESRF discovered that the **Octave Tempo Operations Logbook (formerly j5 Operations Logbook) met its requirements,** either natively or with minor enhancements.

Another attraction of the Tempo Operations Logbook was that it can use any standard database (Oracle, SQL Server and PostgreSQL). Tempo Operations

Management solutions only needed to be installed once on a server while allowing every user access via a standard web browser. ESRF wanted a customizable and flexible solution to change its specific requirements. They found that **Tempo Operations Management is extremely easy to customize to meet particular requirements** and anyone who understands the fill-in-the-form procedure can do it without coding. ESRF discovered that virtually any kind of document/file can be attached to a Tempo Operations Logbook entry, and these attachments can be displayed immediately from the log. Tempo Operations Management can also be used to create a whole spectrum of applications within the platform like custom logbooks, reports, document repositories, work permits and more. The user interface is intuitive enough that there is no requirement for special training. ESRF decided to implement Tempo Operations Management.

How Tempo Operations Management solved the challenge

Tempo Operations Management solutions closely match the ESRF requirements, but a huge advantage to ESRF was the flexibility to add enhancements easily.

- The enhanced filtering and searching capability enables users to quickly locate a Tempo Operations Logbook entry by selecting options from multiple fields and finding specific text within the attached pdf files.
- Special fields allow experts to add explanations or corrective actions to Tempo Operations Logbook entries.
- A screenshot gallery was added to the Tempo Operations Management applications and thumbnails were shown in each entry.
- An enhanced user permission system was created, giving fine-grain control of who can operate.
- Multi-key combination options were added so that a user can accurately describe situations that cover multiple overlapping areas.
- Special procedural business rules were added; for example, Octave Tempo Shift Handover (formerly j5 Shift Handover) forces selected users to read status information at the start of the shift.
- A powerful notification functionality was added and an email or an SMS can be sent out to a selected group of recipients: for example, if the shift crew wants a list of recipients to be informed of any new entry or at a scheduled time during the day.
- Tempo Operations Management Solutions include a real-time resource ideally suited to the connection with the ESRF Tango control system. When Tango sends events, an entry in the Tempo Operations Logbook is generated automatically. Thus, any power supply problem is now automatically logged.

Tempo Operations Management solutions evolve to meet the special needs of ESRF:

- Filtering has been substantially improved and integrated into the main ESRF page, with custom filters making the process faster.
- The Octave Tempo Operations Management Framework (formerly j5 Framework) is tab-based for the hierarchical management of Tempo Operations Management solutions.
- A wizard-based configuration has been added, enabling the fast creation of new Tempo Operations Management solutions.
- New and more representative visualizations including charts, photographs and special scriptable buttons configurable through a wizard.
- LDAP authentication enables the centralized management of a large number of users.
- Provision of standard and custom solutions like Octave Tempo Control of Work (formerly j5 Control of Work), Octave Tempo Operator Rounds and Routine Duties (formerly j5 Operator Rounds and Routine Duties), Octave Tempo Action Management (formerly j5 Action Management) and more.
- Tempo Operations Management solutions can be accessed via mobile devices to allow remote access.
- There is a feature in Tempo Operations Management where one application can be embedded within another Tempo Operations Management workflow. This is useful when a main event has sub-events.
- Tempo Operations Management dashboards, reports and views allow the scheduling of daily, weekly and monthly PDF or spreadsheet reports.
- Tempo Operations Management connectors allow third-party software to access entries.

About Octave

Octave is a leader in enterprise software, turning data into decisive action and intelligence into your edge. Our software solves for and simplifies complexity, from the design and build to operations and protection of people, property and assets – for any scope, at any scale. For decades, we've partnered with customers to sharpen performance, elevate efficiency and amplify results. From factory floors to entire cities, our solutions are tuned to scale up what's possible from day one onward.

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