



Industreweb 4.0 is a manufacturing platform to join, rather than replace, existing technologies, with an emphasis on flexibility and scalability. Industreweb is the "glue" between systems, a toolkit to capture data, solve problems and improve production efficiency.

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INDUSTREWEB 4.0

Brochure 2018

Scalable, Integrated Software Simplifying I4.0 Adoption





INDUSTREWEB 4.0

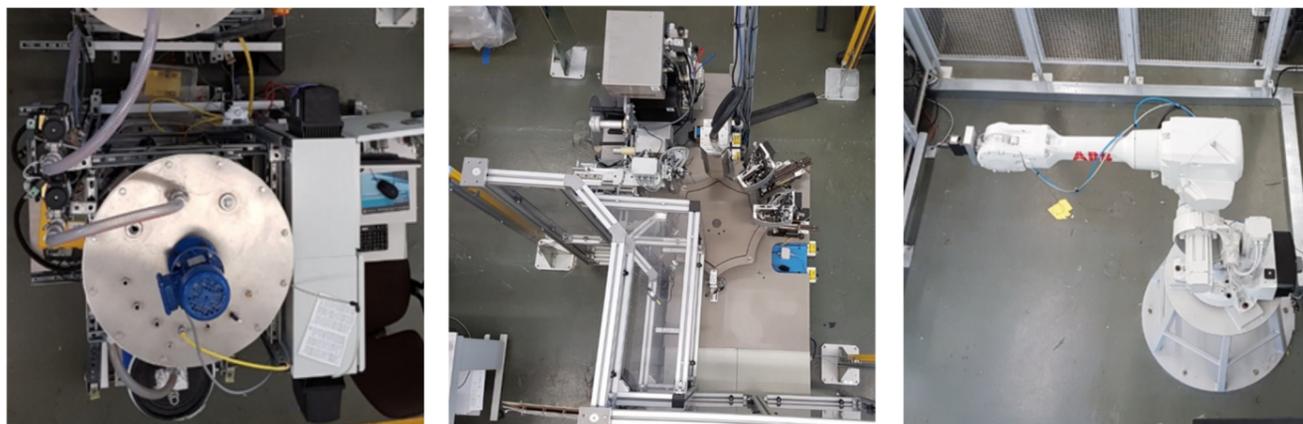
CONNECTING INDUSTRY

Industreweb 4.0 is a manufacturing platform to join, rather than replace, existing technologies, with an emphasis on flexibility and scalability, Industreweb is the "glue" between systems.

Industreweb connects to all your sources of data providing real-time monitoring and decision making via its high-speed logic engine. It supports a wide range of interface standards such as OPC, ASi, ZigBee, Z-Wave, along with native support for most common PLC's - Siemens S7, Rockwell / AB, Omron and Schneider.

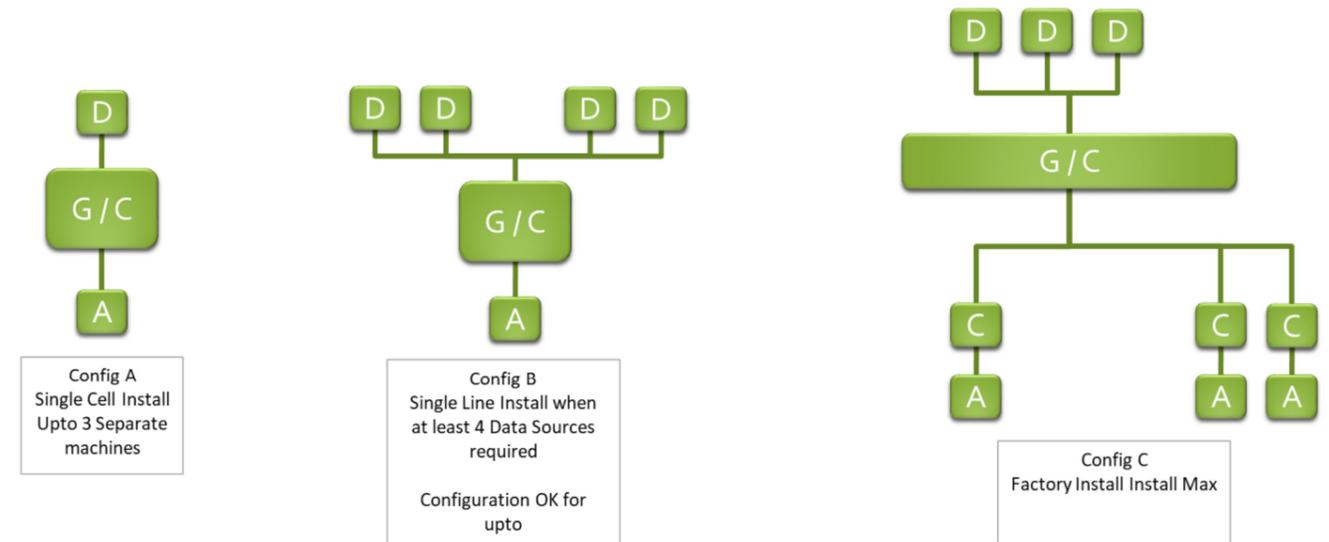
Monitor data, create alerts and trigger actions in other systems. This can include setting a flag in a PLC, displaying an alert on a screen, send an SMS or email or writing a value to a database. Industreweb Collect nodes can interact with one another to create a wider integrated solution, and on top of that it can connect to the cloud to leverage state of the art analytics tools to provide insight into your production processes. Ultimately it's your toolkit to capture data, solve problems and improve production efficiency.

Start your journey towards Industry 4.0 with Industreweb 4.0



Pricing

One of the most commonly asked questions is how the cost of installing Industreweb 4.0 can be reduced if implemented across a plant or even the whole enterprise.



Below is a guide to how the costs can vary if you have a single install as shown in "Config A" above, right through to a factory Install as shown in "Config C".

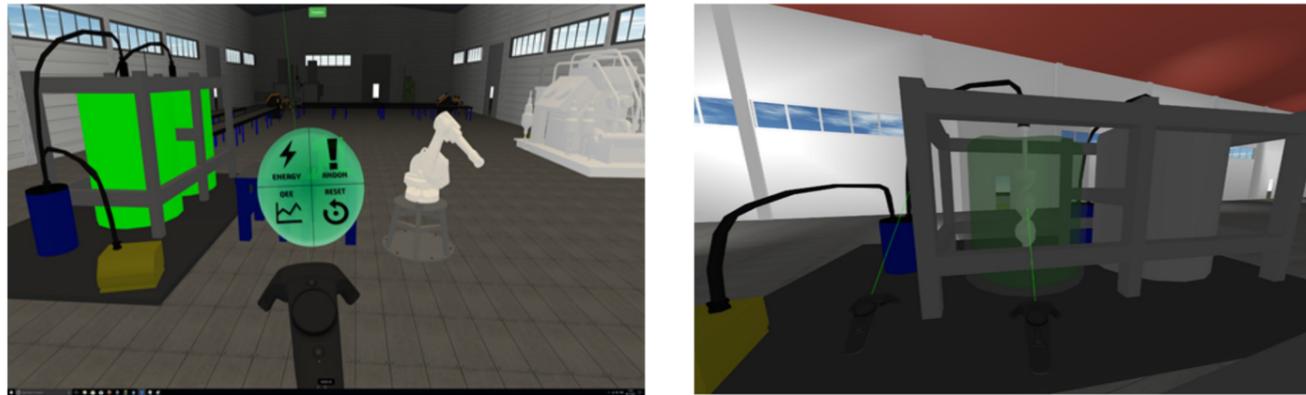
The advantage that Industreweb offers is the "scalability" of the product. As with most of our installations, an initial pilot area would be targeted to deploy the required tools / services and with the successful completion of the pilot, a much wider deployment can be rolled out. The advantage of piloting is that often customers will start off with specific requirements and as these are fulfilled, new and unforeseen configurations can be highlighted and adopted / adapted to suit the customer needs. That way the wider roll-out can be managed smoother and with the exact customer requirements.

The prices below are for guidance only and can be negotiated depending on the application areas and tools required:

No of Units	Single	Line	Enterprise
1	£6,970.00	£17,285.00	£58,800.00
5	£34,850.00	£28,195.00	£68,320.00
10	£69,700.00	£49,980.00	£80,080.00
25	£174,250.00	£121,745.00	£115,920.00
50	£348,500.00	£237,080.00	£175,280.00
100	£697,000.00	£467,750.00	£294,000.00

Vactory—Virtual Factory

Industreweb makes the digital factory a reality using state of the art technology to produce a real-time digital twin of your production facility in the virtual environment.



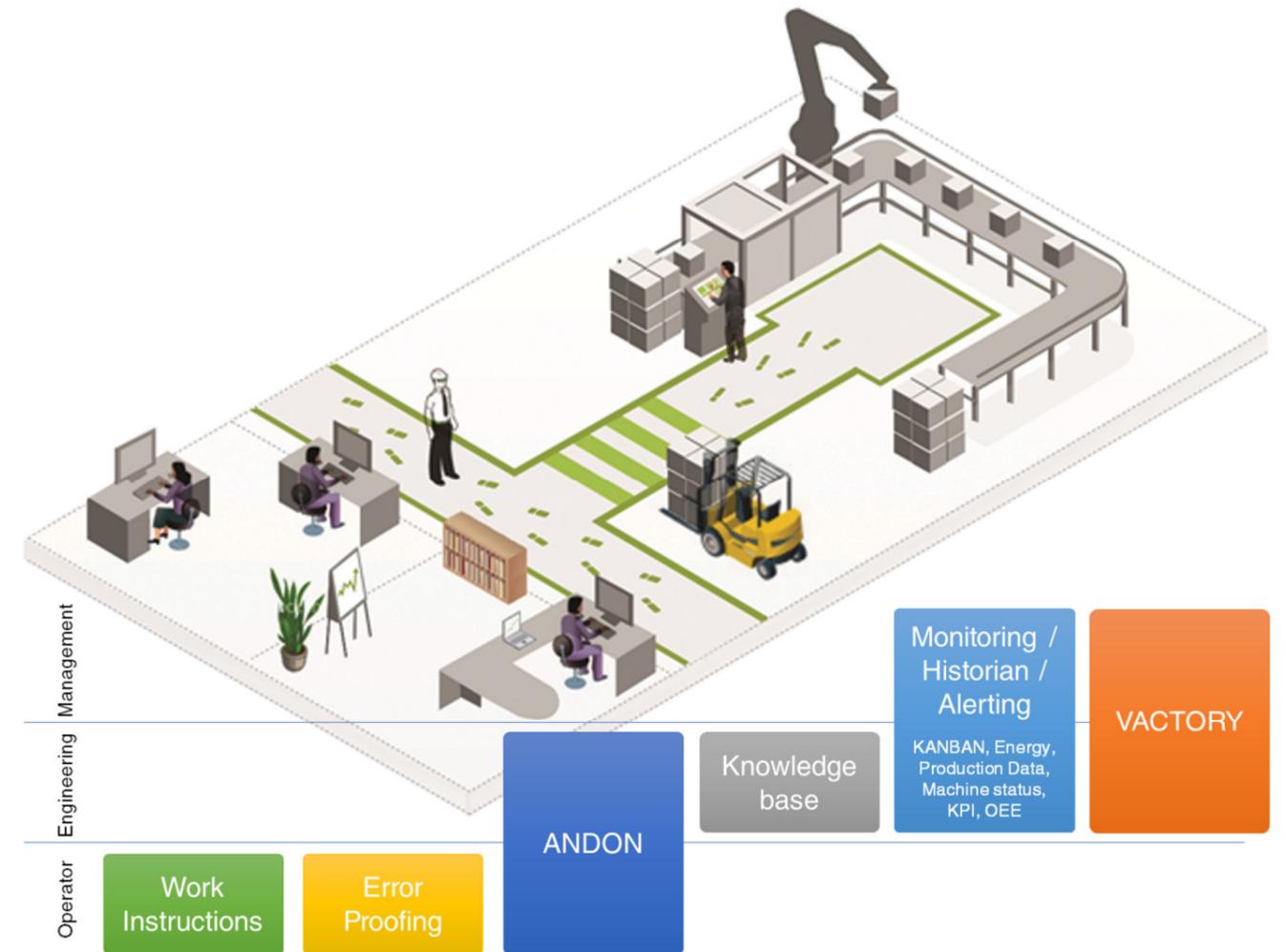
Industreweb Vactory (Virtual Factory) makes the digital factory a reality through the use of real-time data provided by Industreweb Collect coupled with advanced 3D technology. View a virtual representation of your processes through a browser enabled device, highlighting production issues, live and historic KPI's without the need to install specialist software components.

Production assets whether they are machines, products, or components can be modelled in the 3D environment, visually along with their associated behaviours. Two types of assets can be created in your Vactory:

- **Twinned** Vactory assets are virtual objects that have a physical twin which behave in the virtual factory in the same way as its physical twin, enabling you to monitor its behaviour remotely
- **Virtual** assets exist only in the Vactory but behave as a physical device would.

Features:

- Real-time virtual factory to visualise your process to support both local and remote monitoring
- Full VR and single screen mode supported
- Integrated security framework to control access
- Support for integration into the Maintenance Knowledgebase and Andon Applications



What Industreweb 4.0 Offers

Industreweb is designed to link all the key areas of an enterprise and provide knowledge and information relevant for the user.

Operators

Operators are presented with real-time process data so they have a clear idea of whether they are running to schedule, and they feel confident that maintenance staff will be made aware of any efficiency issues.

Engineers / Maintenance

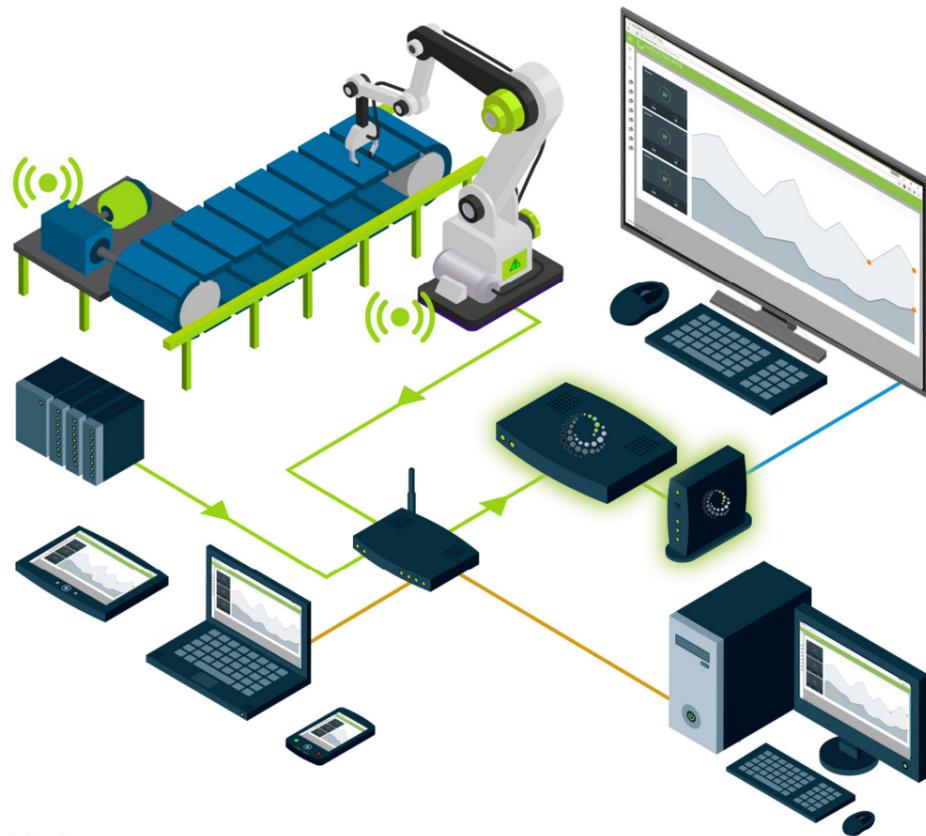
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Plant Management

Management need to focus on the high level objectives of meeting customer demands balanced with maximising operation profit. Industreweb provides them the data they need to be able to demonstrate plant efficiency, and the confidence they will be kept in the picture with support for new standards such as IATF 16949:2016.

Monitor, Alert, Trigger, Display, Analyse...

Shopfloor systems need to operate with maximum efficiency and with the least amount of downtime. Anything that can support these requirements is going to be of benefit to an enterprise. The biggest challenges are that systems are not connected or may have multiple protocols that are hard to communicate with. Industreweb 4.0 brings connectivity from shopfloor systems all the way up to Cloud Services.

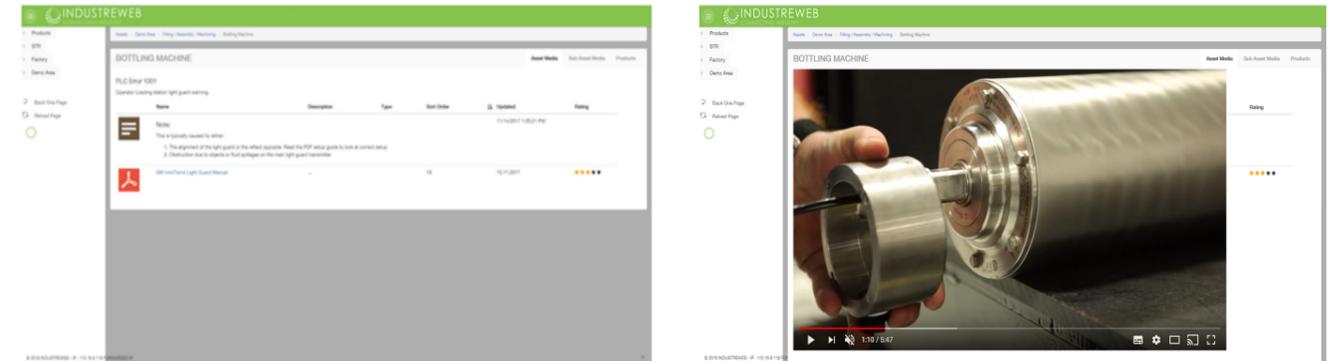


Features

- Common production system interfaces including OPC, Siemens S7, Schneider, Rockwell and Omron wireless protocols
- Support for legacy systems by sensors overlaid on the system to avoid disruption
- Real-time responsive web-based user interface for data visualisation & analytics
- Operator friendly, point and click user interface – gather human knowledge
- Real-time virtual factory capability to monitor, visualise and simulate your processes via Industreweb Vactory
- Alerts and notifications – email, SMS, messaging services
- Security framework to control Role and User access
- Administration tools to allow staff to configure and manage the system
- Comprehensive media management (documents, videos, audio)
- Integrated Audit trail
- Modular software framework that is flexible to future-proof for additional modules

Maintenance Knowledgebase

Capture valuable solutions to machine failures by linking documentation for each solution, including notes, documents and videos. Monitor your process and display those solutions automatically when faults happen.



Benefits:

- Ensure that errors and quality issues get dealt with quickly
- Provide Maintenance staff with the solutions as the fault occurs

Features:

- Capture valuable solutions to machine failures
- Link it to documentation for each fault solution which can include notes, documentation, videos and more
- Triggers documents automatically when they are required e.g. machine failure
- Rate solutions so the best solutions become recognised

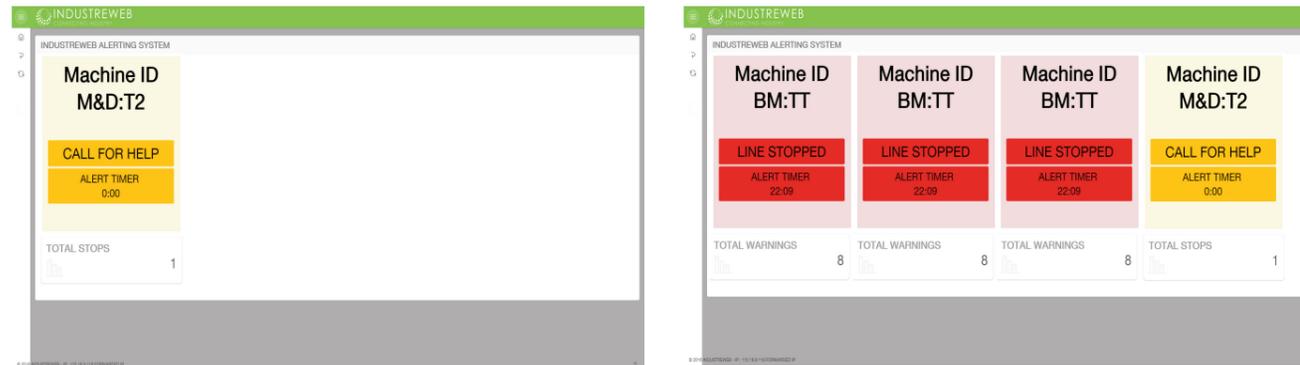
Monitoring / Historian / Analytics

As well as its own internal capabilities, Industreweb offers extended services, functionality and data analytics when linked to platforms provided by a range of market leading vendors. Support for Siemens MindSphere, GE Predix, Proficy & CSense, Amazon Cloud Services, Microsoft Azure Data Analytics and Machine Learning are available or being developed. More up to date information can be found on our website.

For more information visit Industreweb.co.uk

Andon Fault Escalation

Detect quality and production related issues and communicate them in real-time to the staff who can resolve them. Industreweb sends alerts and can be configured to escalate Issue Tickets to ensure they are being handled.



When issues with the process occur, it's critical to flag it up to maintenance staff and get a resolution as quickly as possible. Andon Fault Escalation allows operators to manually raise Issue Tickets, or for issues to be detected automatically and therefore raise a Ticket. Active Issue Tickets are displayed to both the operator and maintenance staff via any browser enabled device, and with support for live alerting by email, SMS or instant messaging.

Benefits:

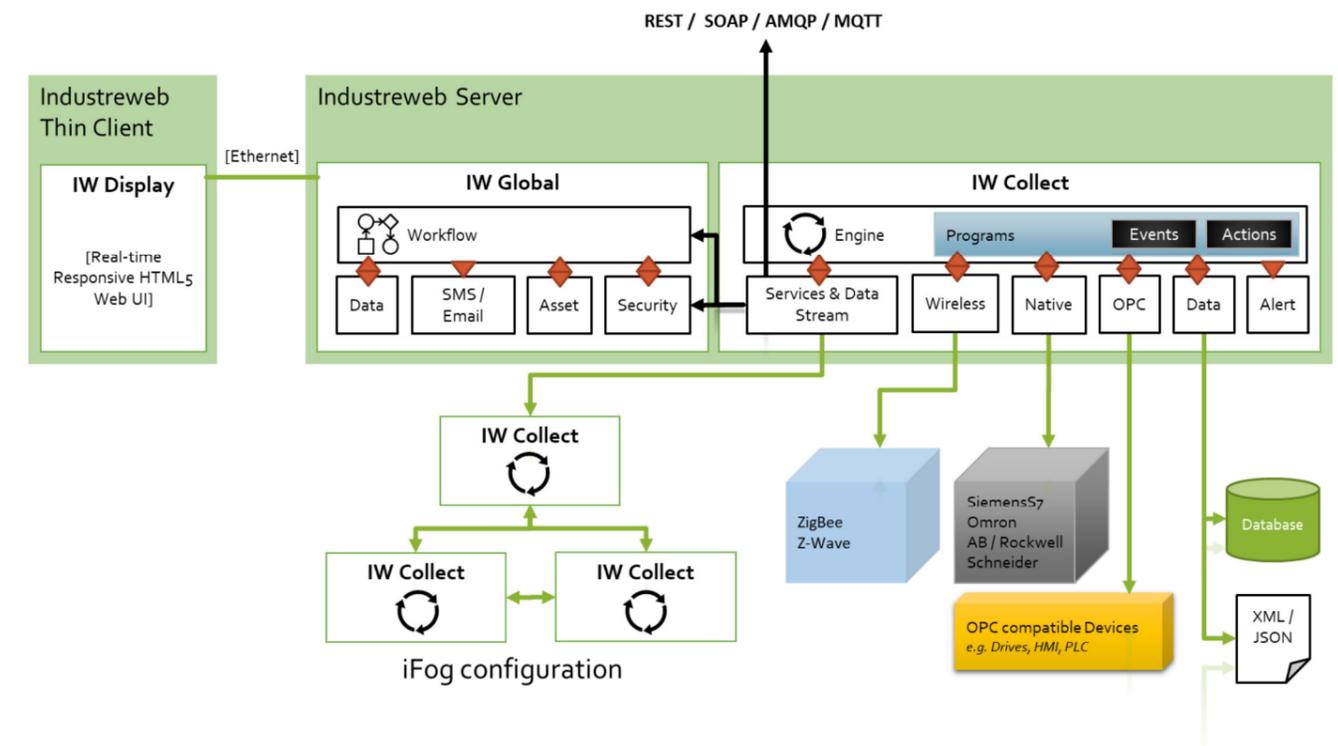
- Ensure that errors and quality issues get dealt with quickly
- Re-assure operators that issues have been notified and will be attended to
- Log issue statistics for powerful analytics for common faults and greatest downtime causes

Features:

- System to notify management, maintenance, and other workers of a quality or process problem
- Real-time visualisation on any web enabled device
- Integrations with PLC for dynamic triggering
- Alert escalations including email and SMS
- Support for integration into the Knowledgebase and Vactory Applications
- Capture events in database for analytics



How It works



IW Collect

The core of Industreweb is the Collect Engine which connects to a wide range of data sources via its extensive connector library. Each Collect Micro Server can monitor your processes in real-time and based on the logic rules you configure it can trigger actions that can Alert (e.g. SMS, email). Each Collect can communicate with other Collect Nodes to act as a fog configuration, or with other services such as the cloud and also supports the popular IOT protocols such as MQTT and AMQP.

IW Global

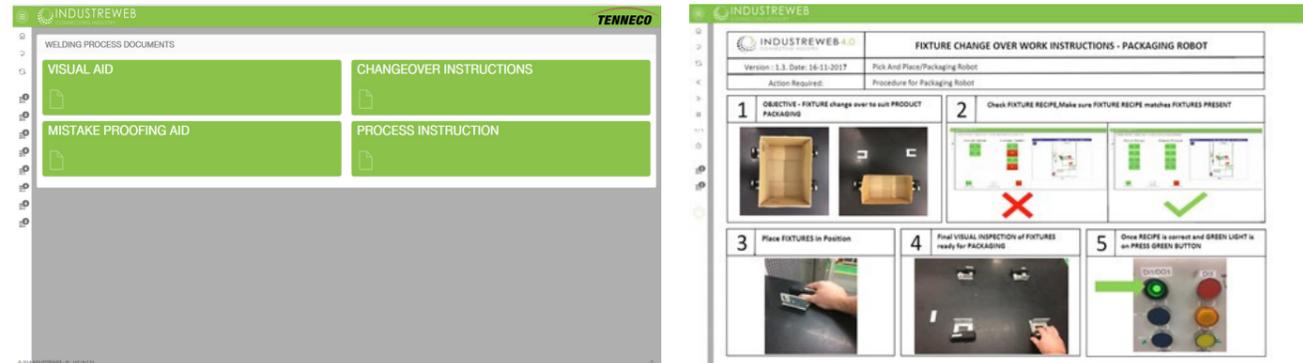
Industreweb Global is the control panel and admin interface for Industreweb. All Collect Nodes get their configuration from Global so changes can be deployed quickly and securely. Global manages screen content and layout for Industreweb Display including user access rights and Media to be displayed including documents and videos. Global is based on a powerful Service architecture including an enterprise Work Flow Engine so that long running or complex orchestration tasks can be handled with ease.

IW Display

Industreweb Display is a super flexible responsive real-time web interface, that ensures whenever information or data needs to be visualised will be available to the right people on any browser enabled device including smartphones and tablets. Display Nodes can be placed anywhere on the shopfloor and connected to a monitor or screen to bring real-time data where it's needed.

Work Instructions

Digital documentation shop floor system - Avoids lost, damaged, outdated paper based documents. Rapid documentation roll-out of with built in audit trail means that management is streamlined and version control is easy.



Support staff with electronic work instructions to replace paper based systems. Rapid documentation roll-out of with built in audit trail means that management is streamlined and version control is easy. Show the right staff member the right support media when it's needed.

Benefits:

- Avoids lost, damaged, outdated paper based documents
- Reduce costs associated with manually producing and managing printed media
- Rapid documentation rollout with built in audit trail
- Triggers documents automatically when they are required
- Provide Operators the right documentation every time

Features:

- Support for a wide range of digital media including PDF & Videos
- Powerful media library functionality to make managing content a breeze
- Security framework built in to control who has access to what screens
- Supports live interfaces to all common ICS to trigger Documents when the process changes
- Link support media to machine status, product type or job code in order to display documents relate to the current state of the process or machine

Error Proofing

Avoid unnecessary production errors that can have an impact of waste, quality and in service product defects. Detect the state of your process including tracking the location of production assets and staff.



Detect error scenarios within you manufacturing process by alerting of their occurrence or preventing them from occurring in the first place. Using real-time monitoring issues such as incorrectly manufactured or untested products can be avoided.

Benefits:

- Avoid production issues due to human error
- Reduce scrap and increase quality
- Link to the Andon, Work Instruction applications to add alerting and staff training support

Features:

- Supports live interfaces to all common ICS to trigger Documents when the process changes
- Support for position tracking technology including Ubisense SmartSpaces to monitor production assets including tooling, products, components and staff
- Log errors to determine when process improvement is required

