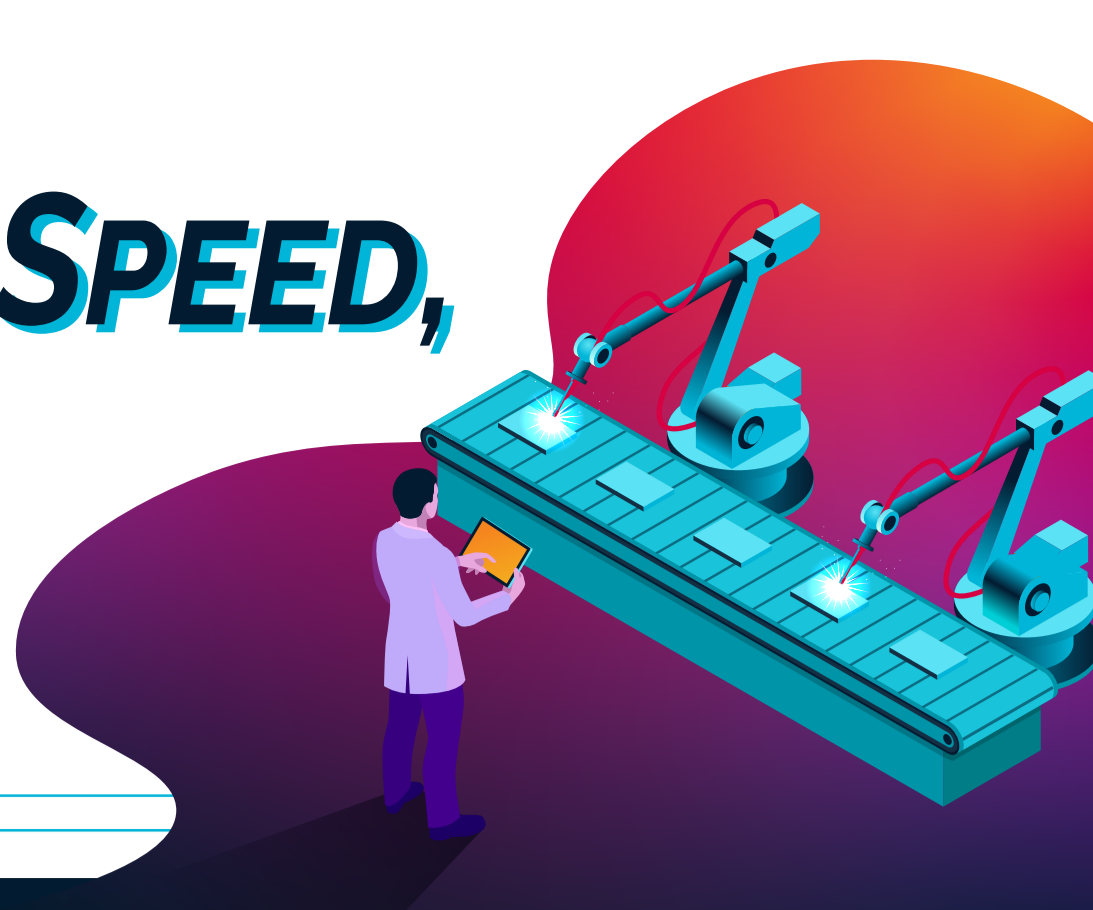


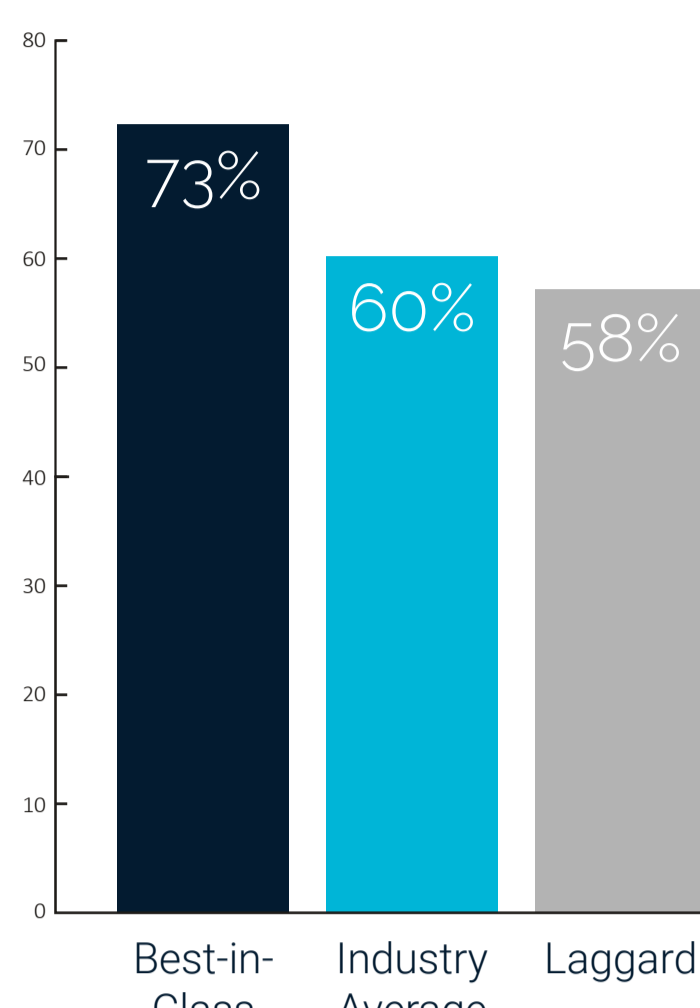
IMPROVED QUALITY, SPEED, AND SAFETY ON THE FACTORY FLOOR



How IoT-Enabled Processes are Optimizing Manufacturing

Process quality is be top-of-mind for manufacturers as they attempt to keep up with the increasing pace of innovation in today's business environment. Best-in-Class companies are investing in technology solutions, including the Internet of Things (IoT), to support innovation and optimization throughout manufacturing operations. The comprehensive data collection and analysis methods available with IoT provides insights into operational performance and enables strategic, data-driven decisions in the factory.

Implementation of the Internet of Things (IoT) in the manufacturing environment:

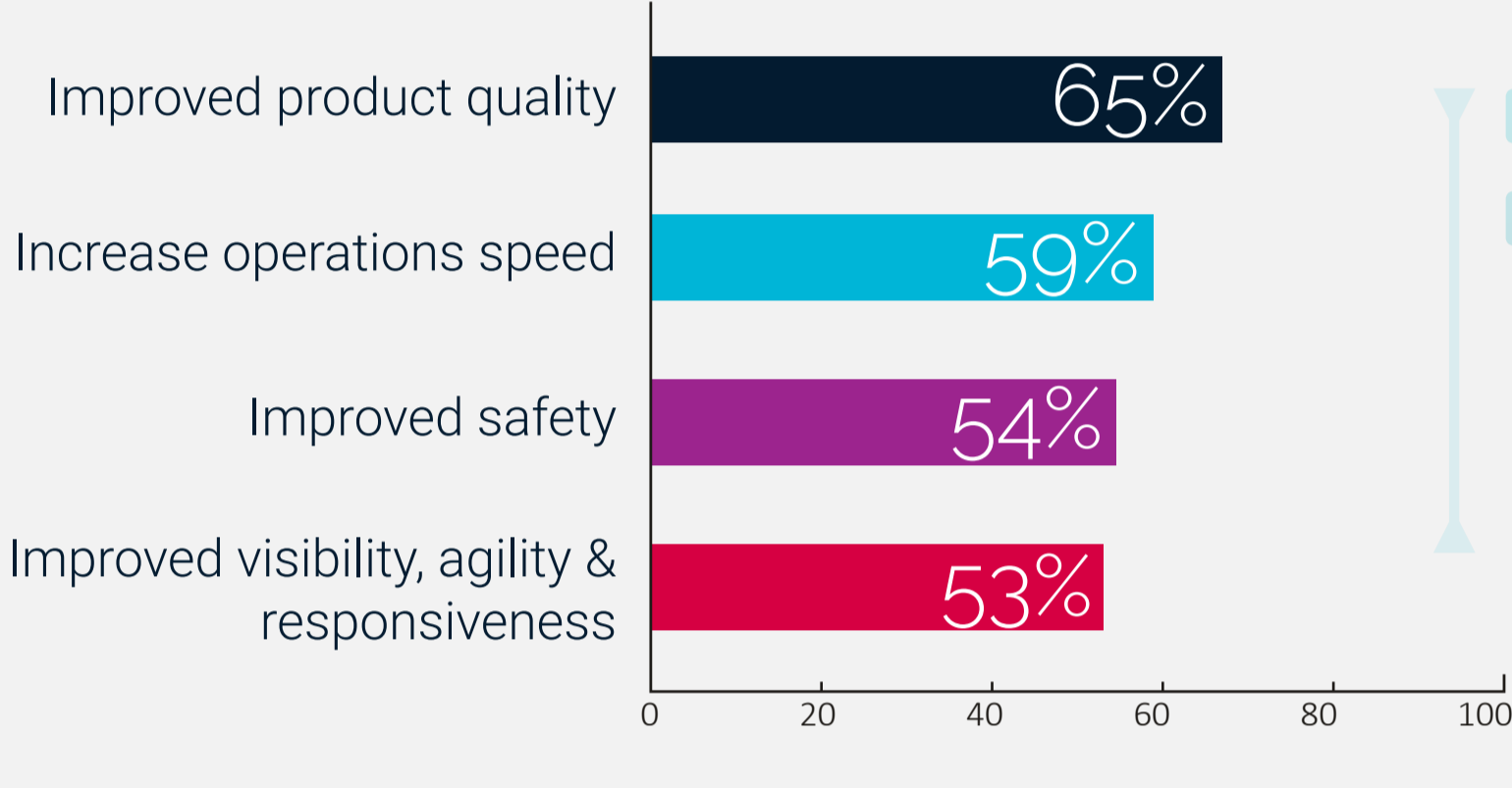


BENEFITS OF IOT IN MANUFACTURING

The multitude of real-time data gathered from IoT-enabled devices can be difficult to interpret and put into action, but organizations are currently utilizing this data in a variety of ways in the manufacturing environment. With greater visibility, plant managers can build comprehensive models of the factory floor and determine the most efficient process for optimizing equipment utilization, which translates to improved operations speed, safety, and product quality.



Benefits of Leveraging IoT in the Manufacturing Environment



n = 403, Source: Aberdeen, November 2020

IMPROVEMENTS IN PROCESS EFFICIENCY

Companies utilizing IoT data are seeing higher performance rates in metrics related to process productivity and efficiency than companies that do not. This shows how the strategic management of staff and resources as well as real-time alerts to help factory workers quickly address issues can reduce machine downtime and increase OEE.



Manufacturing Metric	Companies Leveraging IoT Data	Others
Percent of complete and on-time shipments	71.6%	66.1%
Overall equipment effectiveness	72.7%	66.8%
Capacity utilization	72.5%	68.8%
Raw material utilization	73.3%	70.0%

Average current performance, n=403, Source: Aberdeen, December 2020

PROCESS EFFICIENCY IMPROVES PRODUCT TARGET ACHIEVEMENT

Greater process productivity, quality, and performance all impact how likely products are to meet targets at design release. Thus, companies leveraging IoT are more likely to have products that achieve launch dates, cost targets, and quality targets.

Product Target	Companies Leveraging IoT Data	Others
Product launch dates	71.1%	67.2%
Product cost targets	70.3%	66.9%
Quality targets at design release	72.0%	68.8%
Product revenue targets	71.9%	70.1%

Average percent of products meeting each target at design release, n=403, Source: Aberdeen, December 2020

CONCLUSION

IoT solutions enable manufacturers to monitor process efficiency and identify areas for improvement in the factory. Visibility into these connected processes allows decision-makers to leverage granular data to identify and fix inefficiencies to save time and money as well as improve process quality. Greater process efficiency helps manufacturers deliver products on-time and on-budget, which ultimately improves relationships with distributors, customers, and the wider community.

Click here to learn how connected processes, when working together with connected people and products, drives seamless manufacturing operations:



Learn about PTC's IoT Solutions:

