



## JXTG NIPPON OIL & ENERGY WAKAYAMA PETROLEUM REFINING CO., JAPAN

### Key Facts

**Company:** JXTG Nippon Oil & Energy  
Wakayama Petroleum Refining Co.

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

**Description:** Wakayama Petroleum Refining Co. Ltd. possesses a VDU (vacuum distillation unit), a furfural solvent extraction unit, a solvent dewaxing unit, a lubricant hydrodesulphurization unit and lubricant isodewaxed unit.

**Industry:** Oil and Gas / Refining

**Products Used:**

j5 Operations Management Software

### THE PROBLEM

Wakayama Petroleum Refining Co. Ltd. (WPR) is an affiliate of JXTG Nippon Oil & Energy Corporation, the largest oil company in Japan, and produces lubricating oils, solvents and additives, and was established in 1949.

The management of WPR's operations involves close collaboration between many teams on the plant including safety, maintenance, management, planning, real-time control and personnel.

WPR needed a comprehensive operations management system for information sharing, automating routine tasks and reports, and ensuring procedures were consistently followed.

WPR required an enterprise-level tool for recording and following up near misses to help reduce the risk and consequences of accidents.

WPR needed to manage the retirement of experienced operators. They needed to find ways to adapt to a smaller operations team and to ensure that vital knowledge about the plant and its procedures was retained and transferred.

There was a need to improve the efficiency and reliability of work instruction management, reporting and shift handover, and the collection of inspection round data using a mobile device. There were also complications related to the high-pressure gas certification that needed to be addressed.



## HOW j5 OPERATIONS MANAGEMENT SOFTWARE PROVIDED THE SOLUTION

Starting in 2011, the following j5 applications were implemented at Wakayama Petroleum Refining Company: j5 Operations Logbook, j5 Shift Handover, j5 Work Instructions, j5 Inspection Rounds, j5 Incident Management and j5 Standing Orders.

j5 Shift Handover produces reports for operators, supervisors and managers with relevant data, events and instructions for each unit and area of the refinery. It ensures a consistent, visible and accountable process.

j5 Work Instructions enables planners to schedule ad hoc and recurring tasks for the operations team members. Tasks are marked off as complete and summarised in the j5 Shift Handover Reports.

j5 Inspection Rounds facilitates the recording of plant data from the field. j5 Inspection Rounds are designed in j5 Operations Management Software, uploaded to a mobile device, completed by the field operators and then synchronised with j5 Operations Management Software so that round information is readily available for analysis and reports. Anomalies are automatically highlighted.

j5 Standing Orders allows for the controlled dissemination of important communications within the plant.

j5 Operations Management Software operates in a unified user interface powered from a single, central server. It can be accessed from any web browser that is connected to the plant's network. Users can select between Japanese and English.

## CUSTOMER TESTIMONIAL

"j5 delivered a professional consulting service that gave us a clear understanding of our current situation and goals. We selected j5 as the de facto global standard for achieving competitiveness in operations management. We rely on j5 for logbook, handover, work instructions, standing orders, near misses and mobile inspection rounds. We would like to extend our use of j5 to other applications in the future."

— **Nobuyuki Takahashi**  
Executive Director and Kainan Plant Manager  
Wakayama Petroleum Refinery



## BENEFITS OF j5 OPERATIONS MANAGEMENT SOFTWARE

j5 Operations Management Software makes important shift, inspection round, personnel, safety, maintenance and process information visible to users across the whole refinery. This fosters greater understanding, coordination, knowledge transfer and communication between teams and improved decisions.

Role-based workflows with j5 Shift Handover, j5 Incident Management and j5 Work Instructions improve efficiency, safety and follow-through. Providing a consistent, intuitive user interface for multiple j5 Applications.

j5 Operations Management Software is easy to adapt as the needs of the refinery change over time. It is also easy to add new j5 Applications, custom or packaged. The simplicity, comprehensiveness and unity of the j5 architecture makes j5 Operations Management Software cost-effective to maintain and reliable. j5 Operations Management Software supports WPR in meeting its regulatory and compliance reporting requirements.

## 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.