

# Real-time Manufacturing Insights (RMI) solution

Transforming real-time operational visibility  
through AI-driven innovation





# Overview

For manufacturers, unplanned downtime represents a significant challenge, resulting in reduced efficiency, increased costs, and overall productivity losses. Additionally, a major asset often remains underutilized: data. Manufacturing organizations generate vast amounts of data from equipment, machines and sensors, and leveraging this data can unlock unprecedented opportunities for innovation.

The manufacturing industry is experiencing a swift transformation in its competitive landscape. To drive operational efficiency, enhance productivity, and foster innovation, manufacturers are turning to advanced solutions such as AI. Embracing this shift is essential for organizations to build resilience and ensure their operations are future-proof.

## Our Solution

**HCLTech Real-time Manufacturing Insights (RMI) solution** is an advanced AI-powered predictive analytics solution that empowers manufacturing organizations to leverage their data for actionable insights. By utilizing state-of-the-art AI and machine learning models, RMI delivers real-time visibility into every aspect of the manufacturing process.

Using GenAI and predictive maintenance capabilities, RMI not only forecasts equipment failures but also provides comprehensive reports on asset utilization, enhances quality control and offers actionable recommendations on top, all through a single, user-friendly dashboard. This helps the important stakeholders in making the right decisions at the right time.



## Awards and Recognitions



**AI Breakthrough Award 2024**  
Best Predictive Analytics Solution of the Year



**IoT Breakthrough Award 2024**  
IoT Analytics Solution of the Year



**IoT Evolution Award 2023**  
IoT Excellence Award

## Features



### Predictive maintenance

RMI solution uses AI-powered predictive maintenance algorithms to analyze and provide insights using data from IoT sensors to anticipate equipment failures and asset health.



### ChatBots using GenAI

RMI leverages conversational AI and Large Language Models (LLMs) to enable users with critical information and automate trend generation and summarization for deep dive analysis. It also helps users navigate issues through human-like conversations via ChatBots for information like top alarms, asset health, performance metrics etc., in real-time.



### Sustainable practices

RMI provides AI-driven optimization on energy consumption analysis and reporting, resource utilization, benchmarking and scrap loss reduction promoting sustainable manufacturing.



### Quality control

Using AI-enabled vision analytics and anomaly detection, RMI provides quality controls, ensuring not only better output but also minimizing waste in the manufacturing line.



### Plant management

RMI proactively accesses the key KPIs and performance metrics of the plant and assets for shop floor to top floor visibility. This enables appropriate and better decision making for the users.

## Key benefits

RMI solution is backed by strong data science engineering expertise and proven experience of supercharging progress for G2000 customers globally. It helps organizations to:



**17%-20%**  
Reduction in  
maintenance  
costs



**25%-30%**  
Reduction in  
unplanned  
downtimes



**10%-15%**  
Increase in  
asset utilization



**3%-5%**  
Increase in  
productivity



**Upto 3%-5%**  
Reduction in  
scrap losses



**7%-10%**  
increase in  
production quality

# Case Study



## Industrial AI solution boosts lumber giant's production performance

### The objective

- Achieve streamlined and efficient operations across the entire manufacturing value chain, encompassing 20 sites and three critical operation assets
- Enhance the manufacturing process to minimize downtime and ensure seamless transitions between operations, even within tight tolerances
- Increase production run-rate and ensure the manufacturing process operates at peak efficiency
- Reduce unplanned downtimes and boost overall production uptime from 70% to 80%
- Leverage Industrial AI to gain real-time visibility into productivity KPIs

### The solution

HCLTech addressed the manufacturing optimization challenge through the deployment of its AI-led advanced analytics solution, Real-time Manufacturing Insights (RMI). Leveraging the capabilities of AI, Edge AI and Gen AI, RMI facilitated actionable intelligence delivery directly to the production floor, thereby transforming the manufacturing landscape across the client's extensive network.

### The impact

Increased production uptime from **70% to 80%**

30-minute advance asset failure warning

Reduced unplanned downtime for operations and cost savings of **~30%**

Improved mill productivity by **10%**



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