



## JXTG NIPPON OIL & ENERGY, JAPAN

### Key Facts

**Company:** JXTG Nippon Oil & Energy

**Website:** [www.no.jxtg-group.co.jp](http://www.no.jxtg-group.co.jp)

**Industry:** Downstream Oil and Gas / Refining

**Products Used:**

j5 Operations Management Software

### THE PROBLEM

JXTG is one of the oldest refining companies in Japan, having started business in 1888. Their interests include the exploration, importation and refining of crude oil; the manufacture and sale of petroleum products, including fuels and lubricants; and other energy-related activities. They operate 11 refineries and have major shares in other refineries and in tank farm operations.

The operations section of a refinery is complex and multifaceted. It is tightly related to the equipment and operations people associated with the running of the refinery. Operations are also tightly coupled with safety, maintenance, management, planning, real-time control, personnel, and other areas. JXTG needed an enterprise system that would bring these areas under control and to a consistent level of management. They wanted this operations management to work uniformly across all 11 of their refineries.

The refining business is one of the most prone to accidents and injury. The most effective way of minimizing these incidents is to thoroughly record all near misses, to analyze these incidents rigorously to mitigate and minimize the possibility of it happening, and reduce the severity of the consequences. JXTG needed a tool that would carry out these functions at an enterprise level. In the normal operations of a site, there is often the need for processes to interact with other processes. This was particularly true for JXTG:

- At the end of the shift, incoming operations staff needed to know the values of key real-time data and this information needed to be part of the shift handover.
- Key laboratory information needed to be collected from the LIMS system and shown in the shift handover for the incoming personnel.
- Contractor planned information needed to be collected from the planners to be organized and scheduled for the next day.
- Maintenance work orders needed to be collected from IBM Maximo® to be presented to the operations staff.



## HOW j5 OPERATIONS MANAGEMENT SOFTWARE PROVIDED THE SOLUTION

j5 Operations Management Software offered the ability to evolve from simple single site systems to multiple sites with multiple applications. This results in a controlled evolution of the system across the whole enterprise. Over the years, j5 Operations Management Software has grown to provide 13 different applications now servicing nearly 3,000 employees across all 11 refineries on a daily basis.

The j5 Operations Logbook ensures that all events are entered as and when they occur throughout the refinery. This gives a comprehensive base load of events that are categorized against the operational area and specific categories to ease sorting and reporting. This information is automatically collected and presented in the shift handover report.

j5 Shift Handover provides individual reports for operators, boardmen and supervisors. There is a strict procedure that j5 Shift Handover enforces to ensure consistency of operations and also presents rich information from the LIMS, CMMS and Real-Time systems to give a complete picture of the outgoing shift.

j5 Work Instructions provides a framework for the planning, creation, actioning and reporting of work instructions. Using this system, the many diverse instructions are handled efficiently across all the sites enabling them to strictly adhere to the PDCA (Plan Do Check Act) cycle.

The j5 Framework also coordinates the collection of information specific to the planning of maintenance operations. This information is collected from the CMMS and contractor planning sheets and is used to efficiently manage and schedule the maintenance tasks throughout the site.

j5 Incident Management is used to collect, categorize, prioritize and organize all the near misses throughout the corporation. This enables the consistent management of near misses and incidents so as to reduce the frequency of incidents and also mitigate the effects of incidents. j5 Incident Management also tracks the actions associated with each near miss to ensure that the recommended correcting actions are carried out. There are a variety of different real-time and LIMS systems across the sites. j5 Operations Management Software is responsible for collecting key parameters from these different j5 applications so that the operations department has an up to date view of the data enabling more informed decisions to be made.



## BENEFITS OF j5 OPERATIONS MANAGEMENT SOFTWARE

j5 Shift Handover ensures that this is carried out consistently and with all the relevant data shift after shift across all the levels of operations. This means huge benefits in: avoiding misunderstandings, avoiding incidents, improving efficiency and production, knowledge transfer, planning efficiency, teamwork and improved communications.

j5 Work Instructions enforces a functional and efficient PDCA work management system across all the divisions and sites. It includes: a better overview of instructions, better follow through of the instructions through to completion, reduced processing effort (by using templates), a better overview of the tasks, quick identification of difficult or incomplete tasks, better coordination of the workers, consistent recording of the tasks for future optimization, faster feedback of the progress of tasks, etc.

Thanks to j5 Incident Management, the corporate-wide recording and follow-up of actions associated with near misses has been shown to be the most effective means of reducing serious incidents. The benefits of j5 Incident Management include: simple entry of near misses, procedural approval and analysis of the incidents, the risks and mitigating actions, prioritization of the incidents, exposing of trends and analysis to formulate mitigating actions and a consistent set of procedures across all sites to ensure that the near misses are rigorously processed.

## CUSTOMER TESTIMONIAL

“I’ve had the pleasure of working closely with the j5 team over the past two years as we have developed the j5 Operations Logbook for implementation at our manufacturing plants. The team’s commitment, dedication and professionalism have impressed me immensely.”

— **Operating Group Manager** at JXTG Nippon Oil & Energy

## ABOUT HEXAGON

Hexagon is a global leader in sensor, software and autonomous solutions. We are putting data to work to boost efficiency, productivity, and quality across industrial, manufacturing, infrastructure, safety, and mobility applications.

Our technologies are shaping urban and production ecosystems to become increasingly connected and autonomous – ensuring a scalable, sustainable future.

Hexagon’s PPM division empowers its clients to transform unstructured information into a smart digital asset to visualize, build, and manage structures and facilities of all complexities, ensuring safe and efficient operation throughout the entire lifecycle.