

What Are the Benefits of Digital Control of Work Solutions?

1 Effective Control of High Risk and Hazardous Work

Traditional Control of Work systems rely heavily on the experience and expertise of operators and outside contractors to diligently and safely carry out the work. Operational risk is reduced when all the stakeholders are skilled, experienced and qualified. However, with ongoing contractor and staff turnover, if permits are not managed efficiently, this can lead to new and

inexperienced staff managing dangerous work which they may not have the credentials and competence to handle. The patented j5 IndustraForm® Designer – included with j5 Control of Work – makes it easy to configure the required approvals and workflow steps to the exact needs of each job in a unique yet familiar spreadsheet-like environment.



j5 Control of Work also enforces this through a process of worker identification and required signatures at each step. Visual cues – which can be color coded to show the statuses of key steps in the procedure – can also be easily added to increase situational awareness. It is also less likely that a hazard is neglected since safety-critical information can be carried forward and highlighted from

previous permits and be integrated with j5 Shift Handover. Additionally, it is easy to attach relevant information related to all work permits from data sources such as the CMMS. Overall, this means that high risk and hazardous work can be tightly controlled and documented by authorized personnel, ultimately leading to a safer and more collaborative enterprise.

2 Improved and Integrated Health and Safety Processes

Because of the inherent constraints associated with traditional manual operations and maintenance processes, it is hard, if not near impossible, to considerably improve health and safety culture using inadequate disconnected tools. Procedures are not clearly defined, leading to inconsistency and increasing the risk of human error. j5 Control of Work provides significant improvements to overall health and safety practices by providing strictly defined and consistent

procedures from the original Work Request through to the final approval and completion of the Work Order. If integrated, j5 Management of Change and j5 Operator Rounds can also provide additional coordination and visibility of related activities. Day-to-day j5 Control of Work procedures can also be integrated with j5 Shift Handover and j5 Action Management, reducing data silos and increasing health and safety collaboration and culture further.

3 Informed Decision Making with Operational and Safety Insights

The overall operational health of an industrial site is directly associated with the ability of site personnel to quickly identify ongoing or upcoming problems that could cause disruptions. With traditional Control of Work systems, it is very hard to get an overview of the state of the permitting process. This involves searching through many documents and then manually compiling a report, which will most likely have information gaps. As permits are constantly issued, processed and completed, dangerous fatigue can build up associated to the frustration of laborious manual reporting. Overall, if there isn't a clear understanding of the current state of the operation, decision making can be misguided with a lack of insight from the plant floor to the boardroom. With j5 Control of Work, comprehensive data can be accessed easily and quickly using j5 Dashboards, Reports and Views.

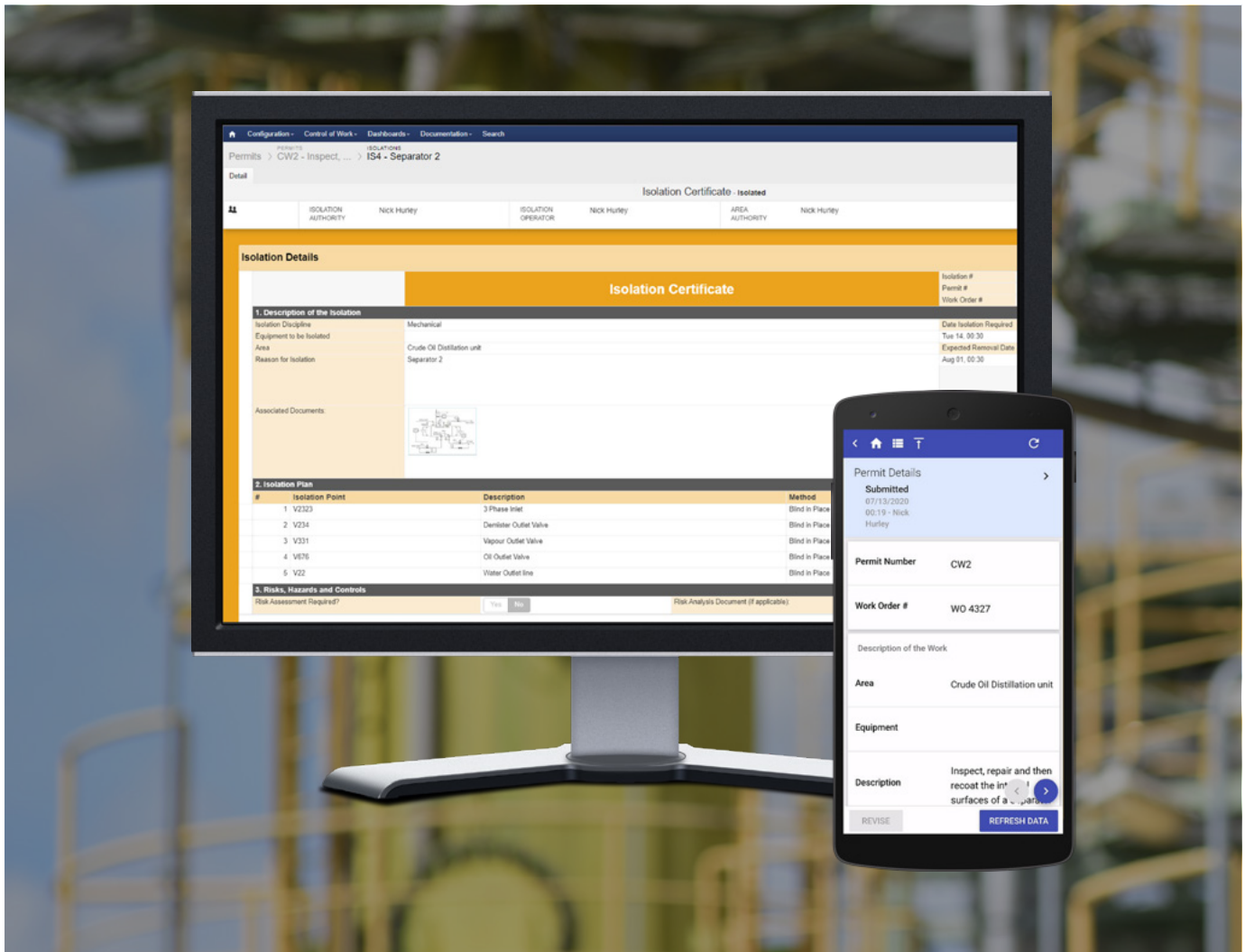
Reports are automatically populated with information in real-time and neat PDF and spreadsheet files can be emailed out to the relevant stakeholders. Notifications can also be triggered to reach appropriate personnel in real-time as procedures develop. This means plant personnel have an accurate, clear, up-to-date and verified visualization of the work permit process and the associated activities. This information is continually displayed in intuitive visual formats like Calendar Views, Dashboards, Gantt Charts and Plot Plans, making it possible for personnel enterprise-wide to have a clear understanding of the ongoing operational health of the site. Information can be displayed contextually for each job role, making high quality data-driven decisions and insights possible, enabling an overall improvement in operational performance and safety culture.



4 Better Work Processes Resulting in Cost and Time Savings

With traditional Control of Work systems, many of the procedures are tedious, time consuming and inconsistently carried out resulting in inefficiencies and increased costs. The days of shuffling through stacks of paper and sending scattered documents manually around dangerous industrial sites should be a thing of the past. With j5 Control of Work, since all the information is digital and personnel can access this safety-critical data in real-time, there are significant cost and time savings. For example, instead of spending hours searching through filing cabinets and computer network folders looking for a relevant document like a P&ID, then cumbersome copying and pasting them into another disconnected location, a j5 Control of Work user simply clicks on the

relevant document, and it is distributed along with the permit to all relevant stakeholders. There are powerful filtering and search tools included with j5 Control Work used to quickly locate key work permit information but also the related engineering, maintenance, real-time data. Every permit has an optimum workflow, and this ensures that each person carries out the steps according to the same, company-defined workflow. This leads to consistent permit to work practices across the enterprise. Since the permits in j5 Control of Work can be easily configured by authorised site personnel, workflows can evolve as the requirements and legislature change. Additionally, the presentation of information is intuitive, fast and up to date.



5 Decreased Paperwork with Digital Mobility

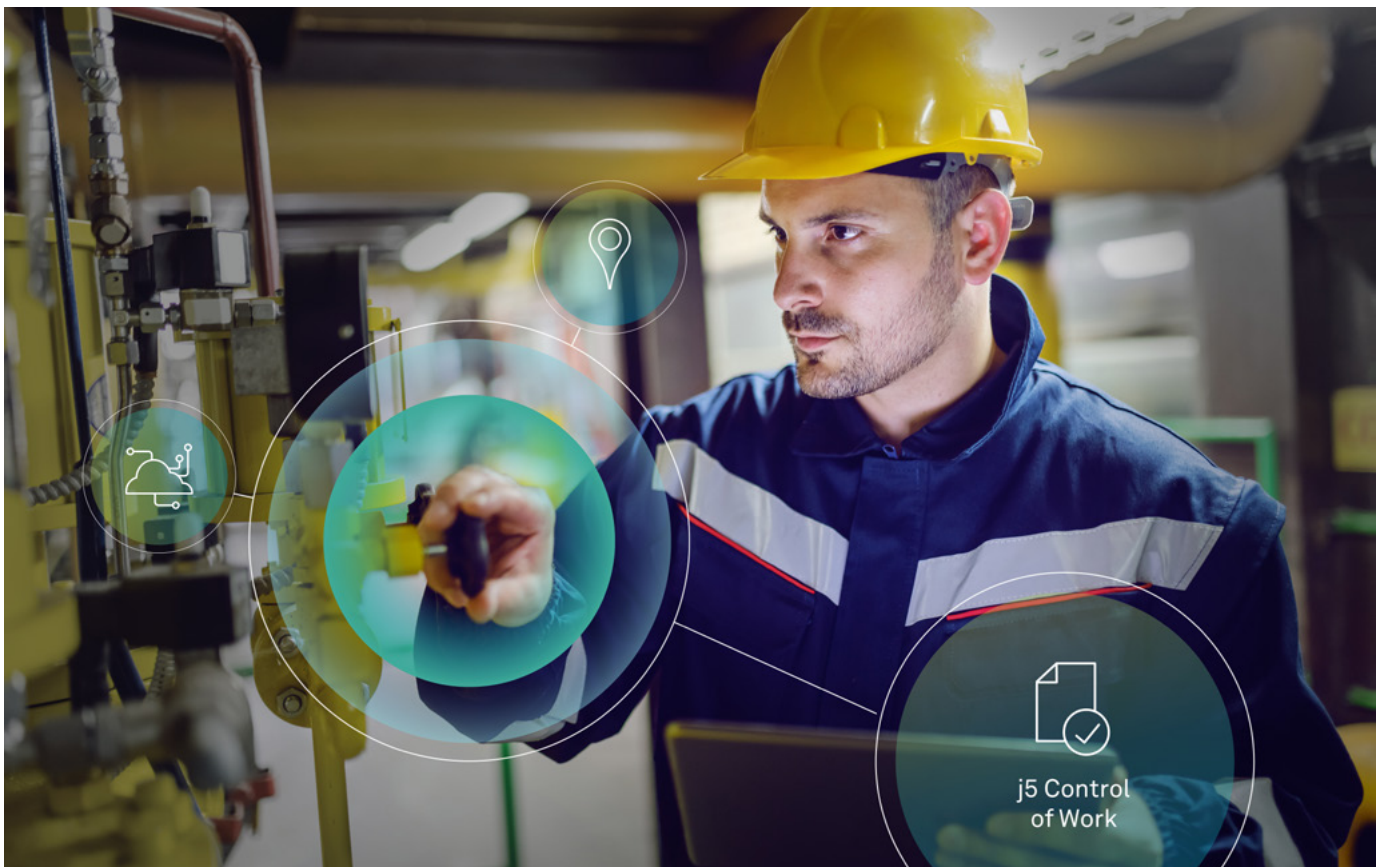
Traditional Control of Work systems involve an inordinate amount of paperwork. Documents must be filled in with often scrappy handwriting and passed manually to the next person in the chain. Often different versions – such as a blue copy, a red copy and a white copy – must be filled in and signed. j5 Control of Work significantly reduces paperwork and at the same time makes the

information widely available to personnel working in the site offices, the control room and remotely in the field. The procedures configured in the j5 IndustraForm Designer are easily optimized for both desktop and mobile devices. Additionally, data entry can be automated with the intelligent cloning of existing permits, saving valuable time.

6 Accountability, Auditability and Traceability

Industrial sites are faced with increasing regulatory pressure to account for the safety-critical procedures and processes that are undertaken day to day. Additionally, such accounting, auditing and tracing – if correctly carried out – can result in a wealth of enterprise data that can be positively used to identify areas for improvement. With j5 Control of Work, there are comprehensive built-in information management

structures to assist in the accountability, traceability and auditability of all the related procedures and processes. Most of these functions are carried out automatically without the need for any additional work by end users. For example, approvals are strictly required at each key step, each permit is traceable based on a unique numbering system and an audit trail is comprehensively recorded automatically.





7 Improved Data Compliance, Retention and Security

With ever-increasing regulatory compliance requirements, there is a critical need to collect quality information and to ensure that the data is secure and safely retained for future analysis. Furthermore, having this secure data is just part of the requirement; it must also be easily accessible and presented in a visual, intuitive way to all the authorized personnel in the enterprise and be neatly formatted in reports to the requirements demanded by external regulators. Keeping on top of this critical compliance task with traditional Control of Work systems is extremely difficult. With j5 Control of Work, the process

of collecting, organizing and securing significant quantities of quality information is mostly automatic. Work permit information, statistics, anomalies and workload trends are all routinely collected and are viewable in intuitive, visual presentations. This information can be made available only to authorized users and can be retained for as long as required. Special purpose reports – which can be sent quickly to external regulators – can easily be created, scheduled and distributed automatically. There is also search engine-like query capabilities and simple PDF and spreadsheet export functionality.

8 More Efficient Execution of Routine, Non-Routine and Turnaround Maintenance

Companies that use traditional Control of Work systems are faced with inherent – and sadly obvious – issues that limit the efficiency and effectiveness of their industrial procedures and processes. Trying to schedule, monitor, coordinate and manage maintenance tasks in an intelligent way is often extremely hard work and tedious. It also opens the door to human error that can increase unnecessary operational risk and plant downtime. With j5 Control of Work, maintenance tasks can be digitally connected to the CMMS Work Orders and tracked through a process of verifications, isolations,

acceptance, initiation, completion and the final closing of the CMMS Work Order. This is done efficiently and safely by informing all the relevant stakeholders, including contractors. The work status is clearly shown and is available to everyone concerned, even those using mobile devices. This means work roadblocks are immediately visible and corrective actions can be initiated to minimize the time to repair. It is also possible to integrate and interface all the related information into a streamlined, consistent workflow that results in a quick and safe turnaround.

j5 Control of Work Technology



Enterprise Scalability

j5 Control of Work is powered by patented j5 IndustraForm Templates, which allow companies to transform paper, spreadsheets, word processor documents and scattered databases into enterprise-level applications quickly and with minimal disruption to operations.



Patented Spreadsheet-Like Configurability

While j5 Control of Work is an enterprise-wide digital platform, the j5 IndustraForm Designer allows personnel to configure j5 Control of Work in a familiar, patented spreadsheet-like environment. This makes configuration easy and accessible to those who don't have programming skills, while also reducing expensive vendor change requests and reliance significantly, which lowers the cost of ownership.



Comprehensive Mobility

This configuration extends to mobile devices, where j5 IndustraForm Templates can also be used extensively, meaning that companies can develop mobile applications internally with minimal effort. This is significant with j5 Control of Work because it is important – according to the Health and Safety Executive (HSE) – to recognise hazards when and where work is carried out.



Tried and Tested Solution

j5 Control of Work is not an underdeveloped add-on; it is part of a solid digital platform solution that has been designed to continually improve with minimal disruption and to futureproof your Control of Work processes. j5 Operations Management Solutions is a consistent, upgradable digital platform where site configuration is modular to allow for relatively effortless upgrades.



Increased Efficiency and Time Savings

As all j5 Operations Management Solutions elements exist on the same desktop and mobile framework, upgrading multiple j5 IndustraForm Templates is stable and hassle-free. This simple upgrade process also saves time and financial costs, allowing customers to allocate more resources towards the safe operation of their plants.

Configuration Benefits of j5 Control of Work

- ✓ Extremely easy to add new fields with multiple configuration options
- ✓ Start with templated, fully configurable workflows, or design your own workflows from scratch (these templated intuitive workflows have configurable approvals, gates, notifications and states)
- ✓ Ability to test layouts in the j5 IndustraForm Designer and publish in real-time with no disruption to application or data, reducing the cost of testing for configuration changes
- ✓ Simple to change the layout of j5 Control of Work modules on desktop and mobile
- ✓ User roles and permissions can be strict or flexible, whatever is required for each scenario
- ✓ Dynamic user experience designed to promote ease of adoption, for example text or background colors that change depending on field values
- ✓ Multiple visualization options, such as Calendar Views, Dashboards, Gantt Charts and Plot Plans
- ✓ Enterprise-wide digital platform with patented spreadsheet-like configuration
- ✓ Seamless links to external data sources and other industrial applications like Data Historians and the CMMS
- ✓ Seamless integration between j5 Control of Work modules and other j5 Operations Management Solutions elements that enable users to provide a comprehensive end-to-end solution landscape
- ✓ Interact with 3D Models, Laser Scans and P&ID Diagrams (requires j5 Connector for HxGN SDx®)
- ✓ Integrates with many Hexagon products, such as HxGN SDx, Smart® P&ID and others

Version Upgrade Benefits of j5 Control of Work

- ✓ Robust version control
- ✓ Upgrade without shutdown (and plant disruptions)
- ✓ Hassle-free roll-back and roll-forward capabilities
- ✓ New versions of j5 Control of Work modules and other j5 IndustraForm Templates can be tested thoroughly before going live



j5 Operations Management Solutions offers the advantage of having a proven industrial solution whilst having the option to provide any complementary module that you would need for a specific requirement.”

Laurent Hardy

Operations Manager, European Synchrotron Radiation Foundation (ESRF)



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.

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