HxGN SDx® Connector for j5 Operations Management Solutions

Accelerate your journey to operational excellence by digitally uniting your asset information and processes!

Accelerate your journey to operational excellence by digitally uniting your operations, maintenance, safety, engineering and real-time data!

Across the manufacturing and process industries, plant workers and executives in interconnected departments are struggling with siloed information. This happens when a combination of paper, spreadsheets, word processor documents, PDFs and homegrown databases are used to manage and record critical design and operational information. This data is often scattered across filing cabinets, disconnected computer networks and detached software applications. Unfortunately, this means those responsible for the operation, maintenance and safety of hazardous facilities may not be fully informed during day-to-day tasks and when safety-critical events occur.

Shockingly, dangerous trends and incidents can be missed by personnel due a lack of unified communication; even if they are observed, follow-up human procedures related to anomalies in the process data are often still paper-based. Critical time is wasted trying to find the important information related to a process unit or piece of equipment, which needs to be accessed quickly when resolving an ongoing incident.

To ease these pains, companies have invested in point solutions or manual processes to manage human operations processes and procedures, maintenance work orders, real-time and historical process data, engineering schematics and technical documentation. Despite this digital step in the right direction, the core problem of siloed information is still prevalent.

For example, a plant may have industry leading software like Aspen InfoPlus.21® or the OSIsoft™ PI System™ to monitor real-time and historical data from equipment, sensors, instruments, the DCS and SCADA systems but are still managing engineering schematics, user manuals, technical documentation and human operations processes and procedures using other disparate tools. There are often frustrations when interfacing these related tools, resulting in plant and executive personnel still not being readily aware of safety-critical information. For example, operations personnel may not be able to quickly access engineering design data while reviewing an operations logbook entry about an out-of-specification event.

To meet these challenges and increase collaboration across teams, the HxGN SDx Connector for j5 Operations Management Solutions is available to users of both solutions. HxGN SDx is a central platform for creating a digital twin for operations – that is continually verified and kept up to date – from multiple data sources to improve asset health, reduce maintenance costs and improve overall performance at facilities across a variety of industries. The HxGN SDx Connector for j5 Operations Management Solutions brings additional value and interoperability to users of both these Hexagon solutions, accelerating a company's journey towards operational excellence.

Solution Overviews

HxGN SDx

A documentation and information management solution that centralizes and unites operations, maintenance, safety, engineering and real-time data. HxGN SDx uniquely combines human operations processes and procedures, maintenance work orders, real-time and historical process data, engineering schematics and technical documentation with 3D models and laser scans, enabling a comprehensive digital twin for operations. HxGN SDx manages common facility configuration data and documentation; through connectors, it pulls data on-demand from multiple systems of record across the IT/OT landscape (such as data historians, EAM software, PLC and SCADA systems, the CMMS and the DCS). HxGN SDx InsightView is a configurable widget-based dashboard that shows relevant user role-based information on "a single pane of glass" allowing workers to quickly view numerous data sources. Enabling data-driven decision-making by providing personnel with comprehensive information related to their roles and tasks.

j5 Operations Management Solutions

A digital platform that enables facilities to document and manage the execution of key industrial processes such as control of work, operator rounds, shift handover and the capture of operator shift logs. Many companies are still using paper, spreadsheets and word processor documents for these safety-critical activities, and an investment in j5 Operations Management Solutions allows companies to reduce operational risk, digitalize operations and meet compliance. Unlike other solutions that require specialized skills and training

to configure – resulting in a higher cost of ownership – j5 Operations Management Solutions offer a unique straightforward digitalization approach with its patented spreadsheet-like configuration environment. This distinctive yet familiar low-code/no-code approach enables end users to quickly manage changes that affect the desktop browser and mobile user experience without requiring expensive vendor services. This distinction allows j5 Operations Management Solutions to be a quick-time-to-value investment, with high flexibility and a lower total cost of ownership.

The HxGN SDx Connector for j5 Operations Management Solutions provides operations and maintenance personnel, engineers, HSE teams and corporate executives with greater visibility while reducing unnecessary value leaks – such as time wasted searching for information – caused by disconnected data. By utilizing this unified digital platform, personnel can quickly find important information related to assets and process units when resolving an ongoing incident using the intuitive HxGN SDx Info Map. When time is critical, this allows quick access to j5 Operations Management Solutions records, engineering schematics like P&IDs, user manuals, technical documentation and real-time and historical process data. Personnel from the plant floor to the boardroom can also track the performance of assets efficiently by enabling digital twin visuals inside HxGN SDx. For example, problem areas can be quickly viewed using 3D models and laser scans. Using these views, j5 Control Work records and j5 Operations Logbook entries can also be accessed when areas and equipment are selected from the user experience. Overall, the combination of these Hexagon solutions positively impacts company-wide safety culture, production efficiency and ultimately the bottom line of the balance sheet.

> **With j5 Operations Management Solutions, I've finally found the solution I needed to take my business to the next level. There's no other company in my niche doing what we do, the way we do it, and a huge part of that is because of j5 Operations Management Solutions. Our goal is to implement as much of our daily activities as we can into this system. From our inspection records to manufacture alerts and bulletins, we see this as the ultimate solution for tracking our day-to-day activities.**

Michael Fry
President and CEO
Deepwater Subsea LLC

Deepwater Subsea Janus24™ Real-Time Monitoring Platform

Case Study

Deepwater Subsea focuses on operational support, compliance verification, real-time monitoring, competency development and training. Founded by Michael Fry, who was the supporting Subsea superintendent for Transocean when the Deepwater Horizon tragedy occurred, the company aims to end preventable operational errors in the oil and gas industry.

Deepwater Subsea was using inadequate and time-consuming methods for its operational information management. These included spreadsheets and word processor documents that made it difficult to track and trace data, while also lowering coordination, focus and operational productivity. The auditability and proof of inspection activities is crucial to comply with government regulations that were introduced after the Deepwater Horizon tragedy. Michael Fry said it was a "nightmare" to look for historical inspection information, and key operational data was held on various computer networks and systems of record. Most time was wasted clicking between different screens to find related information. There was also no link to the PI System, which meant that safety-critical operations and real-time data was disconnected. This delayed investigations and any remedial actions.
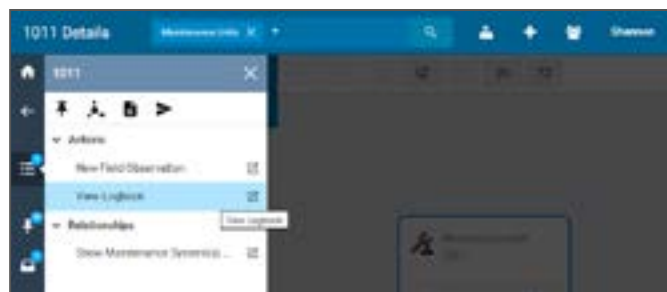
Deepwater Subsea wanted an operational information management solution provider with an established bidirectional interface to the PI System. By utilizing HxGN SDx along with j5 Operations Management Solutions and the PI System, Deepwater Subsea has developed the Janus24 real-time monitoring platform. This is an industry-first solution that combines real-time data, compliance verification inspections and asset lifecycle management. It allows oil and gas companies to operate safely and in compliance with regulations. Deepwater Subsea can now effectively analyze and view the operating status of the equipment being monitored in real-time. The link between Hexagon and OSIsoft solutions has allowed Deepwater Subsea to achieve ISO 9001 compliance because inspectors' activities can be monitored from start until completion. Overall, the benefits achieved using HxGN SDx and j5 Operations Management Solutions are accelerating Deepwater Subsea on its journey to become the global market leader in real-time monitoring for drilling rigs.
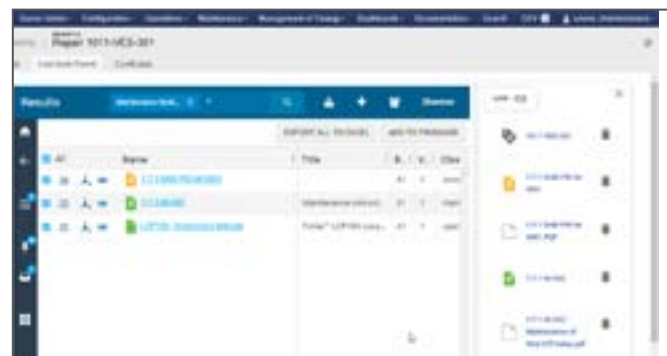
Benefits Achieved Using HxGN SDx and j5 Operations Management Solutions

- 95% savings in time retrieving and searching for quality evidence post inspection

- 70% savings in productivity in human operations processes and procedures, documentation and the completion of inspections

- Clear audit of when the inspection was completed and who was involved

- Data silos reduced dramatically and time saved with no more clicking between different screens

- Documentation compliance met and continually updated in line with ever-evolving government regulations

- Knowledge easily transferred from senior to junior employees and new hires

Example Use Cases

The HxGN SDx Connector for j5 Operations Management Solutions is an example of how smartly integrated Hexagon technologies allow users to achieve "single pane of glass" interoperability.

Content from j5 Operations Management Solutions can be easily embedded in HxGN SDx. For example, j5 Operations Logbook entries can be connected to a maintenance unit. j5 Control of Work permits can also be related to tags and work packages in HxGN SDx. Site walkthroughs using 3D models and laser scans are also possible to enhance the permit planning process.

Content from HxGN SDx can also be easily embedded in j5 Operations Management Solutions. The HxGN SDx Object Selector allows users to navigate through the HxGN SDx user interface and link any object – such as list pages, Info Maps, interactive 3D models and P&ID diagrams – to the appropriate location in j5 Operations Management Solutions.

If HxGN SDx documents with associated files are linked, copies of the files that are readable on a mobile device – for example, a word processor document or PDF – are stored in the j5 Operations Management Solutions attachment database.

These files are downloaded to the j5 Mobility application during synchronization, and this allows the documents to be opened on a mobile device even when it is offline.

EAM/ERP
IBM Maximo® and SAP®
Plant Maintenance (PM)

Operations Risk Management
PAS PlantState Integrity™

Data Historians/DCS/SCADA
Aspen InfoPlus.21, aspenONE®, AVEVA™ Historian, OPC UA and the PI System

Digital Twin
HxGN SDx

Human Operations Processes and Procedures
j5 Operations Management Solutions

Interoperability: An Essential Element of a Digital Twin for Operations

As well as adding value to each other, HxGN SDx and j5 Operations Management Solutions both have connectors to these leading industrial systems of record:

- Aspen InfoPlus.21
- IBM Maximo
- PAS PlantState Integrity
- SAP PM
- The PI System

HxGN SDx InsightView allows companies to remove data silos by powerfully combining different types of asset data into a single contextualized dashboard. Visualizing data in this context reduces the number of required user interfaces from multiple systems of record. Dashboard widgets can be related to a selected object using a step-by-step wizard – such as a tag, unit, change request, work package and others – allowing users to easily visualize plant information relevant to that object. This enables personnel to quickly find important information related to a particular process unit or piece of equipment, leading to interdepartmental clarity when investigating incidents and avoiding time wasting double work.

As your trusted digital transformation partner, Hexagon's operations and maintenance solutions can help you create intelligent information from both **unstructured**, duplicated and disconnected data and documentation, as well as **structured** digital data sources and databases, and **consolidate** them to reduce operational risk, increase efficiency, decrease downtime, remove value leaks and meet internal and external compliance.

Isn't it time to accelerate your journey to operational excellence by digitally uniting your operations, maintenance, safety, engineering and real-time data?

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.

Hexagon (Nasdaq Stockholm: HEXA B) has approximately 21,000 employees in 50 countries and net sales of approximately 3.8bn EUR. Learn more at hexagon.com and follow us @HexagonAB.