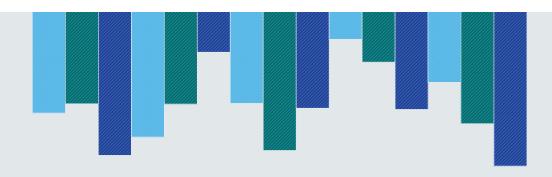


The Data-First Enterprise:

Reimagining Finance and Procurement with Intelligence-Driven Insights



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Imagine a world where software can tell you where the money is and how to get it. Imagine a world where, with the push of a button, your enterprise systems surface valuable opportunities to reduce costs, improve compliance, or reduce risk and actually automate the execution. Imagine a world where employees can shift from reactive reporting to proactive engagement in strategic, high-value activities.

These scenarios certainly have represented the promise of artificial intelligence (AI) and software for some time. Thanks to the massive disruptions caused by Covid-19, we are now seeing the promise becoming a reality in the most data- and process-heavy parts of the enterprise: finance and procurement. AI can now arm finance and procurement teams with vital information to engage stakeholders and accomplish more.

As the world and the marketplace become more dynamic and volatile, the enterprise operating system must adapt. Enterprises can now rapidly assess, predict, and change spending, investments, and operations strategies in real time to capture value creation opportunities.

Companies require new ways to identify actionable opportunities to improve their businesses from the massive amounts of data and systems they manage across their organization. With many companies facing rising costs and shrinking margins, access to actionable insights for finance and procurement leaders is critical to success and survival in many cases.

Yet, the monolithic legacy applications like enterprise resource planning, procure-to-pay, and contract lifecycle management systems have hampered the enterprise, resulting in decision making that is slowed by heavy customization, inaccessible data, and significant technical debt. To remedy this, innovative finance and

procurement leaders elect to implement a data-first strategy with easily adaptable business technologies that enable organizations to make better decisions faster by democratizing data, delivering actionable insights, and improving cross-functional collaboration.

Gartner¹ estimates that by 2022, 50% of all legacy spend on analysis software will be replaced by Al-powered, cloud-based solutions. By 2024, 50% of organizations will have near real-time procurement analytics. Gone are the days when data was only available to those with advanced skill sets who spent weeks building simple reports that only captured a small percentage of the total opportunities. The future of finance and procurement capabilities is complete visibility into financial data with insights to drive more significant strategic impact.

At Suplari, now part of Microsoft, we see finance and procurement teams shifting from passively struggling with data and building backward-looking reports to empowering the entire organization to collaborate on critical initiatives using insights and automation. We've sponsored this research by Harvard Business Review Analytic Services to examine how finance and procurement leaders create value through data and predictive insights. Through in-depth interviews with companies in the midst of digital transformation, this white paper shares best practices and use cases on how to create true business impact, driving profit, cash flow, and increased productivity across the enterprise.

There has never been a better time for finance and procurement teams to lead by using data. Please use this white paper to start the conversation on how your finance and procurement teams can exponentially increase their strategic impact.

¹ Koray Kose, William McNeill, and Kaitlynn Sommers, "Boost Supplier Management by Integrating Use-Case Driven Spend Analytics," Gartner, January 25, 2021.

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Reimagining Finance and Procurement with Intelligence-Driven Insights

Finance and procurement sit in one of the most strategically valuable positions within the enterprise. No functions have a better vantage point from which to provide sourcing input, manage costs, work around supply shortages, and help achieve broader strategic goals. From spiking oil prices to Covid-19 to supply chain issues, recent events have highlighted the critical role that finance and procurement play in organizational agility.

"As we've had to contend with a pandemic and countries being open and shut, it's put a real strain on our supply chain," says Henry Shepperd, senior manager of performance and enablement at Emirates Flight Catering (EKFC), a subsidiary of Emirates Airline. "We've really had to increase our agility and speed to react, whereas historically we had quite steady volumes and output. We've had to change our operating style to build more agility into our operating model."

Procurement has always needed to respond to the needs of the business, but "what has changed is they need things even faster and we've got less lead time to work with," Shepperd adds.

Finance and procurement teams are thus looking to technology to help them develop greater agility. In December 2021 Gartner reported that "automation and advanced analytics for procurement are expected to mature greatly over the next two to five years, making investment in these technologies feasible even for risk-averse procurement organizations." There is also an opportunity to make the procurement process even more valuable to all operations across an organization by democratizing access to spend data

HIGHLIGHTS

From spiking oil prices to Covid-19 to supply chain issues, recent events have highlighted the critical role that finance and procurement play in organizational agility.

There is already a shift toward artificial intelligence—based spend analytics, and early adopters are starting to experience the benefits of prescriptive spend recommendations.

Quick and easy access to unified financial data is at the center of enterprise collaboration, enabling procurement, accounts payable, treasury, and finance departments to share insights and drive value.



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and informing stakeholders with timely insights into how and where goods and services are sourced.

"Most people look at procurement as a bottom-line function, but it's quite the opposite," says Jason Buck, director of sourcing, procurement, and vendor management at Blue Cross and Blue Shield of Kansas City (Blue KC). "Across my profession, there is this revolution around the data that we have and how it can bring top-line growth to companies if tapped into appropriately. Having the ability to mine data and visualize it in ways that produce insights is paramount to bridging that gap to the value-creation stage."

Capturing data across the source-to-pay process is crucial to realizing the potential of advanced analytics and insights that will drive value for organizations going forward. A centralized data source for procurement can unlock the ability for an organization to run advanced analytics, put spend and procurement data into the hands of those who need it now, and—perhaps most important—course-correct in volatile business environments.

This Harvard Business Review Analytic Services report explores the experiences of individual companies at different stages in their journey as they pursue a data-first finance and procurement strategy and create value for the entire organization.

From Spend Analytics to Finance Intelligence

The procurement field is undergoing a profound shift from the tradition of spend analytics to the predictive capabilities of end-to-end supply chain intelligence. Spend analytics is, by definition, backward looking. It is an examination of money that is already spent—useful for after-the-fact decision support but not in itself an exercise that can help an organization achieve strategic goals. "The goal is to move intelligence to the point of purchase so that we are guiding people to where we want them to buy," explains Elouise Epstein, partner at Chicago-based Kearney, a global management consultancy.

Deloitte's latest chief procurement officer (CPO) survey found that three out of four respondents deem spend and saving performance analytics the most valuable—significantly more than those who named other types of analytics, such as process performance, supply market intelligence, or cost modeling.² FIGURE 1 Epstein sees a long-term opportunity for analytics to "generate differentiated, proactive, and forward-looking insights that enable actions that do not need human intervention," such as risk management. "An automated bot can continually evaluate the risk profile across the entire value chain," she says. If a risk threshold is identified, an automated set of actions can be kicked off—including a sourcing event to proactively change the supplier mix.³

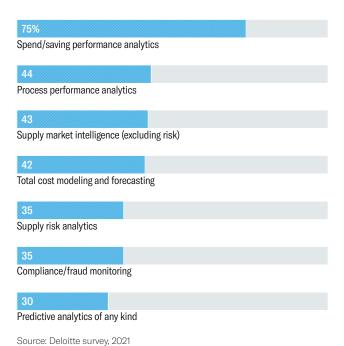
In a January 2021 report, Gartner states that as capabilities advance, "current spend analysis software will gradually be replaced by tools that are able to use a combination

FIGURE 1

Analytics Drive Savings and Spend Management

Spend, performance, and process analytics are most valuable to procurement.

Which of the following types of analytics have you found most valuable?





of structured and unstructured data to generate insights with data in any format for strategic guidance and spend analysis." Digital procurement and spend analytics will empower organizations to execute on intelligent sourcing and supplier relationship management, and to enhance supplier risk and quality management. Organizations that are already running spend intelligence have the ability to do a deep dive into procurement data. "Our teams can draw a direct line from their procurement activities, projects, and studies into the company's financials," says Jeffrey Ball, CPO at Denverbased MediaNews.

Ball would like to see that detailed knowledge expand "to a set of integrated systems, based on robust, comprehensive, real-time market data—data from social media, data from news—that can feed into our expense module and our contract lifecycle management system." He envisions such a system suggesting sourcing opportunities or clarifying the impact of certain economic shocks or industry shifts that might, in turn, impact cost structure—all in a proactive, automated manner.

There is already a shift toward spend analytics based on artificial intelligence (AI), and early adopters are starting to experience the benefits of prescriptive spend recommendations. Gartner expects AI-driven capabilities to go beyond spend to broader procurement analytics that deliver insights into contracts, sourcing, and category management. "As this shift occurs, sourcing and procurement leaders will need to adapt their processes and frameworks to integrate

enhanced capabilities," says the January 2021 report by the research firm. "They will also need to invest in AI-based analytics with machine learning and advanced analytics with more predictive and prescriptive focus to remain competitive." 5

Putting Data First

Establishing core capabilities for intelligent spend analytics begins with visibility—a single source of truth with contextualized procurement, supplier, and contract information, achieved through a rational and consistent process to categorize costs and contracts, and a means to visualize, map, and report spending.

Every transaction creates data. However, the data comes in different forms, from disparate systems, and at varying degrees of reliability. The same item, for example, might show up in contracts and invoices under different names, even from the same vendor. Multiply those differences across vendors, languages, and enterprise resource planning systems, and the usefulness of that information becomes a limiting factor. In the 2021 CPO survey, Deloitte found that data quality is the greatest barrier to the effective application of digital technology in procurement.

Procurement has traditionally been a manual process that doesn't translate into an easy data solution. "In the not-too-distant past, we were very much a paper-driven organization in procurement," says the head of procurement at a U.S.-based



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retailer. Contracts were delivered by hand or by mail from one party to another. The retailer now uses a digital contract system that ingests data as the contract moves through the process. "Now if someone asks if we have a contract with a particular company, anybody on my team can go into the system and find it very quickly," the executive says. At the same time, "we realized that we need spend analytics because we are making a very dramatic push into category management," a strategic approach to procurement in which organizations segment spending into discrete groups of similar or related products to find opportunities for consolidation and efficiency. "The single source of truth enables us to have spend analytics to the level that we have now," the executive adds.

Unauthorized spending further frustrates efforts to get a handle on what is being spent. After a series of acquisitions and divestitures, CDK Global, which provides data and technology to the automotive and heavy equipment industries, lacked a clear procurement process, resulting in rampant unauthorized spending. "We had budget holders who felt they could go sign whatever contracts they wanted, without regard to good purchasing practice or how it fits in with the other architecture that we have in the company," explains Mike Morsch, senior vice president in charge of procurement at the Illinois-based company. "The whole contract process was email-based, and everything was signed on paper. Purchases were not categorized appropriately, even when they made it into the system—especially with purchases made without an order," he says. "The data that we had was very dirty."

To get value out of the data, Morsch relies on cloud-based spend analytics to make sense of it. "It helps us make sure the data is cleansed coming out of our systems of record. And it makes that available to myself or the CIO [chief information officer] or my category leads—all in near-real time," he says. "Now I can pull up the information I need, drill down into it, see what we bought, who initiated the purchase, and the pricing that we got."

Buck at Blue KC recognized that to make better procurement decisions, his team needed the ability to look forward, not

backward. "Historically, we live in spreadsheets and data sets. As soon as we compile them, they are already out of sync," he explains. "As we look to bring more value to our decision makers, it was important for us to look at the data we have in the back office."

He first looked into hiring a data science team to focus on master data management, but it became clear that building a spend insights solution internally was "not a good use of my budget." Blue KC was able to use the AI and machine learning capabilities already developed, tested, and deployed by its spend intelligence partner to automate analysis of current data and historical patterns and accelerate Blue KC's visualization tactics and techniques. "This decision has accelerated our ability to bring insights to decision makers. It's allowing us to create more value," says Buck.

A particular challenge for many organizations is understanding what they spend with specific suppliers. For EKFC, many contracts use different supplier subsidiaries and names across multiple site locations, languages, and currencies. Once EKFC normalized its supplier data, "we could see suppliers across sites for the first time," says Shepperd. "We got a strategic view of suppliers that were becoming more important." It turns out that one of EKFC's subsidiaries had only 15 suppliers that accounted for 85% of spend. "We are in a stronger position now because we can see each supplier's total spend, where the contracts are, and where the noncontracted spend is. It's a game changer."

Without that data, organizations are in a state of "blind sight," Shepperd says. "We don't necessarily know if something's happened. We don't necessarily know who we're working with or at what value or volume." He describes the progressive broadening and deepening of visibility—from the ability to look at historical data to the predictive capability of machine learning and AI—as a series of new "sights."

"Once data is visible, hindsight is possible. You can see what's happened," he explains. The next level of visibility is insight, "which is something that is already possible using our data that's cleaned and presented to us with the insights that we've set it up to display." Going forward, Shepperd sees a future with foresight that relies on historical data and current events to determine probable trends. He believes that procurement could reach a state of automated foresight "where we are presented with decision support or even decision automation, where the system is making some of the decisions for us. Whenever you start on your digital journey, the first thing is you're reliant on the quality of the data. You're then relying on how that data is interpreted. And that's where machine learning is so important and why we've always tried to steer to technology that is more AI-focused than simple robotic process automation," Shepperd explains. "We recognize that the system or the technology needs to learn and needs to get



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better over time, not just be repetitive in nature. It's about presenting us with potential opportunities."

Demystifying the Black Box of Finance and Procurement

Procurement data used to be kept solely within the domain of the procurement function. Now better visualization tools make it possible to spread relevant information across the wider organization into business units, enabling them to make better purchasing decisions, increasing the speed of execution, and developing greater trust between procurement and the rest of the enterprise. By showing stakeholders where their cost drivers are or sharing potential risk concerns, procurement can play a far more strategic role in the business. Quick and easy access to unified financial data is at the center of enterprise collaboration, enabling procurement, accounts payable, treasury, and finance departments to share insights and drive value.

At Blue KC, Buck is trying to "demystify the black box of what sourcing, procurement, and vendor management do." In quarterly meetings with management teams, Buck and his colleagues pull down a visualization tool and take a deep dive into the data. They can show each division how much it spends with a particular supplier and how many suppliers make up each division's supply chain, and look for opportunities to lower costs and reduce risk. They can generate reports on all aspects of the business related to spending, including spending without a purchase order or outside of a contract, such as with ride shares and travel. With these actionable insights, Buck is able to work with his stakeholders to show patterns of spending trends.

Such visualization can show at a glance where the money is going and what is driving spending. The next step is to put the information in the hands of the business leaders who can act on it. "We want to democratize the data that we have with our stakeholders," says Shepperd. "We can allow the business to self-serve with our spend intelligence tools." Shepperd's team is sharing their spend intelligence data and insights internally with supply chain, finance, and commercial teams, as well as business-line leaders. They are also inviting joint ventures, with customizable permission structures, to see relevant data.

"What's great for us is that this is now being reciprocated; other departments and business partners are now sharing their tools with us. It's a win-win for the company," says Shepperd. He envisions a world in which real-time sharing of data with suppliers can help tremendously—particularly when it comes to the supply chain constraints and global shocks that have defined the past few years. "We want to start extending visibility into our supply base. After all, if they fail, we fail. We want to provide them with as much data as possible to reduce the risk of failure."

For the head of procurement at the U.S. retailer, every technology decision and every change in process is motivated by the desire to improve collaboration with stakeholders. "We are part of finance, but a lot of our processes transcend organizational silos," the executive explains. "We always ask, 'Who is benefiting from the work we do, and how can we take an intentional approach to find a mutually beneficial process?"

The executive's team has brought some processes, such as purchase requisitions, back into procurement because there are "a lot of opportunities there for errors and miscoding that have downstream impacts." Instead, the head of procurement looks for ways to leverage technology to drive better relations with stakeholders, such as the ability to deliver information and insights with spend analytics. "In some cases, we give them access to the tool, and they can self-serve the information that is relevant to them," the executive says.

The best way for procurement to demonstrate the potential of insight-driven spending is "by showing folks how you bring value to the organization, and then delivering that value, whether it's top line or bottom line," says Ball at MediaNews. "You show them your toolkit. You show them what you do, how you do it, and why you're doing it. Ultimately, when budget owners see the results manifested in their own financials, in their own budgets, you have believers in these processes."

Beyond Visualization: From Insights to Action

Real-time procurement dashboards are foundational to understanding cost drivers and performance. But they are not the end point. "Visualization is showing where the



opportunity is," explains Buck. "You can show trends, you can show seasonality, you can show a perspective, but driving the execution to reach an outcome or have an impact—that's where the value is. Visualization just gets you to the table."

"Basic visibility tools can give us signals. They can tell us what has happened, but they can't tell us what we should do about it," says Kearney's Epstein. She sees a future where a cognitive intelligence engine will interpret those signals so management can apply strategy and take action, especially when it comes to risk. Most organizations are still far from reaching this stage. "They may not even be seeing the signals yet because they are still trying to figure out the data," she says. But some are closing the loop and turning insights and improved visibility into action now, especially when it comes to cost.

Having a clear picture of cost drivers and performance can mean better results in sourcing events and supplier negotiations. Benchmarking also relies on cost visibility to be effective, as does should-cost modeling—that is, reverse-engineering a vendor's financials. At MediaNews, Ball's team approaches key contract negotiations armed with a detailed analysis of what they determine to be a reasonable cost. "I've got the facts here. I've got enough data in my expansive list of bids, and it's very granular. And I know the price points, and I can infer their margins," he says. "When I'm able to show a vendor through a synthetic bid that their pricing is, say, 20% more expensive for a particular item, they can either sharpen

their pencils and figure out how to get better, or we will find another supplier."

Opportunity assessment is another way to unlock value that can directly affect the profit and loss performance of a business. For example, if someone requisitions packaging in four colors, they may not be aware that switching to a three-color package could save a lot of money, explains Shepperd. "What is the actual cost of having four colors rather than three? Most of the time you don't know that because you're just buying it the way you've always bought it," he says. AI can help a buyer evaluate a number of different scenarios based on specifications for quality or timing and create a best-award scenario.

Automated insights can also suggest a more cost-effective order process. For example, EKFC might have 80 requisitions raised over the course of one night or 250 over a single weekend. Shepperd's team plans to rely more and more on AI to look across all items and suppliers and then suggest which items can be bundled into a single event when there is a significant overlap in prospective suppliers. "It shows the art of what is possible in terms of automating some of your sourcing," says Shepperd.

Purchase price variance is another way that EKFC turns spending insights into savings. By comparing current supplier prices to a baseline of supplier and industry prices, EKFC is able to maximize savings and increase leverage with suppliers. Spend intelligence allows a buyer to instantly compare the

price of an essential commodity to baseline costs previously paid to each supplier.

The timing of contract renewals is another area where market intelligence from internal and external data can highlight savings opportunities. Basic visibility into when contracts are set to renew is a first step. Intelligent workflow tools can produce a timeline of which contracts are coming up for renewal, ranked by value or importance, and create a repository for documentation and communication throughout the process. Without a digital contract and pipeline management process, final agreements can end up scattered in file-sharing folders or stored on the devices of the individuals who signed them. Missed contract renewal dates can be a big problem, as well. "A single source of truth for contract renewals helps us to be more proactive and start those conversations ahead of time," says Buck.

The future of procurement is in its ability to contribute to innovation, risk, and resiliency, and to create more strategic partnerships with suppliers, says Epstein. Procurement will always have to weigh trade-offs and guide stakeholders to work with vendors that advance strategic goals, such as environmental, social, and governance initiatives.

"Part of our procurement strategy is to implement a supplier diversity program with specific targets around how much we flow to diverse suppliers—women-, veteran-, or minority-owned businesses," says the executive at the U.S. retailer. "For us to be able to have that program, we need to know how much we are spending today with companies that meet those criteria. Finding a tool that can give us reliable insights on diversity spend was critical to us."

The Promise and Peril of Automation

"Digital technologies are on pace to automate and create transparency for most routine processes within three to five years," representing a major shift from the manual processes that still dominate procurement organizations, says Epstein. "Procurement workers spend hours piecing together fragmented information flows from myriad transactions—a task that technology could perform in seconds, just as it has transformed other business functions," she says.

Epstein believes that intelligent automation will lead to more self-service for stakeholders wherein they can guide themselves through a buying process. Procurement's role will be to curate those automated options to achieve cost control and governance goals. "I think that revolutionizes the buying process, because you don't need a procurement person to do three bids and a buy or send out requests for proposals [RFPs] in a spreadsheet, and you don't need to do a bid analysis by hand. All of these functions can be accomplished automatically and in the background," she explains.



Kearney's Elouise Epstein believes that intelligent automation will lead to more self-service for stakeholders wherein they can guide themselves through a buying process.

That is a future that Shepperd would like to see. "Procurement is often viewed as a control with checks and balances in place to prevent people spending beyond a certain delegation of authority. But we found that even with the perception of control, things can still go wrong," he explains. "When you start introducing more technology, you can remove some of those controls but have full visibility of everything that's going on. I think we'll see procurement become more relaxed and encourage speed and agility if we have confidence that the technology is effectively auditing any transactions that are happening and is able to pick out things that are potentially worth investigation."

At CDK Global, Morsch is looking to automation specifically to speed up the RFP process. "We need tool sets that are going to better identify where we should focus our time by first determining what we can automate in the bidding work and then helping us analyze bids right in the tool," he says. He envisions a system that would identify areas where his team would have the greatest impact, where they could push a button and the system would start the RFP process and suggest suppliers based on past performance.

"We're working with a supplier firm that uses artificial intelligence to better manage the RFP processes to do more predictive procurement activities. The system also helps suppliers put in appropriate bids and helps us better analyze the RFP responses that we get," he explains. "This level of automation and analysis will help us identify where we should be doing more bidding on certain purchases and allow us to execute much more quickly. Ultimately, we believe we will have better analytics and we will have more suppliers vying to work with us."

For Buck, automation holds promise for the contract renewal and review process. He would like to see "some kind of virtual agent that can automatically kick off the renewal process, initialize contract reviews, or show seasonality in our spend. I think this is something we are within five years



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of doing—leveraging technology to automate low-value items while leveraging talent to do higher-value activities."

But the path to automation has been a bumpy one for many organizations. "A lot of procurement teams have been disappointed because robotic process automation is simply adding automation to bad processes," says Epstein. It's important to think about which processes should be automated first and whether each one is an efficient process or is followed in a consistent way. Many of the processes developed in the age of paper and spreadsheets no longer make sense on a digital platform, and any change that threatens to upend the way things have always been done is not going to happen by simply pushing a button. The key is to reimagine, redesign, and reengineer what the process should be with intelligent automation in the middle of it.

Leveraging Insights to Become More Agile

Finance and procurement will need to leverage technology to automate a lot of buying and generate insights that can drive business. The first step is to capture data across the procurement process. The next frontier in data analysis is augmented analytics, according to Gartner. "Augmented analytics uses AI and machine learning techniques and changes how analytics content is developed, consumed, and shared. It surfaces key insights in data in less time and provides contextualized recommendations for users across the source-to-pay process."

The next step is to create a system of automated insights tailored to the needs of finance, procurement, and the business. Advanced analytics are already embedded in applications that are available to finance and procurement teams, helping them with visibility in near-real time, surfacing savings opportunities, suggesting supplier opportunities, and giving early adopters a competitive advantage. There are tools that can capture and clean data, automate low-value work, deliver insights that can help the business, and learn continuously as they do it.

Finally, predictive analytics can monitor alerts and provide decision makers with best options or set some actions in motion automatically—particularly when time is of the essence. Ball envisions a system "where spend analytics is tightly integrated with our contract database, all tied into a framework for picturing our supply chain within a broad analysis of all the commodity indices that drive our spend base so that events are triggered automatically," he says. That level of insight and automation will speed action in the case of an event, like a pandemic or a commodity price shock, that can affect, for example, the price of metals or dyes that go into ink or other inputs.

The technology that powers these capabilities should matter less than what they can accomplish, says Epstein. Instead, finance and procurement leaders should choose best-of-breed technologies that meet their ultimate needs: to enable automatic cost savings, to enable better interactions with the rest of the business, and to avoid risk.

An Opportunity for Greater Value

These technologies are an opportunity to examine archaic processes that no longer make sense and free procurement professionals from "chasing after procurement requests, haggling over small contracts, or cutting and pasting data from one system to another," Epstein says.⁷

Automation can free finance and procurement professionals to create greater value for the business. AI-driven insights can help them play a more strategic role in the future, when finance and procurement are more deeply connected with the business and contribute to conversations upstream—not merely react to decisions that have already been made.

"Procurement in any business needs to strive toward being a strategic adviser to the key decision makers that are driving the business forward, where we are helping people make more informed decisions because we are at the table," says the retail executive. "Anything less is just a transactional organization, and I don't think that's optimizing the value of procurement."

Endnotes

- 1 Micky Keck, Kaitlynn Sommers, Patrick Connaughton, and Galaji Abbabatulla, "Predicts 2022: Embrace a Composable Procurement and Strategic Sourcing Application Strategy," Gartner, December 2, 2021.
- 2 Deloitte Insights, "Agility: The Antidote to Complexity: Deloitte 2021 Global Procurement Officer Survey," April 2021. https://www2.deloitte.com/us/en/insights/topics/operations/chief-procurement-officer-cpo-survey.html.
- 3 Epstein, Elouise, *Trade Wars, Pandemics, and Chaos: How Digital Procurement Enables Business Success in a Disordered World*, Kearney, July 20, 2021.
- 4 Koray Kose, William McNeill, and Kaitlynn Sommers, "Boost Supplier Management by Integrating Use-Case Driven Spend Analytics," Gartner, January 25, 2021.
- 5 Ibid.
- 6 Ibid.
- 7 Epstein, Trade Wars, Pandemics, and Chaos: How Digital Procurement Enables Business Success in a Disordered World.



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