

# **Straightforward Digitization WITHOUT Disruptions**





# The Problem

Many industrial sites have spent years developing Control of Work procedures that have been utilized in the field, albeit on paper, spreadsheets, word processor documents and scattered databases. However, choosing the wrong vendor to digitize these safety-critical procedures can also lead to unexpected problems, such as:



## **Disconnected Applications**

Safety-critical information – which should be connected – is siloed and not easily shared between teams.



## **Singular Applications**

Vendors offer singular Control of Work applications that cannot address the many different Control of Work requirements.



## **Enterprise Inconsistencies**

Operations, maintenance and safety personnel use different applications and documents to control work, missing out on crucial overlapping data.



## **Zero Mobility**

With no Control of Work mobile applications, field personnel don't have access to key information when anomalies in procedures occur.



## **Detached Third-Party Applications**

Important maintenance and real-time data from Data Historians, the CMMS, the DCS, the PLC, EAM software and SCADA systems is often not readily available.



## **Costly Configuration**

Some vendors make Control of Work software that is difficult to configure, which wastes time, adds financial costs and encourages unnecessary change requests, making companies overly dependent on vendors when quick changes are required.



## **Vendor Reliance**

Making regular modifications and creating mobile extensions of Control of Work applications requires advanced coding skills and / or vendor engagement.



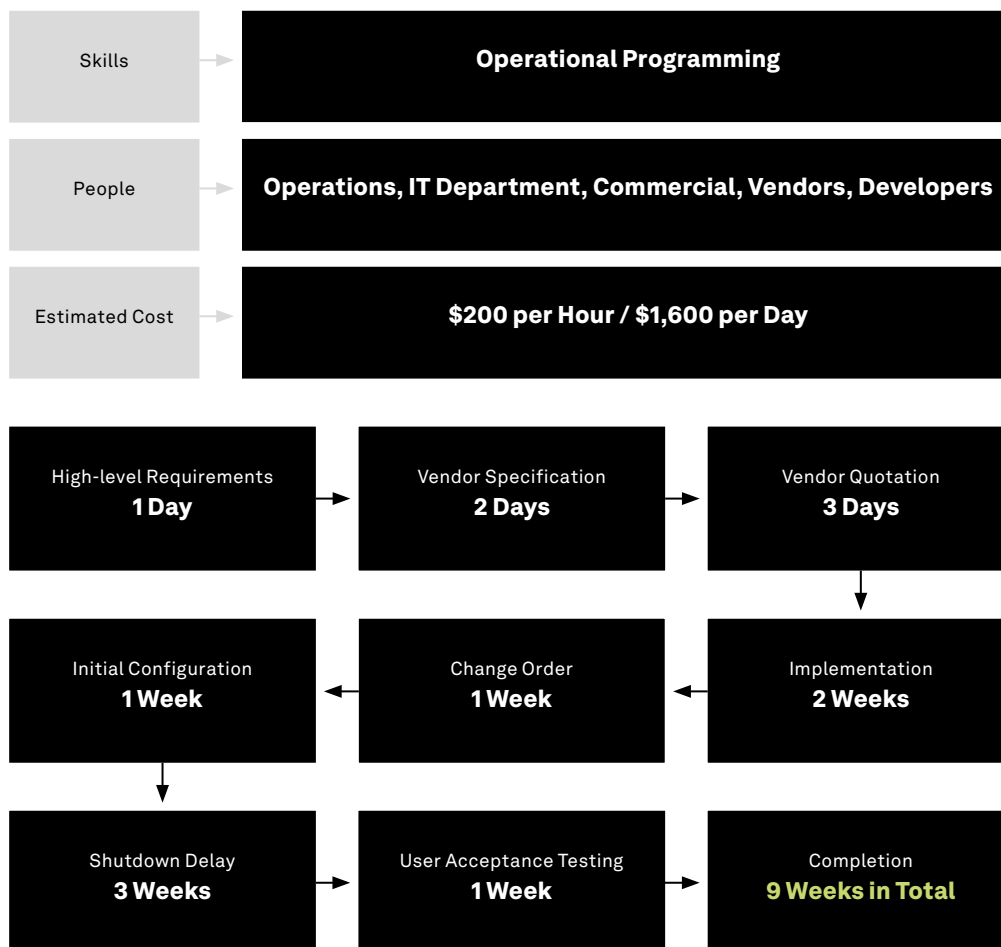
## **Strenuous Scalability**

Scaling Control of Work applications and procedures to other departments and sites is a laborious task.

As a result, rashly implementing a digital Control of Work solution without consideration for the above causes more unnecessary problems. Some vendors who provide digital solutions also advise companies to adopt completely new Control of Work procedures when digitizing, simply because their products are inflexible. This is counterproductive and, in some cases, increases operational risk since the workforce must now suddenly adopt completely new procedures.

Some vendors also provide Control of Work software that requires an advanced level of computer literacy and training to configure. This forces the end user to go back to the vendor for any modifications. Changes to Control of Work procedures are not infrequent, because industrial sites are continually evolving and often legislation forces companies to modify their design and processes. Companies are then trapped in a frustrating and lengthy process of defining changes, raising purchase orders, QA testing and ongoing financial payments to a vendor.

### High vendor reliance leads to high cost of ownership



It is important to avoid these roadblocks by carefully analysing the Control of Work requirements for each site and choosing a vendor who can provide a straightforward digitization tool with simple configuration.



Rashly implementing a  
digital Control of Work  
solution causes **more  
unnecessary problems.**



Configuration - Control of Work - Dashboards - Documentation - Search

PERMITS > CW2 - Inspect, ... > ISOLATIONS > IS4 - Separator 2

Detail

Isolation Certificate - Isolated

ISOLATION AUTHORITY

NICK Hurley

ISOLATION OPERATOR

NICK Hurley

AREA AUTHORITY

NICK Hurley


Isolation Details

Isolation Certificate

Isolation #  
Permit #  
Work Order #

1. Description of the Isolation

Isolation Discipline  
Equipment to be Isolated  
Area  
Reason for Isolation  
  
Associated Documents:

Mechanical  
  
Crude Oil Distillation unit  
Separator 2  
  


Date Isolation Required  
Tue 14, 00:30  
Expected Removal Date  
Aug 01, 00:30

2. Isolation Plan

#	Isolation Point	Description	Method
1	V2323	3 Phase Inlet	Blind in Place
2	V234	Demister Outlet Valve	Blind in Place
3	V331	Vapour Outlet Valve	Blind in Place
4	V676	Oil Outlet Valve	Blind in Place
5	V22	Water Outlet line	Blind in Place

3. Risks, Hazards and Controls

Risk Assessment Required? ☐ Yes ☒ No

Risk Analysis Document (if applicable)

Permit Details

Submitted  
07/13/2020  
00:19 - Nick Hurley

Permit Number

CW2

Work Order #

WO 4327

Description of the Work

Area  
Crude Oil Distillation unit

Equipment

Description  
Inspect, repair and then recoat the internal surfaces of a separator

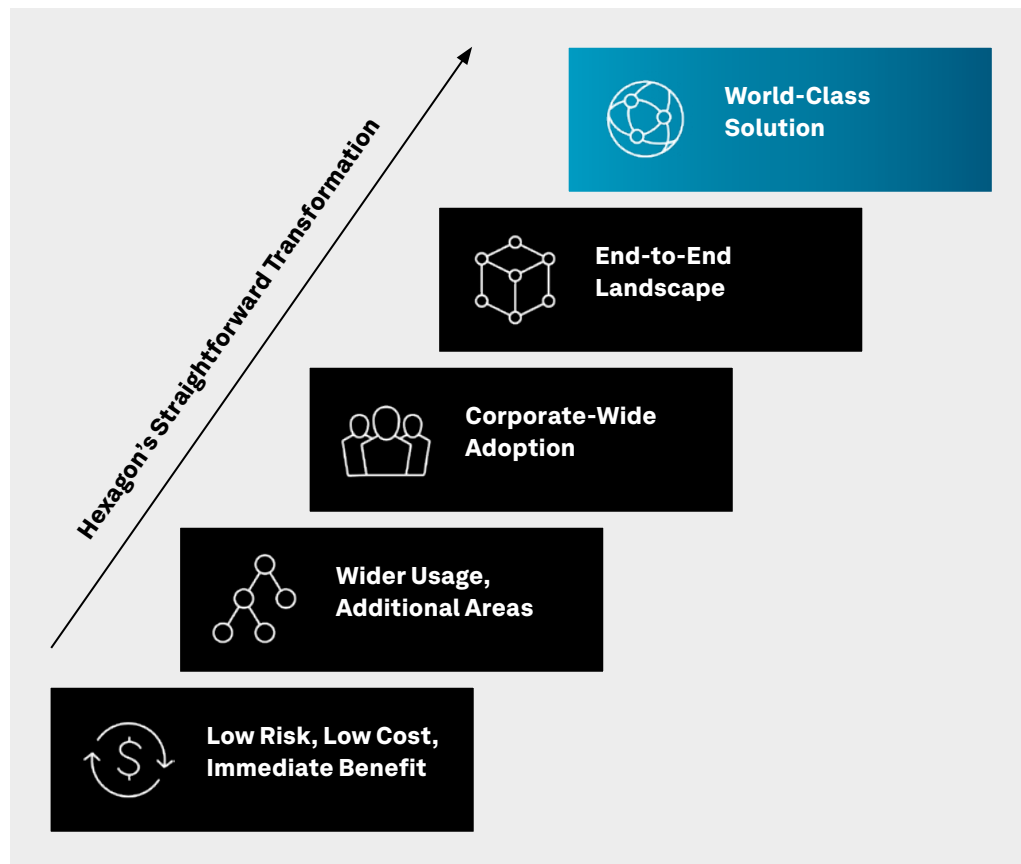
REVISE

REFRESH DATA

# j5 Control of Work

## The Solution

Hexagon recommends a **unique straightforward digitization approach** to industrial enterprises looking to move away from paper, spreadsheets, word processor documents and scattered databases. This mainly revolves around a step-by-step digital evolution of a company's existing processes. Many of the procedures and visuals in j5 Control of Work mirror the previous analogue version, and yet all the advantages of digitization such as strict workflows, required approvals, instant access to information, interfacing with other industrial software, automatic notifications and many other enhancements are inherent in this Hexagon solution.



# j5 Control of Work Features



## Integrated Applications

Integrated desktop and mobile applications can be connected to further coordinate and enhance workflows which are carried out and followed by multiple operations, maintenance, safety and engineering stakeholders and contractors.



## Multiple and Consistent Applications

j5 Control of Work includes several interconnected processes and modules such as Hot Work Permits, Cold Work Permits, Certificates, Isolations, Hazards and others.

### j5 Control of Work Modules

Master Permit	Associated Certificates	Isolations	Hazards	Others	Common Items
Hot Work	Confined Space	Isolations	Job Safety Analysis	PPE	User Management
Cold Work	General Certificates	Lockout-Tagout	Risk Analysis	Toolbox Talk	Plot Plan
Breaking Containment	Working at Height	Work Groups	Gas Tests	Lessons Learned	Dashboard
	Overhead Lift Plan		Others	Others	Gantt Chart
	Excavation				



## Enterprise Consistency

Operations, maintenance and safety personnel use a central digital platform to control work, with the ability to easily interface information from important external sources such as Equipment, Functional Locations and Work Orders from the CMMS, trends and values from a Data Historian and engineering information such as Data Sheets and P&IDs; this connected information saves precious time and workers are more prepared to control work safely.





## Extensive Mobility

j5 Control of Work is readily available on mobile devices – including intrinsically safe models that can operate in hazardous industrial areas – and the patented spreadsheet-like j5 IndustraForm Designer is used for both desktop and mobile configuration, making it quick and easy for authorized personnel to create and modify j5 Control of Work as requirements change.



## Connected Third-Party Applications

j5 Operations Management Solutions is a single framework of integrated applications that are used to manage and record operations, maintenance, safety and engineering processes and procedures. All of these applications can be interfaced with data from third-party industrial software such as Aspen InfoPlus.21® (IP.21), AVEVA® Historian, IBM Maximo®, SAP® HR, SAP PM and the OSIsoft™ PI System™.



## Simple Configuration

j5 Control of Work offers a unique yet familiar low code / no code configuration environment that enables the end user to quickly make changes onsite without having to constantly engage in vendor change requests.



## Configuration Control

Authorized engineers can quickly respond to new requirements by simply making modifications in the patented spreadsheet-like j5 IndustraForm Designer.



## Enterprise Scalability

Scaling j5 Control of Work modules and procedures to other departments and sites is easy as j5 Operations Management Solutions is a consistent, upgradable digital platform where site configuration is segregated to allow for relatively effortless upgrades.

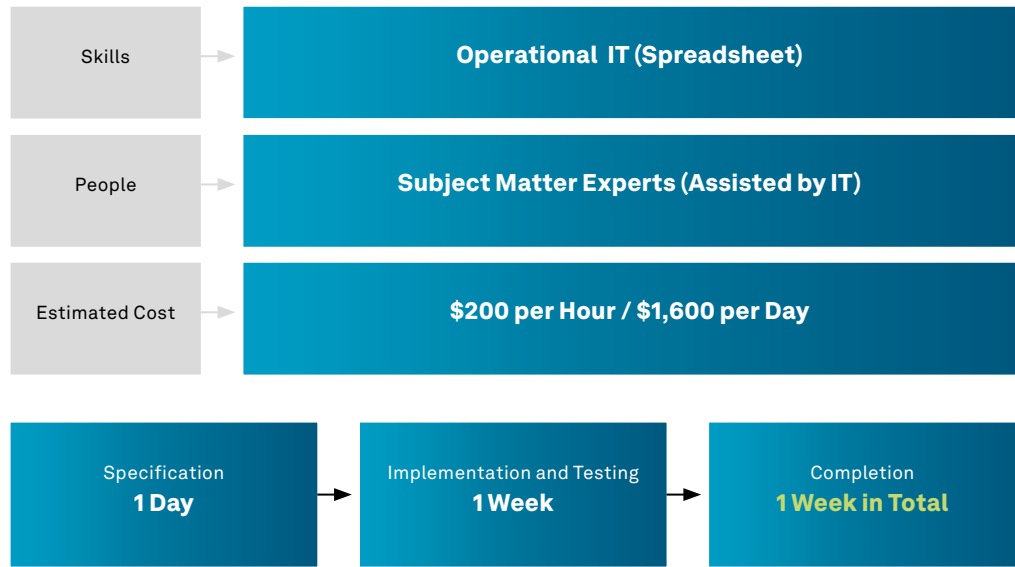


To cover all permitting requirements, a Control of Work system must provide comprehensive modules addressing the work to be carried out and the required documentation, such as:

<b>Permits</b>	Cold Work and Hot Work
<b>Certificates</b>	Confined Space, Excavation and Working at Height
<b>Isolations</b>	Lockout-Tagout
<b>Hazards</b>	Job Safety Analysis and Risk Analysis
<b>Many Others</b>	PPE Selection and Toolbox Talks

However, some vendors provide singular applications, and should an end user require additional functionality, this again leads to expensive and time-consuming vendor change requests. j5 Control of Work includes a comprehensive suite of relevant permit to work modules, processes and procedures. As all elements of j5 Control of Work may be quickly modified onsite by authorized site personnel and changes can be made in hours / days instead of weeks / months (if these were instead managed by an external vendor).

**j5 Control of Work leads to lower cost of ownership**



From experience, Hexagon understands the problems of upgrading to new software versions enterprise-wide when each site has a different installation or configuration that has been created with custom services by the software vendor. Companies require an established solution that is easy to configure internally and remains stable when updates are deployed. j5 IndustriaForm Templates are configured in a patented spreadsheet-like environment, enabling personnel to rapidly design them in a familiar and intuitive way. Desktop and mobile applications are now in sync, and there are no advanced source code programming skills required.

# j5 Control of Work Technology

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.

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.

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.

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.

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.

Hexagon (Nasdaq Stockholm: HEXA B) has approximately 20,000 employees in 50 countries and net sales of approximately 3.9bn EUR. Learn more at [hexagon.com](https://www.hexagon.com) and follow us @HexagonAB.