

CASE STUDY

Steel Rolling Mill Monitoring and Data Analytics



A major steel company faced significant challenges in acquiring reliable data due to a legacy data acquisition system. This led to ambiguous insights and poor decision-making. SpringCT partnered with the client to enhance their industrial IoT (IIoT) capabilities and deliver a robust, scalable analytics and monitoring platform.

The client's existing data acquisition system was outdated and unreliable, leading to frequent inaccuracies in the collected data. As a result, the insights generated were often ambiguous or misleading, making it difficult for decision-makers to trust or act on the information. The lack of modern infrastructure also posed challenges in scaling the system and integrating data from various sources across multiple steel mills.

SpringCT helped the client enhance their existing IIoT application built using the open-source ThingsBoard platform. The solution enabled seamless data acquisition from various sensors and PLCs using OPC DA/UA and Modbus protocols, and real-time transmission to the cloud using MQTT. The enhanced platform included advanced data processing capabilities for better monitoring, analytics, and actionable insights.

Results

Improved data accuracy and integrity across steel mills, enabled real-time operational monitoring and visibility, reduced downtime through timely alerts and anomaly detection, provided actionable insights resulting in better decision-making, and enhanced scalability for monitoring additional units with ease.

Conclusion

By modernizing the IIoT infrastructure and implementing a scalable data acquisition and analytics solution, SpringCT helped the steel rolling mill gain accurate, real-time visibility into their day-to-day operations. This led to improved efficiency, reduced downtime, and smarter, data-driven decisions.