

Real-time Manufacturing Insights solution (RMI)

Real time operational visibility from
shop-floor to top-floor



Overview

Today, most manufacturers have already made the most obvious changes to streamline their operations, using traditional methods to eke as much productivity out of their supply chains and plants as possible. Now, companies must look for new ways to boost the productivity and profitability of their operations.

There's one significant asset that manufacturers have not yet optimized: their own data. Process industries generate enormous volumes of data, but many have failed to make use of this mountain of potential intelligence. With computational power and rapidly advancing analytics opportunities, process manufacturers can put that data to work, gathering information from multiple data sources and taking advantage of machine learning models and visualization platforms to uncover new ways to optimize their processes from the sourcing of raw materials to the sale of their finished products.

Source – Mckinsey and Co. – Manufacturing: Analytics unleashes productivity and profitability

About our solution

HCL Tech's Real-time Manufacturing Insights (RMI) solution helps organizations gain visibility into their entire manufacturing setup. It works along with the system present within the plant such as MES, SCADA etc. and provides predictive and prescriptive maintenance capabilities. It improves production agility, manages cost and ensures production quality. The solution delivers –

- **A top floor to shop floor** integrated view of the entire manufacturing process
- **Action-driven** manufacturing analytics and recommended actions
- **Real-time** operational visibility of Man machine material method environment (4M&1E)
- Seamless integration with more than **100+ industrial** protocols support



Key features



Easy configuration of plant hierarchy

Dynamic visualization of new lines and assets, production target settings via user-friendly interfaces



Enterprise view on a single dashboard

Features to monitor plant performance, across regions



Alert Management

Threshold configuration of KPI alerts and sending the alerts via email.SMS. application,etc.



Manufacturing Analytics Insights

Real time KPI Dashboards. Asset Health Monitoring, Line Analytics. Quality Analytics, and Trend Analysis



Predictive and prescriptive analytics

Provide recommended actions - on top of data - to improve manufacturing productivity



Role based Visualization

Real-time visibility of the entire manufacturing operations based on the user's role



Reports

To get detailed insights that include asset utilization, downtime, scrap losses, and stoppages



Shift Management

Option to configure the shifts in manufacturing facility (time, resource, and product configuration, etc.)



User Defined KPIs

Monitor the KPIs that you care about including secondary KPIs apart from the standard OEE and Quality KPIs



Integration with external data sources

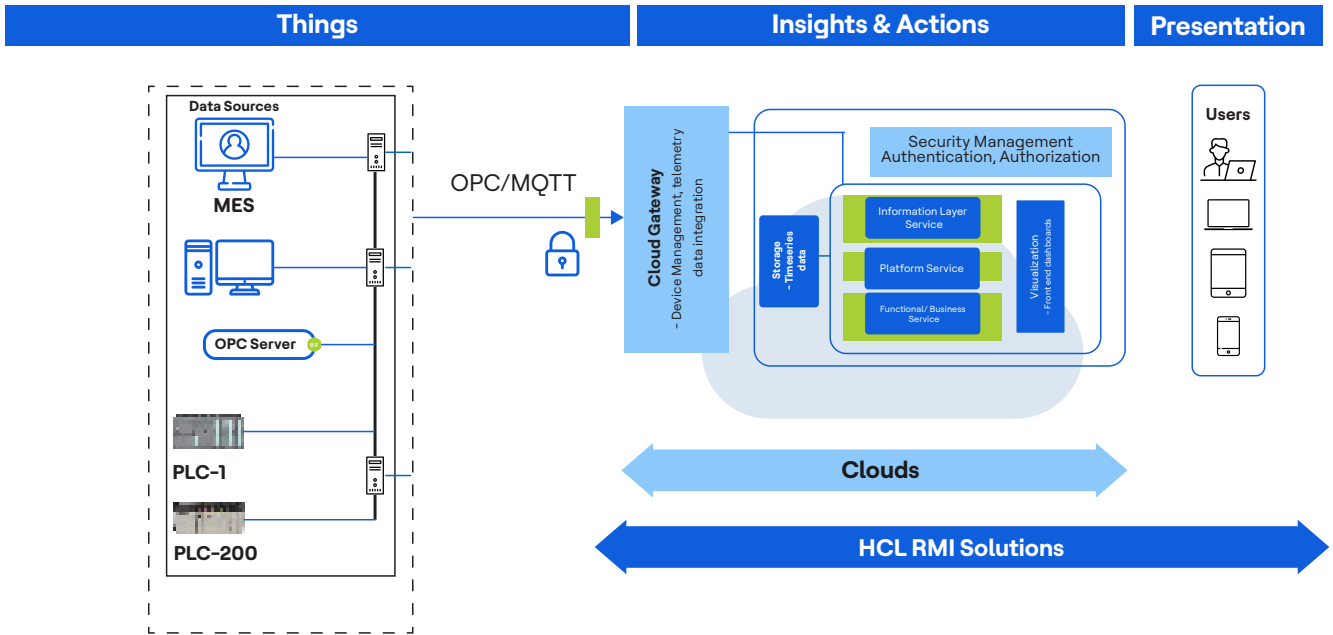
Integration with different data sources (equipment, PLC, MES, etc.) using industrial gateways



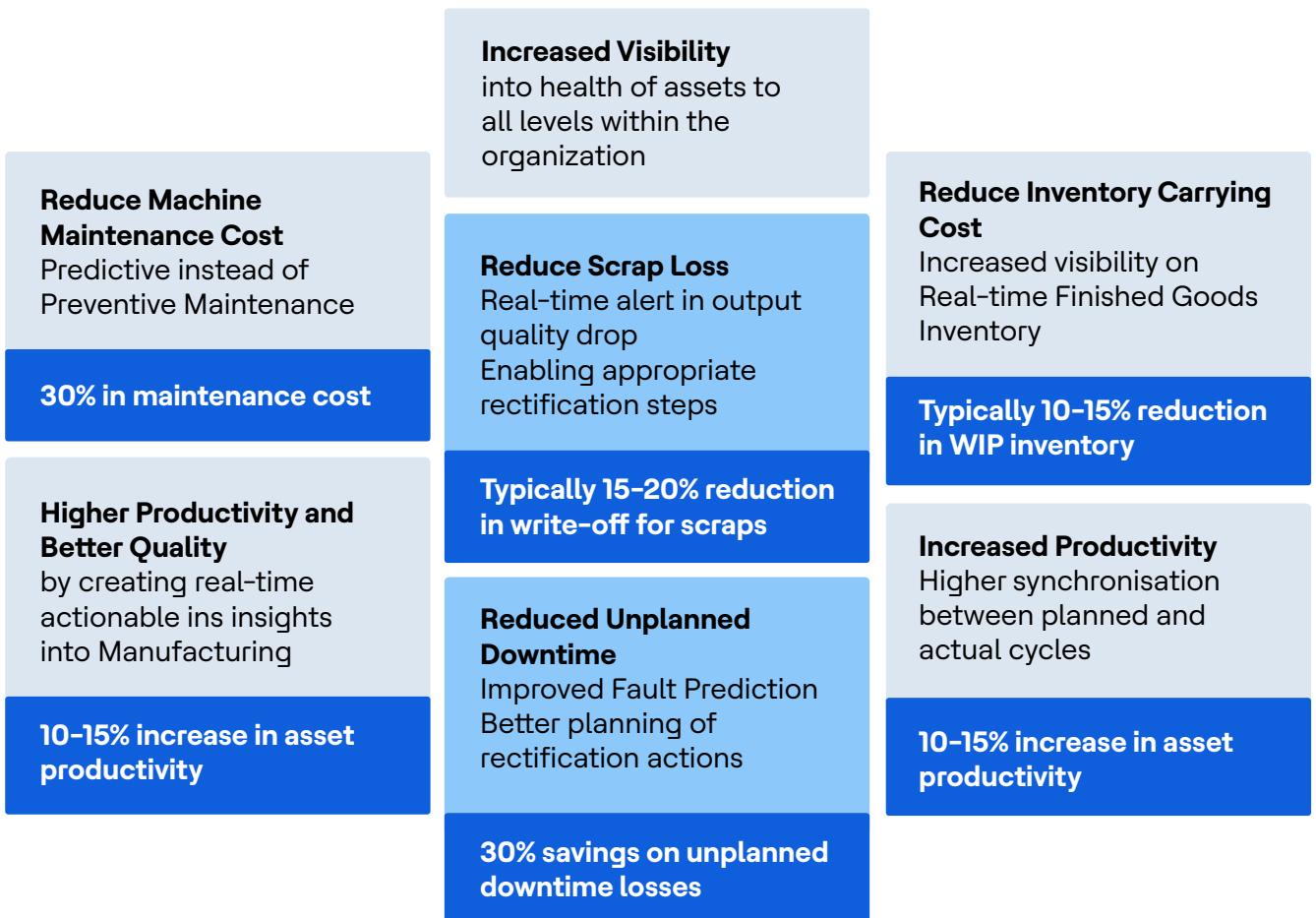
Compatible with existing systems and assets

RMI works in conjunction with MES/MOM or any industrial solution like SCADA, HMI etc. Each RMI service can independently engage with exiting industry solution or asset landscape and help customers overcome the changes, fill the gap and build a robust digital manufacturing setup. It integrates seamlessly with various ISA95 stack industry applications and its functional modules, aggregate the man, machine, material & environment data in a very efficient manner with ability of various protocols and communication method.

Solution architecture



Key benefits



Use cases

1 RMI helps automotive manufacturer increase production uptime by 12%

The situation

- A major automotive manufacturer lacked timely insight into the operations of business-critical equipment, leading to machinery breakdowns and unplanned production downtime.
- Moreover, equipment micro-stoppages were hampering the manufacturer's day-to-day operations, adversely affecting the company's profitability.

The solution

- Thanks to RMI, the plant management team now has dedicated dashboards showing real time performance of business-critical assets.
- These dashboards use RMI's predictive and prescriptive analytics capabilities to display equipment issues and the reasons for stoppages, as well as comments entered by operators.
- In addition, RMI's analytics models predict future equipment failures, enabling the plant management team to maintain equipment well in advance of a breakdown.

The results

- Boosted production uptime by 12%
- Increased asset performance from 94% to 95%



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Medical equipment manufacturer boosts OEE to 72% using RMI

The situation

- Without real-time visibility into its operations, a major medical equipment manufacturer faced difficult production hurdles that were holding back the business.
- The lack of availability of production-critical machinery hampered day-to-day operations. Unplanned maintenance was causing costs to soar. And untimely OEE data made it difficult to improve manufacturing productivity.
- All of these problems were taking a direct toll on the company's profits.

The solution

- By implementing RMI, the medical equipment manufacturer now has access to important KPIs such as OEE, equipment availability, and shift production rate—enabling managers to make the quick adjustments needed to optimize production and reduce costs.
- Moreover, RMI's predictive and prescriptive analytics capabilities make it easier to predict the failure of business-critical equipment and take the necessary steps to prevent failures and unplanned downtime.

The results

- Increased OEE from 65% to 72% Reduced maintenance and service costs from 10% to 6% Boosted asset availability from 71% to 78%
- Increased asset performance from 92% to 93%



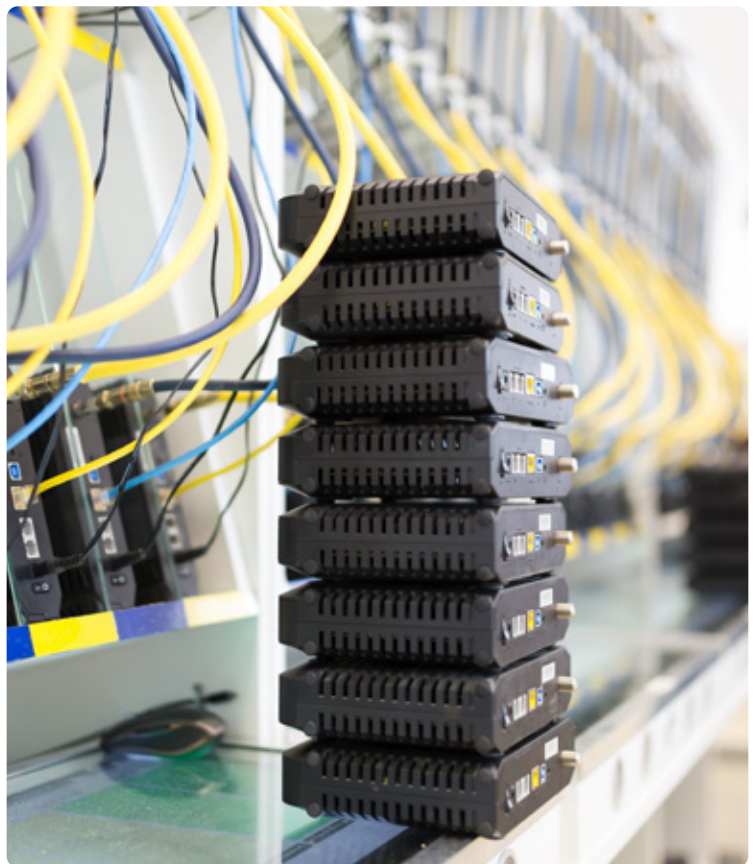
About us

IoT WoRKS™ at HCL Technologies

IoT WoRKS™ is a dedicated IoT business unit of HCLTech. Our award winning, best-in-class, customer and industry specific, deployment ready solutions co-created with customers, enable them to maximize effectiveness and returns on their asset investments. Rated as a global leader in IoT consulting & services by top analysts, our solutions, enable IoT-led business transformation through creation of more efficient business processes, new revenue streams and business models that deliver measurable business outcomes. At HCLTech we believe that the transformative impact of IoT is realized by IoTizing the 'things', connecting the assets to a data platform and then using the data to derive business insights and taking business decisions which ultimately lead to change in enterprise's processes and people practices.

HCLTech

HCLTech is a next-generation global technology company that helps enterprises reimagine their businesses for the digital age. Our technology products and services are built on four decades of innovation, with a world-renowned management philosophy, a strong culture of invention and risk-taking, and a relentless focus on customer relationships. HCLTech also takes pride in its many diversity, social responsibility, sustainability, and education initiatives. Through its worldwide network of R&D facilities and co-innovation labs, global delivery capabilities, and over 211,000 'Ideapreneurs' across 52 countries, HCLTech delivers holistic services across industry verticals to leading enterprises, including 250 of the Fortune 500 and 650 of the Global 2000.



HCLTech | Supercharging Progress™

HCLTech is a global technology company, home to 219,000+ people across 54 countries, delivering industry-leading capabilities centered around digital, engineering and cloud, powered by a broad portfolio of technology services and products. We work with clients across all major verticals, providing industry solutions for Financial Services, Manufacturing, Life Sciences and Healthcare, Technology and Services, Telecom and Media, Retail and CPG, and Public Services. Consolidated revenues as of 12 months ending September 2022 totaled \$12.1 billion. To learn how we can supercharge progress for you, visit hcltech.com.

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