

KINAXIS®



AEROSPACE AND DEFENSE

**Three critical** areas  
of improvement for  
the future of A&D  
supply chains

# Introduction

In stark contrast to the slowdown during the pandemic, a new challenge plagues the aerospace and defense industry. Fueled by a rise in global travel, geopolitical escalations, and a new space race, demand for A&D products has skyrocketed over the last few years. Keeping up with this demand is essential for business success, but the industry must solve for a supply chain that's become increasingly complex and fragmented.

End-to-end supply chain orchestration is empowering today's supply chain leaders to synchronize their data, people, and

processes all in one place so they can absorb disruption and adapt to changes without missing a beat.

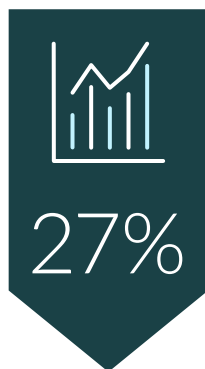
Kinaxis sponsored a survey with IDC to understand what is driving change across the supply chain (SC), if orchestration can help, and what's supporting or hindering the adoption of orchestration tools to manage complexity, risk, and disruption. The research comprises a quantitative survey conducted in late 2023 of over 1,800 SC decision makers from multiple geographies, industries, and functions.



# 1. A&D companies need to focus on resilience

## What do we mean by resilience?

Resilience, defined as best-in-class adaptability to disruptions both big and small, is especially difficult for the A&D industry due to a heavy reliance on outsourced processes and suppliers with their own complex supply chains.



## The A&D industry is less resilient than others

Only 27 percent of A&D companies rate their supply chains as resilient, the lowest amongst seven industries surveyed. <sup>1</sup>



## Why can't A&D supply chains respond to disruptions?

Inherently, the A&D industry has elements that make it difficult to be resilient:



### Complex Products

Aircraft production involves intricate processes and thousands of critical components. The resulting supply chain is distributed and intricate. When a disruption occurs, the network is slow to adapt to changes.



### Single-Source Risk

It's common in the A&D industry to have single-source suppliers for specialized components. A single point of failure can disrupt the entire supply chain.



### Reactive Approaches

Historically, many A&D firms react after-the-fact to disruptions because they don't have visibility into all parts of the supply chain.



## How can A&D organizations become more resilient?

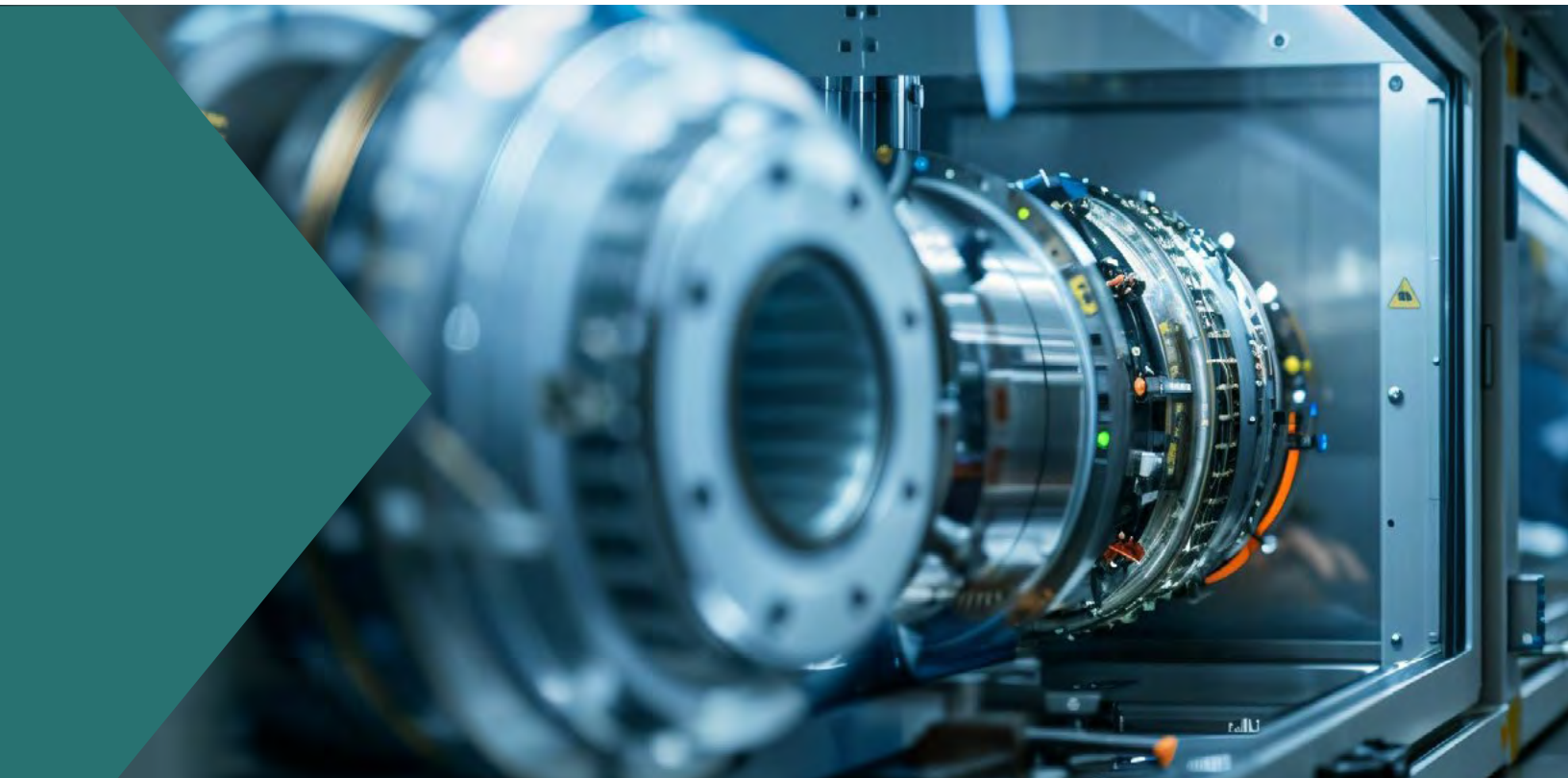
Despite fundamental challenges, there are still many opportunities for improvement.

Top priorities of A&D leaders include focusing on reducing lead times with suppliers, efficiently managing resources, mitigating risks to supply disruptions, and complying to ever-changing regulations across various regions.

It is important for all companies – regardless of their current stage of transformation – to align their supply chain goals with the overall company vision to maximize benefits. Solutions can include diversifying the supplier base and shifting to a proactive stance when it comes to risk.

## A&D companies reported that top goals for their supply chain as: <sup>1</sup>

- 1 Supply chain resilience – improve the ability to respond to market changes either upstream with suppliers or downstream with customers
- 2 Improving supply chain visibility/traceability
- 3 Improving integration between supply chain planning, execution/fulfillment, and overall supply chain governance
- 4 Modernizing/updating IT related supply chain infrastructure



## 2. A&D companies need to break down data silos

### Data silos are rampant in A&D

A&D companies go through frequent mergers and acquisitions, which adds to the proliferation of data systems. Kinaxis has seen companies with more than 10 ERP systems. Additionally, A&D companies often use siloed point solutions created for highly specialized processes, which also contribute to the data fragmentation problem.

### A&D suffers from silos more than other industries

Technology fragmentation in A&D is apparent in the research findings. Compared to the seven other industries surveyed, A&D leaders reported the highest amount of disparate systems. Nearly 25% of A&D companies characterize the technological foundation of their supply chain to be standalone applications.<sup>1</sup>

### The consequences of disparate systems

Fragmented technologies not only hamper agility, they impede the industry's ability to balance the technical, regulatory, and safety nature of products. They also create vulnerability to disruption through lack of visibility. End-to-end oversight and management across siloed systems is critical for success.







## Top supply chain technology capabilities sought after by A&D leaders

Modern supply chain systems have the ability to merge data across multiple fragmented systems to create one source of truth. A&D leaders identified the following as top technology priorities: <sup>1</sup>

- 1 Composability (i.e. components/modules connected via API on product level)
- 2 Flexibility
- 3 Ecosystem integration
- 4 Configurable (i.e. flexible options to adjust capabilities/reporting)
- 5 AI/GENAI capability

Ideal solutions for A&D bring together these capabilities to handle the industry's biggest challenges. The latest supply chain orchestration platforms provide the ability to connect deep bills of materials from finished goods to raw materials, handle the specialized processes of an engineer-to-order manufacturing environment, and analyze large volumes of data to detect supplier risk and lead time deviations. Capabilities like GenAI can prescribe risk mitigation options and upskill talent on new tech.

# 3. A&D companies need to collaborate better with external stakeholders

## Poor collaboration risks the supply chain on every front

With suppliers, a lack of two-way communication about demand shifts or supply constraints can stall the entire supply chain. On the transportation side, poorly coordinated shipments of supply can hinder production. Finally, a lack of communication with customers about delays puts revenue and reputation at risk.

## Collaboration priorities among A&D leaders

Managing complex supply chains with multiple layers requires active collaboration.

Top three priorities for A&D companies in the next one-to-three years are: logistics & global trade (59%), collaboration with suppliers (55%), and collaboration with customers (40%).

## Orchestration is essential for better collaboration

External collaboration with multi-tier suppliers, logistics, and transportation providers continues to be critical as demand grows.

To achieve multi-party collaboration, management of the entire supply chain holistically is imperative. IDC's research notes nearly all (94%) of A&D companies said that end-to-end supply chain orchestration would have a modest to significant impact on performance. <sup>1</sup>



## Supply chain opportunities achievable with orchestration: <sup>1</sup>

- 1 Exceeding customer expectations with better processing, delivery, and communication
- 2 Resilience to any disruptions
- 3 Gaining a competitive edge by delivering better products, services, and customer expectations
- 4 Confident decision-making, through real-time data and analytics
- 5 Stronger collaboration with all supply chain stakeholders



# Learn from the leaders

**LOCKHEED MARTIN** 

This leading aerospace and defense manufacturer builds complex products that require utmost coordination. Planners are tasked with building forecasts while accounting for deep bill of ladings, tiered suppliers and multiple other factors. Lockheed Martin implemented the [Kinaxis® Maestro™ platform](#) to connect the dots and data across its supply chain, bringing together teams and increasing the visibility. As a result, forecasts were more robust, planners had more information at their fingertips, and Lockheed Martin had the confidence it needed to handle anything that comes its way.

To learn more about how Kinaxis can help A&D companies increase collaboration and supply chain visibility, visit [kinaxis.com/en/industries/aerospace-defense](https://kinaxis.com/en/industries/aerospace-defense).

<sup>1</sup> Source: IDC Resource Map Deck, sponsored by Kinaxis, Leveraging End-to-End Supply Chain Orchestration: Deliver Next-Generation Supply Chain Management, Intelligence, and Responsiveness, IDC DOC ID#: CA52482924\_RMD, May 2024.

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