

USE CASE

How a global medical device manufacturer accelerated a new product launch to 80% uptime and near-zero scrap.

Background:

A leading global medical device manufacturer was introducing a new product that necessitated the development of a highly automated production line. This line, designed as a discrete manufacturing process, incorporated advanced automation technologies and complex system integrations.

During the initial equipment qualification and run-off phase, the team encountered several challenges, including inconsistent production throughput driven by recurring equipment faults and an elevated rate of quality rejects.



The line's OEE was just 30–40%.

As a result, the line's Overall Equipment Effectiveness (OEE) was limited to the 30–40% range, highlighting significant opportunities for performance optimization and process stabilization.

The customer's traditional systems (SCADA) collected critical data points. They were siloed and required additional effort and analysis to translate them into meaningful and actionable information.



Lack of real time intelligence hampered them to take quick decisive actions. The team was confronted with a pivotal decision:

Take a conventional path - restart production with a simplified manufacturing line and minimal automation, sacrificing advanced insights for immediate stability.

Embrace a transformative approach - leverage **Industry 5.0 technologies** and adopt a **data-driven** strategy to gain a deep understanding of both equipment behavior and process dynamics. This approach would enable systematic **root cause analysis**, issue prioritization, and sustainable quality improvements, ultimately driving consistent throughput to meet customer demand.



The INTELYCX value proposition

When the customer engaged with INTELYCX, the joint teams collaborated to rapidly identify and address production challenges affecting a new product launch.

The decision was made to integrate the manufacturing equipment with the INTELYCX Platform, enabling seamless data streaming from all critical assets.

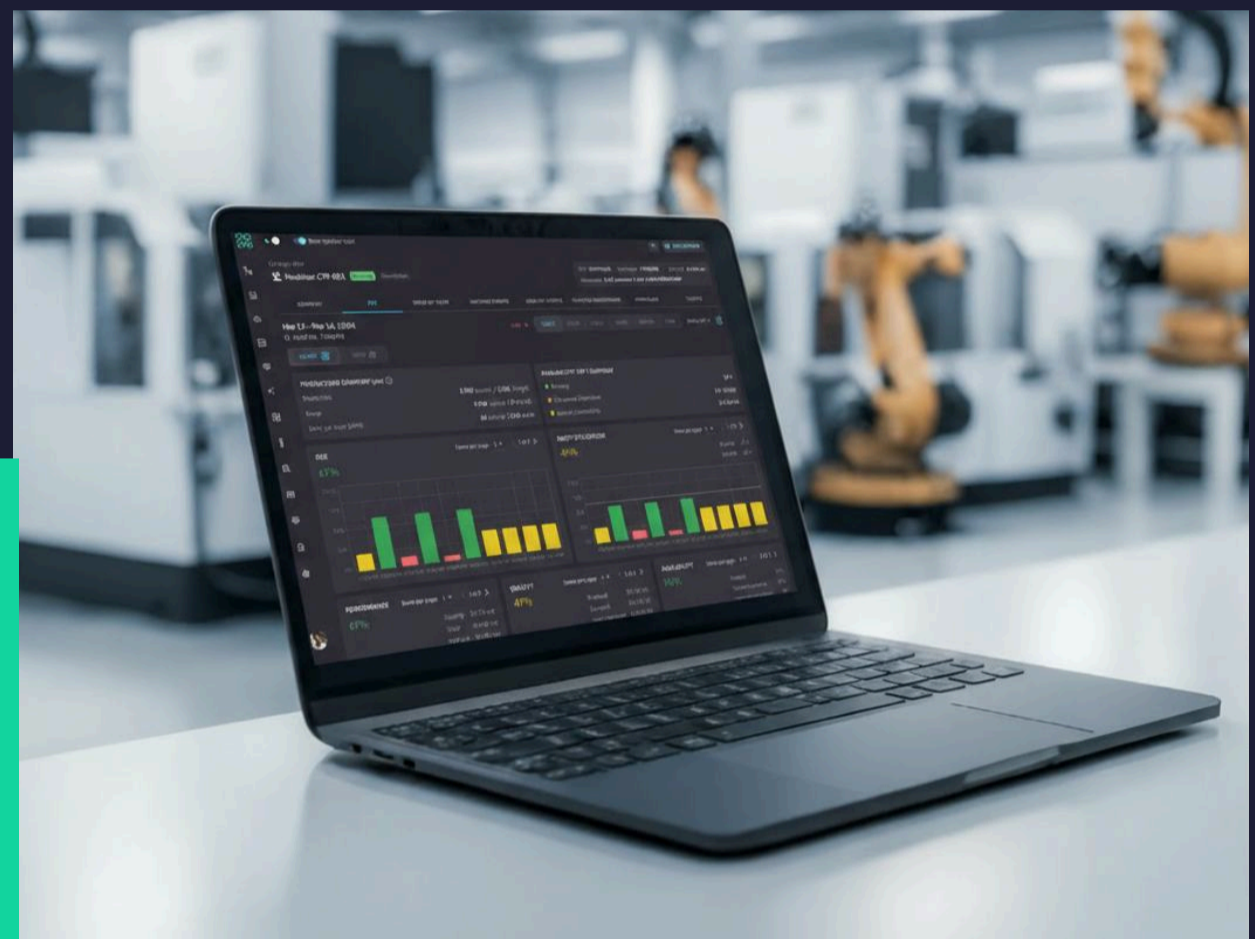
This included real-time collection of **key performance indicators (KPIs)** such as **OEE**, as well as granular equipment fault data, quality inspection data, sensor telemetry, and peripheral hardware signals.

By leveraging this comprehensive dataset, the team performed in-depth cause-and-effect analyses to understand the underlying drivers of performance variability.

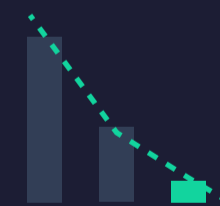
To enable this, gateway devices were deployed to interface with the equipment's PLCs, ensuring secure and continuous data transmission to the INTELYCX Cloud Platform. The platform's high-throughput data architecture efficiently ingested and processed the large volumes of streaming data in real time.

Advanced Statistical Process Control (SPC) algorithms were applied to identify process trends, correlations, and anomalies. These insights empowered the launch team to conduct meaningful root-cause analyses, uncovering key sources of process instability and quality losses.

Based on these findings, the team prioritized and executed targeted engineering changes to the manufacturing line, implementing permanent corrective actions that addressed chronic performance issues.



Throughout the remediation phase, every engineering change was validated using real-time data and analytics from the INTELYCX Platform. This data-driven feedback loop served as the guiding compass for continuous improvement, ensuring that each intervention delivered measurable impact.



Scrap rate dropped from 30% to below 1%.

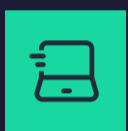
Within a few months, the collaboration transformed the line's performance. The scrap rate was reduced from over 30% to under 1%, and uptime improved from the low 40s to more than 80%. This resulted in resolving persistent technical issues, stabilizing throughput, and positioning the team for a successful commercial launch.



Institutionalizing knowledge and future readiness



Building on this success, the customer and the INTELYCX team are now working to institutionalize operational knowledge by integrating the lessons learned into ARIS, INTELYCX's Generative AI-powered knowledge assistant.



By digitizing and embedding SOPs, work instructions, equipment troubleshooting guides, and operator logs, ARIS will serve as an intelligent repository to train operators, assist technicians in real time, and sustain long-term equipment performance.

What we thought would take months or even years was accomplished in just a few weeks through our partnership with INTELYCX. It has truly become our north star as we advance our Industry 5.0 journey.



Intelycx customer leader

Conclusion

Through a data-driven, collaborative, and agile approach, INTELYCX delivered a transformative solution that enabled the customer to overcome major new product launch hurdles in a fraction of the expected time.

