FORUM INDUSTRIA DIGITALE

MECCATRONICA E SOFTWARE PER L'INDUSTRIA

50 1975 - 2025 ITALIA

KEB

Tecnologie digitali al servizio della trasmissione di potenza: migliorare la gestione della produzione e monitorare le performance di macchina.

KEB Automation Italia

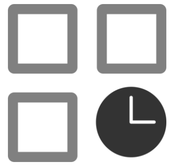
Stefano Berardi

Promosso da FORUMECCATRONICA | forum Software Industriale | ANIE Federazione Nazionale Imprese Elettrotecniche ed Elettroniche | ANIE Automazione

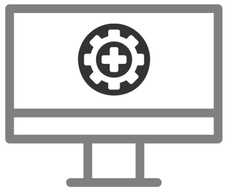
In collaborazione con Ordine degli Ingegneri della Provincia di Brescia

Organizzato da messe frankfurt

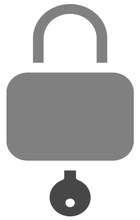
Yesterday focus on:



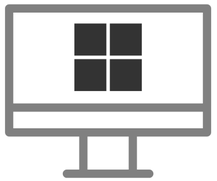
Real-time
Applications
in unique device



HMI
Visualization
with high number
of functionalities



Vendor Lock
System
In hardware & software



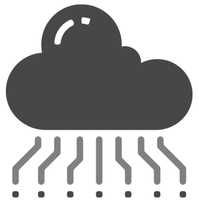
WIN based
OS System

Today, what is relevant?

Fast Growing Open source System and Communication

Service-Oriented Architectures with all devices connected
for the development Apps, services and cloud technologies (AI)

Reducing dependence on hardware and software platforms



Industry 4.0 IIoT for Data-Driven functionalities and decision making

Machine Oriented business model

How?

With an Open Automation Platform, highly customizable, designed to improve operational efficiency and drive innovation. Thanks to its open, modular and scalable architecture, an Open Platform facilitates the integration of different applications and systems, optimizing data management and analysis.

…based on 3 fundamentals

Management and IIoT Portal Based
Set of services in the cloud platform

CLOUD/IIoT Level

Collection of Apps for different functionalities
Connecting / Collecting / Visualizing / Analyzing

Customize Level

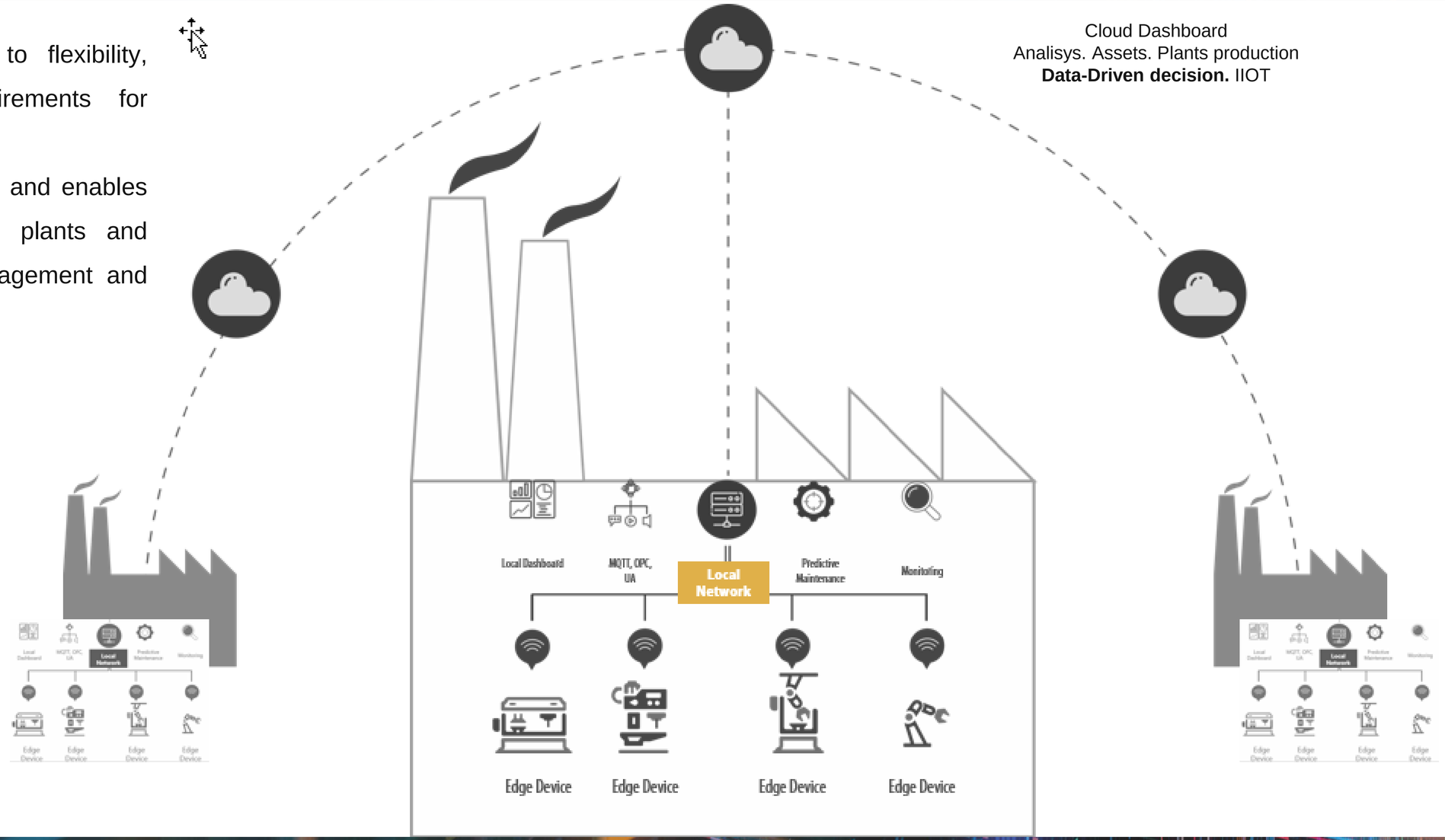
Edge operation system in any hardware
Core software infrastructure based on Linux and Docker

Machine Level

An open platform is the answer to flexibility, connectivity and integration requirements for machines and systems.

It allows the optimization of data use and enables the connection between machines, plants and systems, facilitating information management and analysis.

Cloud Dashboard
Analisys. Assets. Plants production
Data-Driven decision. IIOT



Use Case: how to improve production management and monitor machine performance.

Sector

Automated Warehouses

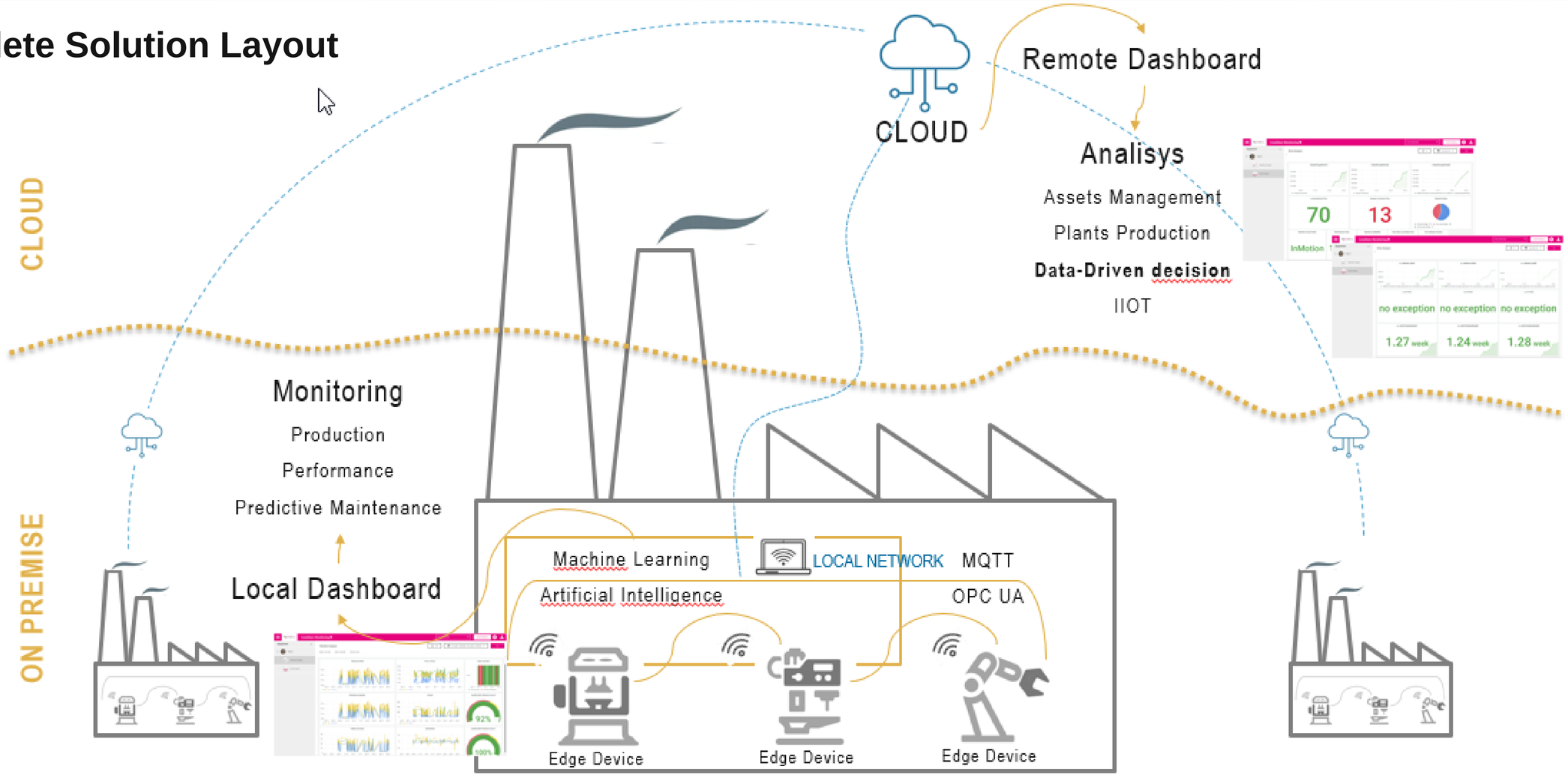
Challenge

- *Monitoring of machines performance in real time.*
- Monitoring and analysis remotely performane of machine in different locations.
- Optimization of operative process
- *Maintenance and service cost reduction*
- *Extension of machine life-time*
- More efficient data-driven management of business processes

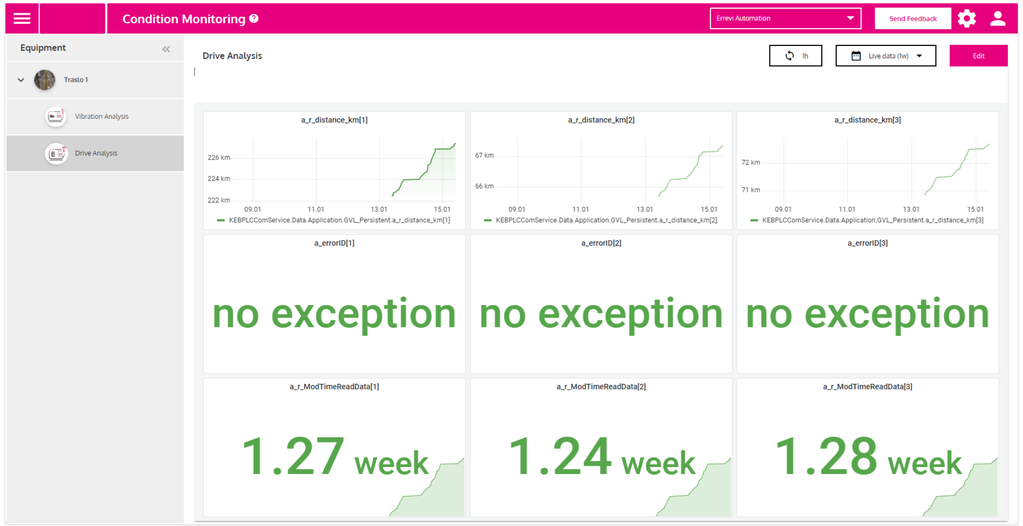
Solution

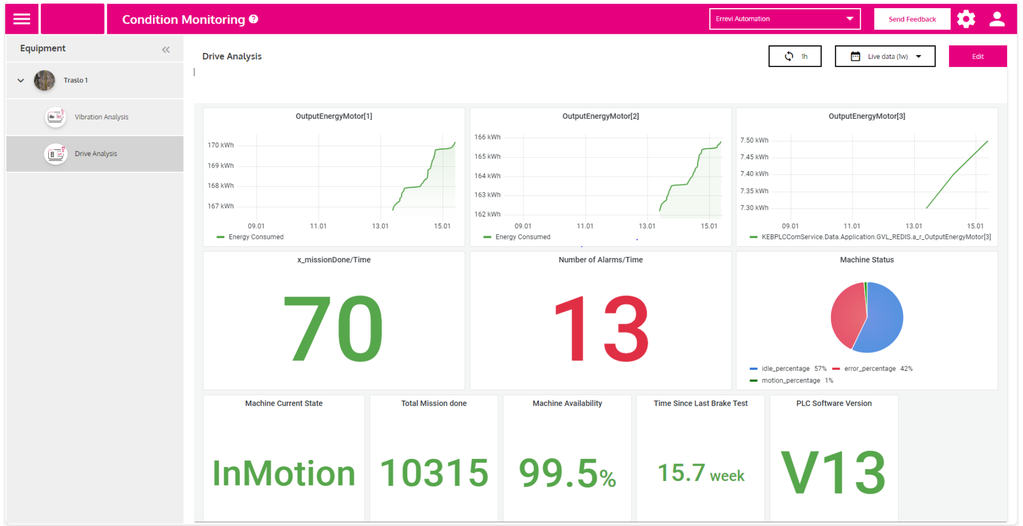
Data from sensors mounted on motors and machine operating data are collected and sent to AI-based software that analyzes and processes them through machine learning algorithms, providing the customer with detailed information about the performance of the machine, energy consumption and component operating status for the management and optimization of operational processes.

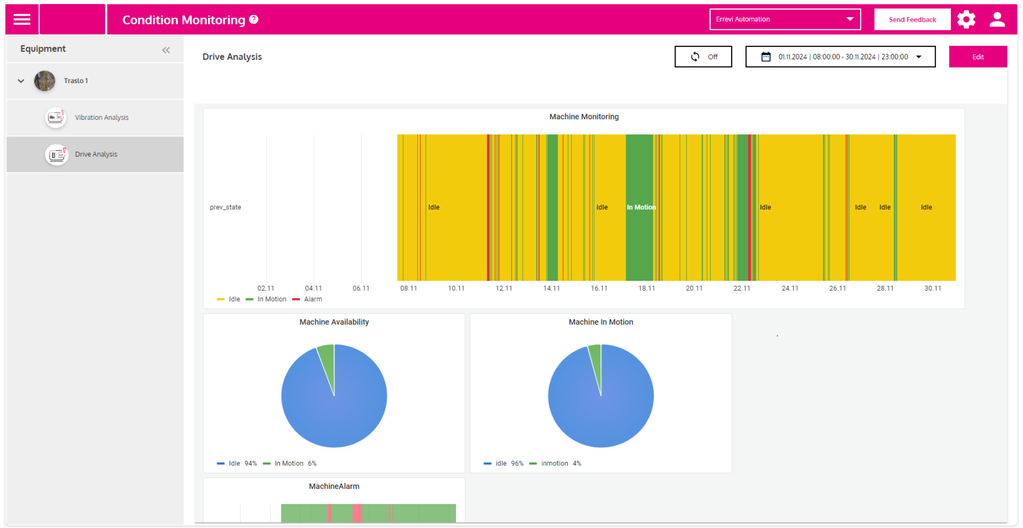
Complete Solution Layout

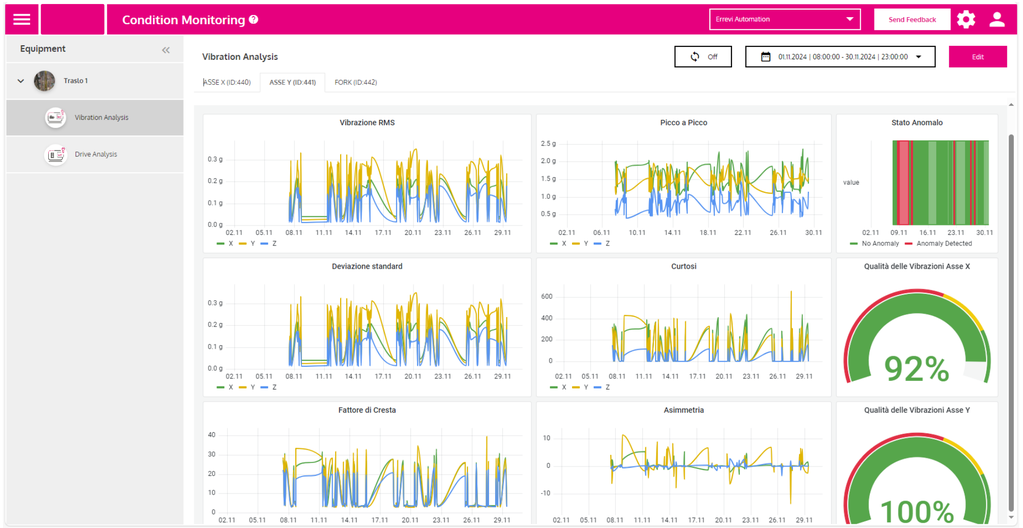


Dashboards


Condition Monitoring
Errevi Automation
Send Feedback
Equipment
Trasio 1
Vibration Analysis
Drive Analysis
Drive Analysis
1h
Live data (1w)
Edit
a_r_distance_km[1]
a_r_distance_km[2]
a_r_distance_km[3]
KEBPLCComService.Data.Application.GVL_Persistent.a_r_distance_km[1]
KEBPLCComService.Data.Application.GVL_Persistent.a_r_distance_km[2]
KEBPLCComService.Data.Application.GVL_Persistent.a_r_distance_km[3]
a_errorID[1]
a_errorID[2]
a_errorID[3]
no exception
no exception
no exception
a_r_ModTimeReadData[1]
a_r_ModTimeReadData[2]
a_r_ModTimeReadData[3]
1.27 week
1.24 week
1.28 week


Condition Monitoring
Errevi Automation
Send Feedback
Equipment
Trasio 1
Vibration Analysis
Drive Analysis
Drive Analysis
1h
Live data (1w)
Edit
OutputEnergyMotor[1]
OutputEnergyMotor[2]
OutputEnergyMotor[3]
Energy Consumed
Energy Consumed
KEBPLCComService.Data.Application.GVL_REDIS.a_r_OutputEnergyMotor[3]
x_missionDone/Time
70
Number of Alarms/Time
13
Machine Status
idle_percentage 57%
error_percentage 42%
motion_percentage 1%
Machine Current State
InMotion
Total Mission done
10315
Machine Availability
99.5%
Time Since Last Brake Test
15.7 week
PLC Software Version
V13


Condition Monitoring
Errevi Automation
Send Feedback
Equipment
Trasio 1
Vibration Analysis
Drive Analysis
Drive Analysis
Off
01.11.2024 | 08:00:00 - 30.11.2024 | 23:00:00
Edit
Machine Monitoring
prev_state
Idle
In Motion
Alarm
Machine Availability
Idle 94%
In Motion 6%
Machine In Motion
idle 96%
inmotion 4%
MachineAlarm


Condition Monitoring
Errevi Automation
Send Feedback
Equipment
Trasio 1
Vibration Analysis
Drive Analysis
Vibration Analysis
Off
01.11.2024 | 08:00:00 - 30.11.2024 | 23:00:00
Edit
ASSE X (ID:440)
ASSE Y (ID:441)
FORK (ID:442)
Vibrazione RMS
Picco a Picco
Stato Anomalo
No Anomaly
Anomaly Detected
Deviazione standard
Curtosi
Qualità delle Vibrazioni Asse X
92%
Fattore di Cresta
Asimmetria
Qualità delle Vibrazioni Asse Y
100%

Advantages:

Open
Flexible
Scalable

OEM

- Machines Performance monitor.
- Monitor and Analyse plant in real time.
- Remote machines connection for easier service organization activities.
- Digital Services sell as «added value» to their customers.
- Competitive advantages in the market against their competitors.

End-User

- Machines Performance monitor.
- Motors (and Drive) predictive maintenance:
  - Avoid unexpected machine stop
  - Maintenance and service cost reduction
  - Machine life-time extended
- Customized Dashboard for machine data analysis and take production decision based on data.

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GRAZIE PER L'ATTENZIONE

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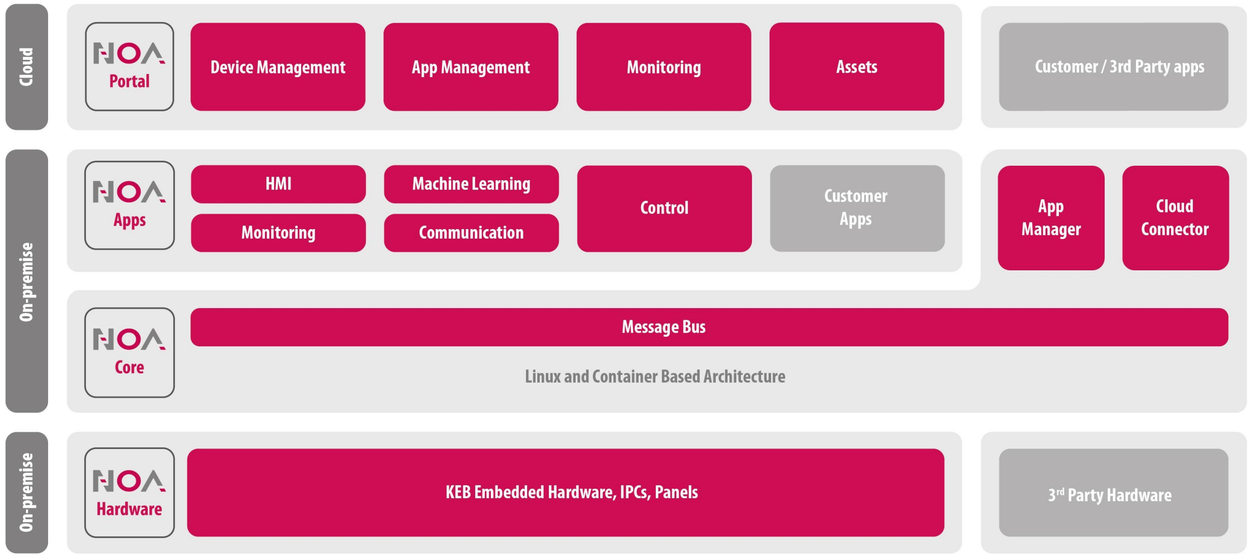
In collaborazione con ORDINE DEGLI INGEGNERI DELLA PROVINCIA DI BRESCIA

Organizzato da messe frankfurt

Reference

NOA Next open automation



Click on th link below to find out more about our new open architecture:

NOA product description

NOA Brochure

Get a Demo

Watch the Video

Click on th link below to find out more about our full solution:
Product Portfolio