



Smart Manufacturing | Using Datonis Leading Global Metal Forging Company Lays The Foundation Of Industry 4.0



Smart Manufacturing



Smart Grid



Smart City



SECTOR

Smart Manufacturing (Industry 4.0)



CUSTOMER PROFILE

A Leading Global Metal Forging Company – A **US \$ 2.5 Billion conglomerate**, head quartered in Pune.

It is a technology driven **global leader** in Metal Forming sector. It has a **transcontinental presence** across nine manufacturing locations, serving several sectors including automotive, power, oil and gas, construction & mining, locomotive, marine and aerospace.



BUSINESS REQUIREMENTS

- Line OEE (Overall Equipment Effectiveness)
- Live Line Status Report
- Statistical Process Control
- Historical Shift production
- Line Utilization Report



THE CHALLENGE

As a part of their Industry 4.0 initiative, the customer wished to improve their products, their business and their overall efficiency using actual production data from their assembly lines. The customer had **multiple assembly lines** with a diverse set of machines, robots and conveyors. They wished to analyse real-time data as well as store the historical data from their lines to identify issues, improve throughput and predict outcomes.

There were several challenges that this vision presented.

- The customer had invested in multiple **SCADA systems** across their lines. Multiple **heterogeneous systems** meant that it was extremely **complex to collect data** across these systems and present a unified view of production and efficiency data. There were islands of data that were not unified.
- The assembly lines consisted of **heterogeneous machines**, a majority of which were not connected. Data for these machines were **manually compiled** resulting in delays and inaccuracies in decision making.
- Connecting additional machines would result in a humongous growth of data. The existing SCADA systems would not scale to this data growth which meant that there were limits to the amount of real-time and historical data that these systems could handle.
- The shop-floor (Operational Data) was **isolated** from the rest of the IT network in the organisation. The existing complex network topology made it a challenge for systems to talk to each other.
- The CXOs and decision makers in the company needed modern Rich Internet Applications that would work from anywhere and on any device. They needed modern and responsive web and mobile applications that would present data to them when they wanted it.



SOLUTION

The customer kick-started their Industry 4.0 initiative by choosing Altizon's IoT Platform – **Datonis™**, the leading enterprise platform for the Internet of Things (IoT). Datonis would act as the **unified platform** for connecting all the machines across all their assembly lines. These machines could send data at the lowest granularity about every aspect of its operation to Datonis. Datonis would process this data in real-time or on a scheduled manner to provide insights into production efficiency and **Overall Equipment Effectiveness (OEE)**. Some direct benefits include:

- Providing **production visibility** and **machine efficiency** across assembly lines allowing decision makers to monitor progress at a plant level and drill down into specific machines whenever needed.
- Complete **historical data is stored** and available for analysis. The customer can go back and analyse historical data going back to several years.
- All machines are connected regardless of the fact that they are heterogeneous which was previously not possible. All **CNC** and **PLC machines** with diverse controllers are now connected. Other machines that affect productivity like robots and testing machines are also connected. The Datonis platform is built on a big-data stack and can easily handle the scale up and the **data diversity challenges** that these machines present.
- Energy consumption metrics are collected at a **machine level** and that information is used to manage energy requirements for current operations and future scale up.
- Datonis is a hosted SaaS platform on the cloud so the **customer can scale up** as per their need. Datonis provides a flexible pricing model which means that the customer **only pays for machines connected**. This provides a lot of flexibility with **no up-front investment** required for the platform. Datonis also provides an uptime SLA so data is always processed and the system is always available.
- Datonis provides **complete integration with modern web and mobile applications** using a comprehensive set of REST APIs. This meant that the customer could inject production data into their ERP systems as well as **build applications** that would present this data in the most suitable manner on any device.



OUTCOMES

Some of the business outcomes of deploying the Datonis platform are.

Centralized Machine Data

All machine data is now collected and available for analysis at a central location.

Real-time and Historical OEE and Production Visibility

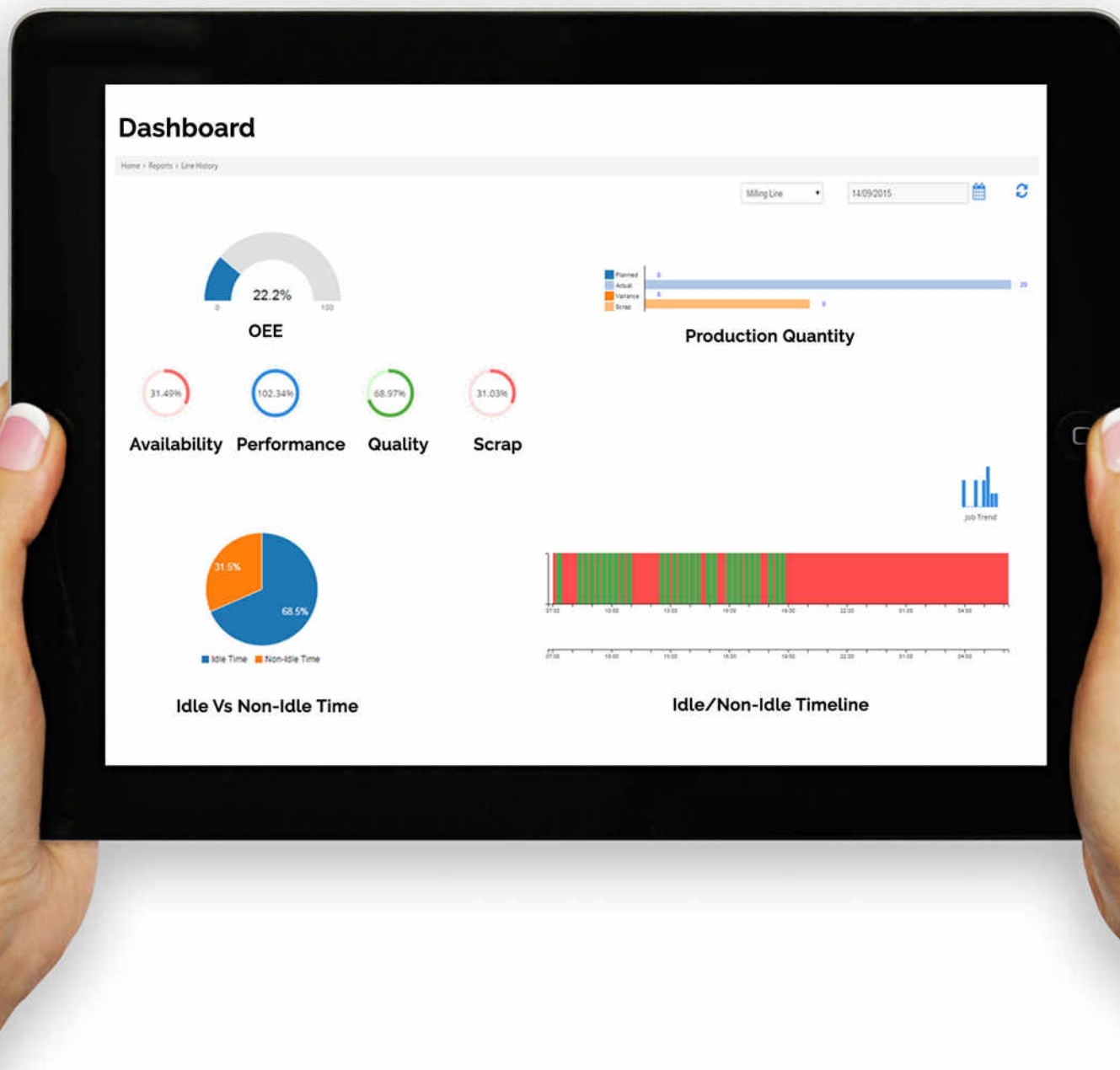
Provided **accurate real-time OEE and production visibility** – which was earlier manually calculated and was inaccurate.

Condition Monitoring

Real time **alerts and notifications** and historical analysis of machine data helped improve real-time condition monitoring of machines and then drive an accurate schedule for **Predictive Maintenance of machines**

On-Demand Machine Data Analysis

Machine data analysis reports are now available anywhere and at any time.



Operational Dashboard



ABOUT ALTIZON

Recognized as **Gartner 2015 Cool Vendor**, Altizon is the **world's first Industrial Internet Platform** company focussed on making Enterprises Internet of Things(IoT) ready.

Our flagship product - the **Datonis IoT Platform**, helps you build your IoT product in weeks by providing device connectivity kits, a device management layer, a highly-scalable, real-time, big-data analytics engine and alerting and monitoring services.

Datonis easily integrates with your existing IT systems to provide a seamless transition between your IoT devices and your IT infrastructure management tools. Datonis is available both in a SaaS as well as in a Hosted model.

We help you build your smart connected devices with the

- **Most Comprehensive Support for Industry 4.0**
- **Industry leading Stream Analytics and Event Rule Engines**
- **Best DIY Enterprise Dashboards**
- **Go Mobile, Go Cloud solutions**
- **Enterprise grade Scalability and Security**

CONNECT EVERYTHING



Connect Seamlessly
Collect & Transfer Data Securely
Manage Devices

OWN YOUR DATA



Create visualizations
Build applications using API'S
LOB Integration

PROCESS EVERYTHING



Define structure
Get insights
Generate alerts & notifications
Store data securely

DEPLOY ANYWHERE



SaaS model
Cloud hosting & support
Private cloud/On-premise



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