Digital Transformation in the Manufacturing Industry

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Executive Summary

Digital transformation will enable manufacturers to more easily adapt to changing business requirements. Manufacturers are escalating their access to modern IT resources and digital technologies, and they must identify the partners that can help them transform more quickly.

Information is an increasingly valuable asset for manufacturers’ growing number of knowledge workers.

Cloud and cybersecurity investments will help manufacturers to increase safe and secure access to IT resources.

Manufacturers are using big data analytics and business intelligence to drive insights throughout their businesses.
The World of Manufacturing Is Changing

Today’s business challenges

» Global competition
» Enterprise quality
» Customer service
» Product-enabled services
» Complex supply networks
» Connected products
» New markets
» Regulatory compliance and sustainability
» Cybersecurity and safety
» Mergers and acquisitions
Digital Transformation in the Manufacturing Industry

Top Business Priorities for Manufacturers

Significant Initiatives in Driving IT Investments in 2015

- Increase productivity: 39.3%
- Optimize business processes: 34.7%
- Reduce costs: 27.8%
- Increase revenue: 27.7%
- Introduce new and/or improved products and services: 22.2%
- Improve customer acquisition and retention: 18.1%

Source: IDC’s Vertical IT and Communications Survey, 2015 (Total Manufacturing n=602, Discrete Manufacturing n=275)
Digital Transformation in Manufacturing

Employing digital technologies and IT modernization to drive changes in business models and value chains

- Big data and predictive analytics
- Social and collaboration tools
- Mobile devices and applications
- Cloud and accessing IT resources as a service
- Internet of Things
- Next-generation cybersecurity
- Application modernization
- Infrastructure modernization
Manufacturers Are Making Key Investments in the Foundation for Digital Transformation

- Transforming information into an asset
- Investing in cloud and cybersecurity to increase safe and secure access to IT resources
- Applying analytics to improve design and manufacturing, and enable connected products and services
Transforming Information into an Asset

More manufacturing employees need access to information to do their jobs

40% of manufacturers say that more than half of their employees are knowledge workers

**Data Discovery:** Acquiring, preparing and visualizing data from sources such as customer records, supplier scorecards, products, processes, sensors

**Value Development and Realization:** Using analytics and other techniques to increase data’s business impact

**Knowledge and Collaboration:** Making it easier for users to safely and securely access and use data in the way they work from sources such as customer records, product sensors, and product, production and supplier systems

**Information Architecture:** Providing a technology foundation for information assets, including data management and models, integration, storage and security
Continuing the Digital Transformation Journey

Cloud, Cybersecurity, Business Intelligence and Analytics Among Top IT Investments

Cloud services 24.8%
Security/risk management technologies 23.0%
Business intelligence and analytics 19.5%
Supply chain technologies 18.8%
Infrastructure consolidation/virtualization 16.2%
Application modernization 16.1%

Source: IDC’s Vertical IT and Communications Survey, 2015 (Total Manufacturing n-602, Discrete Manufacturing n-275)
Continuing the Digital Transformation Journey
Applying Big Data and Analytics in Manufacturing

What are the top three ways you are applying your Big Data and Analytics initiatives within your organization?

- Understand and optimize the business process: 31.0%
- Support sales and marketing activities: 30.3%
- Allocate resources more effectively: 26.2%
- Understand product performance, rationalize product lines, and/or develop new products: 23.9%
- Understand and target customers: 23.8%
- Improve security: 23.0%

Source: IDC's Vertical IT and Communications Survey, 2015 (Total Manufacturing n=602, Discrete n=275)
Digital Transformation Is Multi-Faceted

Enabling manufacturers to respond and adapt to business challenges

**Leadership**
Creating a digital investment strategy to integrate IT into processes, products and services

**Customer Experience**
Improving how manufacturers engage with customers with product and service innovation

**Information**
Changing the way manufacturers access and apply data to business requirements

**Operating Model**
Enabling connected assets, products and services to change manufacturing

**WorkSource**
Optimizing work with the tools employees need for information sharing, collaboration and decision making

Source: IDC, 2015
Getting Started with Digital Transformation

- Know your business priorities
- Review your current IT capabilities
- Consider investment options that deliver business value quickly
- Make valuable information assets and analytics tools more accessible
- Develop immediate and long-term plans for modernization
- Find a partner that understands your business and speeds your journey