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BY BETH STACKPOLE

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THE NEW DIGITAL WORKPLACE

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BY BETH STACKPOLE

GROUP VP, CUSTOMER EXPERIENCE & OPERATIONS Anne McCrory

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Making data pay

Businesses hustle for competitive advantage with data analytics

BY MARTHA ROUNDS

grow

After the initial global shock ${\rm of}$

the pandemic, visionary leaders across a range of industries turned their attention to examining expenditures and pushing harder for competitive advantage.

Thirty-six percent of respondents to an IDC survey conducted in May indicated that most or all technology projects will go ahead after a reassessment of their overall value. Another 22 percent said they would prioritize projects and technologies that are most likely to generate returns, taking an even sharper look at their current portfolios.

The survey identified business operations resiliency and customer experience as the top business priorities for the rest of 2020 and early 2021, followed closely by programs to gain insight into business operations, products and ecosystems.

Data analytics is one area many companies are pushing on to help achieve those priorities. But making data pay is a challenge.

Finding value in data

Data's value can be elusive. On its own, data has no value. Data builds value only when leveraged by the business and its customers. Companies must not only intentionally seek to create value from data, but also have the right skills, technology and strategic approach to do so. Many, if not most, companies lag in these areas. Navistar International, a manufacturer of trucks, diesel engines, and school and commercial buses, has created competitive advantage for itself with OnCommand Con-



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nection, a product that enables its customers to manage their fleets regardless of the manufacturer of the trucks or buses—through a single portal. Julie Ragland, the company's SVP and CIO, sets a big stage when defining superior, high-value data. "We don't necessarily have to monetize a service to find extraordinary value," she notes.

For example, Navistar's explicit goal is for its customers to have the best repair velocity in the industry—and that means having parts available when a truck pulls in for repair.

"We realized that by knowing where trucks were—all trucks, not just our trucks—and what fault codes were active on each truck at a given time, we could know how to fix each truck, including what parts are required," Ragland explains. For all of its repair centers, the company developed a dynamic part stocking model that is driven by the repair location and fault codes of all trucks at every moment. This data, in turn, drives the part stocking plan at Navistar's distribution centers, so its customers have the right part on the right shelf at the right time. With this information, Ragland notes, Navistar has been able to decrease emergency stocking orders by 70 percent.

Creating competitive advantage

In response to the COVID-19 crisis, Navistar, like many other companies, has implemented deep salary deferrals and other cost-cutting measures to preserve cash and weather the crisis. At the same time, its strategic investment in analytics enables Navistar to strengthen its customer relationships, as trucking companies will be looking to cut costs wherever they can for the foreseeable future.

How can other companies create competitive advantage through data and achieve their goal of using data and analytics to accelerate their business? Accord-

Given the high risk in today's competitive environment, it is **difficult to internally sell** the idea of putting the **importance of data** to the customer over monetization.

ing to IDC adjunct analyst Bob Multhaup, there are four necessary approaches to this challenge:

 Discover and capture unique data that customers perceive as having superior, differentiated value

■ Integrate customer performance data into the business ecosystem

■ Treat data monetization as secondary to the critical importance of data to the customer

Prioritize timely data that is useful for decision-making

Of these approaches, the most difficult to sell internally in today's high-risk competitive environment is putting the importance of data to the customer over monetization. But it is this focus on the customer that will create competitive advantage. Differentiating through superior data and analytics means leveraging external customer data to positively influence customers' buying decisions and leveraging internal data to improve the speed, quality and payback of business decisions. With superior data and superior data analytics, companies can best their rivals—for the long haul. ◆

Martha Rounds is research director for IDC's IT Executive Programs. IDC adjunct analyst Robert Multhaup contributed to this article.

EXECUTIVE VIEWPOINT



Cynthia Stoddard SVP and CIO Adobe

Cynthia Stoddard oversees Adobe's global Information Technology and Reliability Engineering teams. In her leadership role, Cynthia spearheads a global strategy for delivering services and operations that form the mission-critical backbone for the company.

Adobe

Adobe CIO: Pandemic Accelerates Digital Transformation

What has Adobe been doing during this pandemic to support its employees and customers?

Internally, we are prioritizing employee well-being, productivity and collaboration. When Adobe made the shift to remote work in early March, our IT organization immediately improved network routing and expanded VPN bandwidth around the world. It's crucial to ensure employees stay connected, our systems are working at maximum efficiency and the necessary security protections are in place. We're also thinking about the next generation of tools to enable enhanced employee experiences and collaboration like virtual whiteboarding. Externally, we are focused on keeping our operations up and running for our customers and continuing to deliver the best services and products.

What are you hearing from your enterprise customers as they've quickly pivoted and implemented business continuity plans under COVID-19?

The No. 1 priority is a focus on digitization. Businesses who have not yet undergone digital transformation are looking to bring more products and services online, and they're thinking about how to build everything they need to support this.

What is your view of how the digital workplace will evolve as the economy opens back up?

COVID-19 has accelerated digital transformation. As things start to

slowly return to "normal," I believe we'll continue to see innovation and creativity in collaboration technology. Touchless technologies like digital signatures and process reinvention to handle workflows that are currently human-centric will become more prevalent. I can see this happening in every industry—retail, tech, health care, hospitality—in both customer and employee experiences. Touchless processes and virtual communication are here to stay, and I expect we will see accelerated innovation in this space.

How are you empowering remote employees and serving customers remotely through digital workflows, content and documents?

We've been actively listening to all of our customers across different industries, and their common goal is to stay productive. It's important to streamline workflows across the devices and applications employees already use, while reducing the load and risk for IT. Two focus areas for us have been facilitating internal document workflows and making sales contracts easier for reps and customers at home. We have teams working directly with customers to help them streamline their document and e-signature processes in the cloud, especially within the apps they already use. We also do this internally at Adobe with our Document Cloud offerings.

Download and learn more in this IDC report

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This year's **CIO 100** leaders are shifting emphasis to employee experience with an eye toward boosting productivity, streamlining collaboration and redefining the nature of work.

BY BETH STACKPOLE

S A SENIOR DESIGN ENGINEER at Jabil, Matt Swanson spends most of his time policing the quality of electronic circuit board designs to head off potential reliability issues and field failures on behalf of the manufacturing services firm's customers. Yet, thanks to Jabil's new Citizen Data Science program, Swanson has also become proficient at data analysis and has found new ways to flex his professional muscle.



Swanson employs his new skills to make critical business insights more accessible to colleagues, and to collaborate on modeling initiatives that improve first-pass yields on new product introductions. While Swanson still relishes the traditional engineering role, he says Jabil's Citizen Data Science program has enriched his work experience through exposure to new skills, opening his eyes to areas where data analysis can have a real impact.

"The program has provided access to new tools and prescriptive models that enable me to view problems with a wider lens," he explains. "Data science brings with it a new way to look at a situation. I can see myself looking for more training in data science, and if that leads to more opportunity, that would be welcome."

Like Jabil, many of this year's CIO 100 winners are pursuing initiatives dedicated to improving the employee experience. The practice, which puts employees at the center of new digital initiatives, takes on many forms,

from offering advanced training opportunities to building innovation and digital learning cultures to unleashing the power of automation to change the nature of work.

A BUSINESS IMPERATIVE

FTER YEARS of leveraging technology to bolster customer engagement, companies are applying



many of those same constructs to improve the employee experience. Just as happy customers are the key to increased sales, a satisfied and engaged workforce is more likely to translate into higher productivity and profitability for companies willing to make the commitment to and investment in novel ways of working and new resources.

The 2019 Deloitte Global Human Capital Trends survey confirms employee experience is fast-tracking as an enterprise imperative. Eightyfour percent of those surveyed rated the issue as important, while nearly a third (28%) ranked it among the top three urgent issues facing organizations last year.



"The program has provided **access to new tools** and **prescriptive models** that enable me to view problems with a wider lens."

-MATT SWANSON (ABOVE), SENIOR DESIGN ENGINEER, JABIL

Employee experience is rising to the top of the enterprise IT agenda because it makes good business sense to address deficiencies. MIT research found that enterprises with a topquartile employee experience achieve twice the innovation and customer satisfaction—and 25 percent higher

profits—than companies considered to have a bottom-quartile employee experience. Despite the obvious benefits and urgency of the moment, however, only 9 percent of companies responding to the Deloitte survey confirmed they were ready to address employee experience shortcomings.

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of companies Only responding to a Deloitte survey confirmed they were ready to address employee experience shortcomings.

That isn't the case at Cox Enterprises, which is channeling significant investment into automation, among other programs, to improve employee experience and redirect people to higher-level work. "Making sure that our employees are focused on the highest value they can bring to the company is more and more important as almost every industry is forced to be more efficient," says Richard Cox, CIO at Cox Enterprises. "To the extent that we can have higher-level

work that is directly connected to the mission and vision of our company provides a higher sense of job satisfaction. That's one of the core principles of employee engagement."

MAKING WORK FLEXIBLE **NEWAY COMPANIES**

are ramping up employee engagement is by redesigning systems and applications to reflect the digital interactions people are accustomed to in their personal



Delivering business outcomes

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lives. Streamlined interactions across platforms, the ability to work on any device from anywhere, and easier, more natural collaboration with peers are among the top wish list items for employees hungry for a modern digital work environment that empowers them to be more effective in their jobs.

At global giant GE, an increasingly mobile workforce, frequent acquisitions and diverse businesses created a need for a platform to deliver the

"The **mandate** for our smart enterprise security architects and software development team was that the UX had to be foremost."

-CHUCK MCGINNIS (LEFT), DIRECTOR OF SOFTWARE ENGINEERING, GE

freedom and flexibility employees want without sacrificing the security the enterprise requires. Beginning in 2014, a GE team started a project to figure out how to enable users to connect to the apps they needed to get their job done from anywhere in the world with seamless, secure connectivity, says Justin Acquaro, GE's SVP of cybersecurity.

While GE may seem to be chasing a common IT goal, the scale and distributed nature of the company's workforce complicated the security challenge, according to Acquaro. At the same time, the team was adamant that security protections shouldn't impede the user experience (UX), which eventually led the group

to build its own in-house solution after scouring the market for a suitable off-the-shelf offering, he says.

PUTTING UX FIRST

TTHE TIME, any solution in the market that increased security and connectivity sacrificed user experience," notes Chuck McGinnis, GE's director of software engineering who led the internal team to build what would become GE's MyApps. "The mandate for our smart enterprise security architects and software development team was that the UX had to be foremost."

The resulting MyApps solution created a seamless experience for both connectivity and security, employing the tenets of a zero trust architecture to achieve the latter. As a behind-the-scenes technology, MyApps automatically detects network state and connects users to their preferred apps while continuously checking device posture and user behavior, terminating connectivity when suspicious activity is detected. Since MyApps was released, more than 100,000 GE users have signed



on as a way to access their preferred enterprise tools from wherever they are working. The patented, multifactor security platform has improved user experience by eliminating burdensome tokens and logins, includ-

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"With product complexity up exponentially, we needed to make supply chain and manufacturing decisions predicated on data more than historical experience."

-GARY CANTRELL (ABOVE), CIO, JABIL

ing any login disruptions occurring when changing networks, which was a constant burden for GE users, McGinnis says. Users also gain full access to all common work apps, including email, without lengthy logins and access requests. Employees working remotely are treated to faster connect times (by as much as five to 10 minutes) along with a reduction in the number of dropped connections (by as much as 98%)—

helping to both fuel worker productivity and reduce GE's security risks.

With the third generation of MyApps now in flight, GE users can seamlessly and effectively work from wherever they are—a practice that's all the more important in light of the shift to remote work brought on by the COVID-19 pandemic. "We succeed when users forget that MyApps is working because it just allows them to do their jobs," McGin-

Congratulations to Mastercard and its Al-powered decision management platform team for receiving the CIO 100 Innovation Award



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nis says. "They don't have to worry about if they're connecting or how they're connecting or when they're connecting. They just connect."

AUTOMATING **MUNDANE WORK**

OX SAYS EMPLOYEES at Cox Enterprises are increasingly relying on automation to improve how they work. The company's Intelligent Automation program was established to help revamp business processes and create better employee experiences for

"To the extent that we can have **higher-level work** that is directly connected to the **mission and vision** of our company provides a higher sense of **job satisfaction**."

-RICHARD COX (LEFT), CIO, COX ENTERPRISES

day-to-day responsibilities, Cox says. At the same time, however, the goal of Cox Enterprises' automation push is to go beyond typical task-driven use cases to unleash the potential of employees by refocusing talent on more creative and satisfying work.

"Automation is part of the future of how we work as companies look for how they drive efficiencies and maximize the potential of each and every employee," Cox says. "If you think about what's required, there's arguably not many technologies other than automation able to check both boxes."

Through the program, established in early 2018, Cox Enterprises has implemented more than 50

automation solutions to standardize processes across its communications, automotive and corporate divisions. Among the more successful use cases is an application that leverages virtual helpers to handle manual cash postings for incoming payments; transitioning basic HR requests such as time corrections and paid time off from Employee Service Center workers to virtual assistants; and decreasing the time spent on servicing tax audit requests.

The latter process "used to take an employee two weeks of effort to do something on the side of their desk they didn't have time to do," says Scott Leazer, assistant vice president of IT business solutions at Cox Enterprises. "Now an RPA [robotic process automation] bot takes about a day to complete the same task, freeing up time for the employee to focus on more important audit work versus pulling information."



many of the company's employees are targeting data analytics to enrich their current role. Jabil's Citizen Data Science program has trained employees across HR, finance, manufacturing, supply chain, engineering and legal departments. Implemented through partnerships with the University of



MASTERING NEW

IKE JABIL'S SWANSON,

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South Florida, the China Institute and the University of Malaysia, the program provides three weeks of training in data analytics using real-world business challenges to get employees up to speed, according to Gary Cantrell, Jabil's CIO and senior vice president for information technology.

By democratizing the practice of data science, Jabil is aiming to help its employees more effectively unlock the value of its data assets while also providing them with skills that can enrich their current roles and future career path, Cantrell says. The program was initiated in part because the 50-year-old manufacturing services firm had amassed a lot of tribal knowledge within the business yet needed a way to more widely share those valuable insights across the organization. "With product complexity up exponentially, we needed to make supply chain and manufacturing decisions predicated on data more than historical experience," he explains.

Since the Citizen Data Science

Program launched in 2017, almost 200 employees have participated. Cross-functional teams from finance and IT that took part in the training developed an accounts payable forecast model that improved accuracy rates by 97 percent, while another team from the supply chain and engineering groups created a machine learning algorithm



to automate the parts quoting process, reducing turnaround time by 80 percent. There was also Swanson's group building models for the engineering department to improve forecasting for engineering capacity utilization and quality.

While Jabil and its customers

have achieved operational benefits resulting from the analytics models, employees are learning a valuable skill set that enriches their work experience and improves their marketability. "The data science program is a hot ticket with a lot of prestige," Cantrell says. "Getting a new skill set, especially around data science, is always appealing in our group."

"In the area of digital employee experience, it's all about how to unleash the power of transformational **technology** to improve employee engagement." -NICHOLAS COLISTO (ABOVE), VP AND CIO, AVERY DENNISON

NURTURING AN **INNOVATION CULTURE** T AVERY DENNISON, building employees' innovation dexterity is key to transforming the global manufacturer of labeling and functional materials into a digital business, according to Nicholas Colisto, vice president and CIO. The company launched the Digital Innovation Center of Excellence (DICE) consisting of three programs to create digital products and services: Learning, Lab, and Links. An enterprise-wide education program helps employees build com-



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"This gives employees the opportunity to **be more** than order takers—it allows them to get involved in innovation and the exciting stuff of work."

-SHUBHABRATA MOHANTY (BELOW), CIO, ALTIMETRIK

petencies in areas such as DevOps, agile methodologies, AI, blockchain, and design thinking. Along with the digital learning environment, Avery Dennison has established a Digital Lab designed to empower teams to guickly create and scale innovative ideas that can boost the business. In one example, lab teams are tasked with expanding the firm's digital employee experience platform, including reimagining traditional processes and creating a unified, consumerized set of applications and tools that will bolster employee engagement. The third piece of DICE is Links, an outreach program that brings together customers, suppliers, universities and consortiums to cocreate and solve business problems, Colisto says.

"There are always risks with innovation when using breakthrough digital technologies," he says. "In the area of digital employee experience, it's all about how to unleash the power of transformational technology to improve employee engagement."

THE POWER OF 'PLAY'

O ENSURE its employees are successful helping other companies digitally transform, Altimetrik, a business transformation company, has introduced Playground, a platform that supports continuous busi-



ness and technology innovation as well as digital talent transformation. Employees ideate and collaborate using the innovation management platform, which allows them to develop and deploy proofs of concepts in a live engineering environ-

ment and elastic cloud infrastructure. Raw ideas are shuttled to an idea bank while approved innovations are stored in an innovation library, where they can be circulated and reused by others thanks to an established governance model. Encouraging employees to innovate and stretch their wings is essential for any company, but particularly for Altimetrik, whose mission is to help other firms innovate and transform. "This gives employees

NASA Jet Propulsion Laboratory, (IPL) world renowned for innovation in space exploration, faces a different set of challenges related to IT and business process innovation, so it too is changing the employee experience to promote experimentation. "We're an 83-year-old big engineering company that tackles big problems like sending the Rover to

the opportunity to be more than order takers—it allows them to get involved in innovation and the exciting stuff of work," says Shubhabrata Mohanty, Altimetrik's CIO.

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Mars, but our rule book covers things that are very slow to develop," explains Tom Soderstrom, IT chief technology and innovation officer at JPL. "Technology is coming at us so fast, in order to solve today's problems with tomorrow's technology, we needed rapid experimentation and a startup way of thinking."

This is where JPL's Innovation Experience Center (IEC) comes in. The space is designed to enable



interns, who eventually grow into formal roles and are instrumental in recruiting new talent and introducing fresh ways of working to the traditional IT workforce, Soderstrom says. Since its inception, the IEC team has come up with a digital assistant that helps procurement answer questions more quickly, helped NASA/JPL figure out how to employ a new AWS antenna offering that saved millions of dollars, and so there's a lot of reverse mentoring," he says. "Other employees see it as permission to work in this new way, management sees it's effective, and everyone wins."

READY, SET, ACTION

IKE ANY MAJOR IT initiative, evolving the employee experience to improve engagement is not just about implementing technology. Ultimately, the exercise

"Technology is coming at us so fast, **in order to solve today's problems with tomorrow's technology**, we needed rapid experimentation and a startup way of thinking."

-TOM SODERSTROM, IT CHIEF TECHNOLOGY AND INNOVATION OFFICER, JPL

employees to experiment with new technology without being constrained by legacy platforms or fear that their project isn't within the bounds of traditional JPL processes. IEC is primarily staffed with pursued a machine learning project to figure out where to drill on Mars' rocks to prolong the life of drill bits. "Because these are young, eager individuals skilled in technology, they infuse new skills into the team is a cultural shift requiring significant change management along with support from top executives.

One of the best ways to rally support and codify standards for any major initiative is through a center of excellence (CoE). Cox Enterprises established such a governing body to support its automation program as did Avery Dennison. At Cox Enterprises, while development of automation use cases is encouraged at a grassroots level and through cross-functional collaboration, the CoE is there to serve as a partner and a governing body to establish and enforce standards.

At the same time, grassroots efforts can be instrumental in helping with change management. Cox Enterprises, for example, began its automation program by giving select areas of the business seed money to fund efforts built by IT so they didn't have to worry about budgets. Once those groups experienced exactly how automation could make their jobs easier, adoption took off and the early users advocated for others to get on board. "It was hard in the beginning because people thought we were coming to take their jobs when what we were really doing was coming to help them out," says Leazer.

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While handpicked top talent can serve as change agents to encourage the broader workforce to engage in new technologies or ways of working, it's also critical to have top management support, especially when it involves wholesale change like promoting an innovation culture. "When you have the blessing and approval of the CEO, everyone feels it's important and there's a seriousness to it." notes Altimetrik's Mohanty. Ultimately, Altimetrik's Playground has provided employees with a platform to continuously engage and go well beyond what's expected in their regular work. "It keeps employees motivated and excited," he says. "With continuous [employee] engagement, we allow them to try their best and experiment. The program enables them to learn new technologies, new business models and new industries rather than sticking to one particular thing." •

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Beth Stackpole is a regular contributor

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Influencing IT purchases when you don't control the spend

Business-line leaders increasingly control technology spend, but CIOs should aim to impact those budget decisions

BY MARY K. PRATT



counterparts.

Pitt's experience isn't unique. CIOs and executive consultants have seen busi-

ike most CIOs, Ian Pitt must ensure the availability and performance of all the systems in the IT stack. But he doesn't select or even buy all the software that his department supports, instead seeing more of that decision-making falling to his business-line

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ness leaders increasingly taking charge of technology decisions that impact their functional areas.

According to the survey "What Decentralized IT Spending Means for the CIO's Role," conducted by IDG and Snow Software, 67 percent of the 450 responding IT leaders said at least half of their spend is controlled by individual business units.

Pitt, CIO of software company LogMeIn and an active member of the Boston Chapter of the Society for Information Management, sees benefits in the new budgeting paradigm—if it's done with the right amount of IT input.

"We're spreading the responsibility for buying across the organization to those who know the needs better, and this diversification down to the individual functions can bring great innovation to the company," Pitt says. "But that doesn't mean we should have a freefor-all. There's a lot we need to keep under control—privacy, security, the spend. These are all important. If you get that right, then the federation of solutions can be a great thing. But if you do it wrong, the company is then out of control from a technology perspective."

Given how much technology spending is now outside the IT department budget, CIOs are finding they need to exert influence to ensure all technology purchases throughout their enterprises can be integrated and maintained and, perhaps most important, can deliver the business results that executives want.

"It needs to be a carrot, versus a stick, approach," says Marc Strohlein, an adjunct research adviser for IDC's Research Network who focuses on digital business transformation.

CIOs and management advisers say there are multiple ways for IT executives to exert control even when they don't control the spend, including the following 10 approaches.

1 Establish a review process

Business leaders often have a firm grasp on what they want a technology to do for them, but Pitt says they don't have an indepth understanding of how their understand its necessity. "We still make sure we're looking at the technology as if it's our money making the purchase," Pitt says, adding that IT won't necessarily shut down planned purchases even if the review reveals

"It needs to be a carrot, **versus a stick**, approach."

-MARC STROHLEIN, ADJUNCT RESEARCH ADVISER, IDC RESEARCH NETWORK

sought-after solution would fit into the enterprise's existing technology stack.

That's why he has planned purchases go through a review process to ensure they can be integrated with existing systems, can scale as needed, and meet security and data privacy requirements—a process he has worked with business leaders to establish so they potential problems. "Our response is often, 'Yes, we can buy it, but if we do, we need X amount of new headcount or other investments to make it work."

The approach, Pitt explains, gives IT a role in the purchasing decision without resorting to authoritarian rule—which encourages the business side to continue participating in the reviews. "You have to know what you're talking about. **You have to be 100 percent informed.** There's no way you're going to influence someone if you have to call someone else to be in the meeting with you." -JOEY FERNANDES, VP OF IT, COLLETTE

2 Adjust procurement approval

As business units seek out and buy solutions for their own departmental use, there's a greater likelihood they could buy software already in use elsewhere in the enterprise, buy from a vendor already doing business with the organization, or select a technology that adds excessive maintenance costs over time.

Experts advise CIOs to adjust their procurement processes to flag those issues so they can alert the business leaders to such problems and work with them to fix them.

To prevent his business colleagues from buying software that could cause such issues, Pitt established a procurement review process within the finance department that's designed to flag duplicate purchases, so the company can negotiate for optimal terms, or purchases that will bust maintenance budgets.

"We have systems in place to capture technology requirements and decision points to make sure there's a budget for maintenance and to make sure we have good value from the vendors," Pitt explains.

Be an expert Joey Fernandes, vice president of IT at travel company Collette, knew one of his business colleagues wanted to buy a particular collaboration suite, having been sold on its benefits. But Fernandes wanted to change her mind because Collette, being a Microsoft shop, already had Microsoft Teams in place. He knew that the Microsoft collaboration platform would do the job his colleague wanted without adding extra costs to her budget.

So he met with her and walked her through the technology, demonstrating how it worked and how it would meet her unit's needs.

Fernandes says the encounter confirmed for him the importance of CIOs being as well-versed in technology as they are in the business. "You have to know what you're talking about. You have to be 100 percent informed. There's no way you're going to influence someone if you have to call someone else to be in the meeting with you," Fernandes says. "If you're going to influence someone you have to have enough knowledge to sit down with them and explain it."

4 Highlight IT's capabilities

CIOs can sway some spending decisions by showing their colleagues how IT can maximize the dollars they spend—if they opt for technologies that work well with the existing technology infrastructure, Strohlein says.

To do this, CIOs need to build an architecture and establish standards and parameters on new technology that set an easy, clear path for businesses to follow. CIOs should then evangelize those standards to the business, selling their business colleagues on how adhering to those guardrails as they buy their own technology will help them "get more bang for the buck they're spending," he says.

"[CIOs] can take two different paths: try to control the spending or build trusting relationships and provide the platforms and services and supports to make them successful," Strohlein adds.

Bring technologists into the business

"Technology is clearly becoming democratized," says Steve Van Kuiken, senior partner and global leader of McKinsey Technology. "But ungoverned, costs go up, complexity goes up and risk goes up exponentially. CIOs have to have some way to govern it or it becomes a huge problem down the road."

Putting technologists into the business can help bring that governance and tech department influence to spending decisions, Van Kuiken says. CIOs can establish that practice by adopting development methodologies such as agile

CIOs who want to retain **power of persuasion** over business colleagues' technology decisions **should build a fast**, flexible infrastructure that's highly automated so that business leaders go to IT first, before seeking outside guidance.

and DevOps, which bring tech teams into the business where they can offer perspectives and comment on potential solutions, he adds. This helps foster collaborative decisions on which technologies are optimal based on both business and technology requirements.

Move fast CIOs who want to retain power of persuasion over business colleagues' technology decisions should build a fast, flexible infrastructure that's highly automated so that business leaders go to IT first, before seeking outside guidance.

"The business is making technology decisions based on func-

tionality and speed, but they may trade off against an internal solution that may be better tailored to the business if it's going to take six months to get it versus getting a package quickly [from a vendor]," Van Kuiken says. "So you need to be responsive to the speed at which business is moving and release software at a much faster cycle than old infrastructure allows."

Focus on outcomes Focusing on desired outcomes is another way for CIOs to exert

control of purchasing decisions, Van Kuiken says.

"The business and IT together need to manage outcomes, not

projects. And I think the CIO has to drive that mindset shift to avoid an ungoverned technology situation," he says, explaining that this is beyond seeing the CIO as a business partner or consultant. "It's about how the CIO measures impact and how the CIO works together with the business. In the old centralized technology model, the business communicated in terms of requirements and IT communicated in terms of project delivery. In this new model, you communicate around outcomes. You say what the outcome is, and if you agree on this, you can go through a collective design process to achieve the stated outcome. It's a more collaborative

process that you're driving. That changes the way you work together, and it becomes more about working in tandem."

Be transparent As business leaders take on more responsibility for selecting and buying technology, CIOs need to demonstrate they're running a highly efficient operation and can

OpEx—so they can work with their colleagues on determining the value of different options.

"CIOs are more influential and more credible when they have a transparency to what things cost and what levers can be pulled to change that cost and can articulate that in terms of business value versus this is what a technology will cost," Bates explains.

as head of IT they can help them better understand the full cost of buying and supporting their technology choices.

"The business units can choose whatever they want if they're the ones paying the bill, but they should prove by numbers that what they're going to buy has the return on investment they're seeking and the total cost of ownership est technology choices. After all, he says, it's hard to debate against mathematical equations that show a business-side pet technology project won't deliver a good ROI.

Accept good enough to enable the business to make optimal choices, he admits that they don't always make the best decisions.

IT leaders should work with department heads to **determine** and compare ROIs, helping them better understand the full cost of buying and supporting their technology choices.

therefore advise others on what selections bring the right value, says Steve Bates, a principal in management consulting with KPMG. CIOs therefore need to be transparent on their own spend—what's fixed, variable, direct, indirect, CapEx and

Compare ROIs Similarly, experts say CIOs who want to steer business departments to the best technology choices can work with those department heads to determine and compare ROIs, knowing that

fits within that calculation." Fernandes savs.

Fernandes provides IT's financial figures to his business colleagues, noting that information provides hard data that can persuade the organization to make the smart-

"We have solutions that we say 'ugh!' and we have to bite our tongue," he says. "No organization has a 100 percent track record on successful implementation of technology. When that happens, we make the best of those solutions as long as they're doing right for customers and stakeholders and not doing anything terrible. Sometimes we aim for good enough and focus on minimizing the failures." \blacklozenge

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Mary K. Pratt is a regular contributor to

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BY BETH STACKPOLE

MAKING DATA PAY 4

INFLUENCING IT PURCHASES WHEN YOU DON'T CONTROL THE SPEND

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