



FORRESTER®

# Reimagining Manufacturing

How Digital Technologies Can Help Asia's Manufacturers  
In A Post-COVID-19 World

Get started →

FORRESTER OPPORTUNITY SNAPSHOT: A CUSTOM STUDY COMMISSIONED BY CISCO | AUGUST 2020

## Manufacturing Is Facing A Moment Of Reckoning

Asia Pacific markets are at different stages of recovery from COVID-19 disruptions. China is starting to recover some domestic demand while other regions, such as Japan, Korea, ASEAN, and India are still a long way from regaining momentum. As the industries reopen across Asia, they will grapple with supply chain disruption, reduced demand, and workforce challenges amid social distancing restrictions.

In this time especially, digital technologies can help in a number of ways; however, manufacturers in Asia have not yet built adequate foundations.

Cisco commissioned Forrester to conduct a custom survey of 150 APAC manufacturing decision makers to understand their current state of digital transformation and what manufacturers must do to stay ahead, especially in these times of change.

### Key Findings



**COVID-19 exacerbates systemic changes in manufacturing.** Mobility, supply chain shocks, and factory floor restrictions challenge the status quo of existing manufacturing processes.



**Manufacturers have yet to “walk the walk” on digital transformation objectives.** Sixty-two percent want to build automation across the factory floor, but only 8% are differentiating with digital.



**Network capabilities are imperative for urgent digital needs.** Manufacturing decision makers currently exhibit a 36% gap between intent and execution in automation capabilities.

## Post COVID-19 Challenges Require Reimagining Policies And Practices

The shifting dynamics of a post-pandemic world require manufacturers to reimagine their business context across a few dimensions:

- 1. Supply chains.** The decline in production in China (which accounts for one-fourth of industrial value) coupled with disruptions in transport have adversely affected current supply chains. While some challenges will be temporary, manufacturers must diversify and build alternate suppliers.
- 2. Enabling factory and office workforces.** Manufacturers must run split operations and business continuity plans (BCPs) across both corporate offices and factories for the near future. This will involve retraining and enabling workers to work remotely without impacting factory line reconfiguration.
- 3. Staying cost-effective in a period of slowing and volatile demand.** Limitations on factory workforces, coupled with economic uncertainty and smaller productions, mean manufacturers must make the most out of their existing resources. Production efficiency, in that sense, is now critical.



## Digital Technologies Can Help Manufacturers

To maneuver across these challenges, manufacturers must leverage digital technologies and capabilities that enable the following attributes:

1. Digital capabilities (like AI) and data visibility to better **understand and address customer needs and enable demand planning.**
2. Investment in collaboration technologies to **enable knowledge and factory workers while fostering pragmatic innovation** that yields tangible results.
3. **Factory automation**, connecting machines to drive cost efficiencies and ability to function with fewer workers.

But this is easier said than done.

## Reimagined Digital Priorities For Manufacturing

### DATA VISIBILITY AND AI TO BETTER PLAN FOR CUSTOMER NEEDS

Analyzing customer behaviors to identify patterns and better answer their needs, as a Finnish phone manufacturer did in 2018 with its cognitive analytics for customer insight software

### COLLABORATION TECHNOLOGIES WITH KNOWLEDGE WORKERS AND FACTORY WORKERS

Smart factory capabilities that move data, inventory tracking, and knowledge sharing across back office to factory floor

### AUTOMATION AMID WORKER RESTRICTIONS AND COST EFFICIENCY NEEDS

Uptick in interest for robotics and digital twins, especially in the automotive industry, to maintain production levels

## Manufacturing Lags Other Industries In Executing On Digital To Drive Business Results

The intent for digital transformation (or Industry 4.0) in manufacturing has existed for several years. Sixty-two percent of manufacturing decision makers want to automate across floor operations while 65% consider smart manufacturing and internet-of-things (IoT) methods a vital priority. Manufacturers also recognize the need to adapt customer interactions accordingly: 70% intend to build digital customer touchpoints.

However, several manufacturers have fallen short on their execution of Industry 4.0 practices. Forrester digital maturity models label only 8% of manufacturers as digital differentiators, compared to 30% in banking, financial services, and insurance (BFSI) and retail counterparts.

Manufacturers still struggle with building both mindset and capabilities for digital transformation.

FORRESTER OPPORTUNITY SNAPSHOT: A CUSTOM STUDY COMMISSIONED BY CISCO | AUGUST 2020

### Digital Differentiators Across Industries (Percentage of firms considered to be digital differentiators across industries)

30%   
Banking and retail

8%   
Manufacturing

**Definition:** Industry 4.0 is a term often used to refer to the developmental process in the management of manufacturing and chain production. It encompasses a combination of traditional manufacturing and industrial platforms and practices with the latest smart technology.

Base: 150 APAC manufacturing decision makers  
Source: A commissioned study conducted by Forrester Consulting on behalf of Cisco, February 2020

## Driving Digital Wins But With A Strategic Intent

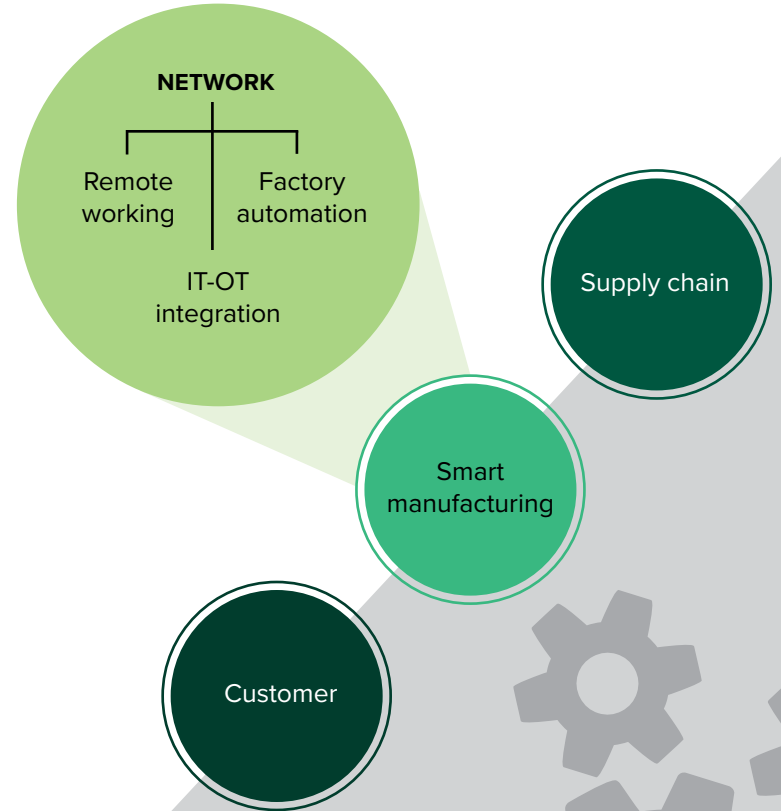
In approaching digital transformation initiatives, manufacturers need a mindset that acts on quick wins with urgency but also considers how they fit into the long-term digital transformation roadmap.

The current climate requires manufacturers to prioritize fast and effective deployments.

Enabling remote working and investing in factory automation to break down IT-OT silos will produce immediate results and lead to cost savings.

While prioritizing these initiatives, however, manufacturers must ensure they are also setting the building blocks for long-term digital transformation success across customer, production, and supply chain workflows.

## Digital Transformation Roadmap

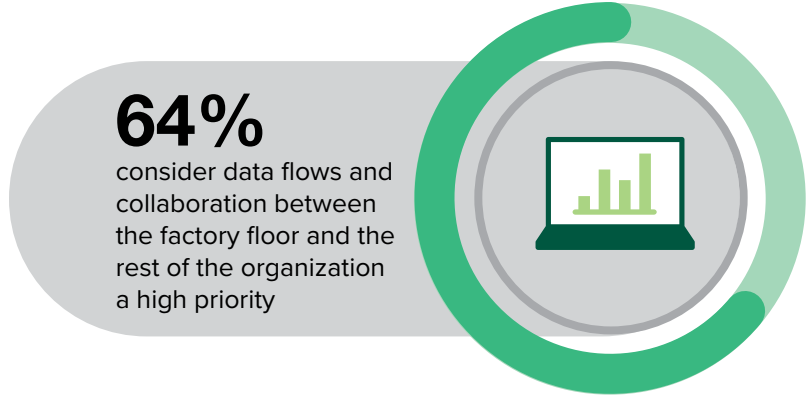
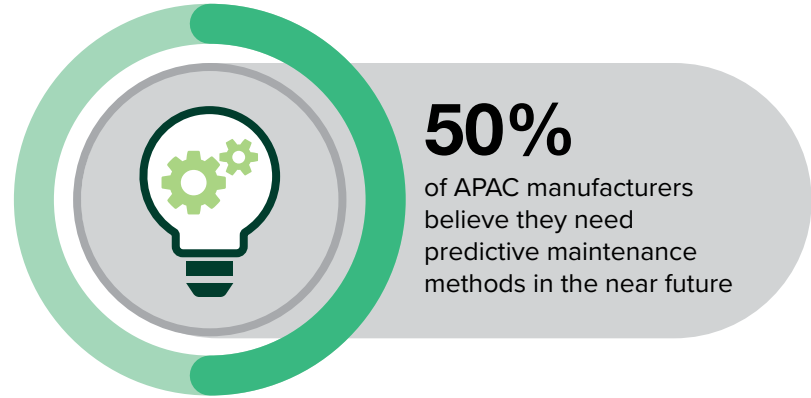


## Automation And Remote Working Are Imperative For Workforces To Thrive

Reimagining and optimizing manufacturing operations with current remote working parameters will require digital technologies that enable consistent collaboration and preemptive connectivity. This is no longer a luxury for manufacturers, but a need of the hour.

Knowledge workers must be able to coordinate across a wider-spread workforce, obtain and share relevant data quickly, and collaborate through their end-to-end workflows with real-time updates and reporting.

Similarly, as manufacturing plants reopen, managing production lines with a restricted workforce and safe distancing measures will require not only automation and AI capabilities to hedge against human risks of illnesses and productivity shortfalls, but also proactive machine maintenance to limit physical interactions on the factory floor.<sup>1</sup>



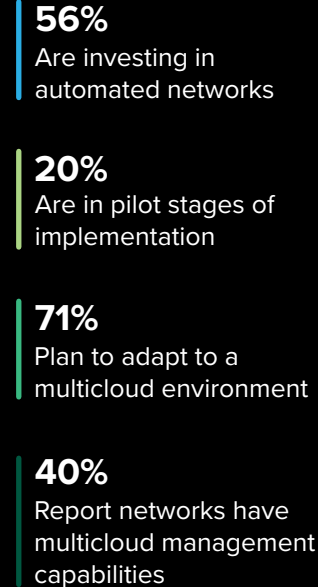
## Gain Efficiencies By Converging IT-OT Networks And Enabling Factory Automation

The agility of manufacturers' networks will determine their success in addressing these new connectivity needs. Unfortunately, manufacturers still maintain separate IT and legacy OT networks and see significant gaps in network capabilities to support digital preparedness.

For instance, while 56% of APAC manufacturing decision makers claim to have adopted IT network automation, only 20% of these players have moved beyond the pilot stages.

In managing the connectivity, 71% acknowledge a multicloud environment in the future. However, only 40% have networks that can manage this complexity. Given the impact network capability gaps impose on enabling urgent digital foundations, manufacturers must reconsider their investment in a converged network.

## APAC Manufacturers Still See Gaps In Their Network Capabilities To Enable Future Digital Capabilities





## The Path To Transformation Needs Pragmatic Yet Systematic Change

In grappling with the COVID-19 complexity, manufacturers no longer have the luxury of keeping their digital transformation initiatives at bay. Optimizing investments amid existing challenges will require focus on the following:

**Digitizing to truly listen to customers' needs.** Building connectivity across data and networks for digital customer engagement should be a top priority.

**Accelerating automation for required resilience.** As automation comes to the forefront, manufacturers must consider the synergy between human and digital workers from an operational standpoint.

**Building a shared vision across your IT and OT stakeholders.** Ensure that the sophistication and lower cost you see in your IT networks run your OT as well.

### Project Director:

Josephine Phua, Consultant

Sruti Pegatraju, Consultant

### Contributing Research:

Forrester's Infrastructure & Operations research group



## Methodology

This Opportunity Snapshot was commissioned by Cisco. To create this profile, Forrester Consulting supplemented this research with custom survey questions asked of 150 decision makers responsible for their companies' technology infrastructure strategy and management. The custom survey began and was completed in February 2020.

### ENDNOTES

<sup>1</sup> Source: "Connected Solutions Are Proving Their Worth In Today's Crisis; Make Them A Critical Part Of Your Near-Term Roadmap," Forrester Research, Inc., April 29, 2020.

### ABOUT FORRESTER CONSULTING

Forrester Consulting provides independent and objective research-based consulting to help leaders succeed in their organizations. Ranging in scope from a short strategy session to custom projects, Forrester's Consulting services connect you directly with research analysts who apply expert insight to your specific business challenges. For more information, visit [forrester.com/consulting](https://forrester.com/consulting).

© 2020, Forrester Research, Inc. All rights reserved. Unauthorized reproduction is strictly prohibited. Information is based on best available resources. Opinions reflect judgment at the time and are subject to change. Forrester®, Technographics®, Forrester Wave, RoleView, TechRadar, and Total Economic Impact are trademarks of Forrester Research, Inc. All other trademarks are the property of their respective companies. For additional information, go to [forrester.com](https://forrester.com). [E-46388]

## Demographics

### REVENUE

8% \$50 billion+

14% \$20 billion to \$50 billion

33% \$10 billion to \$20 billion

44% \$5 billion to \$10 billion

### RESPONDENT FUNCTION

44% IT

56% Line of business

### COUNTRY

16% China

16% India

17% Indonesia

17% Japan

17% South Korea

17% Thailand



FORRESTER®