4INDUSTRY

Connected Worker Use Case Library

March 2021

Purpose of this library

A DMOS like 4Industry is highly configurable, meaning you can easily design and implement complex workflows yourself. This library aims to helps you get started by listing the automation use cases with the best cost/benefit ratio to improve work on the shop floor. It can also serve as a guide for centralizing all shop floor workflows in a single system of action.

The use cases are centered around enabling your operators to interact with your Industry 4.0 technology (Connected Worker). After all, that's the strength of our connected worker platform; empowering operators. For each use case, we've listed the associated benefits, level of effort and related 4Industry capability.

Is your use case missing?
Let us know, because the capabilities of the platform stretch far beyond the use cases described here!

About 4Industry

4Industry is a DMOS that enables manufacturing companies to increase Overall Equipment Effectiveness (OEE) through factory digitization. By using mobile-enabled digital knowledge and smart factory workflows, manufacturers can boost efficiency and effectiveness of their operators, continuously improve plant operations and maximize equipment efficiency through proactive and preventive maintenance.

Internet of Things

Easily connect your IoT sensors to 4Industry, which uses the monitoring data to trigger real-time notifications in case of anomalies. Our platform-agnostic system can connect to any public or in-house IoT service provider.

	Create deviation at IoT device threshold overrun
Capability	Autonomous Maintenance
Action	4Industry determines the parent equipment and auto-creates a deviation with the right priority based on the criticality of the overrun. The right group of people is notified.
Trigger	An IoT device sends a value that is above a defined threshold
Benefits	Brings detection time back to zero. Diagnose time is shortened considerably, because the deviation contains auto-proposed solutions.
Effort	Moderate investment in configuration and /or devices needed

Integrations

4Industry can communicate with both digital systems like an ERP and MES or physical systems like a SCADA, sensors, etc. Connecting standalone systems and creating a single source of truth greatly improves data quality and consistency. Data exchange is available in formats like REST API, XML, CSV, etc. or via middleware.

	Integrate job with pick-to-light system	Integrate deviation notifications with Andon lights or signboard	Respond to MES events
Capability	Work Instructions	Autonomous Maintenance	Autonomous Maintenance
Action	If a worker performs a task in which s/he needs to pick up a tool or a part, 4Industry can send a command to the pick-to-light system to switch on.	When a new deviation is created, 4Industry sends an update to an Andon signboard or light and triggers the yellow/red lights according to the number and/or impact of the deviation.	4Industry creates a deviation with all necessary details like what equipment, etc. and sends a push notification to the assigned equipment operator. The deviation record includes any SoP(s) that have solved the problem in the past.
Trigger	Task in progress	Number and impact of a deviation	MES identifies a breakdown
Benefits	Faster work instruction execution and fewer mistakes with part/tool picking.	Shortens detection time and notifies operators without a mobile device of the deviation.	Breakdowns are detected faster, decreasing MTTR. Overall equipment performance will rise.
Effort	Heavy investment in configuration and hardware needed	Moderate investment in configuration and /or devices needed	Little time and effort needed

Integrations

	Integrate assessment with external measurement device	Task request from an external system
Capability	Smart Forms	Task Management
Action	If a measurement is needed from an external system during an assessment, this external system can send the value to 4Industry.	External systems like an SPC are trigged by an event and send out an assessment. This request can be forwarded to 4Industry, which will generate the assessment and notify the right people. Values can be pushed back to the external system.
Trigger	Assessment in progress	An external system (like SPC) requests an assessment
Benefits	Faster assessment execution and fewer mistakes in number/data input.	Shorten time to complete a task and improves task overview.
Effort	Heavy investment in configuration and hardware needed	Little time and effort needed

Machine Learning

Machine Learning transforms historical data into valuable predictions, saving you both time and money. Learning from training data, algorithms can identify issue patterns—paving the way for predictive manufacturing where the system proactively mitigates potential issues to improve reliability.

	Auto-propose solution for a deviation
Capability	Knowledge Management
Action	Deviation is analyzed by Natural Language Understanding. Based upon rules and understanding, it will associate the right knowledge and auto-proposes solutions based upon previous solutions of similar deviations.
Trigger	New deviation
Benefits	Helps to solve problems faster and reduces MTTR.
Effort	Moderate investment in configuration and /or devices needed

Automation Designer

All workflows on the 4Industry platform can be automated. Improve process consistency and quality with automated workflow update notifications, helping you step away from time-consuming manual reminders or phone calls. After a quick training, the no-code platform enables you to automate repetitive tasks in no time.

	Notify user of expired certification	**Create SHE incident after pressing the emergency stop**	**Create an accident classification assessment**
Capability	Environment, Health & Safety	Environment, Health & Safety	Environment, Health & Safety
Action	The system screens a worker for the required certifications when he enters a work area. If a certification is expired, a notification is sent to the worker.	Creation of SHE issue linked to the machine. It is possible to escalate this kind of incident directly to a manager.	An assessment is automatically triggered and assigned to the person who was involved in the accident to evaluate the incident.
Trigger	Task assigned to Work Area	Signal from safety PLC that emergency stop has been pressed	Safety incident registration
Benefits	Increase compliance.	Helps to increase safety awareness, resulting in fewer accidents.	Capture the details of every work-related injury for future prevention, creating a safer work environment.
Effort	Moderate investment in configuration and /or devices needed	Moderate investment in configuration and /or devices needed	Little time and effort needed

Automation Designer

	Publish knowledge article once RCA is finished	Create an assessment linked to a previous assessment score	Auto-generate monthly SHE reports*
Capability	Reporting & Analytics	Smart Forms	Environment, Health & Safety
Action	4Industry publishes the RCA findings in a knowledge article and links it to the original deviation description, equipment, failure mode, etc.	A short assessment could be requested and submitted by a user. Following a bad score, a new, more complete assessment can be generated and sent to any person.	A standard monthly SHE dashboard/report shows every SHE issue and calculates safety KPIs every month. The report can be sent to e.g. plant managers.
Trigger	RCA is finished	Previous assessment finished with calculated score	Monthly
Benefits	Lowers MTTR and increases the number of knowledge articles.	Automate a manual workflow and ensure workers follow the defined steps. If the workflow is followed correctly, you can also reduce MTTR.	Raise SHE awareness at management level and eliminate the time needed to draft a report.
Effort	Little time and effort needed	Little time and effort needed	Little time and effort needed

*Also possible for deviations.

Automation Designer

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	Reopen RCA if final assessment fails	Start RCA after multiple deviations on the same machine
Capability	Reporting & Analytics	Reporting & Analytics
Action	The RCA status is changed from "Waiting for Assessment" to "Analysis". Team members are notified.	A new RCA is created that is related to the deviations. The RCA is auto-assigned to the responsible user group.
Trigger	Low quality score of RCA assessment	Failure mode has occurred X times on equipment during a specific timeframe
Benefits	A higher RCA quality helps you increase your OEE.	Solve recurring deviations faster to increase your OEE.
Effort	Little time and effort needed	Moderate investment in configuration and /or devices needed