

E-book

CONFIGURE, ADAPT, INNOVATE

Overcoming supply chain challenges
with composable solutions

 Microsoft Dynamics 365



Contents

03

Introduction

Be agile in an era of relentless change

[Explore >](#)

04

Chapter 1

Unravel today's supply chain complexities

[Explore >](#)

07

Chapter 2

Increase resiliency with composability

[Explore >](#)

10

Chapter 3

Plan your composable strategy with a best-practices checklist

[Explore >](#)

12

Conclusion

Prepare your supply chain for what's next

[Explore >](#)

Who is this for

Supply chain leaders who oversee technology investments to drive operational excellence.

Estimated reading time:
10 minutes

Be agile in an era of relentless change



Timing is everything, especially in today's global commerce. Companies must rapidly and strategically respond to whatever supply chain challenges they face, or risk weakening their competitive advantage. In a world characterized by weather extremes, uncertain economies, and multiplying cyberthreats, composability becomes the means by which business leaders create more agile, resilient supply chains.

Composability is the next step in supply chain modernization. With a composable approach, your organization can quickly enhance, supplement, and expand its existing systems and operations—enabling it to accomplish more with less. Less cost, time, complexity, and technology. Because tech solutions should adapt to business and customer needs, not the other way around.

Use this e-book to expand your understanding of how to enable a more flexible supply chain—without replacing what you already have. Learn what's driving adoption of composable supply chain solutions, how they work and deliver value, and steps for implementing a composable strategy.

COMPOSABILITY

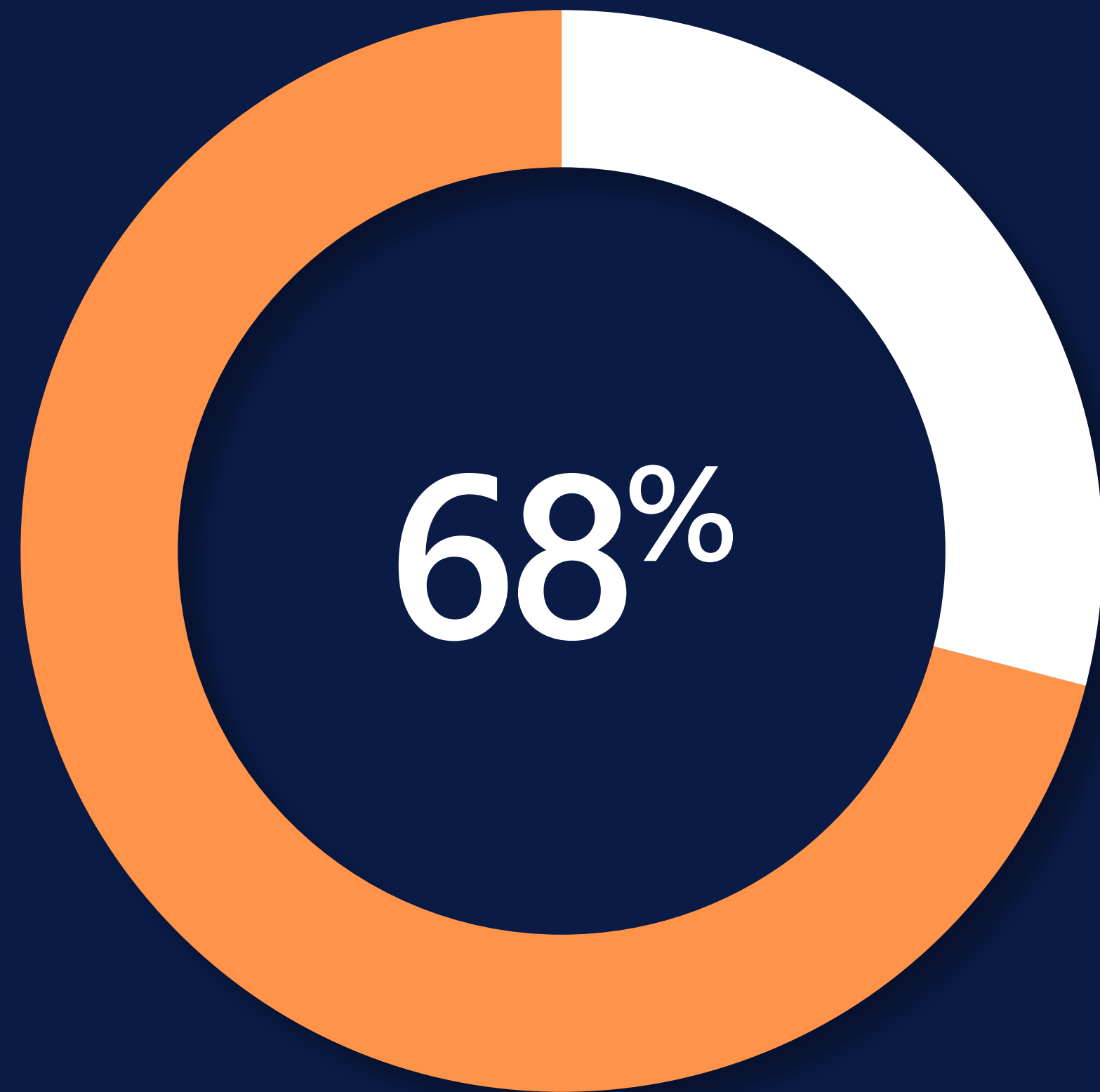
The ability to rapidly configure and reconfigure supply chain processes, applications, and capabilities from modular, interchangeable, and reusable components.

By adopting a composable architecture, businesses can proactively respond to internal and external factors impacting supply and demand and create more engaging digital experiences.

CHAPTER 1

Unravel today's supply chain complexities





It's become clear to leaders across industries that having an unpredictable supply chain is now the norm. For the last few years, companies have been wrestling with unexpected disruptions, even some that upended supply chains almost overnight. Businesses must juggle the delays, constraints, and disruption caused by unexpected natural disasters, international tensions, and economic pressures. On top of that, innovative strategies such as direct-to-consumer manufacturing models are flooding the market.

The result? Supply chain leaders now operate in a vastly changed competitive environment from that of just a few years ago.

According to Gartner®, "As of 2021, 68 percent of supply chain executives report that they have been constantly responding to high-impact disruptions over the last three years."¹ Consequently, businesses that depend on the timely flow of goods and raw materials are sharpening their focus on creating a resilient and sustainable supply chain.

As of 2021, 68% of supply chain executives report that they have been constantly responding to high-impact disruptions over the last three years.¹

¹Source: Gartner, Predicts 2022: Supply Chain Strategy, Simon Bailey, Marco Sandrone, Jennifer Loveland, Dana Stiffler, Heather Wheatley, Pierfrancesco Manenti, Sarah Watt, John Blake, Laura Rainier, November 2021

Common challenges of supply chain unpredictability

Persistent supply chain chaos raises challenges that affect many businesses:

- A lack of real-time visibility up and down the supply chain.
- Disconnected systems with siloed data across functions.
- The inability to quickly deploy new customer-centric capabilities and features.
- The inability to take advantage of the same AI, advanced analytics, Internet of Things (IoT) devices, and other cloud-based technologies that competitors use.

Each of these challenges can be solved through supply chain modernization. However, businesses that operate globally often have a complex IT landscape with separate systems for their various functions, including enterprise resource planning (ERP),

customer relationship management (CRM), e-commerce, warehouse management, and transportation management. When these systems don't talk to each other, operations slow down.

Completely replacing the systems businesses use now with new ones would be answering supply chain disruption with more disruption—both to critical operations and bottom lines.

That's why solving supply chain challenges requires a flexible technology solution that works in tandem with the software you're already using.



CHAPTER 2

Increase resiliency with composability





Composable architecture

With a composable architecture, organizations gain competitive advantage by adding, modifying, and extending functional solutions—much like building blocks.

- A** Asset management
- B** Planning
- C** Warehouse management
- D** Production
- E** Procurement
- F** Existing ERP, CRM, other systems (all gray)

Composable solutions bridge the gaps between systems so they can operate together more fluidly. Originating in system design, the concept of composability grew out of the rise of front-end frameworks, web application programming interfaces (APIs), microservices, and software as a service (SaaS) trends. Composable architecture allows businesses to build faster digital experiences than with a traditional back-end approach to development.

It's helpful to think of a composable solution as modular software "building blocks" that interlock with different systems across your

business, so everyone has instant access to the same information. That's a valuable capability for businesses that must make supply chain decisions quickly.

Composable technologies are built to solve the complex puzzle of today's changeable global supply chain using three key principles: modularity, connectedness, and extensibility.

With an end-to-end view of the entire supply chain, the support of a scalable cloud platform, and digital technology optimizing more business functions, companies using composable solutions are ready to do more with less. It's a strategic plan for sustained growth.

THREE KEY PRINCIPLES:

Modularity

Companies can assemble, reassemble, and replace business-critical applications based on precise business and market needs.

Connectedness

Solutions talk to each other and share their data, enabling visibility across business functions and making it easier to collaborate with partners up and down the supply chain.

Extensibility

Companies can customize apps, scale app capabilities and functions, and add on new apps as needed to meet business requirements.

Unite your data to gain speed and efficiency

A composable solution allows you to unite data from everywhere, ingesting it in near-real time using thousands of API connectors, intelligent data mapping, and common data models. Connecting different data sources across all the functions of business operations—from suppliers to the shop floor to distribution and transportation—creates a richer data pool from which to derive predictive insights using AI and machine learning.

With more predictive insights about your supply chain and trends in the market, your business can get ahead of hurdles while taking advantage of new opportunities for growth. Better insights mean:

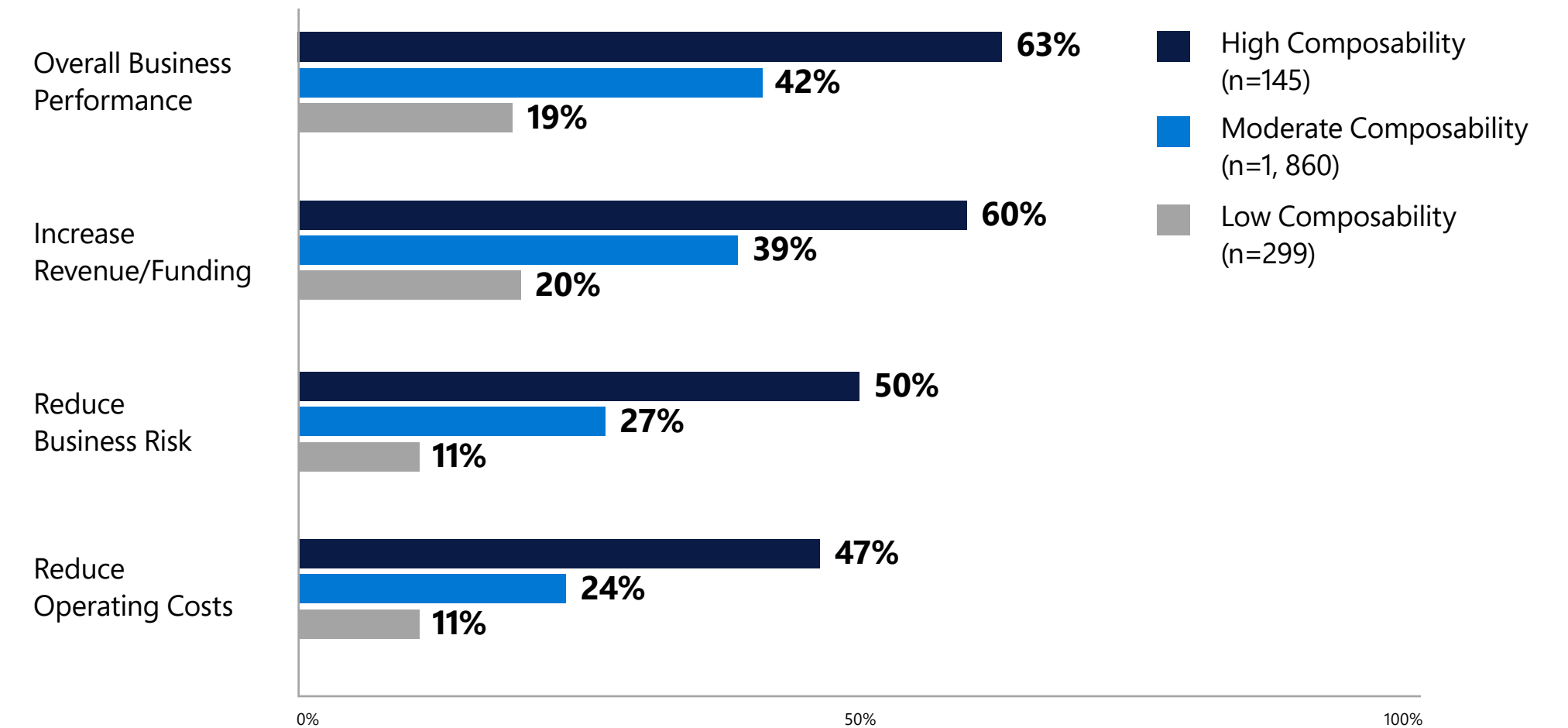
- Making better-informed, data-driven decisions.
- Acting faster and scaling your best practices.

- Creating resilient supplier networks.
- Proactively mitigating supply chain disruptions and using countermeasures as needed.
- Negotiating optimal pricing.
- Optimizing fulfillment and delivery.

Considering that composable solutions can be cost-effective, use a low-code or no-code interface, and take just weeks rather than months or years to deploy, the choice to add modular, integrated connectors to your technology systems becomes easier to make. Overall, organizations with a high degree of composability reap benefits on many levels, including better business performance.

Composability and Business Performance

Percentage of Respondents Ahead or Far Ahead of Peers and Competitors



n = varies by segment, CIOs and technology executives answering, excluding "don't know"

Q. Considering the past 12 months, rate your enterprise's business performance compared with its peers' or competitors'.

Source: 2022 Gartner CIO and Technology Executive Survey 762360_C

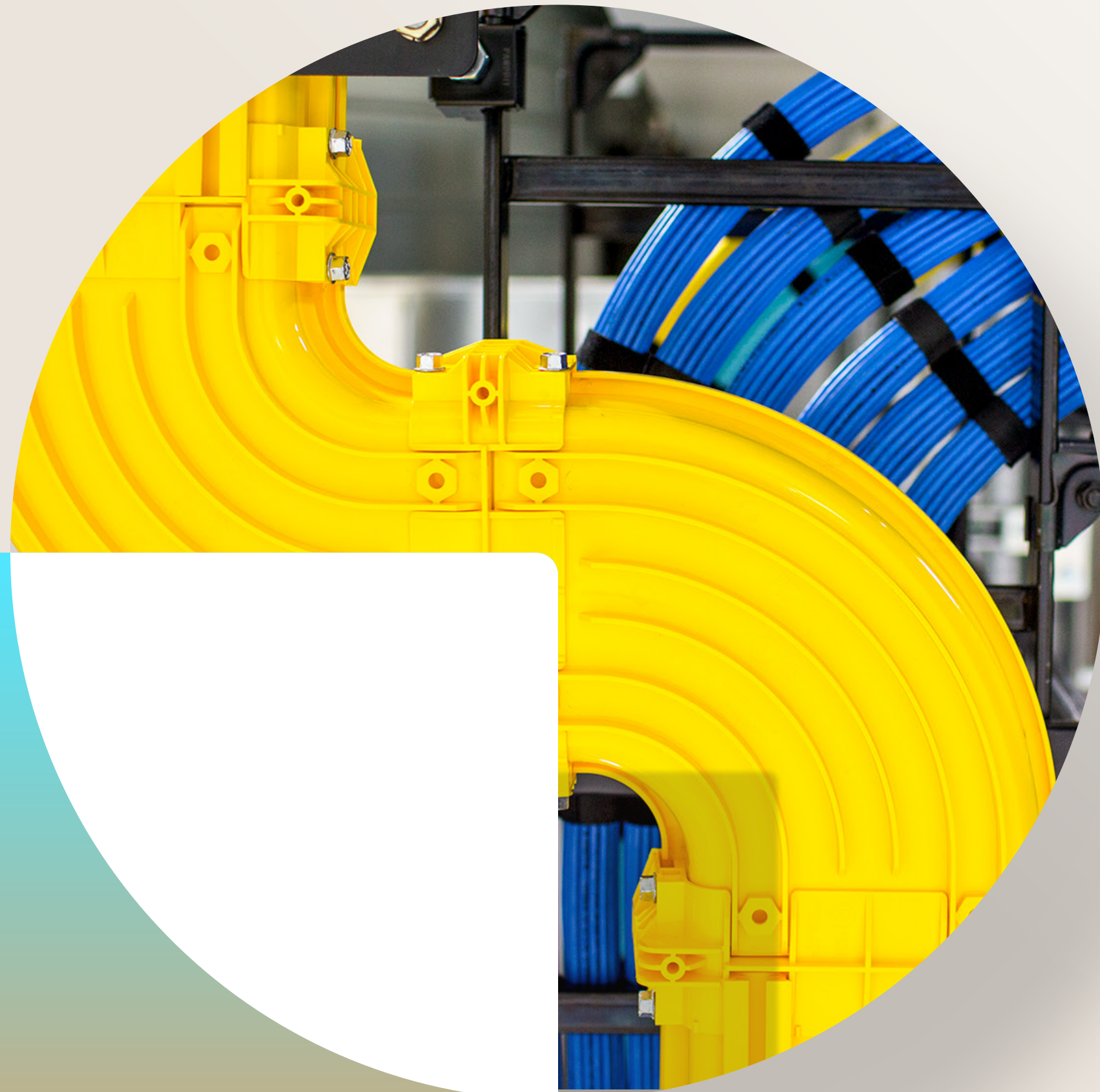
Source: Gartner, 2022 CIO and Technology Executive Agenda: Industries Perspective Overview, Jan-Martin Lowendahl, Andy Rowsell-Jones, Tomas Nielsen, Monika Sinha, Janelle Hill, Ian Cox, Nicole Sturgill, Mark Fabbi, March 2022

GARTNER is a registered trademark and service mark of Gartner, Inc. and/or its affiliates in the U.S. and internationally and is used herein with permission. All rights reserved. Chart/graphic created by Microsoft based on Gartner research.

CHAPTER 3

Plan your composable strategy

with a best-practices checklist



How one company drives long-term growth with a composable platform

Tillamook County Creamery Association, a dairy cooperative in Tillamook, Oregon, needed a highly agile ERP system to support expansion of its product lines and distribution. The business adopted Microsoft Dynamics 365, using its composable architecture to seamlessly add new functionality unique to dairy production. Now with warehouse automation and real-time visibility into its supply chain, the company can more efficiently meet rising demand and even increased the number of pallets it builds and ships hourly by 50 percent.

[Read the customer story](#)

Given their modular nature, composable solutions drive increasingly higher value over time. With a composable framework, your company can transform its supply chain through incremental cultural, structural, and technological changes. Use this checklist to help chart your path.

CULTURAL

- Gain buy-in to a composable approach at all levels, beginning with senior leadership.
- Foster a cross-organizational mindset of modularity, iteration, and collaboration.
- Set specific goals for supply chain optimization, focusing on one change at a time.
- Evaluate which modules deliver the greatest value and can be reused.
- Use lessons learned to plan for the next round of changes.

STRUCTURAL

- Create small, autonomous functional teams—and team leaders—to oversee incremental solution changes.
- Task teams with:
 - Identifying areas that require critical new capabilities, within your organization and across your ecosystem of global partners.
 - Finding prepackaged solutions rather than turning to software developers to code new ones.
- Train leaders and teams to use new solutions and establish associated best practices.
- Connect to news, market, weather, and social media systems that provide timely insights into conditions affecting supply chains.

TECHNOLOGICAL

- Adopt an open, cloud-based data platform that:
 - Can be rapidly and efficiently deployed and work with existing solutions.
 - Unifies data from disparate, siloed systems of planning, engagement, and execution.
 - Provides a low-code or no-code interface.
 - Delivers end-to-end, real-time supply chain visibility.
 - Features built-in AI and machine learning capabilities.
 - Supports IoT, robotics, mixed reality, and other emerging technologies.
- Select best-of-breed, API-enabled applications that:
 - Fill specific feature and functional gaps.
 - Don't require additional coding or can be quickly customized.
 - Enable new efficiencies through automation.
 - Foster more integrated digital experiences.

Prepare your supply chain for what's next

Composability is an emerging framework, and Microsoft helps accelerate its adoption. A full portfolio of cloud-based offerings from Microsoft serves as key building blocks for optimizing complex supply chains.

Supported by an intelligent data foundation, these modular business applications unify cross-channel digital experiences. They drive higher profitability and sustainability. They speed innovation while minimizing costs and risks. And, overall, they use less technology to deliver greater value, faster.

Solutions from Microsoft help reveal what's next across your supply chain networks—without requiring existing systems to be dismantled or disrupted. To quickly gain a distinct advantage, begin your composable journey with Microsoft.



[Contact a Microsoft expert for a live demo or free trial](#)



[Learn more about Microsoft supply chain offerings](#)