

# Automated Machine Learning and Manufacturing



Manufacturing is a hotbed of AI innovation, from R&D to real-time production applications. With the growing variety of data, enabled by IoT integrations and smart products, it's paramount to maintain scalability and accuracy of generated predictions. Check out these manufacturing use cases of automated machine learning that improve R&D efforts, production analytics, and operational performance.



## 1. IMPROVE PRODUCTION



### Refine Root Cause Analysis (RCA)

**97%** Potential time savings for root cause analysis augmented by machine learning.



### Improve Production Defect Detection

**50%** The potential productivity increase for QA processes that implement AI.



### Streamline Predictive Maintenance

**20%** The potential cost savings associated with decreased maintenance downtimes.



### Improve Manufacturing Yield

**20%** The potential savings in material costs due to improved production yield analytics.

## 2. STREAMLINE R&D



### Optimize Product Design

**\$340 MILLION** **200x**

Planned budget for AI-enabled R&D at Foxconn over the next five years. Speed improvement for the development of new metal-glass hybrids, enabled by the use of AI.



### Improve Testing

**10%** Potential reduction in costs and time-to-market for manufacturers implementing AI.

## 3. ADVANCING SALES & MARKETING



### Sales Forecasting

**65%** Potential reduction in lost sales through optimized supply chain forecasting.



### Lead Scoring

**72%** Percentage of high performing marketing teams using AI for product recommendations and predictive lead scoring.

## 4. THE IMPACT DOESN'T STOP THERE

Other specific use cases include:



Predict out-of-range environmental factors



Smart products: embed machine learning to enable data-driven features



Improve production level analytics



Improve marketing attribution



Transform supply chain analysis



Improve classification of sensor values



Optimize and fine-tune equipment performance



LEARN MORE ABOUT AUTOMATED MACHINE LEARNING AND WHAT IT CAN DO FOR YOUR MANUFACTURING COMPANY

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### Sources

<https://www.mckinsey.com/~/media/McKinsey/Industries/Semiconductors/Our%20Insights/Smartening%20up%20with%20artificial%20intelligence/Smartening-up-with-artificial-intelligence.aspx>  
<https://www2.deloitte.com/us/en/pages/manufacturing/articles/advanced-manufacturing-technologies-report.html?id=us:2em:3na:tech:eng:pip:040918&sfid=0031400002MSQMRAA5>  
<https://www.siriusdecisions.com/blog/thedefinitivewaytomeasureandgradesalesforecastaccuracy>  
<https://www.mckinsey.com/business-functions/operations/our-insights/how-big-data-can-improve-manufacturing>  
<https://www.ptc.com/en/product-lifecycle-report/iot-slashes-downtime-with-predictive-maintenance>  
[https://www.huffingtonpost.com/entry/2017-state-of-marketing-ai-is-highest-tech-investment\\_us\\_593eea47e4b014ae8c69e2fd](https://www.huffingtonpost.com/entry/2017-state-of-marketing-ai-is-highest-tech-investment_us_593eea47e4b014ae8c69e2fd)