IndustryWeek

The Need for Speed: The State of Manufacturing Procurement

TABLE OF CONTENTS

Key findings

Discrete manufacturers and suppliers overwhelmingly want to streamline sourcing, quoting, and procurement. However, a lack of visibility — and disconnected systems and processes — are the key challenges to increasing the speed and accuracy of procurement operations. Here's a top-line overview of today's procurement hurdles and how the industry sees opportunities to meet today's business demands.

Acceleration is essential:

96% are working to speed up this process within the next 1-2 years

69% say it currently takes 3-10 weeks

46% want to reduce that timeframe to less than one week

Sourcing/procurement challenges persist:

66% have trouble finding specific expertise internally

64% have challenges gaining visibility into logistics and production timelines

63% don't have visibility into cost structure and capabilities

63% lack internal resources
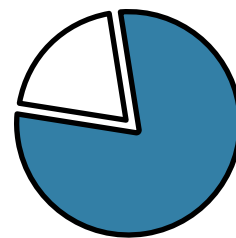
Ad hoc sourcing and procurement are pervasive:

70% use email for collaboration

52% use spreadsheets

52% use off-the-shelf software or an online service

33% use a tech solution that was built in-house

Sustainable sourcing is a priority:

80% say it is having a significant or important impact on their day-to-day sourcing directives

There are opportunities to improve manufacturer-supplier collaboration:

Data standardization: More than 70% agree this is the most important issue

Regular should cost analysis: Nearly 60% say this is very important (including 71% of manufacturers)

Zero RFQ/direct-to-purchase order: More than 60% of manufacturers and suppliers rank this as very important

EXECUTIVE SUMMARY

The pandemic, international conflicts, shortages in supplies/materials, and the demand for skilled workers require manufacturers to pivot rapidly on any given day.

Faced with these market challenges, manufacturing brands and suppliers want to heighten their abilities to collaborate and accelerate the sourcing and procurement process. However, it seems many organizations are held back because relevant data is spread across disconnected system silos — such as email and spreadsheets — or in the hands of a few internal experts.

These issues slow the request for quote (RFQ) process, especially when bid packages should include complex design specifications. They limit transparency and the ability to adjust to extenuating factors. This slow, opaque process often fosters a lack of trust around costing and margins, which hurts collaboration and causes further delays.

The good news is that manufacturers and suppliers both want to expedite sourcing and procurement, increase visibility into the process, and ultimately improve trusted partnerships. Survey respondents said the best ways to achieve these goals are through greater visibility, collaboration during the quoting and design processes, and self-service quoting capabilities.

This report delves into recent research conducted by *IndustryWeek* to better understand the state of collaboration in complex manufacturing. The survey uncovered priorities, challenges, and strategies that OEMs and suppliers are seeking to improve the sourcing and procurement process.

About the research

In partnership with aPriori, *IndustryWeek* fielded an online survey in late July 2022 that generated 345 responses from original equipment manufacturers (OEMs) and suppliers in Asia (including Australia), Europe, and North America. Seventy-nine percent of the OEMs and the suppliers surveyed are considered upper management with C-level titles, as well as vice president, director, or manager. Participants represented consumer/electronics, industrial equipment, automotive/ transportation, and aerospace/ defense manufacturing. Only professionals working at companies with annual revenues of $100 million or more were qualified to participate in the survey.

THE STATE OF THE SOURCING AND PROCUREMENT PROCESS

Sourcing and procurement workflows have accelerated over the years thanks to technology. However, they still don't move at the pace that competitive businesses require. Only 4% of organizations have said it takes up to one week for the average sourcing and procurement process — from initial specifications delivery to quote acceptance. The majority place the timeframe at a month or more:

- 40% said 3-5 weeks

- 29% cited 6-10 weeks

- 20% reported only 1-2 weeks

Respondents reported similar timeframes to quote for standard versus complex requirements. For example, 55% say it takes up to two weeks to quote for standard parts, and 48% cited that length for complex parts.

As you might expect, when internal expertise is necessary — such as greenfield costing and design/manufacturing guidance — quoting takes longer. Nearly half of respondents say these processes take between six and 15 weeks. Also, there is little surprise that many organizations (52%) say that quoting for complex parts and assemblies takes at least six weeks.

Quoting speed versus accuracy

But the accuracy of quotes typically varies significantly by level of complexity. Standard parts quoted often have a higher degree of quality and assured deliver delivery than RFQs with added complexity. Many suppliers face pressure to respond to bids quickly to maintain customer satisfaction and gain new orders — despite often not having all the necessary bid information or project visibility required to provide an accurate quote.

Advantages of acceleration

Overwhelmingly, manufacturers and suppliers want to accelerate sourcing and procurement. Seven percent would like to adopt immediate quoting (zero RFQ capabilities). And 79% say it would be ideal to complete the process between 24 hours to two weeks.

Globally, customer satisfaction is the greatest benefit of accelerating the quoting process. Demand remains strong, yet speed is a challenge due to supply-chain constraints, according to Bloomberg, so the manufacturing industry is trying to gain ground where it can.
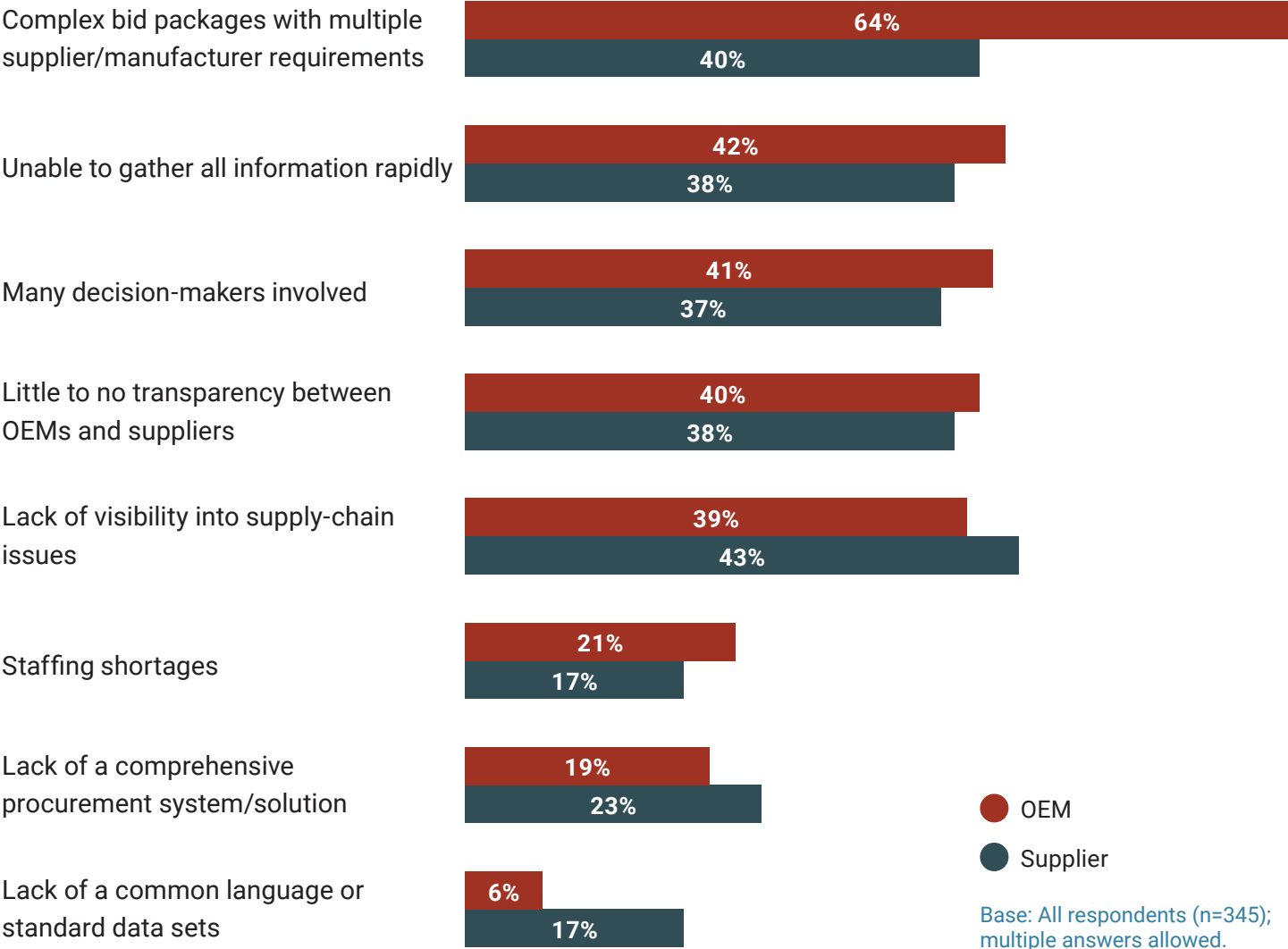
There are slight differences between manufacturers and suppliers. For example, while OEMs rank customer satisfaction as the top priority, suppliers place equal importance on satisfying customers and gaining supply-chain resiliency.

60% SAY COMPLEX BID PACKAGES ARE THE NO. 1 REASON FOR SOURCING DELAYS

Complex bid packages that include multiple requirements are the No. 1 reason for delayed supplier responses to an RFQ. Both suppliers and OEMs agree that the inability to rapidly collect information, coupled with a lack of transparency, are key hurdles that must be overcome to accelerate RFQ responses.

Reasons for RFQ Delays: OEM vs. Supplier Responses

Complex bid packages with multiple supplier/manufacturer requirements
- OEM: 64%
- Supplier: 40%

Unable to gather all information rapidly
- OEM: 42%
- Supplier: 38%

Many decision-makers involved
- OEM: 41%
- Supplier: 37%

Little to no transparency between OEMs and suppliers
- OEM: 40%
- Supplier: 38%

Lack of visibility into supply-chain issues
- OEM: 39%
- Supplier: 43%

Staffing shortages
- OEM: 21%
- Supplier: 17%

Lack of a comprehensive procurement system/solution
- OEM: 19%
- Supplier: 23%

Lack of a common language or standard data sets
- OEM: 6%
- Supplier: 17%

● OEM
● Supplier

Base: All respondents (n=345); multiple answers allowed.

Respondents in manager positions are much more likely to cite transparency as a problem: 53% versus 35% of executives. That could be the result of managers being "in the weeds" of daily operations and collaborations on RFQs.

More broadly, manufacturers and suppliers face significant challenges that delay the entire sourcing and procurement process. In fact, given a scale of 1-5, where 5 is extremely significant, the majority of respondents have ranked nearly every factor as a 4 or 5:

- **66%**: Finding specific expertise internally

- **65%**: Long backlogs for orders

- **64%**: Gaining visibility into logistics and production timelines

- **64%**: Lengthy or complex procurement processes

- **63%**: Lack of visibility into suppliers' or manufacturers' cost structure and capabilities
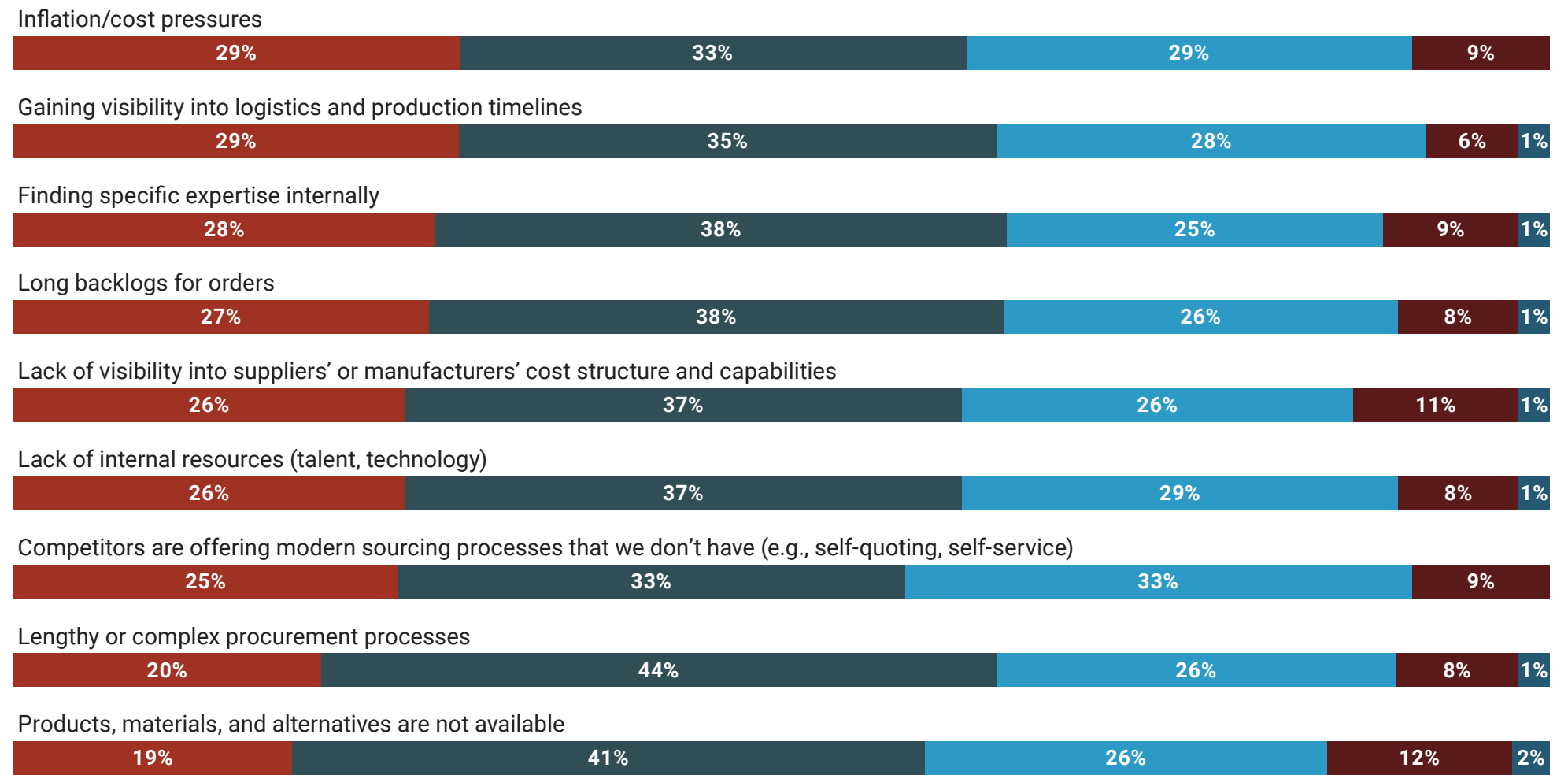

As a side note, managers are more likely to rank internal expertise as a significant challenge compared with executives, who cite lengthy or complex procurement processes as the most challenging aspect.

Procurement Challenges

EACH OF THE CHALLENGES LISTED BELOW IMPACTS A MAJORITY OF RESPONDENTS, AS OVER HALF RATE EACH CHALLENGE AS A 4 OR 5 ON A 5-POINT SCALE.

When it comes to your company's sourcing and procurement, how significant are the following challenges?
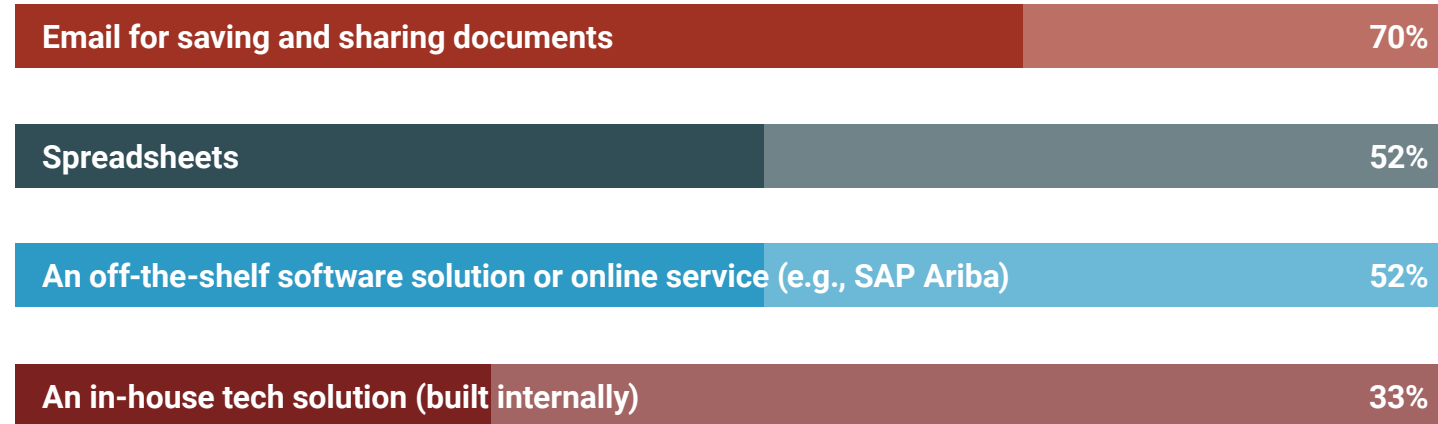
Extremely Significant Challenge ◀ **5** **4** **3** **2** **1** ▶ No Challenge at All

Inflation/cost pressures

| 29% | 33% | 29% | 9% | |

Gaining visibility into logistics and production timelines

| 29% | 35% | 28% | 6% | 1% |

Finding specific expertise internally

| 28% | 38% | 25% | 9% | 1% |

Long backlogs for orders

| 27% | 38% | 26% | 8% | 1% |

Lack of visibility into suppliers' or manufacturers' cost structure and capabilities

| 26% | 37% | 26% | 11% | 1% |

Lack of internal resources (talent, technology)

| 26% | 37% | 29% | 8% | 1% |

Competitors are offering modern sourcing processes that we don't have (e.g., self-quoting, self-service)

| 25% | 33% | 33% | 9% | |

Lengthy or complex procurement processes

| 20% | 44% | 26% | 8% | 1% |

Products, materials, and alternatives are not available

| 19% | 41% | 26% | 12% | 2% |

Base: All respondents (n varies from 342 to 345)

70% STILL RELYING ON EMAIL TO MANAGE SOURCING/PROCUREMENT

Procurement Management Processes Are Primarily Manual

Email for saving and sharing documents	70%
Spreadsheets	52%
An off-the-shelf software solution or online service (e.g., SAP Ariba)	52%
An in-house tech solution (built internally)	33%

Base: All respondents (n=341); multiple answers allowed.

Organizations clearly lack a single source of truth when trying to manage the sourcing and procurement process. They heavily rely on email (70%) and spreadsheets (52%).

Reliance on legacy or manual methods may be contributing to significant collaboration and cooperation challenges. For example, respondents cite a lack of complete design specs; transparency into quoting details; and a lack of collaboration or clarity around design that leads to inaccurate bids. They also say there are difficulties in adjusting to extenuating factors, such as rising material costs or logistics problems.

Organizations in the Asia-Pacific region are most likely to cite a lack of trust around costing and margins, as are respondents in the aerospace and defense industry.
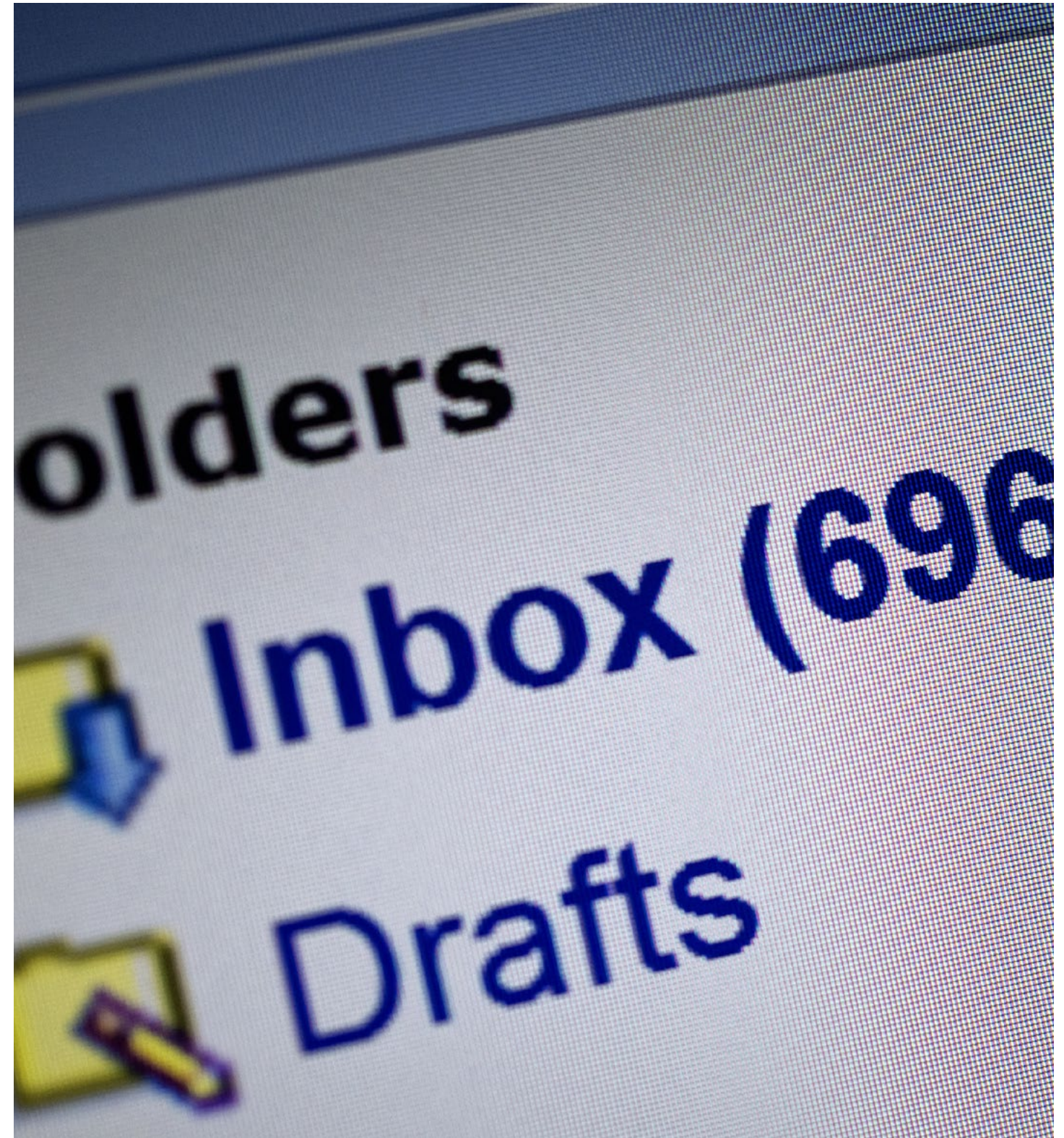
68% OF RESPONDENTS AGREE CONNECTING DATA SYSTEMS IS VERY IMPORTANT

What will it take for manufacturing sector organizations to speed up sourcing and procurement? It starts with a focus on how suppliers and manufacturers work together. For the most part, manufacturers and suppliers agree on the significance of these collaboration challenges.

Specifically, survey respondents have said visibility, collaboration during the quoting and design processes, and self-service quoting capabilities are the top ways to improve collaboration.

The research shows that suppliers and manufacturers think collaboration can be most improved by standardizing how data is shared.
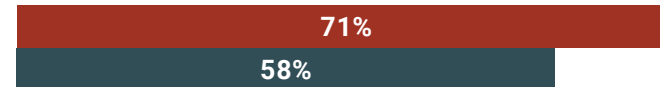

Importance of Collaboration Aspects: OEMs vs Suppliers

Q: How important are the following factors to collaboration between manufacturers and suppliers?
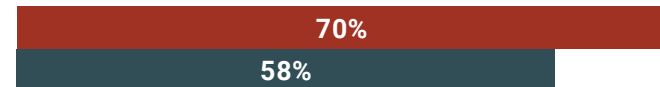
Standardize how data is shared between OEMs and suppliers
- OEM: 71%
- Supplier: 75%
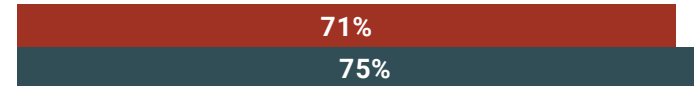
Establishing regular "should-cost" analysis
- OEM: 71%
- Supplier: 58%

Automatically connect data in the systems of record and systems of engagement (e.g., a supplier management system [source-to-pay solution] and an ERP system)
- OEM: 70%
- Supplier: 58%

Zero RFQ/Direct-to-Purchase Order capabilities/quoteless sourcing
- OEM: 66%
- Supplier: 62%
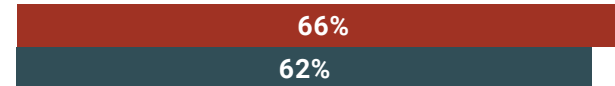
Share specifications via model-based design (e.g., component manufacturing and inspection information included in Computer-aided Design [CAD files])
- OEM: 64%
- Supplier: 63%
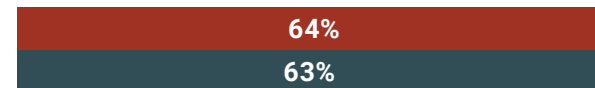
Enable collaboration and assign tasks to individuals (internal OEM teams and external suppliers)
- OEM: 66%
- Supplier: 52%
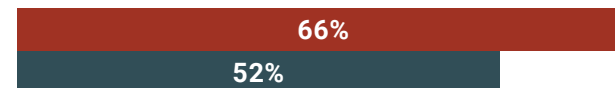
- ● OEM
- ● Supplier

Percents reflect top 2 responses on a 5-point scale
Base: All respondents (n=346); multiple answers allowed.

Although OEMs and suppliers show a shared interest in increased collaboration, responses reflect divergent views on how to achieve this goal. Notably, suppliers are less interested in regular should cost analysis and standardizing data than their customers. This is likely due to supplier concerns that OEMs may try to erode their margins.

To underscore this point, nearly one-quarter of suppliers want visibility into evaluation criteria to ensure that cost isn't the only factor in OEM decision-making.

MODEL-BASED DESIGN SHARING TOPS THE COLLABORATION SOLUTION LIST

Organizations have plans to adopt a variety of functionalities to improve their collaboration efforts, with model-based design sharing leading the plans for implementation within the next 12 months.

Plans for Collaboration Initiatives

Q: When do you predict your company will adopt the following collaboration initiatives?

Connected systems of record and systems of engagement

| 26% | 32% | 28% | 13% | 1% |

Standardized data sharing

| 25% | 34% | 26% | 13% | 1% |

Zero RFQ/Direct-to-Purchase Order

| 23% | 31% | 30% | 15% | 1% |

An internal "workspace" with rules/workflows for design engineers, cost engineers, and sourcing teams

| 23% | 31% | 30% | 14% | 2% |

An internal and external supplier management "workspace" with rules/workflows

| 22% | 32% | 32% | 12% | 1% |

Regular "should cost" analysis

| 22% | 36% | 30% | 10% | 3% |

Model-based design sharing

| 17% | 39% | 29% | 15% |

● Already implemented ● Within the next 12 months ● 1-2 years ● 3-5 years ● Not in the foreseeable future
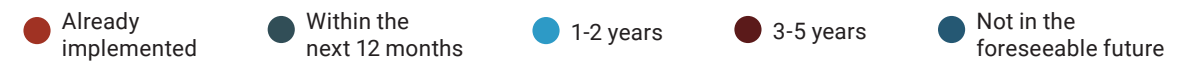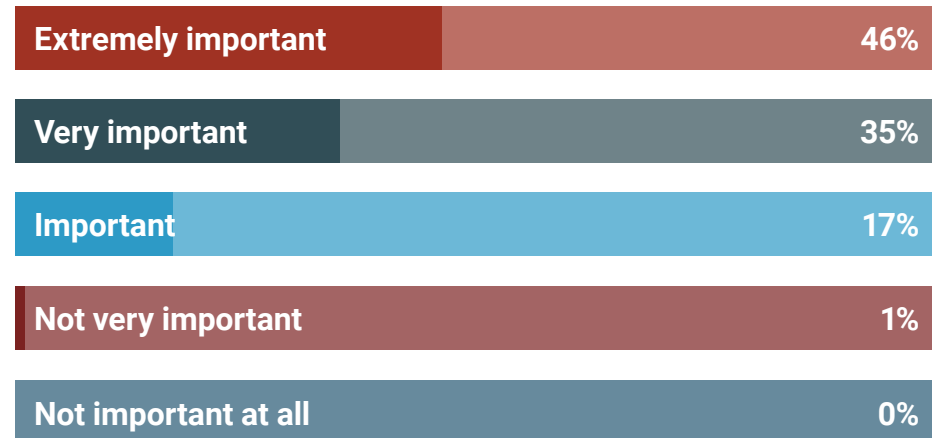
In addition, respondents place great value on self-quoting or self-service functionality; 94% have said their organizations use some of these capabilities to some degree to share information during the sourcing and procurement process. Both suppliers and manufacturers believe that self-quoting/zero RFQ capabilities can improve transparency, reduce administrative burdens, and increase project requirement standardization.

THE GROWING IMPORTANCE OF SUSTAINABILITY

There are multiple reasons that companies are increasingly prioritizing sustainable sourcing, such as to address climate change concerns, alleviate supply-chain disruptions, gain competitive advantage, reduce costs, and better comply with new regulations.

Sustainable Sourcing is a Priority

How important is sustainable sourcing to your business today?

|	
Extremely important	**46%**
Very important	**35%**
Important	**17%**
Not very important	**1%**
Not important at all	**0%**

Base: All respondents (n=345).

No matter the reason, 81% of the respondents cite sustainable sourcing as extremely or very important to their businesses today. In fact, 80% have said sustainability is having a very or extremely significant impact on their sourcing directives or priorities.

This is only expected to increase in importance; 40% of respondents have said they expect sustainability requirements to affect their sourcing priorities within the next 12 months, while another 26% say it will impact sourcing within the next 1-2 years.

Asked how they are addressing sustainability sourcing efforts, respondents most commonly cite working with suppliers to reach carbon dioxide equivalent (CO_2e) reduction targets, followed by selecting partners based on their carbon footprint, and sourcing alternative materials. That said, there are slight differences in approaches between OEMs and suppliers:

	OEMs	Suppliers
Work with suppliers to reach CO_2e targets	69%	55%
Select suppliers based on carbon footprint	56%	63%
Source alternative materials	51%	47%
Conduct cost vs. sustainability tradeoff analysis	20%	37%
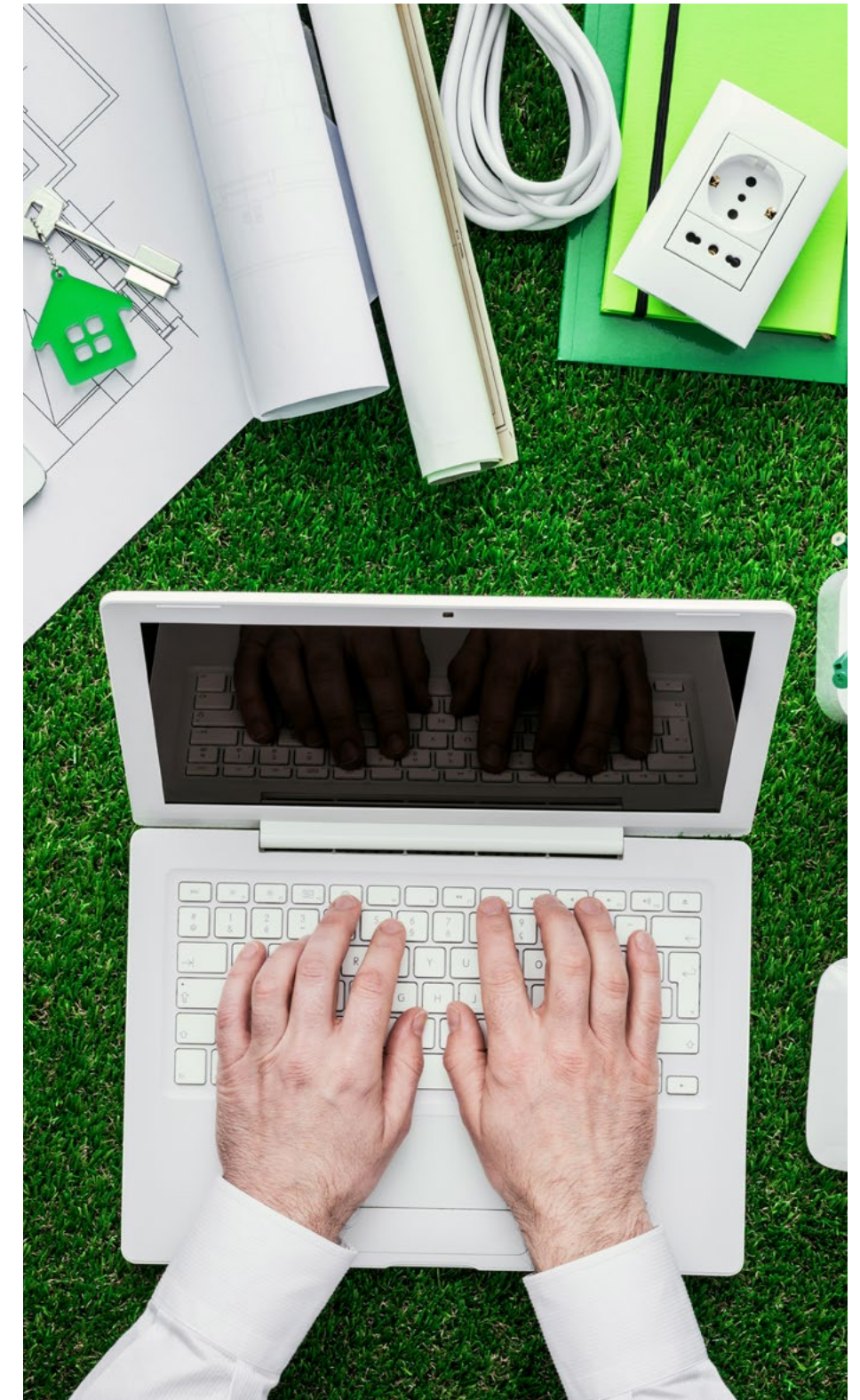
NEXT STEPS: EXPAND VISIBILITY, COLLABORATION, AND AUTOMATION

To gain the necessary visibility and agility in complex manufacturing, organizations should seek ways to connect data systems, automate workflows between OEMs and suppliers, and enable self-service functionality to streamline this often unwieldy process.

A connected platform provides a single source of truth that helps organizations gain insights across the supply chain by replacing siloed or disconnected systems and tools such as email, spreadsheets, and homegrown applications.

An integrated collaboration solution streamlines conversations and reduces the complexity of navigating multiple tools to ensure transparency and early visibility around key issues including product costs, manufacturability, and carbon-dioxide footprint data.

The right platform offers a unified set of product design and manufacturing data in a single environment. Teams across product engineering, product cost, sourcing, and manufacturing can review design files and specifications in a coworking environment.

Manufacturing and business leaders can find benefits in using a purpose-built collaboration solution that:

- **Provides a single source of truth:** Enable all project stakeholders to work on the same data in one place in real time. Use digital thread capabilities to enable users to access the latest product information in their analysis.

- **Is intuitive to use:** Improve collaboration by customizing product data for design or business reviews, as well as supplier negotiations. Enable users to highlight different scenarios by product cost, risk, sustainability, and other relevant metrics. And simplify communications by enabling users to mark up and comment directly on 3D models and provide line-item cost data in real time.

- **Provides transparency:** Have the ability to drill down to see all comments from all users, and use this traceability to better understand a project's evolution.

- **Simplifies task management:** Streamline the product development processes by using automatic alerts regarding assigned tasks and get updates to stay current on project status. And turn off the constant stream of updates in task areas that don't directly impact users.

The right collaboration platform provides multiple benefits — including the acceleration of the sourcing and procurement process and the provision of real-time collaboration between manufacturers and suppliers. As a result, companies can achieve greater agility, efficiency, and a competitive advantage.

IndustryWeek.

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aPriori

aPriori is the leading provider of digital manufacturing software that brings product design, sourcing teams, and supplier teams closer together to close the gap between design and production. By leveraging the digital twin with its digital factories, aPriori automatically generates design for manufacturability and design for cost insights, helping manufacturers collaborate across the product development process to make better design, sourcing, and manufacturing decisions that yield higher-value products in less time. aPriori solutions are available either in the cloud or for on-premises environments.