



THE 2021 STATE OF ECOSYSTEM & APPLICATION
INTEGRATION REPORT

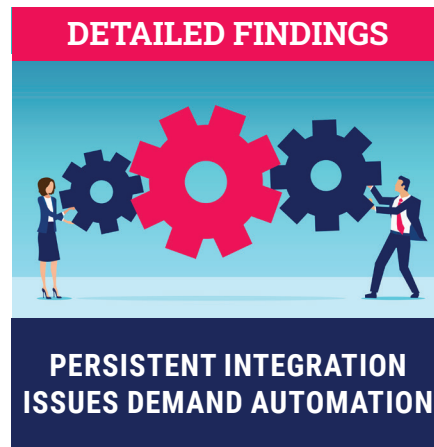
A NEW PERSPECTIVE

THE TIMELY ARRIVAL OF
ECOSYSTEM INTEGRATION

*In 2021, companies find themselves with a new perspective,
better understanding, and a more purposeful urgency to modernize
their supply chain integration solutions.*

*See how the world's leading integration experts plan to leverage
Ecosystem Integration to accelerate growth going forward.*





ABOUT THE REPORT

The 2021 State of Ecosystem and Application Integration Report stems from a survey completed in Q4 2020 and sponsored by Cleo, the global leader in Ecosystem Integration solutions. The survey was conducted by Dimensional Research. This is our third annual iteration of the Report that reflects the collective opinion from business and IT decision-makers representing multiple industries and job functions in companies of all sizes, principally in North America and Europe. If you have questions about the survey results or want more info, please contact Cleo through our website, www.cleo.com.



EXECUTIVE SUMMARY



BEYOND A SENSE OF URGENCY

A year ago, this report on the state of the Ecosystem and Application Integration market zeroed in on the sense of urgency enterprises were feeling to modernize their integration solutions in light of increasing digitalization brought by the cloud, and the weight of legacy systems. Today, companies not only still feel this urgency, but in light of the COVID-19 pandemic of 2020, they are acting on it. COVID created a business inflection point by shining a spotlight into the glaring integration gaps in supply chain processes, revealing more clearly than ever how such gaps can impede revenue and threaten business survival.

Ecosystem Integration Has Arrived

Seventy-four percent of companies surveyed claimed to have lost more revenue due to integration issues in 2020 than in 2019. COVID far and away was the leading culprit impacting revenue, prompting 96% of companies to say that it's pushed them to change their business strategy for 2021 to focus more on cloud migration and digital transformation. And it is this shift – from merely feeling a sense of urgency to taking action – that best crystallizes what is happening in the integration market today.

The understanding that integration technology itself can help uncover business opportunities that contribute to value creation has grown significantly in importance year over year, rapidly increasing the acceptance of “ecosystem integration.”

What exactly did COVID reveal about integration technology? It is this: That companies do not have sufficient visibility into what's really happening with their supply chains. Barely 50% of companies indicated they could access supply chain information to glean business insights. However, nearly 9 out of 10 companies reported that having end-to-end process visibility was important.

So, as we push into 2021, companies find themselves with a new perspective, a deeper sense of urgency and a better view forward. And they've arrived here because of COVID. Ecosystem integration technology, once ignored by C-level and Line of Business leaders as the domain of deep IT personnel, is now properly understood as a strategic driver of business outcomes.

Companies are responding to COVID by aggressively moving their integration solutions to the cloud, giving their supply chains the agility to not only forestall disruption, but outsmart it through analytics and insights. Because of COVID-19, Ecosystem integration ... as a mainstream B2B technology solution ... has finally arrived.



74% of companies claimed to have lost more revenue due to integration issues in 2020 than in 2019.



96% of companies say COVID has shifted their 2021 focus to cloud migration & digital transformation.



50% of companies indicated they could access supply chain information to glean business insights.



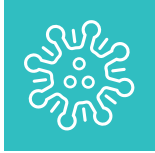
90% of companies said that having end-to-end process visibility was important.

WHAT IS “ECOSYSTEM INTEGRATION?”

Using a single platform for API-based and EDI integration across the external ecosystem of business partners and internal systems with end-to-end visibility to optimize integration processes within a dynamic network of trading partners, applications, suppliers, customers, and marketplaces. Ecosystem Integration has emerged as both a business discipline and a new software category. It helps companies quickly build automated processes that can respond dynamically and intelligently to market disruptions.



COVID has created a business inflection point. And the change is permanent.



COVID'S LONG TAIL

COVID has changed business permanently, growing the reliance on digital commerce, supply partners, and multi-enterprise system integration. This also increases the need for visibility, both to prevent problems and seize opportunities.



REVENUE

Companies lost more revenue in 2020 due to integration issues than in 2019, and COVID was the leading reason why. In response to the pandemic, nearly 9 out of 10 companies made operational business decisions to change course. More than 96% said COVID changed their business strategy for 2021, as they look toward growing their digital commerce channels, accelerating cloud migration, and focusing on digital transformation.



PARTNER ONBOARDING

Most companies added new supply chain partners in 2020, and while onboarding them generally happened faster than in the previous year, the pace woefully lagged behind what the business needed, contributing to negative revenue impact. Among other issues, legacy systems and uncertainty about application integration approaches were identified as reasons companies encountered difficulty onboarding new partners.



SUPPLY CHAIN VISIBILITY

Barely 50% of companies indicated they could access supply chain information to glean the business insights they needed to make faster, better decisions. However, nearly 9 out of 10 companies (89%) reported that end-to-end process visibility was important.



LOST ORDERS

Eighty-eight percent (88%) of businesses admitted they lost orders, and more than half of respondents said their business lost more orders in 2020 than in the previous year. This resulted in significantly more lost revenue in 2020 due to integration issues. And yet a staggering 25% of survey participants admit they really don't know how much they are losing.



ECOSYSTEM INTEGRATION

The survey findings also indicate that companies responded to the revenue and supply chain operational impact of COVID by finally moving integrations to the cloud, underscoring the business importance of "Ecosystem Integration" as a software category going forward.

DETAILED FINDINGS

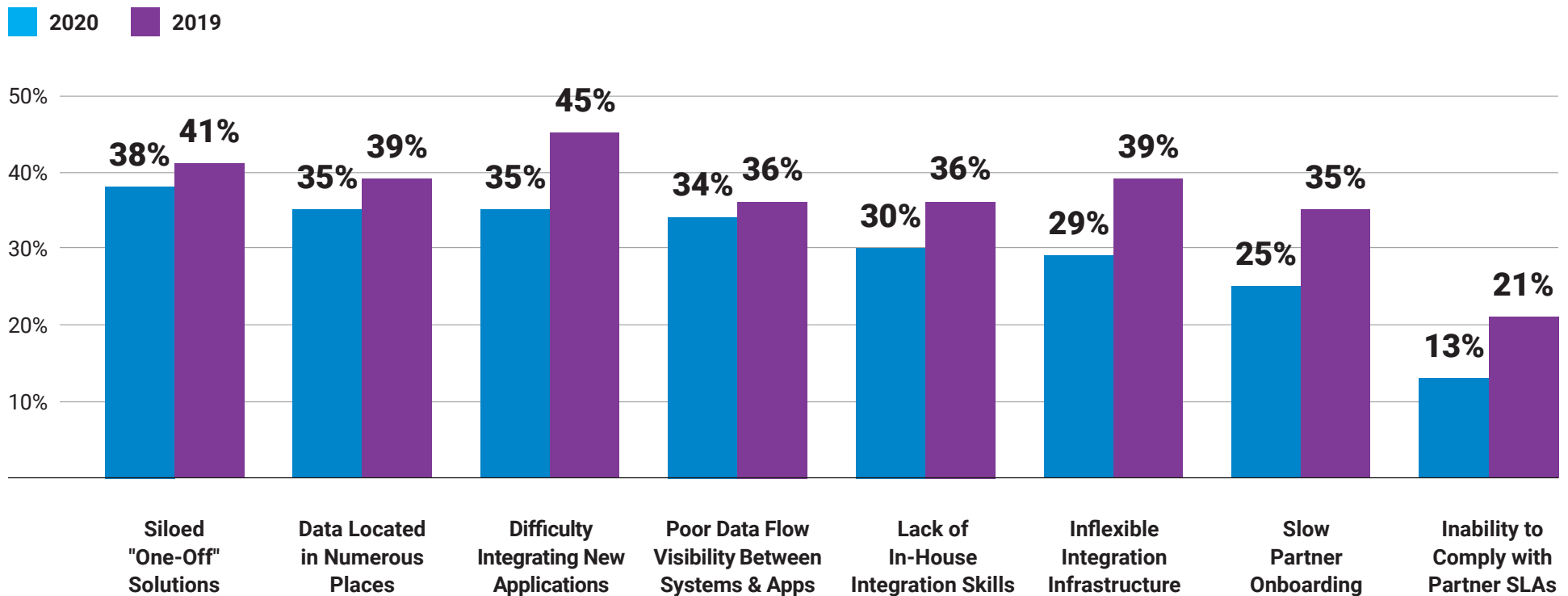


COVID'S LASTING IMPACT ON BUSINESSES

Without question, COVID's impact in 2020 set the future course of global business. But, if there's any silver lining, it is that by exposing the digital fault lines in the world's supply chains, companies now know where their weaknesses are. And because of its impact on 2020 revenue, COVID prompted most businesses to accelerate integration modernization under a customer-focused business strategy -- not a technology-driven one.

COVID-19 Obstructs Revenue, Steals Resources

Because of COVID, attention to integration challenges appears to have declined. However, this is hardly to say these problems are unknown or being neglected. In 2020, 38% of respondents identified siloed, one-off solutions as an impediment to revenue, versus 41% the year before. Thirty-five percent pointed to difficulty integrating new applications, versus 45% in 2019. And 34% mentioned poor data-flow visibility as causing revenue problems for them in 2020, against 36% in 2019.

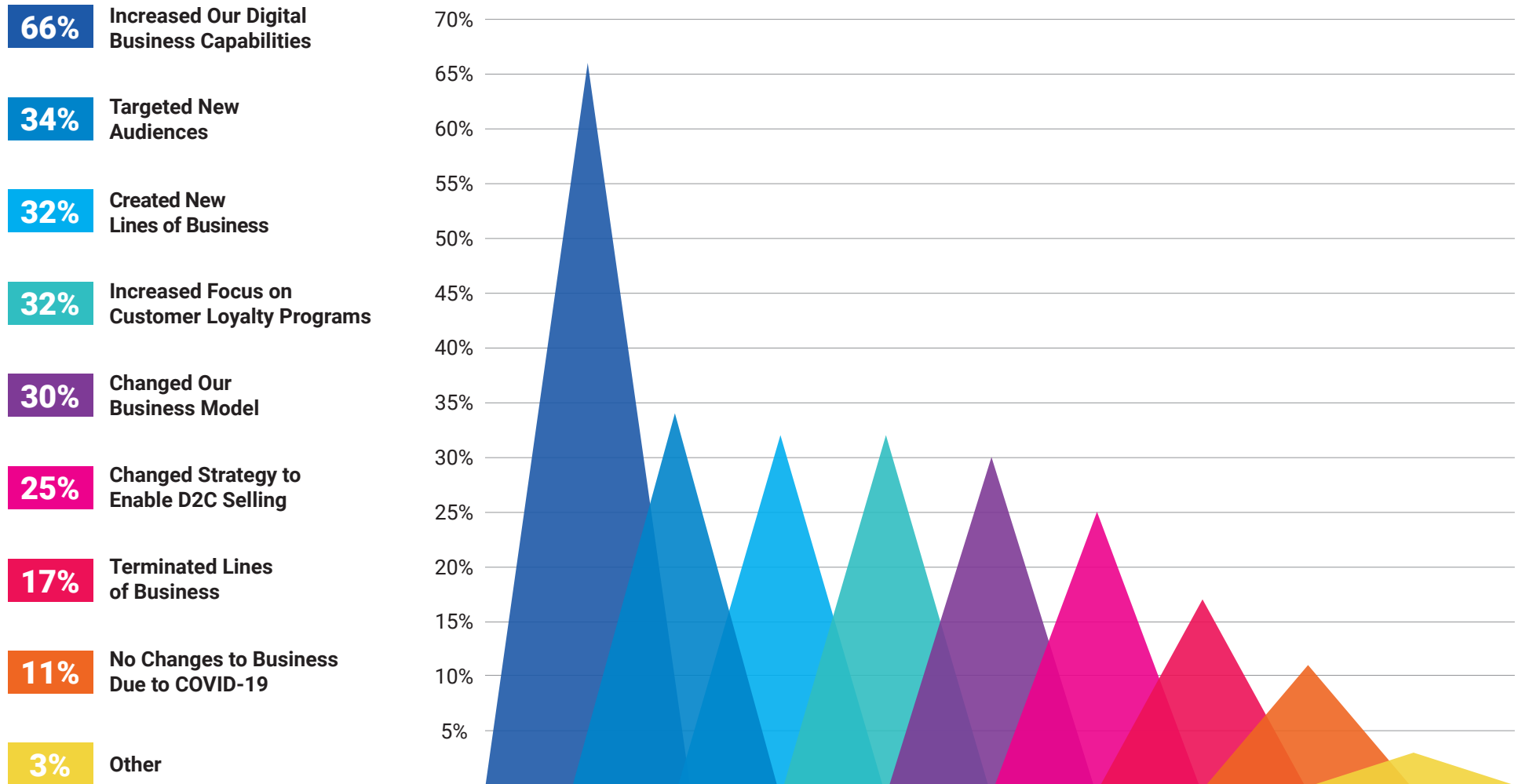


KEY TAKEAWAY

While these and other challenges continue to impede revenue, it's growing less likely they'll persist. Why? COVID elevated the strategic thinking at 89% of companies to an entirely new level, prompting them to altogether change how they do business. In other words, thanks to the disruptions wrought by COVID, a lot of innovative light bulbs switched on about ways to leverage integration technology to drive rapid revenue growth.

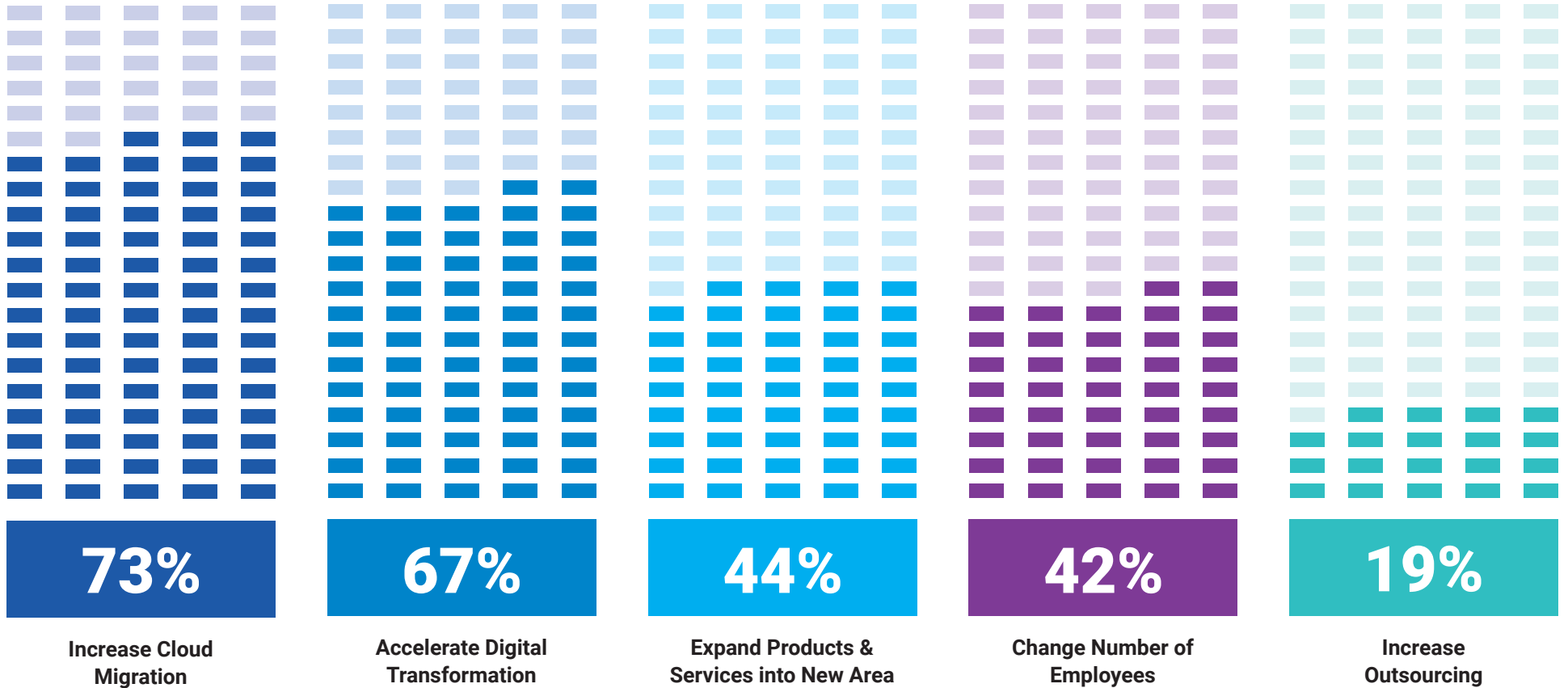
9 in 10 Companies Pivoted Due to COVID

Consider how companies responded to COVID: 66% said they increased their digital business capabilities (e.g., eCommerce, digital supply chain, etc.). Some 34% say they started targeting new audiences. Thirty-two percent created altogether new lines of business, 17% terminated some. Nearly one-third (30%) decided to fundamentally change their business model, with, for example, one-quarter making a shift to a D2C or “direct to consumer” model, or 32% deciding to increase their focus on customer loyalty programs.



Business Strategies Rapidly Shift Toward Cloud

All told, nearly all (96%) respondents say that they've altered their business strategy for 2021 in response to COVID, a move that brings with it a more purposeful focus on integration.



KEY TAKEAWAY

COVID exposed the weaknesses in supply chain integrations, raised people's sights about the issues such problems can cause, and now the business world's appreciation for supply chains has been elevated. Cloud migration and digital transformation are accelerating in response to COVID. And that means more attention paid to integration technology – and not just for technology's sake. Now integration is more clearly understood as essential to effectively executing today's new, customer experienced-focused business strategies.

DETAILED FINDINGS

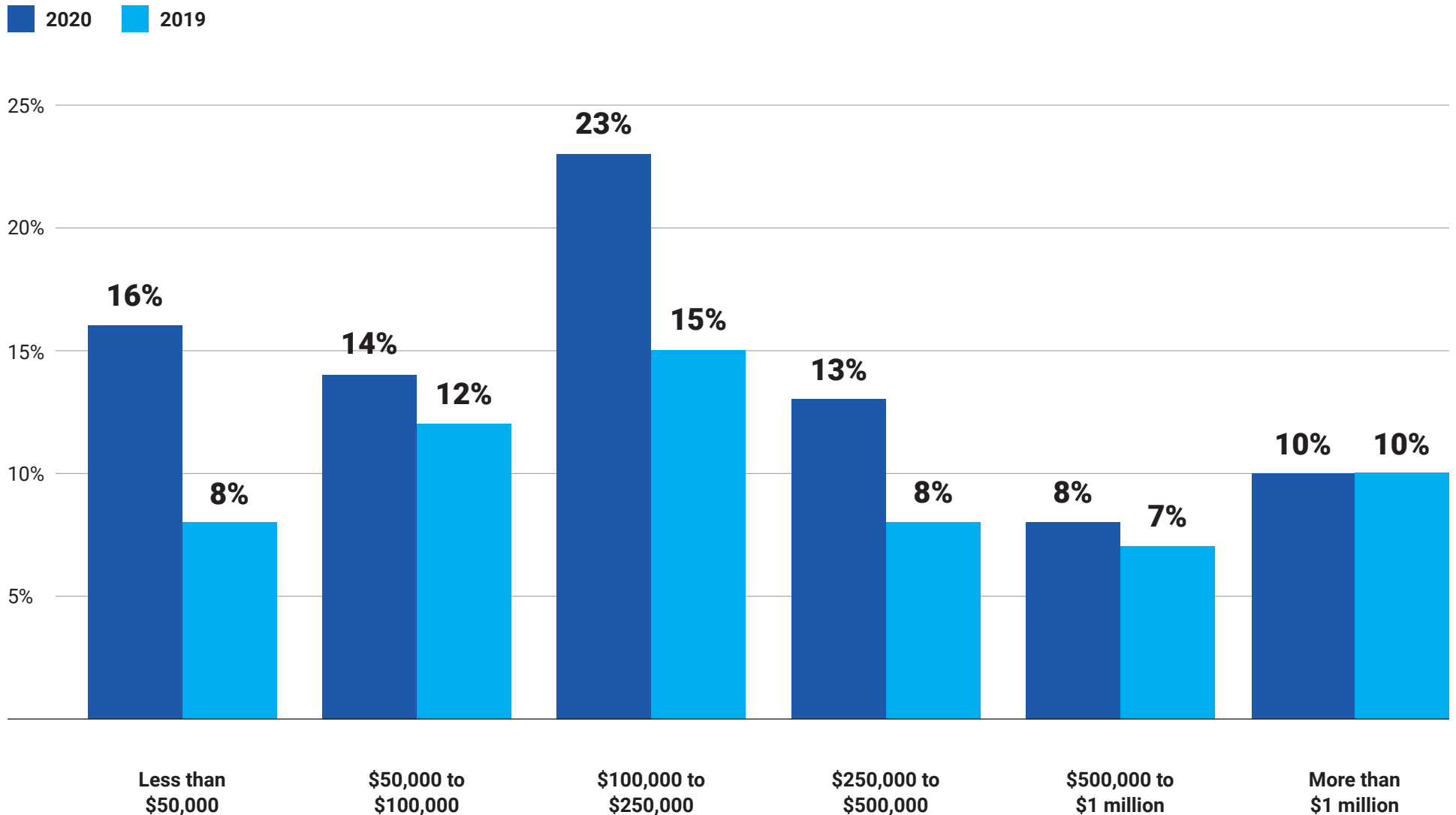


REVENUE LOSSES ANALYZED

Integration issues often cause companies to bleed more revenue than they realize, but in 2020 the impact of these issues became far more apparent due to COVID. The business world's urgent response to the pandemic invited acceleration of cloud migration and prompted more strategic focus on digital transformation. As a result, the revenue issues surfaced by COVID actually served to raise companies' awareness about what they know, don't know, and need to know about integration technology, which bodes well for them reaping its benefits going forward.

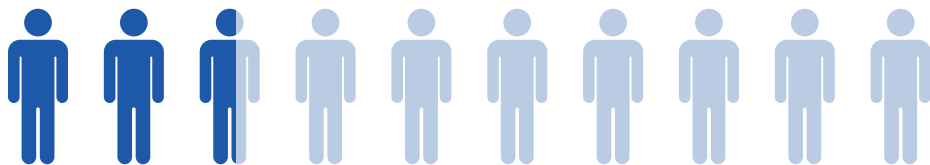
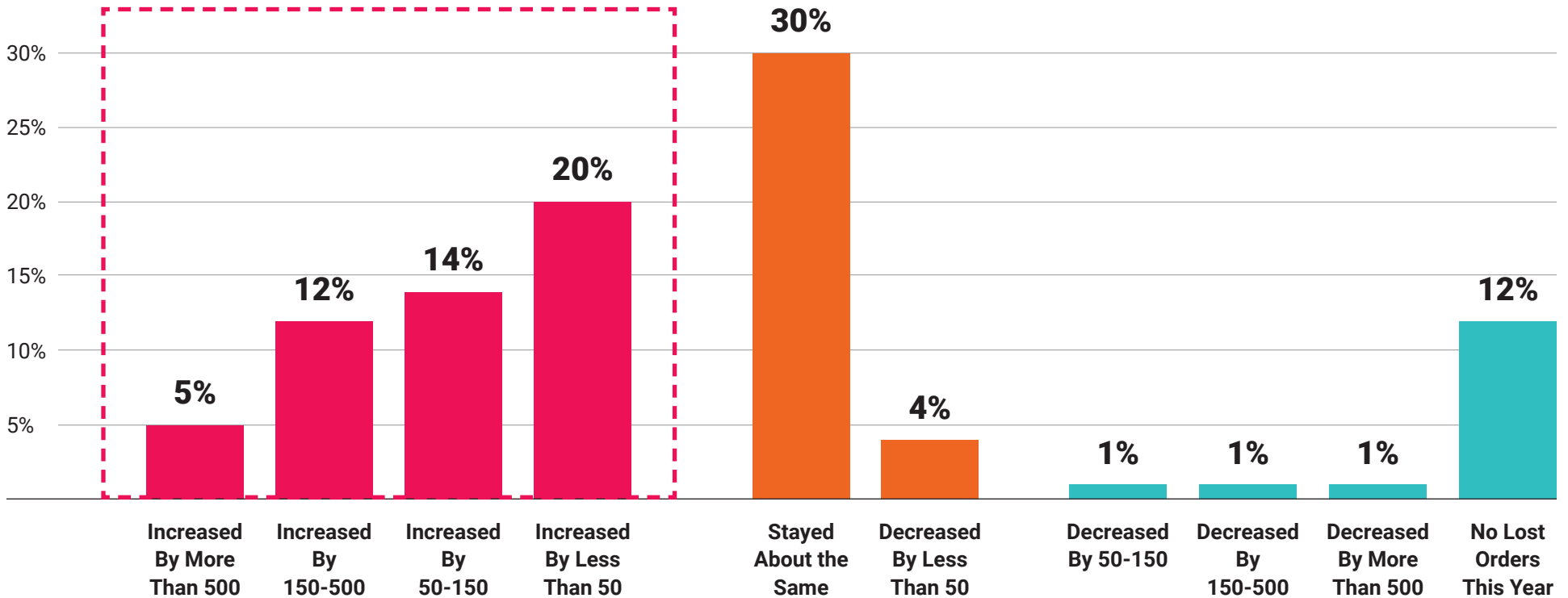
Integration Issues Cost Companies More In 2020 Than Prior Years

When asked how much annual revenue was lost in 2020 due to poor integrations, 66% of respondents said their companies lost up to \$500,000, compared with 43% losing up to that amount the prior year. In 2020, 8% percent said they lost between \$500,000 and \$1,000,000, versus 7% in 2019. And 10% estimated they lost more than \$1,000,000 due to integration issues in 2020, no change from the year before.



88% of Companies Lost Orders; Over Half Lost More in 2020 than 2019

When asked to compare how many orders their business lost in 2020 versus 2019, 51% of respondents indicated they lost more orders in 2020. Only 3% said the number of lost orders decreased, while 30% indicated there was no change year over year. Twelve percent said they did not lose any orders.



HOW MANY LOST ORDERS WERE DUE TO INTEGRATION ISSUES?

26%

Twenty-six percent of respondents answered, "I don't know," a slight increase from 2019, suggesting that one in four businesses still don't have visibility into the actual revenue impact of their integration issues.

DETAILED FINDINGS

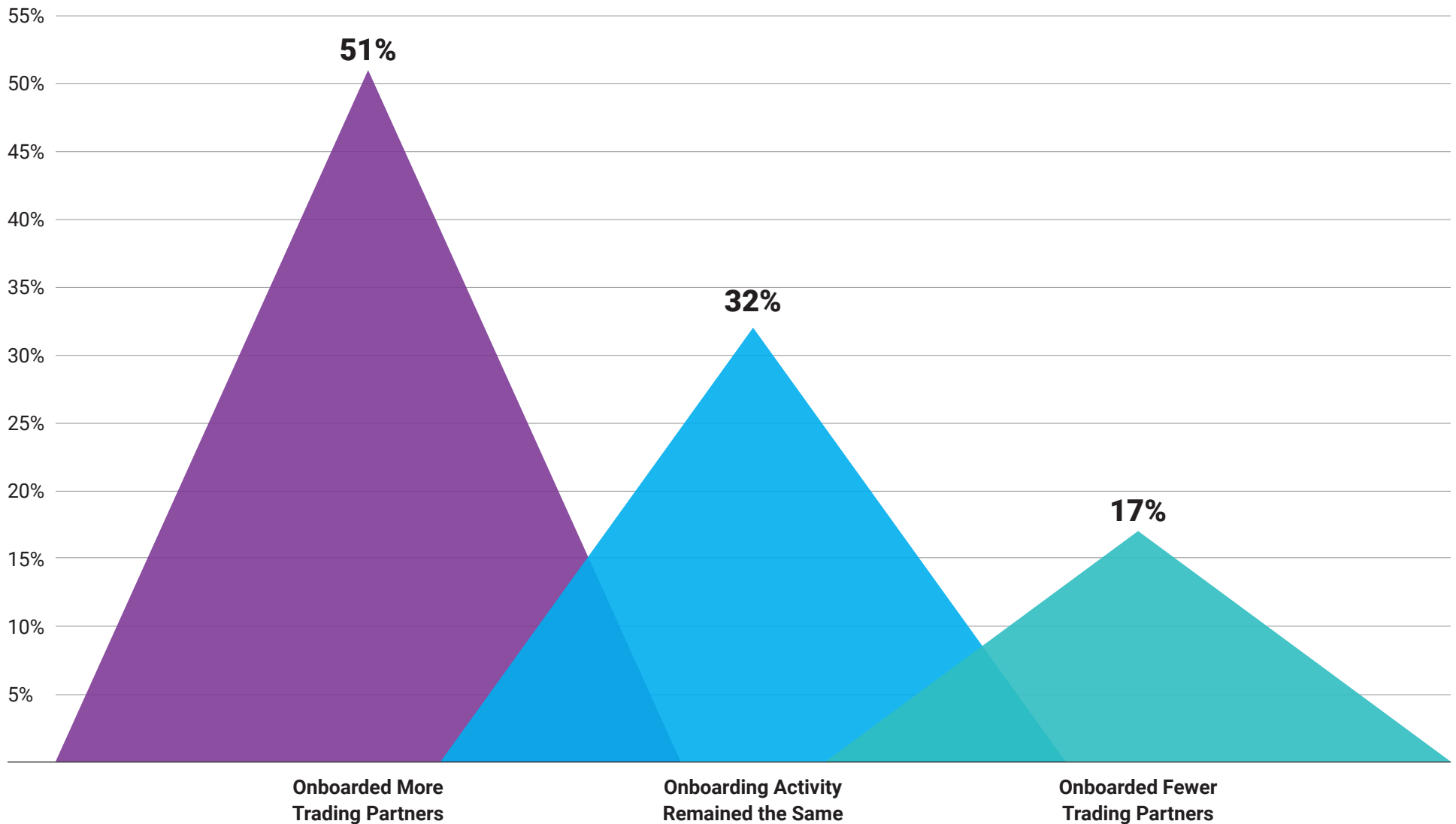


MORE, FASTER ONBOARDING – BUT ...

One of the key measures of integration technology's effectiveness is how well it facilitates the onboarding (or offboarding) of business trading partners. 2020 saw entire geographic regions constrained from trade, innumerable factory shut-downs, and logistics nightmares caused by the dynamic nature of shifting demand.

Most Companies Onboarded More Supply Chain Partners In 2020

2020 saw a slight increase in this area, as most companies (51%) said they onboarded more trading partners than they did in 2019. About one-third said their onboarding activity remained about the same, and 17% said they engaged with fewer new partners.



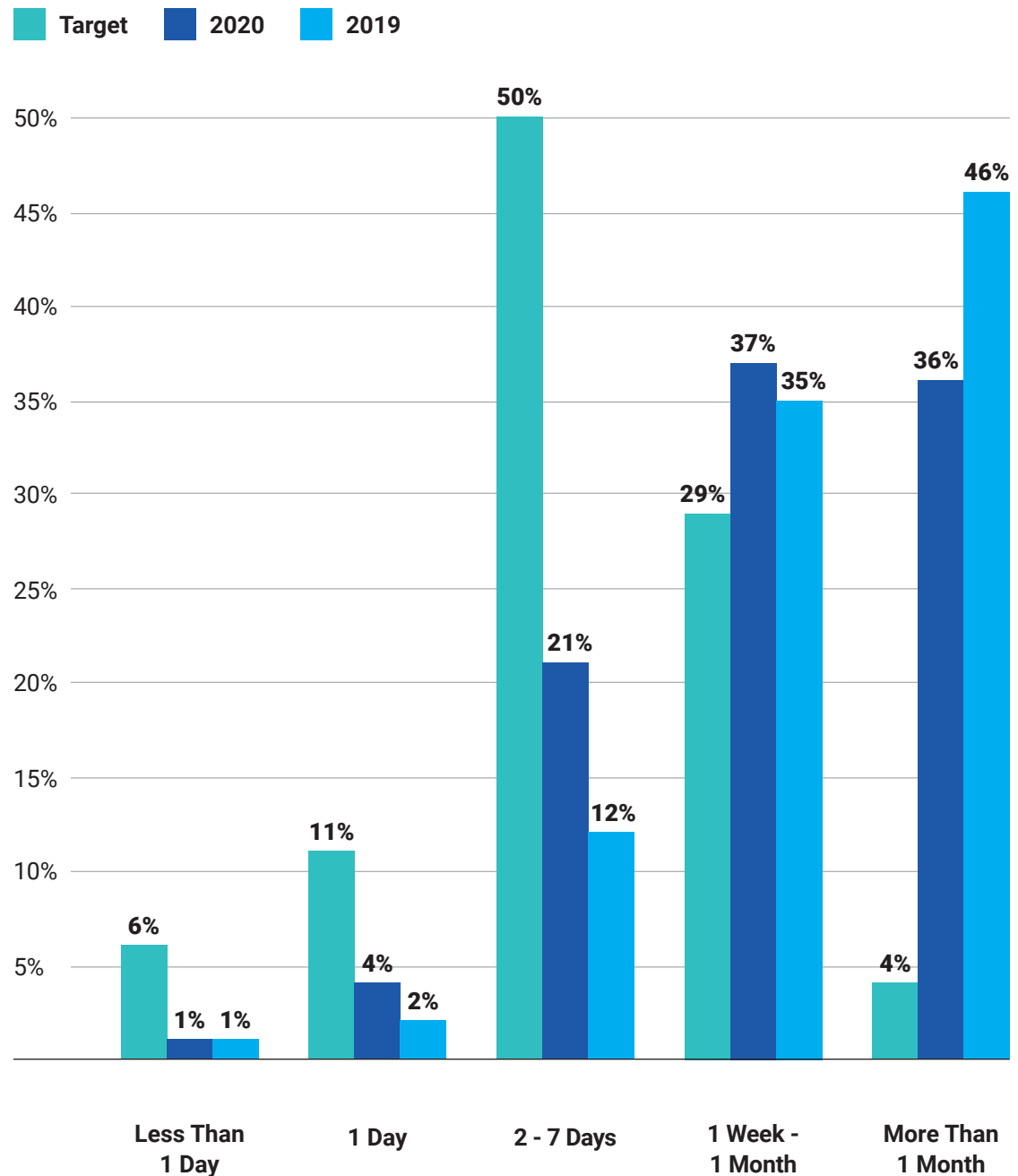
Companies Onboarded Partners Faster in 2020, but Still Missed Targets

Perhaps more revealing than the quantity of supply chain partners that companies added, was the speed with which onboardings now happen, and what the acceptable timeframe is for this critical activity. Half of companies surveyed felt that onboarding new supply chain partners should take 2-7 days. Seventeen percent felt onboarding should be completed in one day or less, while slightly under one-third (29%) thought one week to one month was okay.



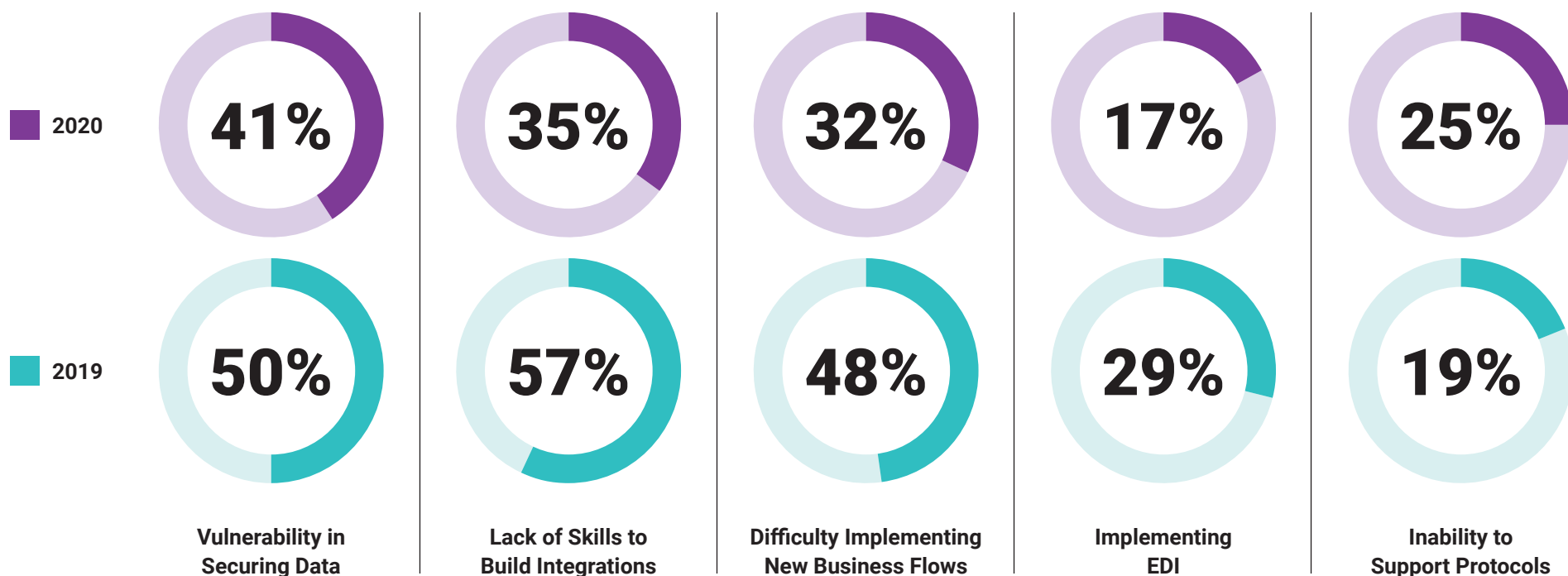
24% Twenty-four percent of those surveyed also consider the fact that they onboard partners too slow to be among their biggest integration challenges overall.

Interestingly, while half of those surveyed see 2-7 days as the optimum target, only one-fifth (21%) of them were actually able to hit that mark in 2020. Compare that with just 12% hitting that mark in 2019, though, and we see 57% improvement. Five percent of companies say they got it down to one day or less in 2020, a 40% improvement over 2019, when only 3% could claim this. Still, the vast majority of companies (73%) remain relatively slow, needing from between one week to a month or more to onboard each new trading partner, though this is better than the 81% of companies who took that long in 2019.



Legacy Systems and Applications Remain Top Challenges

Far and away, dealing with legacy systems remained the biggest challenge for 55% of companies in 2020, unchanged from 2019. All other technical challenge areas we asked about saw significant improvement, however.



The year over year improvements in the five areas above leads us to believe that organizations have not only continued their investment for digital transformation, but accelerated it during a pandemic year. While the data suggests improvements in critical areas like integration skills and EDI implementation, most organizations still have inefficiencies that could be impacting revenue, customer satisfaction, or business risk.

DETAILED FINDINGS

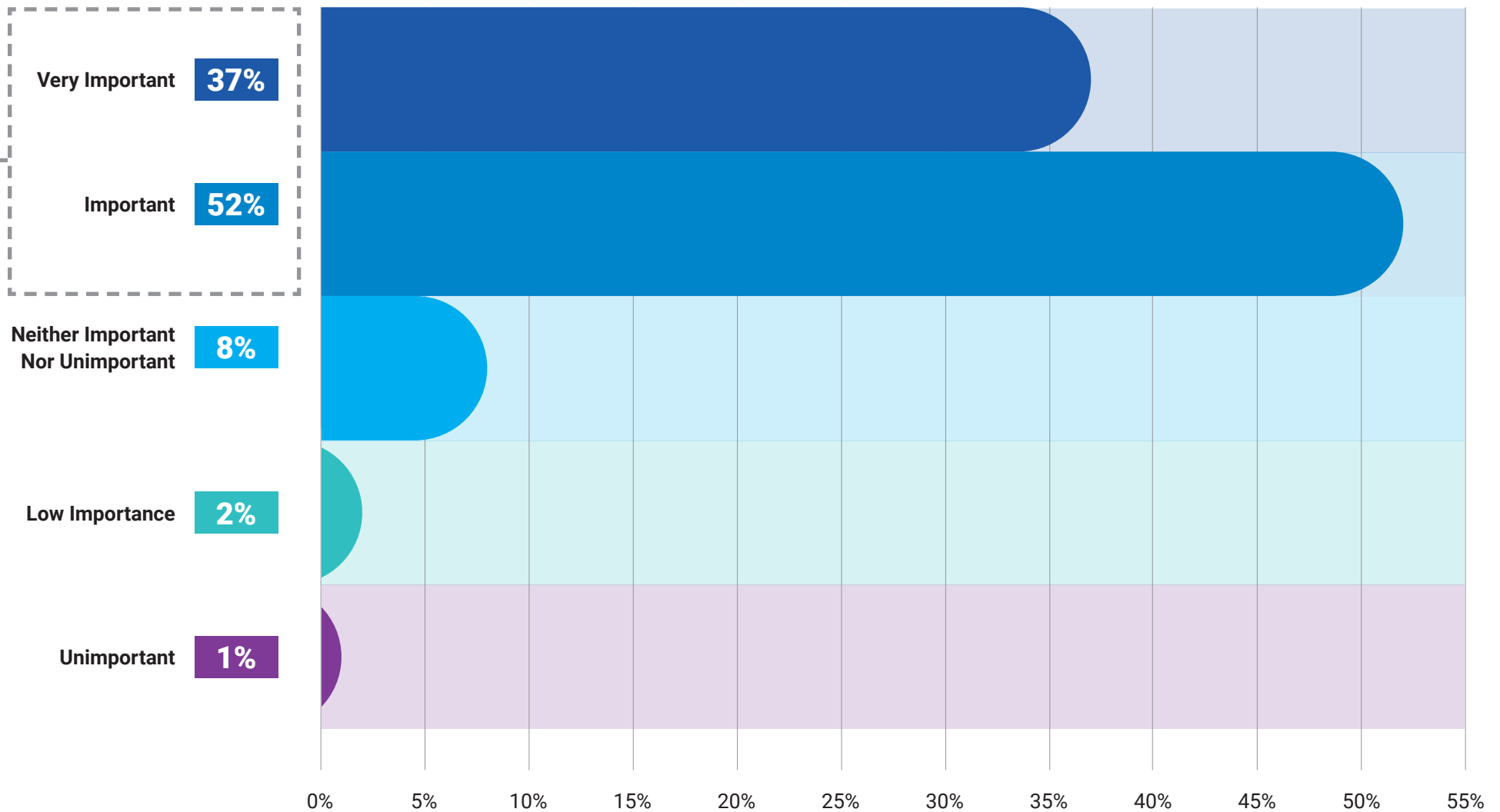


SUPPLY CHAINS STRUGGLE, IMPROVEMENTS NEEDED

When a digital ecosystem is up and running, with all its trading partner and customer relationships, interwoven cloud and on-prem applications, end-to-end business processes, and vital integration points working seamlessly together, data can be orchestrated to flow more easily, enabling businesses to glean real-time insights and make better, faster decisions that move the company forward. Most companies are not there yet.

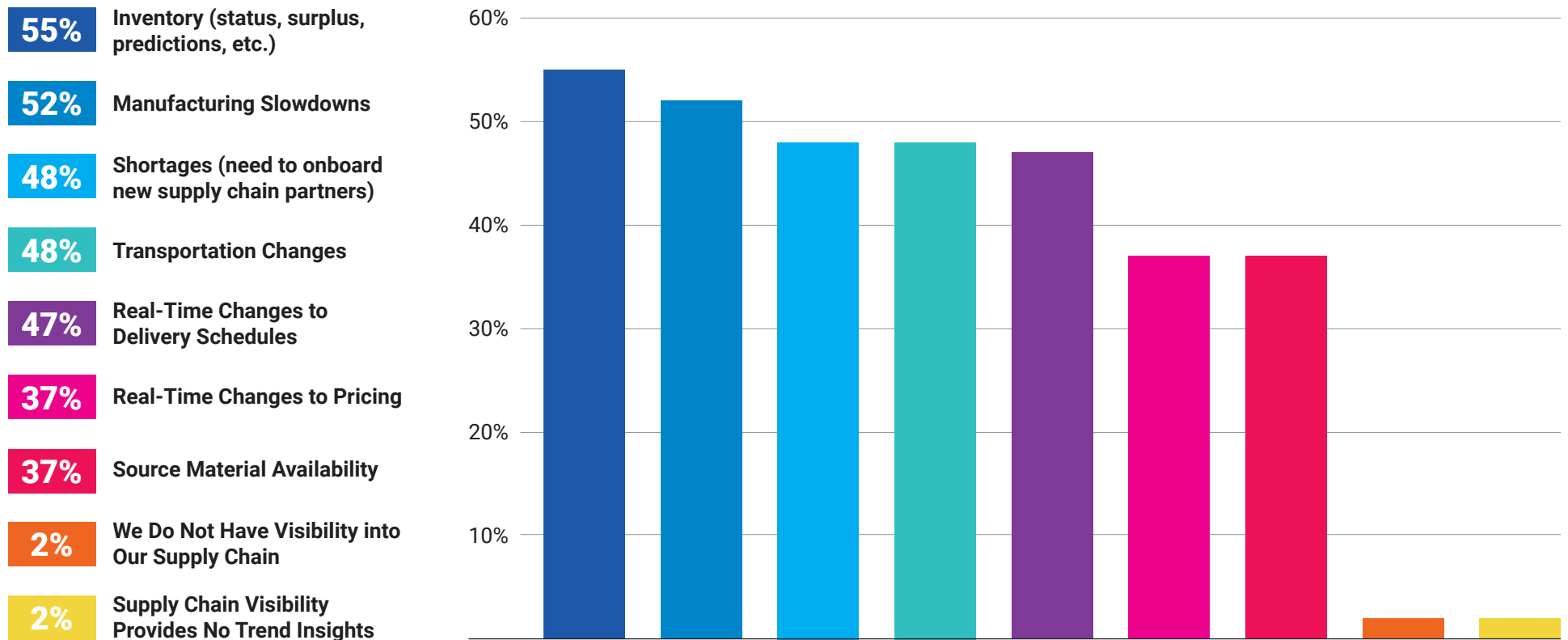
Companies Know Visibility is Important but Maturation is Slow

Eighty-nine percent of companies do say that having complete end-to-end visibility of transactions between their company's systems and their partners, suppliers, and customers' systems is important.



Barely Half Of Companies Can Use Supply Chain Data to Build and Understand Business Trends

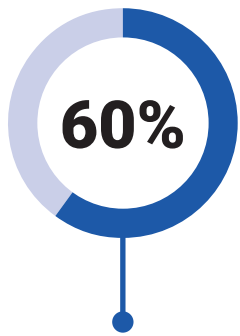
Take inventory status, manufacturing slowdowns, or materials shortages, for example. Companies who are able to analyze their data flows effectively are suited to make better business decisions. Yet, today, only 55% say they have enough visibility into their inventory systems to check statuses or predict surpluses. Furthermore, just 52% say they can detect manufacturing slowdowns and only 48% have the ability to identify severe shortages that might indicate the need to onboard a new supplier.



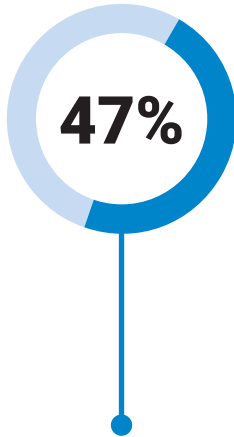
Managing through day-to-day changes likewise calls for clear supply chain visibility. Transportation changes caused by delays or shipping restrictions, real-time changes to delivery schedules, or dynamic fluctuations in pricing, are all things smooth-running businesses would like to know. Yet, today, only about half of companies surveyed said they can use their data to foresee changes to their transportation plans (48%) or delivery schedules (47%), and just over one-third (37%) can see real-time changes to pricing.

94% of Companies are Strategizing to Remove Supply Chain Issues

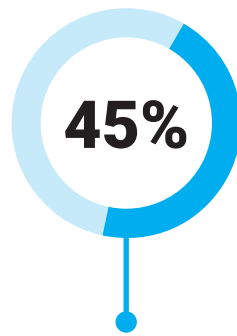
Because of COVID, companies are now well aware of their supply chain shortcomings and are taking steps to address them by trying various strategies to remove supply chain issues. When asked about how their companies have attempted to mitigate supply chain disruptions, 94% said they're trying some or all of the following:



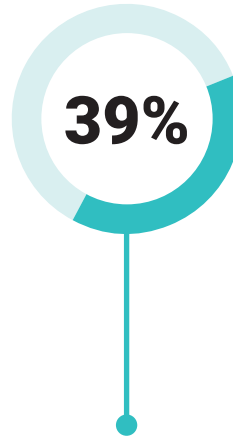
Improving Supply Chain Flexibility



Implementing Better Business Process Flexibility



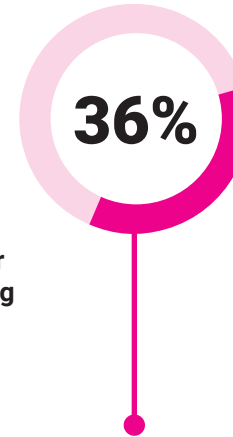
Improving Response Time



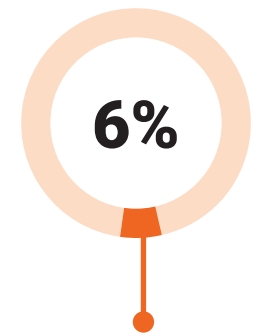
Gaining Increased Control Over Integration Solutions



Using Real-Time Data for Improved Decision-Making



Centralizing Integration Management



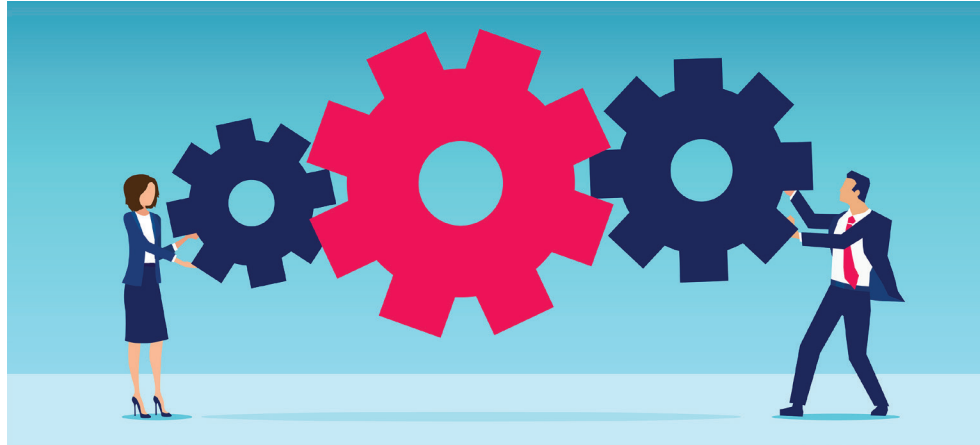
We Have Not Tried to Mitigate Any Supply Chain Disruptors



THE WAKE-UP CALL

2020 was a huge wake-up call for supply chains. Many companies learned the hard way that not only is integration agility – the ability to turn on a dime to support a change in business strategy – critical when dealing with the unforeseen, it is critical to maintain a competitive advantage even during normal business conditions.

DETAILED FINDINGS



PERSISTENT INTEGRATION ISSUES DEMAND AUTOMATION

In our 2020 report, we compared legacy applications to being “like a millstone,” impeding revenue and costing companies money. Not much changed on that score year over year. Legacy technology, and other trouble spots, are still weighing companies down.

Top 10 Integration Challenges for 2021

An objective analysis of this list of persistent integration challenges, and the sizeable number of companies that continue to struggle with them, suggests that a paradigm shift in strategic thinking is needed if companies are to start putting these troubles to rest once and for all.

■ 2020 ■ 2019



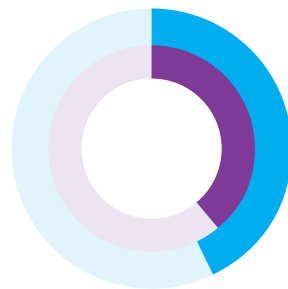
Legacy Applications

56% 63%



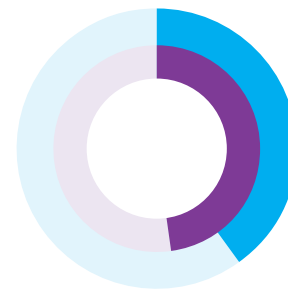
Legacy Integration Solutions

54% 51%



Reliance on Manual Processes

43% 39%



Multiple Integration Solutions

40% 48%



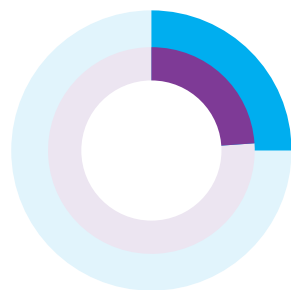
Lack of Integration Expertise

34% 39%



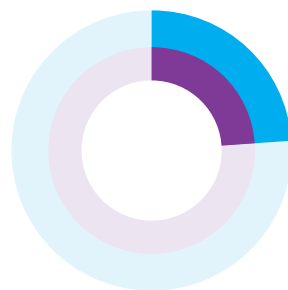
Difficulty Integrating Apps with Cloud Solutions

30% 37%



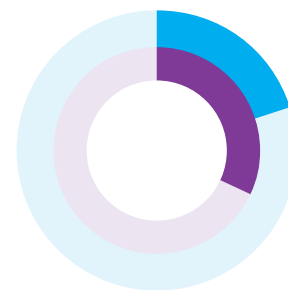
Obscured Data Visibility

25% 24%



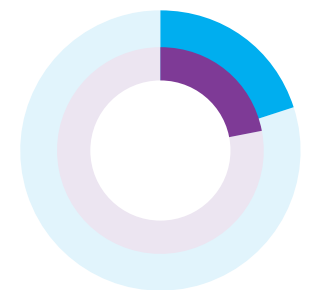
Slow Partner Onboarding

24% 24%



Unsupported Protocols

20% 32%

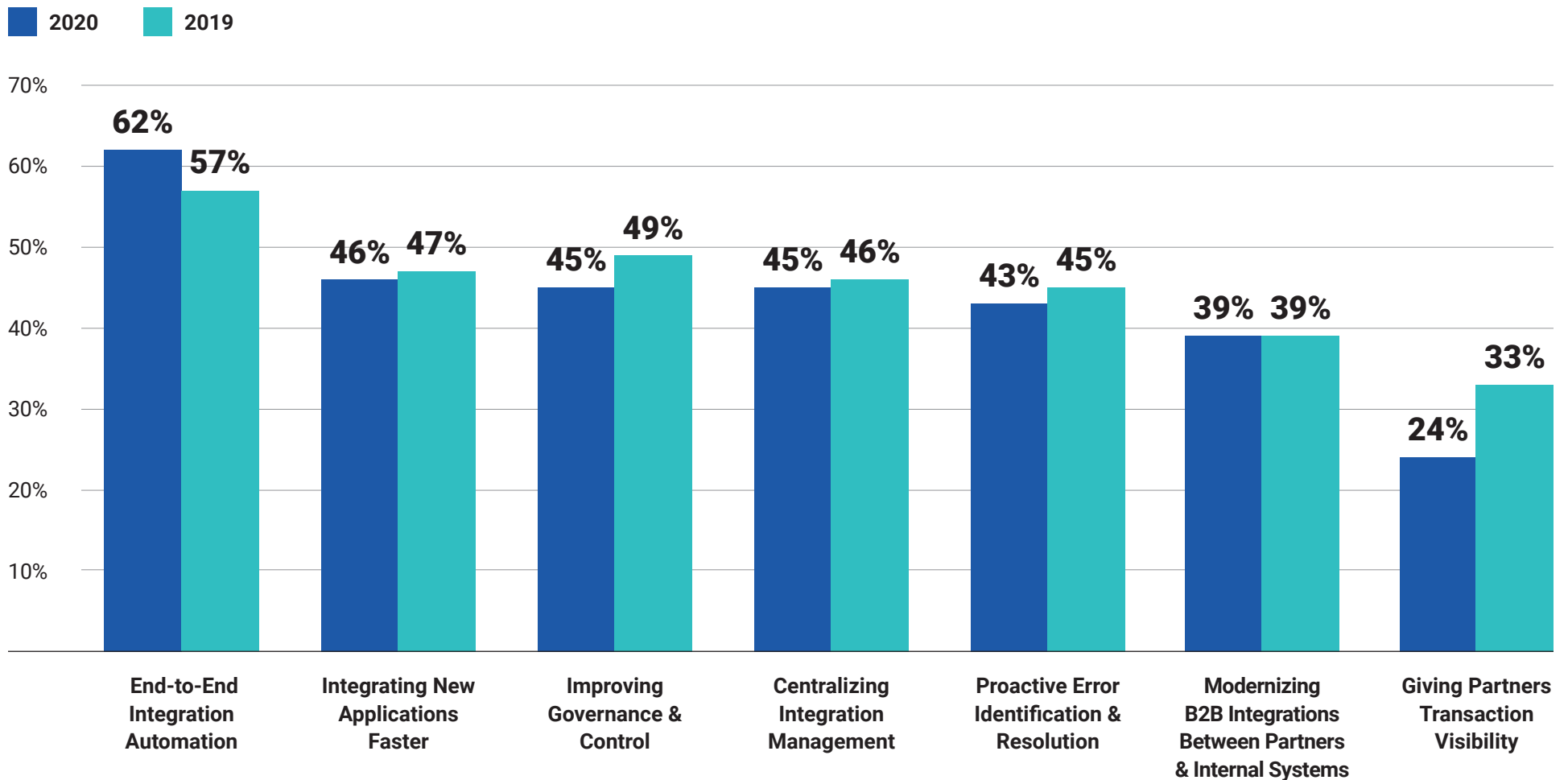


Lack of Back-Office Application Integration

20% 22%

Key Technology Initiatives for Driving Value

Nearly half (45%) of respondents confirmed that specifically in response to the pandemic they have accelerated their plans to transfer integration capabilities to the cloud. This is a very powerful trend. COVID slowed down the cloud migration timeline for 23% of companies responding, while about one-third (32%) said the pandemic prompted no change in their plans.



What are the best next steps for deriving value from integration technology? Notably, two-thirds of respondents (62%) selected “automating end-to-end integration processes” – a key benefit of ecosystem integration solutions – as the number one integration initiative they felt would drive the most value for their business. It’s also a leading indicator supporting the core premise of this report, which is that ecosystem integration’s time has come.

DETAILED FINDINGS



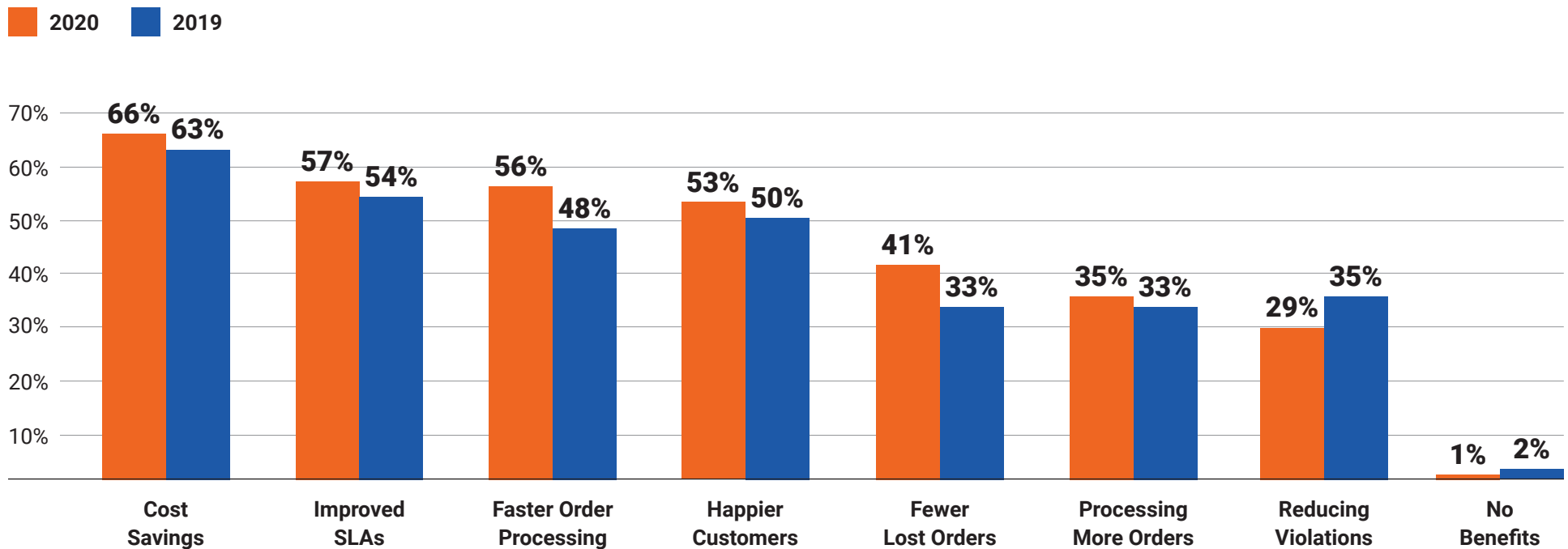
THE TIMELY ARRIVAL OF ECOSYSTEM INTEGRATION

In just one year, there have been across-the-board increases in the importance assigned to ecosystem integration by integration experts. See what business benefits supply chain leaders expect to get from this more modern approach to integration technology.

What the New Perspective Gives Us

2020 literally shocked global supply chains and exposed their digital weaknesses. Business and technology leaders became hyper-focused on finding ways to leverage technology to improve supply chain adaptability and agility. Factor in the irreversible acceleration of eCommerce as more individuals began working from home and companies changed up their business models in response to the crisis, strategically focusing on delivering excellent customer experiences, and the new perspective becomes all the more clear.

Consider the business benefits survey-takers expect from Ecosystem Integration, and it's no surprise companies' senior leaders want those benefits, sooner rather than later. The promise of ecosystem integration is compelling, and grew even more so year over year, as evidenced below.



WHY ECOSYSTEM INTEGRATION IS TIMELY

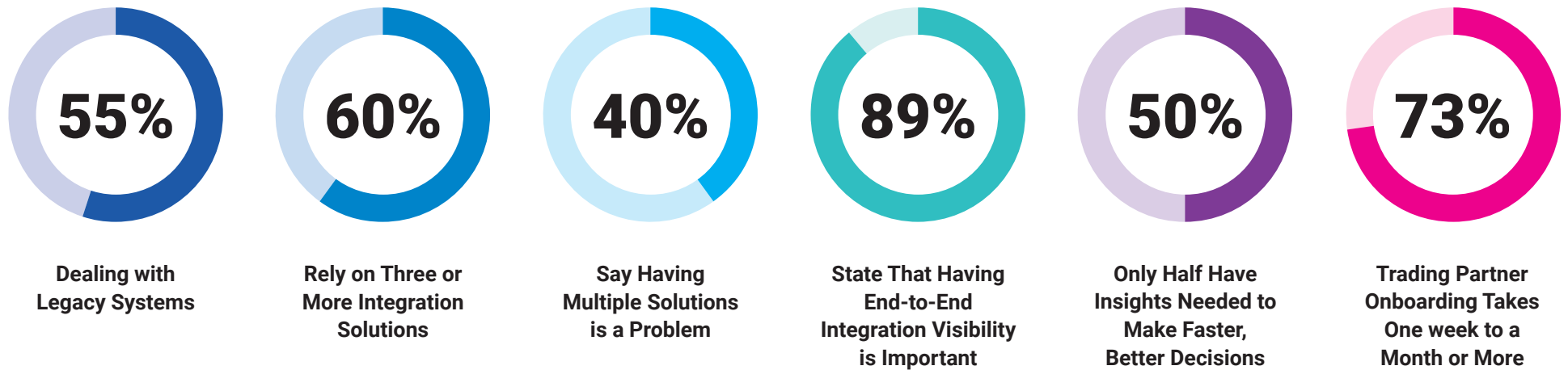
We're witnessing an acceleration in digital transformation, spurred by the pandemic and evidenced by the explosion in eCommerce, increased automation, and rapid adoption of cloud-based SaaS applications. As a new category of software, Ecosystem Integration has arrived at just the right time, providing critical digital business process integration to help companies become digital enterprises that can enable the exceptional customer experiences required to achieve growth and profitability – come what may.

The Outlook Ahead

COVID-19 has left a lasting mark on the world of business. Yet, in many ways, the pandemic proved a fortuitous wake-up call for supply chain-driven companies to learn anew about the value and potential of integration technology to make a strategic and lucrative contribution to their business.

As eCommerce explodes and digital business models change to accommodate this new world of customer-focused businesses, B2B companies in manufacturing, distribution, logistics and retail find themselves with a wholly new perspective, with more clarity and visibility, but more challenges and milestones ahead.

For most companies, B2B integration strategy is broken. Here are the biggest challenges:



Challenges like these, and others cited in this report, put businesses at risk. Fortunately, there is a brighter future straight ahead. Because as cloud adoption increased and digital transformation initiatives gained speed in 2020, the value and timeliness of Ecosystem integration began to sink in as companies wrestled with how to steadily make their supply chains more agile and efficient.

Those learnings have given business leaders a new perspective. And as we push further into this new decade, more companies will move their integration solutions to the cloud as they evolve their integration solutions to become strategic drivers of growth.



SURVEY GOALS & METHODOLOGY

The primary research goal was to understand the scope and challenges of building and maintaining enterprise B2B integrations and how that changed in 2020 vs 2019. Additionally, the research sought to understand the business impact of integration issues and COVID-19.

Methodology

IT executives and professionals responsible for application and infrastructure integration were invited to participate in a survey on their company’s integration approaches and challenges.

The survey was administered electronically, and participants were offered a token compensation for their participation.

Participants

A total of 509 qualified participants that design, build and manage applications or infrastructure integrations completed the survey. Participants were from North America and Europe.

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Companies Represented: Employees & Revenue

- 42% of companies responding have over 10,000 employees. 16% have between 5,000 and 10,000. 36% have between 1,000 and 5,000. And 6% between 500 and 1,000.
- 29% have over \$5 billion in annual revenue. 19% have between \$2 billion and \$5 billion. 11% have revenue of \$1 billion to \$2 billion. 12% have revenue of \$500 million up to \$1 billion. And 18% have under \$500 million.

Locations Represented (by percent)

- United States & Canada81%
- Europe.....19%

Roles Represented (by percent)

- Director/Manager 37%
- Front-line Professional..... 32%
- Executive / C-level31%

Focus Areas (by percent)

- Operations.....23%
- Development.....21%
- Server & Database Infrastructure ... 19%
- DevOps 14%
- Security..... 12%
- Network7%
- Other 4%

Industries Represented (by percent)

- Technology Software 17%
- Financial Services..... 15%
- Government..... 11%
- Healthcare..... 9%
- Education..... 8%
- Telecommunications..... 6%
- Services 6%
- Manufacturing..... 6%
- Retail 4%
- Technology 3%
- Transportation & Logistics 3%
- Media & Advertising 3%
- Food & Beverage..... 2%
- Energy & Utilities..... 2%
- Hospitality 1%
- Pharmaceutical..... 1%
- Other 3%

About Cleo Integration Cloud

Cleo Integration Cloud (CIC) is a cloud-based integration platform, purpose-built to design, build, operate and optimize critical Ecosystem Integration processes. The CIC platform brings end-to-end integration visibility across API, EDI and non-EDI integrations. It gives technical and business users the confidence to rapidly onboard trading partners, enable integration between applications, and accelerate revenue-generating business processes. On the platform, businesses have the choice of self-service, managed services, or a blended approach – ensuring complete flexibility and control over their B2B integration strategy.

About Cleo

Cleo is an ecosystem integration software company focused on business outcomes, ensuring each customer's potential is realized by delivering solutions that make it easy to discover and create value through the movement and integration of B2B enterprise data. Cleo gives customers strategic, "outside-in" visibility into the critical end-to-end business flows happening across their ecosystems of partners and customers, marketplaces, and internal cloud and on-premise applications. Our solutions empower teams to drive business agility, accelerate onboarding, facilitate modernization of key business processes, and capture new revenue streams by reimagining and remastering their digital ecosystem through robust application, B2B, and data integration technologies. For more information, visit cleo.com or call +1.815.282.7695.



Our Users Love Us.

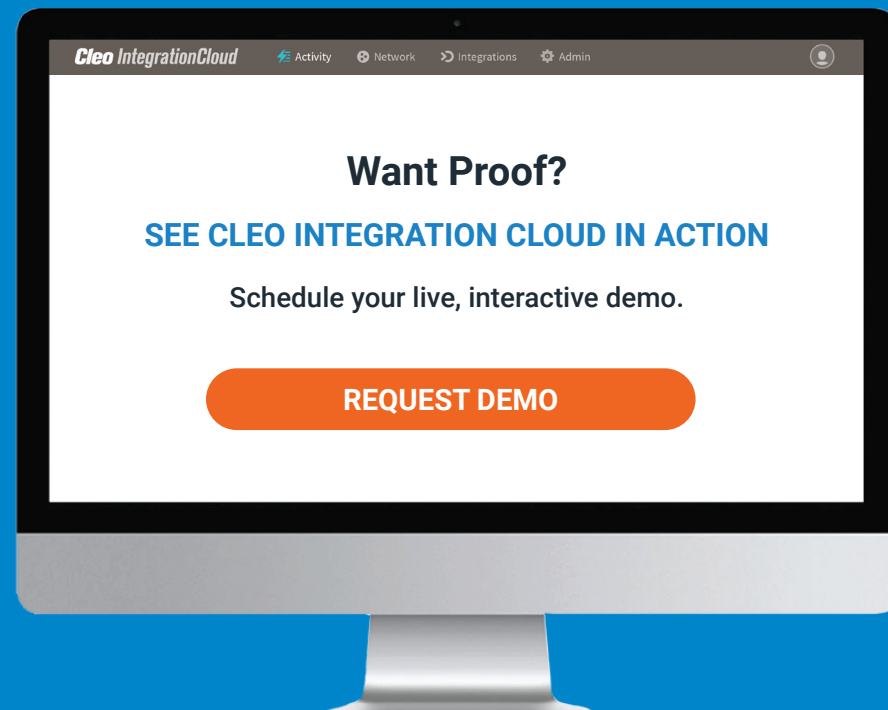
Recognized "Leader" in iPaaS and EDI categories on G2 Crowd for the past 11 quarters.

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Cleo Integration Cloud™

- ✓ 95% Reduction in Manual Processes
- ✓ 4x Faster EDI Onboarding
- ✓ 10x Solution ROI Through Cost Savings
- ✓ Leverage Breadth of Application Connectors



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