in.Grid

Cross Competency Digital Platform
Why Comau?

Up to date solutions for custom business tools

MANUFACTURING BACKGROUND
we understand today’s production challenges (flexibility, uptime, reconfigurability).

ENGINEERING & PRODUCT MANAGEMENT BACKGROUND
we have concrete solutions for automation and digitalization.

PROCESS ASSESSMENT CAPABILITIES
we know the manufacturing process and provide right-sized solutions.

SOFTWARE & MACHINE EXPERIENCE
we have extensive software and machine experience and we use fast development methodologies, such as agile.
What is in.Grid?

The digital platform that increases productivity, reduces maintenance costs, improves quality and enhances production.

**in.Grid** is the Comau platform that allows you to shape Industry 4.0 in line with the smart factory concept.

It creates a powerful network for the exchange and acquisition of data that interconnects Comau and non-Comau machinery in order to acquire performance and process data in the most useful and accurate way possible. The data is then displayed and made available through a simple, interactive interface.
in.Gird IoT is Comau's Internet of Things solution that collects real-time information from machines and their sub-components. This data is analyzed with advanced algorithms, using machine learning techniques which allow plants to reduce maintenance costs. The use of artificial intelligence combined with Comau’s know-how of systems and machines leads to predictive maintenance for each piece of equipment.
in.Grid MES is the Comau shop floor information system that enables you to collect the full range of production data in real time, from raw material acceptance to finished product shipment. This in turn helps you to reduce your costs and enhance your performance.
in.Grid IoT Architecture

Continuous monitoring and process modeling through flexible data storage and availability.
Functionalities

Data acquisition from multiple sources and sensor integration only on further analysis

Process and technological data monitoring and telemetry

Health and utilization status collection

Maintenance calendar management

Data analytics for condition based maintenance and early alarm generation

Availability of API interfaces for common legacy systems

Supervised algorithms based on customer needs and requests

AI (Artificial Intelligence) for decision making

Accessibility to real-time updated documentation

Digital intervention forms for maintenance interventions LL (Lessons Learned)

Automation and production planning simulation, digital twin, digital-to-real and vice versa*

Digital production and maintenance SOPs aided by AR (Augmented Reality)*

*Coming soon
in.Grid MES Architecture

- Direct plug equipment (e.g., printers, DataMatrix readers, nutrunners, etc.)
- Automation control (PLC, CNC)
- IoT Box for integration of heterogeneous equipment
- Edge node (could be e.g. a line PC)
- Legacy (ERP, PLM, etc.)
- Andon
- HMI
- Smartwatch
Functionalities

Communication with PLCs and other systems via standard protocols (OPC DA, OPC UA, Siemens S7, MQTT, etc.)

Integration with legacy systems: ERP for purchase orders and material management and PLM for product BOMs

Production planning, optimization and scheduling algorithmic engine

Production equipment technical structure and operational cycle charts definition

Quality, process and data traceability

Products serialization and sequencing management

HR management, saturation optimization, skill/competences assessment and access control matrixes management

Digital step by step SOP creation, embellishment with user friendly multimedia contents and dispatch

Reporting and Andon solutions allowing for immediate access and visual management of information

Process and production monitoring: statistical process control, equipment status (SCADA) and KPIs calculation (CT, OEE, TA, IA)

Integration with in.Grid IoT Platform

Wearable interfaces (smartwatch)
Offering

in.Grid IoT
Consultancy and assessment
Machine IoT-zAtion
Data collection, communication and networking
Data analytics and advanced telemetry platform
Cloud services
Advanced (maintenance) services
Telemetry, reporting and certification
After Sales smart management services
Spare parts optimization and online management
Remote assistance

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Integration with legacy systems
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Integration with in.Grid IoT Platform
Process and production monitoring
Digital step by step SOPs creation
HR management
Comau in the World