How An Extrusion Manufacturer Reduced Material Costs By 5%

By Decreasing Variability In Production Processes

Unable To Find Root Cause Of Quality Failure

An extrusion manufacturer was experiencing defects during one of its production processes, specifically, the shaping of molten plastics. Operators were unable to monitor the precise diameter, leading to significant variability across the production line.

Manual monitoring of production lines and a lack of contextualized data resulted in the operator's inability to find the root cause of multiple quality failures. This resulted in:

01	A decrease in customer satisfaction
02	Clients seeking new suppliers to address quality issues
03	A high cost for reproducing runs
04	Increase in scrap rates of the faulty product

These challenges had a significant impact on revenue and stakeholders knew they had to find a solution.





Limitations Of Manufacturer's Current Technology

The manufacturer had made large technology investments, but still had limited access to the types of data needed to find the root cause of the failure. Operators were limited to real-time data and short-term historical information directly collected at each specific unit.

Financially, uninstalling old technology and investing in new technology was not an option. They needed a solution that could easily integrate and work with the existing equipment on the factory floor, without disrupting production.

> When you have a number of devices and systems already installed, the last thing you want to do is start over and reinstall a whole new fleet of devices. We were dealing with systems that don't naturally or natively connect to one another. This disparate nature makes it difficult to **bridge that gap between current technology and the technology that allows you to create wire and work with data.**

Process Engineer, Extrusion Manufacturer

Connecting Equipment To Drive Actionable Insights

The company partnered with Oden Technologies to bridge the gap between current technology and newer technology that empowers operators and engineers to acquire quality data. Engineers can now quickly aggregate and analyze production data from every machine on the factory floor.





Connecting all of the assets on the factory floor gave engineers a high-level view and explanation for every process. Defined relationships between variables, like a temperature's effect on output, allowed for the troubleshooting and optimization of processes.



PREDICTIVE ANALYTICS

Oden's platform was able to determine historical trends and patterns that had resulted in quality failures. Alerts notified teams if machines were operating outside of their optimal thresholds, so they could intervene before the failure occurred.



By creating a network of connections between the existing assets on the factory floor, engineers now had actionable, data-supported insights. The manufacturer now receives a daily summary reporting the performance of the diameter against targeted specifications for every product run.

Solving Core Pain Points With Guided Analytics

Continuous monitoring and reporting of process data allowed operators to pinpoint the root cause of the quality failure: the temperature at which plastic was manipulated to create the wire sheathing was set too high. Once the error was determined, the specification was updated and the root cause was eliminated. The manufacturer was also able to quarantine the product that had defects, removing the defective segments before shipping to a customer.





Guided Analytics Create Opportunities To Scale

By eliminating process variability and automating insights, the extrusion manufacturer solved their immediate pain point: quality defects. Predictive alerts allowed teams to proactively prevent future failures from occurring. Time-to-resolution for defects increased by 90%. Annual material costs decreased by 5%.

> We have to address the machine-related issue. I'm aware of what the problems are in a matter of days, rather than a matter of weeks or months. It makes a huge difference in terms of being able to manage a multitude of problems as well as making a difference for that specific issue.

Process Engineer, Extrusion Manufacturer

5%

5% reduction in annual material costs

The partnership with Oden Technologies positioned the manufacturer to scale their digital transformation efforts. With a highlevel understanding of the relationships and behaviors on the factory floor, engineers can now focus on value-add actions that enable them to manufacture better.

MAKE MORE. WASTE LESS. INNOVATE FASTER.

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