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FROM IDG

STATE OF THE CIO

CIOs' expanding management and revenue-generation responsibilities are cementing their roles as business leaders.

Traditional technologists need not apply.

BY BETH STACKPOLE

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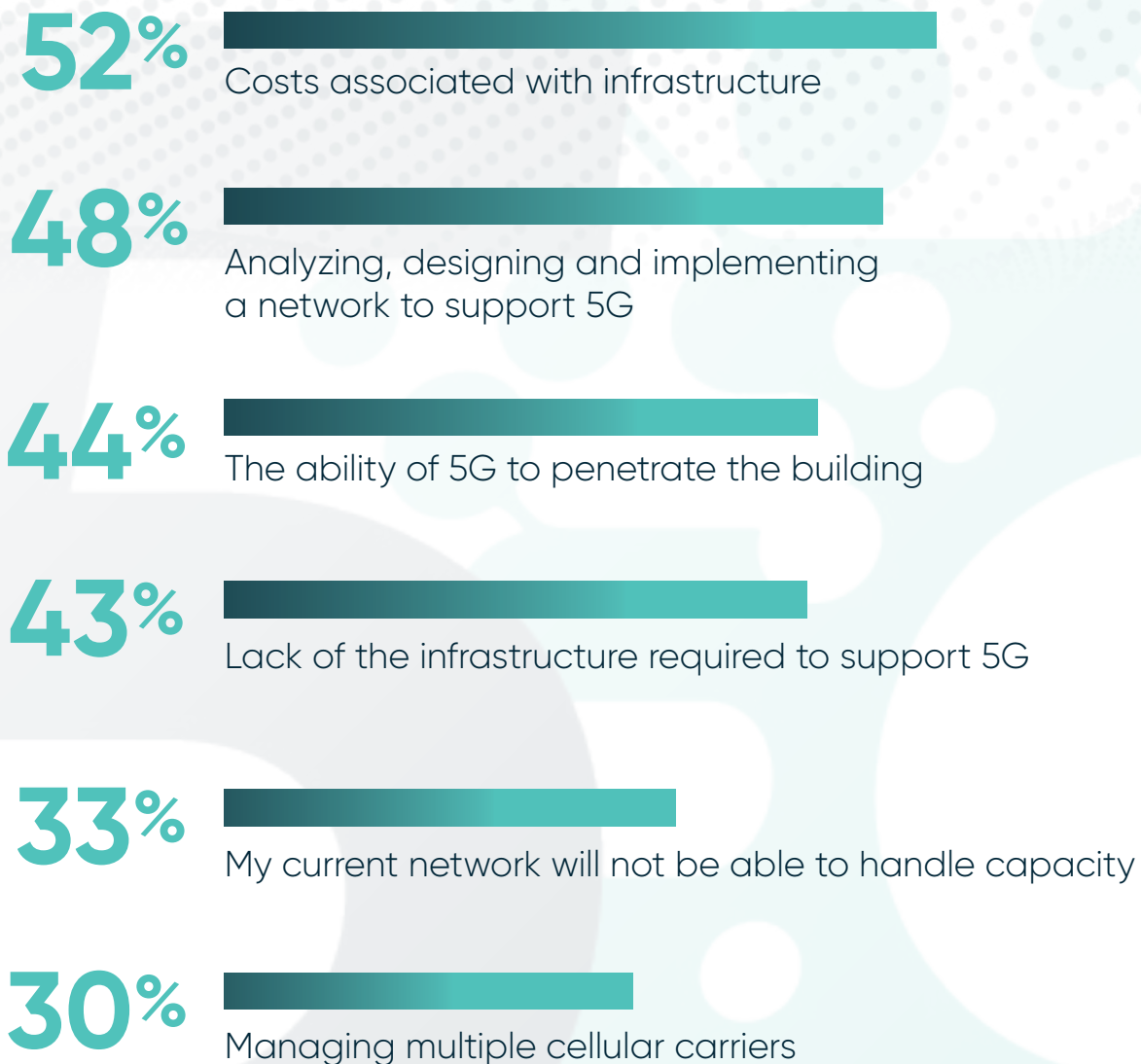
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>
> **Tom Simpson** | *Chief Operating Officer, CBTS parent company Cincinnati Bell Inc.*

Top Concerns
About In-building Wireless Coverage

Source: IDG

52% Costs associated with infrastructure

48% Analyzing, designing and implementing a network to support 5G

44% The ability of 5G to penetrate the building

43% Lack of the infrastructure required to support 5G

33% My current network will not be able to handle capacity

30% Managing multiple cellular carriers

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THE NEW CIO CHARTER

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BY BETH STACKPOLE

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IT's new ROI: Return on innovation

CIOs struggle to temper business expectations of 100 percent innovation success with the realities. Here's how to foster a healthy innovation outlook.

BY STACY COLLETT

After years of leading Colliers International through its digital transformation and dealing with the pressure to create new business solutions quickly, CIO Mihai Strusievici has come to a troubling conclusion: "We can create applications very fast, but our business partners may have expectations that if you do it fast, that you also got it right on the first attempt. Iteration is harder to accept than one would believe."

As the global real estate services company continued to advance its business strategy, business leaders kept pushing for the same agility from IT. But the team faced challenges when innovation was taken from theory into practice. Business leaders have grown frustrated with what they consider to be half-cooked ideas, and that worries Strusievici. "I don't know if the [internal conflict] will emerge as creative energy or if it will bring

[innovation] to its knees out of fatigue."

He's not alone. It's just one of many challenges that CIOs face when measuring the new ROI: return on innovation.

Turf wars and scaling challenges

Scaling innovation—from idea to pilot, to business case, and then to phased implementation—is exceedingly difficult, even for the most experienced organizations. According to a 2019 KPMG report on benchmarking innovation, 60

and 59 percent said that company culture is another key challenge.

"We still see culture and entrenched attitudes as a problem when you're trying to scale beyond the micro to macro," says Steve Bates, principal and leader of KPMG's CIO Center of Excellence.

"A small innovation group can afford to look out through a lens of three, five or 10 years, but when you actually try to take that step and make it real and scale it across the enterprise, that's where the challenges lie."

president and CIO at Skyworks, a maker of high-performance semiconductors. "You need to have a venture capitalist mindset, especially when it comes to innovation. The company needs to say, 'I need to invest in 10 ideas, and even if two of those succeed, it can benefit the company.'"

Jayadev tries to change his organization's mindset by measuring return on innovation using three non-financial metrics: how many innovation projects did IT bring to the table, how many of those were chosen for a proof of concept (PoC),

and 40 percent were converted to production. Jayadev shares these metrics with business leadership to show the value of innovation across the business.

Although non-financial metrics are sometimes considered too soft to be significant to the C-suite, KPMG believes they can give senior leadership a sense for the innovation team's momentum and activity level, how its work is influencing the corporate culture, how quickly it is getting new products and services to market, and how outside perception of

> "I don't know if the **[internal conflict]** will emerge as creative energy or if it will bring **[innovation]** to its knees out of fatigue." – **MIHAI STRUSIEVICI**, CIO, COLLIERS INTERNATIONAL

percent of the executives responsible for innovation, R&D and strategy cited competing priorities as being one of the greatest challenges in scaling innovation,

A venture capitalist mindset

"The problems that I've seen with innovation is, we look for ROI in every single project that we try to innovate," says Satya Jayadev, vice

and then how many of those PoCs went into production. In fiscal year 2019, out of all the solid ideas the IT team brought to the table, 60 percent were brought into a PoC,

the company's offering is changing. Some organizations even measure the number of learnings or insights generated by fledgling ideas.

Having business relationship managers embedded in business units has also been a big help in providing better communication and more realistic expectations, Jayadev says.

Tips for scaling innovative solutions

While no single approach fits all scenarios, KPMG suggests three steps to improve communication and scale innovative solutions.

1 Continuously validate and broadcast success

Those who successfully innovate do a really nice job of "going small to go large," Bates says. They take a hypothesis and work on the smallest executable step. They continuously validate and broadcast that success back to the stakeholders. "The breakthrough comes from when they work in very small chunks and they demonstrate value against this larger investment continuously."

2 Learn to test cheaply and quickly

One way that innovation teams can prove their value is by developing the capability to quickly and inexpensively experiment and capture learnings. The ability to test, learn and iterate was mentioned as one of the key enablers of success by respondents in a KPMG study. In many cases, these early tests can capture data that helps attract more funding.

3 Accept that it's OK to kill an idea

Attempting to do too much can result in nothing having a significant impact, according to KPMG. It's OK to put a stop to projects that lack senior executive sponsorship or that cause staff to stop supporting core business needs.

Deep cultural change required

Successful innovation teams change how people are measured, and they provide space for people to innovate, Bates says. "Innovation needs to be part of your day job, not just nights and weekends. As people begin feeling freedom to innovate, then they have to reward it, typically not through compensation but with more time to innovate or more seed funding."

While some organizations may push for more tolerance for failure, explaining that it's OK to fail fast is not something the organization is ever going to understand or embrace, according to the KPMG survey. What did respondents consider enablers of success? Support from leadership, crafting the right strategy and vision for the innovation initiative, and assembling a team with the necessary skill sets to deliver on that strategy.

Bottom line: The longer an innovation program survives and the more it shows it can deliver value, the more the broader company culture accepts it as an ally rather than an adversary. ♦

Stacy Collett is a frequent contributor to CIO.com.

> "We still **see culture** and **entrenched attitudes** as a problem when you're trying to scale beyond the micro to macro."
>
> –**STEVE BATES**, PRINCIPAL AND LEADER, KPMG'S CIO CENTER OF EXCELLENCE

8 tips for dealing with IT project pushback

Technical initiatives are often met with resistance from business leaders, IT pros and end users alike. Here's how to transform friction into feedback that can help push your project forward.

BY PAUL HELTZEL

As IT's role has evolved to further incorporate business strategy, so too has the way tech leaders communicate with their teams. New plans, projects and products are frequently met with pushback, and in fact, some IT leaders say the expectation of pushback should be built into the process, with a plan for how to persuasively communicate and listen to resistant and hesitant voices.

Most IT leaders say that frank conversations about resistance have helped produce new information that ultimately moves projects forward. And, in some cases, pushback results from legitimate concerns about a project that needs course correction.

Here are several tips on how IT leaders can deal with resistance in the ranks.

1 See it coming

Pushback is just part of the process and should be expected, says Al Smith, chief technology officer at iCIMS. In fact, Smith considers pushback a critical part of the role peers and leaders play in the organization.

"I've always used pushback to fuel my thinking and enhance my contributions," Smith says. "And I expect the same from my team. Regardless of your seniority, you'll be an invaluable asset to any tech department if you exercise the abil-

ity to defend your work and collaborate with others."

2 Foster feedback culture

Giving tech staff the chance to air their issues and then clearing up any misunderstandings can help reduce friction, says Matt Mead, CTO of SPR Consulting. "Sometimes people just want to know that their voice was heard and that someone considered their thoughts and concerns, regardless of the outcome," Mead says.

Here, Smith offers a simple tip: "Take a beat and listen. Take the necessary time to understand where the concern is coming from so that you can properly address it."

Cathy Johnson, CIO of Axiom, advises creating an environment that recognizes the power differential between leadership and staff. "It's critical to ensuring the team feels safe and empowered to discuss their concerns," she says. Then, it's time to take action.

"Doing nothing is not an option.

Sometimes acting on employee concerns means changing direction if, for example, they identify a gap or critical failure point. Sometimes acting on employee concerns is helping them understand why their concern is misplaced or premature. Sometimes acting on an employee

concern is about addressing organizational or individual performance issues," she says. "In other cases, it's acknowledging the problem and putting it to rest in a respectful way that reinforces expectations."

3 Consider context

Oftentimes pushback isn't related to the initiative itself but

instead points to a problem elsewhere in the organization. And that may be better resolved outside of the process of project building, says Peter Pezaris, founder and CEO of CodeStream. Because of this, any pushback should first be addressed by putting the new plan or project

into a broader perspective.

"I've too often seen objections being raised on a shaky footing of misunderstandings, so giving context is critical to a shared understanding of the reality in which you're operating," says Pezaris. "The next step is to ensure all participants have the full context of the plan and project and how it fits into the orga-

nization's larger goals."

Adam Tallinger, vice president at Impact Advisors, agrees. Because your team members are experts in their area and are frequently called on to offer opinions to help drive business decisions, pushback is a likely outcome, he

says. The best remedy for diffusing this is to start by explaining why the initiative is necessary.

"Instead of demanding what must be done or how to do it, start with the reasons behind the project, plan or change," Tallinger says. "This will help the knowledge workers in IT understand and accept the how and what."

> "**Take a beat and listen.** Take the necessary time to understand where the concern is coming from so that you can properly address it."
>
> —**AL SMITH**, CTO, ICIMS

4 Reevaluate the plan

Whenever team members raise valid concerns, it's important to consider this new information and reevaluate whether you need to make changes to the project or process.

"It may turn out that the resistance is based on new information regarding valid concerns that the project leadership wasn't previously aware of," Mead says. "I've seen instances in which a team initiates a project that is properly aligned at a high level, but the details of how to execute it at the lower levels introduce inefficiencies or additional, unnecessary work for IT staff."

Here, pushback from staff can be an IT leader's greatest asset.

5 Have productive discourse

When resistance gets heated, it's imperative that IT leaders rely on their soft skills to navigate tricky conversations.

Zvi Guterman, chief executive officer of CloudShare, notes that pushback frequently occurs when emotions come into play. In these instances, Guterman will frequently use what he calls disclaimers, to ease discussion and turn pushback into something more productive.

"Sometimes I'll say, 'You are the expert,' or 'That's just my opinion,' to encourage healthy dialogue," he says. "It's rare for business decisions to be one-sided, and by allowing all sides to present their arguments, we can turn pushback into productive discourse."

6 Build trust

Impact Advisors' Tallinger notes that trust is the antidote for pushback. He offers advice on how to build it—and warns how it's frequently lost.

One specific issue that can sow distrust is how IT leaders address failures, Tallinger says. IT leaders should "address failures from a learning perspective instead of a punitive one, unless there's repeti-

> "**Instead of demanding** what must be done or how to do it, **start with the reasons** behind the project, plan or change."
>
> –**ADAM TALLINGER**, VP, IMPACT ADVISORS

tive behavior that shows a lack of learning, moral compass or intentionally deceptive practices," he says, noting that it's also important to establish the expectation that feedback will be listened to and responded to before aligning in the chosen direction. "We can't always get our way, but we should always be heard."

If you feel like you've established trust with your team but resistance remains, it may be time to reexamine whether a project or plan is a good fit for the organization, Tallinger says. Failing that, managers may want to look at whether team members are a good fit for the job.

7 Respect the learning curve

With technical change comes a clear need for change management, as nothing can rankle end users quite like a shift in how their work gets done. To that end, Smith recommends being up front and understanding about how new ways of working will require time for managers and their teams to learn and adapt.

"New systems, workflows or support in IT … can sometimes slow momentum and cause pushback from the team—don't downplay that. Instead, be direct about possible delays and chal-

lenges that lie ahead and share the reason or anticipated end goal and the result of this change," he says. "Focus on showing that any delayed gratification will result in an optimal experience. This way, your leaders will know what they're agreeing to, and as a result, fewer will jump ship."

8 Abandon ego

Sometimes dealing with pushback requires looking in the mirror to see whether it's the manager who's getting in their own way, Guterman says.

"A leader who believes they have all the answers, one who micro-manages instead of empowers, will find themselves overwhelmed," Guterman says. "Being effective is less about controlling and containing and more about trusting and collaborating. Leadership is not about what sets you apart; it's about bringing everyone together to achieve greater collective strength. When you drop the ego,

> "A leader who believes **they have all the answers, one who microman-ages** instead of empowers, will find themselves overwhelmed."
>
> **–ZVI GUTERMAN**
> CEO, CLOUDSHARE

you unleash abilities and help a team reach its potential."

And if an initiative is struggling because of legitimate issues with the idea itself or the execution, opening up about what went wrong may help right the ship. ♦

Paul Heltzel is a frequent contributor to CIO.com.

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Diligent Corp.

Discover Financial Services

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Eli Lilly and Co.

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Green Climate Fund

Horizon Blue Cross Blue Shield of New Jersey

IBM

ICMA-RC

Intrax Inc.

Jackson Health System

Johnson Controls

Khalifa Empowerment Program – Aqdar

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Merck & Co.

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MetLife

Mondelez International

National Grid

New Mexico Department of Workforce Solutions

Novant Health

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Penn Medicine

Peraton

Port of Seattle (SeaTac International Airport)

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Rockwell Automation

Rowan University, Division of Information Resources & Technology

Tata Consultancy Services

Under Armour

UNDP

Verizon

WABCO

THE *New* CIO CHARTER

CIOs' expanding management and revenue-generation responsibilities are cementing their roles as business leaders.

Traditional technologists need not apply.

BY BETH STACKPOLE

Nathan Rogers doesn't have a background in coding or computer science. He's spent little career time mapping IT infrastructure or understanding system architecture. Yet Rogers, with an MBA and a resume loaded with business development and accounting experience, isn't the head of finance or operations. Instead, he serves as senior vice president and CIO at SAIC, leading the technology integrator's IT modernization and digital transformation efforts.

Despite a lack of formal technical training, Rogers contends he has the right stuff to succeed in the modern CIO role. Specifically, his background in orchestrating mergers and acquisitions and years of doing business development strategy exposed him to areas such as business process improvement, optimization and system modernization—all crucial competencies for today's CIOs. "The CIO role is changing, and that's why I was a natural fit," Rogers says. "Some CIOs come in and have to learn the business. I had to catch up on all the technology."

As the top IT leadership position continues to shift away from a pure technology focus to more of a business strategist and transformational role, CIO competencies and characteristics are beginning to align with what's expected from mainstream executive management: deep industry knowledge, robust communication and management skills, and an intrinsic understanding of how to run a profitable business. Many fast-track CIOs have been immersed in this metamorphosis for some time.
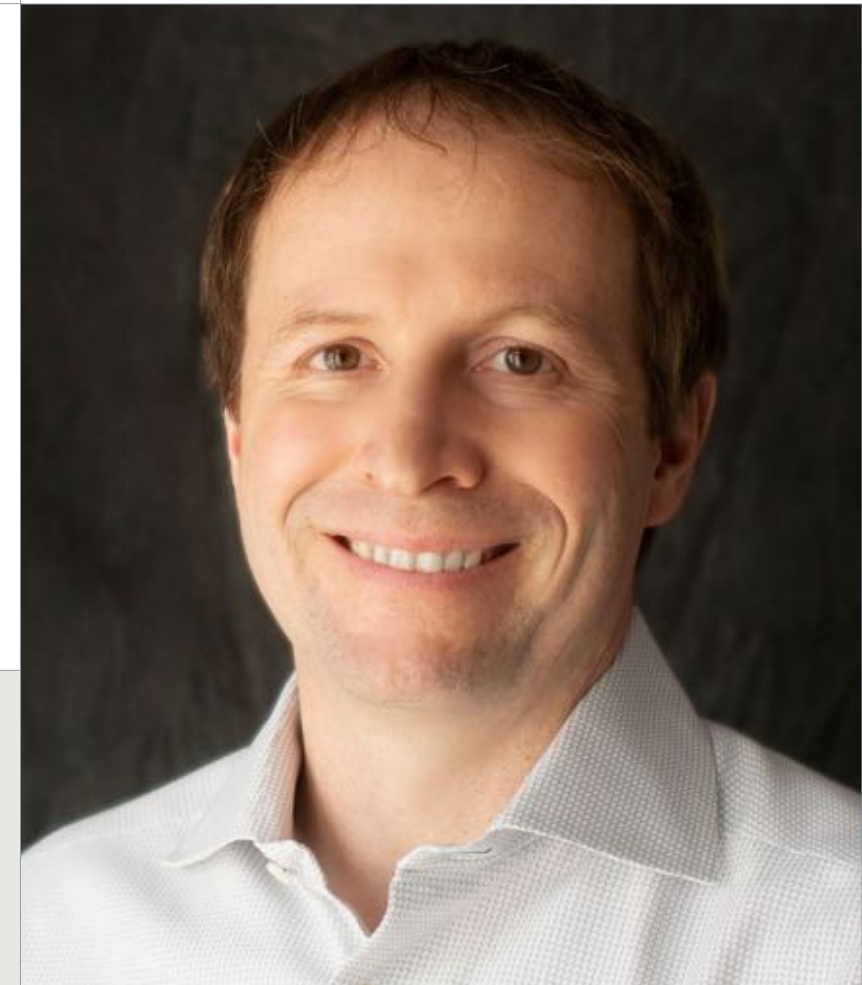
> "Some CIOs come in and have to learn the business. **I had to catch up on all the technology**."
>
> —**NATHAN ROGERS**, CIO AND SVP, SAIC

What's accelerating is recognition in the C-suite and among line of business (LOB) leaders that the CIO is well positioned to not just spearhead technology initiatives but also drive technology-enabled innovation and digital transformation across the entire business.

BY THE NUMBERS

ACCORDING TO CIO.com's 2020 State of the CIO survey, 91 percent of IT leaders and 59 percent of LOB respondents see the CIO's role becoming more digital and innovation focused. Moreover, 89 percent of CIOs and 56 percent of LOB respondents say the CIO is more involved in leading digital transformation initiatives compared to their business counterparts—a characterization made by only 47 percent of LOB respondents in last year's survey.

CIOs are also more likely to self-identify as a business strategist or change management leader. Nearly half of IT leaders (46%) see them-

selves as a transformational CIO, with close to a third (29%) embracing business strategist responsibilities. Only a quarter view oversight over functional areas such as secu-

CIO ARCHETYPES

What type of CIO are you?

- Transformational
- Business strategist
- Functional

29%
25%
46%

SOURCE: 2020 STATE OF THE CIO

rity and improving IT operations as their primary focus.

In this developing incarnation of the CIO role, IT leaders are spending more time on transformational responsibilities (89%) and business strategist work (67%). As part of their increasingly business-directed

charter, CIOs are prioritizing efforts to align IT initiatives with business goals (44%), implementing new systems and architectures (39%), and leading change efforts (34%).

Also high on the CIO agenda is driving business innovation (34%) and identifying opportunities for competitive differentiation (25%).

As the emphasis on business strategist and transformational responsibilities grows, CIOs continue to devote less time to traditional functional work—81 percent this year, down slightly from 85 percent in the 2019 survey. This reprioritization shows no sign of backsliding: Over the next three years, 78 percent of IT leaders say they will devote more time to business strategist responsibilities while 77 percent will focus on transformational duties. A shrinking 57 percent say their principal focus will center around

functional efforts over the three-year horizon.

"In the early days, it was all about technology, building systems and creating infrastructure that supported the automation of the business," explains Tom Kuczynski, vice president of information technology at the District of Columbia Water and Sewer Authority (DC Water), an independent Washington D.C.-based utility. "Yet I always thought that understanding the business and understanding how people conduct the business of the business was extremely important to delivering effective solutions to the enterprise."

TAKING CHARGE

ONE OF THE more significant evolutions in the CIO charter is that IT leaders are now expected to take on a more expansive portfolio, including responsibilities that fall outside of their traditional purview. Nearly all tech executive respon-

"**When you look at the expanding responsibilities of the CIO**, it's not a function of the CIO role itself; **it's the person holding the CIO role**." —**JOHN HILL**, CIO AND SVP, CARHARTT

dents (95%) say they have taken over some form of management or oversight responsibility beyond traditional IT. On average, IT heads say they now have 4.2 different areas of responsibility on their management plate.

At Carhartt, an apparel company best known for professional work wear, John Hill, CIO and senior vice president, doesn't just oversee IT. Two years ago, he took over end-to-

end responsibility for all of the company's business planning functions, from demand planning to supply chain optimization. Hill, who held non-IT executive roles in business development and supply chain prior to joining Carhartt, says his nontraditional executive background was the key to being recognized as the obvious candidate to take over business planning efforts.

OPPORTUNITIES FOR EXPANSION

ALSO IN HIS favor was the fact that a big component of the business planning function involved a migration to SAP's S/4 HANA platform along with wholesale business process transformation. As a result, the busi-

ADDING ON

Top five areas where CIOs are taking on new responsibilities

Cybersecurity — **64%**

Data privacy/compliance — **49%**

Customer experience — **46%**

Operations — **36%**

Business development — **36%**
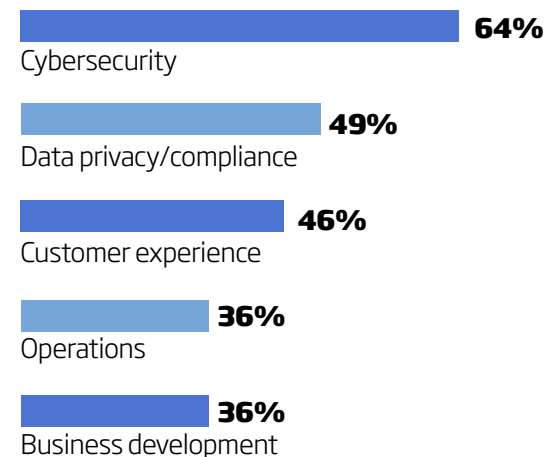
(Multiple selections allowed)
SOURCE: 2020 STATE OF THE CIO

ness, sales and manufacturing teams involved in the initiative had already been moved under Hill's jurisdiction. "The opportunity is there for the CIO

given their position in terms of having direct impact on virtually every process inside the organization," Hill says. "If they're able to get involved in all the strategy conversations, know the business and how to make money, they'll get tapped to do other things."

With the SAP S/4 HANA migration project currently slated to finish on time and on budget by the first quarter of 2021, Hill says the impending milestone cemented his status as an effective leader and influential member of the executive management team. "When you look at the expanding responsibilities of the CIO, it's not a function of the CIO role itself; it's the person holding the CIO role," he contends. "I wouldn't be

> "**There's a healthy respect on both sides**—you can't introduce new technology to the plant floor without ensuring that data is captured properly within the IT systems."
>
> —**BONNIE SMITH**, CIO, LEAR CORP.

given the responsibilities if I didn't have the leadership competencies. The CEO isn't going to have someone who doesn't demonstrate strong business acumen take over key business areas."

GENERATING REVENUE

CIOS ARE ALSO taking ownership of revenue-generating initiatives, with 36 percent of CIOs participating in and 31 percent leading a team tasked with creating new revenue streams. To support these efforts, CIOs are creating teams focused on innovation (46%), establish-

ing business-case scenarios with defined costs and benefits (46%), and interacting more directly with customers (42%). A third of CIOs are building test labs to evaluate ideas for new products and services that aren't fully baked.

In addition to his CIO and tech-related duties, DC Water's Kuczynski was recently named acting interim president of the utility's Blue Drop affiliate, which markets DC Water products and services to the non-rate payer market with the goal of generating revenue and cost savings to defray expenses for the utility's existing rate payers. "I'm now recognized

as a key business leader, not just the IT guy," Kuczynski says. "It's recognition that I don't just talk IT, but that I understand business and how to leverage opportunities within the business to generate revenue to offset the cost of operating the utility."

IT/OT CONVERGENCE

AT MANUFACTURING COMPANIES, digital business initiatives (37%), data analytics efforts (24%) and new product development (19%) are driving the convergence of IT

and operational technologies (OT)—another area where the CIO is taking charge. According to the 2020 State of the CIO, 89 percent of IT leader

Bonnie Smith, CIO at Lear Corp., is one of those CIOs driving IT/OT convergence. Given the growing profile of automation technologies

together to chart the right course. "Lear's manufacturing footprint is huge, and this will prioritize what technology they want to bring into

dors and products (75%), approval of vendors and products (73%), purchase and budgetary discretion (61%), and data collection (69%).

> "By starting to give more **nuggets of intelligence** to sales reps, they **can start to look at trends** like, if customer X bought this, then Y as a prospect might be similar."
>
> —**AVON PURI**, CIO, RUBRIK

respondents see increased collaboration between IT and OT within their organizations. At 88 percent of responding companies, the CIO is directly involved in fostering the relationship between these historically separate factions.

on the plant floor, the automation, engineering and IT groups at Lear are now completely intertwined, says Smith. "There's a healthy respect on both sides—you can't introduce new technology to the plant floor without ensuring that data is captured properly within the IT systems … and for us, that means getting more tightly connected than it's been in the past," she explains.

Smith just launched the company's first Digital Advisory Council to bring parties from IT, OT and the business

facilities and help them understand the benefits and costs," she explains.

OWNING ANALYTICS

DATA ANALYTICS IS one of the more high-profile areas gravitating to the province of the CIO. In addition to being in the driver's seat when it comes to determining and defining business needs to advance data analytics projects, IT is also leading most of the other stages of data analytics initiatives, including researching ven-

At Rubrik, a cloud data management and enterprise backup recovery company, data analytics is a top priority. This year's roadmap calls for bolstering Rubrik's existing business analytics efforts with artificial intelligence (AI) and predictive models to help its sales and support teams better service customers and target new sales, according to CIO Avon Puri, who is overseeing the initiative. Last year, Rubrik drilled into customer machine logs to predict when clients might run into issues with their backup and

"**It's all about a discovery effort** to root out things people are interested in having changed or done differently **and translating that into IT initiatives**."

— **TOM KUCZYNSKI**, VP OF IT, DC WATER

DATA DUTIES

Who is responsible for determining business needs for data and analytics in your organization?

- IT — **64%**
- Operations — **46%**
- Marketing — **37%**
- Administration — **34%**
- Data/analytics team (standalone) — **21%**
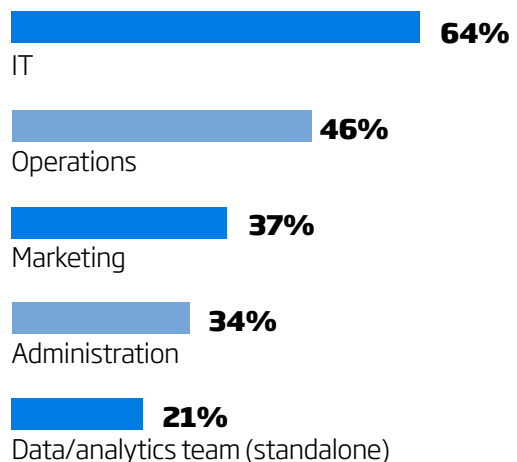
(Multiple selections allowed)
SOURCE: 2020 STATE OF THE CIO

recovery services. The plan now is to build on that capability to help the sales team map and predict bookings based on specific goals for filling the pipeline. "By starting to give more nuggets of intelligence to sales reps, they can start to look at trends like, if customer X bought this, then Y as a prospect might be similar," he explains.

POWER OF THE PURSE

IN ANOTHER SIGN of the CIO's stature as a vital member of the C-suite, the IT department is consolidating control over tech spending. According to this year's State of the CIO survey, IT maintains control over more than half (52%) of the enterprise technology budget.

That's not to say functional areas aren't directing budget toward technology: The survey found that the majority (91%) are earmarking some departmental dollars toward technology products and services. Administration, engineering, and risk management and compliance are most likely to cede technology budget responsibility to IT. Finance, marketing, operations, sales and supply chain are likely to share ownership of technology budgets with IT, and human resources is more likely to maintain ownership of its own technology budgets, cited by 37 percent of respondents.

In addition to ceding tech budget responsibilities to the CIO, more LOB functions are leaning on IT leaders for strategic business advice—not just as an implementor. Thirty-two percent of LOB survey respondents say the CIO or top IT

executive is a strategic adviser, instrumental in identifying the business needs and opportunities where technology can provide competitive differentiation.

PUTTING CUSTOMERS FIRST

AS PART OF their new leadership mandate, CIOs are turning attention to external customers, not just internal users. This year, CIOs spent time on direct customer interaction (42%) and assisting in development of the customer journey (38%). CIOs also adopted a customer-centric mentality for product development: More than half (57%) of survey respondents are using a design thinking approach to building customer- and employee-facing technologies and applications. Customer experience is also part of the CIO's ever-expanding portfolio of responsibilities, cited by 46 percent of respondents, and customer experience technologies, including

chatbots and mobile apps, is the third-ranked area of investment, at 24 percent.

DC Water's Kuczynski regularly spends time in the field with cus-

INVESTMENT PRIORITIES

In 2020, which of the following business initiatives will be most significant in driving IT investments in your organization?

Increase operational efficiency	37%
Improve customer experience	35%
Increase cybersecurity protections	33%
Transform existing business processes	30%
Improve profitability	24%
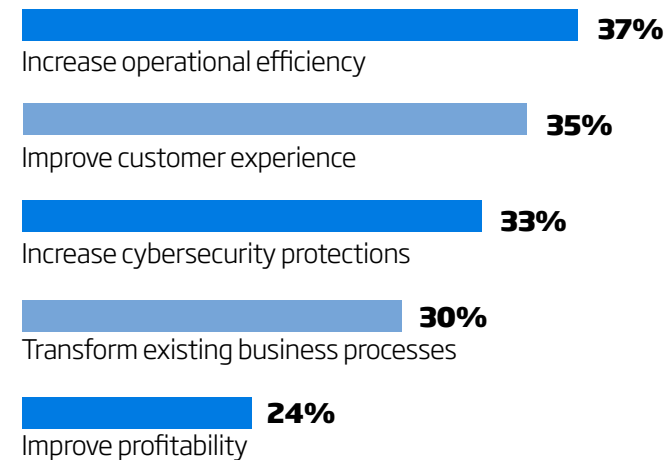
(Multiple selections allowed)
SOURCE: 2020 STATE OF THE CIO

tomers. He has created a customer feedback group that meets every quarter and runs a series of town hall meetings to solicit feedback from clientele. Kuczynski also partnered

with the customer service division to create an engagement platform designed to solicit real-time feedback from customers, which is then used to feed future plans–for example, for refining the website or designing a customer portal.

Kuczynski has even crawled around a digester system, which processes waste, and climbed aboard a boring machine working on a tunnel to get a first-hand glimpse into what's involved in the business and, most important, what will best address customer needs. "It's all about a discovery effort to root out things people are interested in having changed or done differently and translating that into IT initiatives," he explains.

WHAT'S ON TAP FOR 2020

HEADING INTO 2020, the top CEO priority for IT leaders, cited by 39 percent of survey respondents, is to spearhead digital business and digital transformation efforts. CEOs are also looking to CIOs to upgrade data security (31%) and to strengthen IT and business collaboration skills (29%). As for CIOs' own agendas, the highest-ranked business initiatives for 2020 are increasing operational efficiency, improving customer experience, and increasing cybersecurity protections.

In terms of tech budgets, analytics remains the No. 1 investment, cited by 37 percent of IT leaders. Security and risk management moved up the ranks from the fourth spot last year to the No. 2 technology investment priority, cited by 34 percent of respondents. Customer experience technologies, including chatbots and mobile apps, took a huge leap to rank third this year, cited by 28 percent of

"We're aiming for **efficient processes** and **to make the experience seamless**."

—**RAHUL MERCHANT**, EVP AND CIO, TIAA

respondents, up from 19 percent (and the fifth spot) last year. On-premises enterprise applications, the third-ranked technology investment last year, cited by 26% of IT leaders, is far less important this year, cited by only 11 percent of IT leaders.

Companies will also be investing more in "intelligent" technologies this year. While only 14 percent of firms allocated budget to AI last year, almost a quarter of 2020 State of the CIO respondents (24%) confirmed they are planning to invest in AI and machine learning this year.

TIAA is looking at robotic process automation (RPA) to cut back on manual intervention in avoiding data entry mistakes. "We're trying to eliminate as much paper as we can and take as much information as possible to prefill forms so customers don't have to fill everything in," says Rahul Merchant, the financial services company's executive vice president and CIO. "We're aiming for efficient processes and to make the experience seamless."

THE CYBER-SECURITY MANDATE

CYBERSECURITY CONTINUES TO dominate the IT roadmap. On average, State of the CIO respondents are allocating 16 percent of their IT budgets to security-related technologies, and most companies are appointing dedicated cybersecurity-focused executives. More than half of respondents (54%) now have a chief information security officer (CISO), chief security officer (CSO), or other top security executive. CISOs (41%) are more likely to report into the corporate CIO, while CSOs tend to have a direct line to the CEO, at 48%.

The rising tide of data privacy regulations, which differ state by state, coupled with the ever-changing threat landscape prompted Enterprise Community Partners to appoint a new head of cybersecurity who reports into the CIO. The nonprofit, which brings together nationwide know-how, partners, policy leadership and investment to multiply the impact of local affordable housing development, has increased its cybersecurity budget, but the spike also means there is less money available to fund other capital projects, notes Pradip Sitaram, senior vice president and CIO.

LEADING SECURITY

Does your company have a…

- CSO: 16%
- CISO: 31%
- Top security executive: 13%
- None of the above: 46%
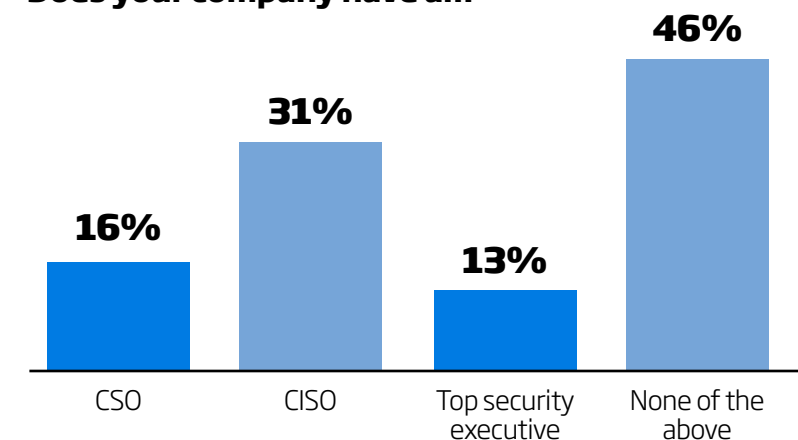
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SOURCE: 2020 STATE OF THE CIO

"It's one of the reasons I have a seat at the table and the No. 1 technology agenda item at every executive and board meeting," Sitaram says.

> "**The No. 1 thing** that keeps me up at night is the war for talent." —**NIMESH MEHTA**, CIO, NATIONAL LIFE GROUP

He notes, however, that there's a catch-22: While executive support is there, business units tend to see this as an unanticipated burden because they are charged back for the additional cybersecurity capabilities and data privacy controls. Moreover, they view cybersecurity through the lens of IT imposing restrictive controls, which feeds the narrative of IT as a cost center as opposed to a true business enabler, Sitaram says.

CHALLENGES AHEAD

CIOS ARE GRAPPLING with many of the same challenges they've battled over the past few years. Near the top is striking the right balance between business innovation and operational excellence, cited by 77 percent of 2020 State of the CIO respondents.

The skills gap remains another lingering issue: Nearly half (49%) of respondents are in need of integration and implementation skills to support digital business initiatives, while soft skills such as strategy building (41%), change management (38%) and project management (35%) remain in high demand. In addition, organizations anticipate difficulty finding candidates versed in an array of crucial technical skills, including cybersecurity (39%), AI/machine learning/RPA (31%) and cloud services (18%). Finding legacy technology skills remains an issue for 18 percent of respondents.

"The No. 1 thing that keeps me up at night is the war for talent," says Nimesh Mehta, CIO at National Life Group, who is in need of expertise in areas such as data security and systems and data architecture. To fill the gaps, Mehta is fishing for talent in non-traditional pools—for example, pulling in people with social science and psychology backgrounds to fulfill data analytics roles. He is also committed to grooming internal talent. "We are reskilling our workforce because you have to uplift what you have."

While the talent gap weighs heavy, Mehta no longer frets over the CIO's standing. A tide of digital business projects successfully executed over the past few years has cemented his status as an effective leader and business strategist, he says.

"The executive team has had the time to see how these initiatives can make an impact on the business, and I don't have to ask for an invite to anything anymore," he explains. "Whether it's a meeting about an M&A opportunity or something that has nothing to do at all with technology, they are talking to me about business strategy. The technical conversations come last." ♦

Beth Stackpole is a frequent contributor to CIO.com

Ones to Watch AWARDS

The **Ones to Watch** awards recognize IT leaders who demonstrate potential for C-level roles and responsibilities. Those recognized have a proven track record of success and routinely go above and beyond in delivering value to their organization.

AARTI ARORA
Director Risk Management
Alexion Pharmaceuticals

TRACEY AVIDAN
Head of Customer Platform Lead
Bayer Crop Science

YELAK BIRU
Senior Director of Data and Analytics, Associate Digital Experience & Global People Analytics
Walmart

GREGORY BISHOP
Senior Director, Systems Engineering & Operations
SBPASC, an affiliate of CareFirst Inc.

MARGARET BRISBANE
Assistant Director, Enterprise Solutions
Miami Dade County

MARINA BROWN
Sr. Application Development Manager
Werner Enterprises

BURTON BUFFALOE
Leader, IBM CIO Logistics and Blockchain
IBM

PAUL COYNE
Assistant Vice President, Clinical Informatics
Hospital for Special Surgery

REGINA DEGENNARO
Director, Pershing Technology
BNY Mellon | Pershing

SHEILA EASON
Director of Customer Service
Internal Revenue Service

ELISA GARBETT
Senior Director, IT Global Service Delivery
Bentley Systems Inc.

RICHARD GEORGE
Global Head, Digital, User Experience & Marketing Technology
Refinitiv

TYRONE GREEN
IT Sr. Director, Global BRM Practice Lead
IT BRM PepsiCo

ANGIE GREGORY
Network Engineering Senior Manager
SAIC

ERIC HAAS
Director of IT and Customer Experience
Hinshaw

CINDY HADDIX
Director of IT Business Operations
World Wide Technology

DOUGLAS HAMILTON
Managing Director, Nasdaq Machine Intelligence Lab
Nasdaq

TED HANSON
Vice President, Global Information Services
Applied Materials Inc.

BELINDA JACKSON
Director of Product & Process Development
Ginnie Mae

MARCUS JENNINGS
Chief of Office of Enterprise Solutions
Bureau of Engraving and Printing

DR. ANITA JINDAL
Director, Engineering
NetApp

SHERRY JORDAN
Director, IT
Blackbaud Inc.

AARON JUDY
Technology Innovation Strategist
Maricopa County – Clerk of the Superior Court

RAJU KAKANI
Vice President, Information Services
SIGMA Corp.

HEATHER KENNEDY
Enterprise Architect II
BlueCross BlueShield of Tennessee

BOJOON KIM
Principal Professional/Smart IT Team Leader
Samsung Electro-Mechanics

SCOTT KNABE
Director Network & Telecom, Information Technology
Donlen

PRIYA KOMANDURI
Head of Product Cloud Platform
Bose

ADRIENNE LEIGHTON
Digital Transformation Lead
Bayer Crop Science

JANET MAK
Vice President, Systems Development
Memorial Sloan Kettering Cancer Center

SAUL MANKES
VP, IT Delivery
Marriott International Inc.

BRIAN MCGRATH
VP, Americas Unified Commerce, Technology & Process Group
PVH Corp.

UMESH MURTHY
IT Director
General Motors

NICOLE NARCISCO
Director, CIO Mergers, Acquisitions and Divestitures
IBM

CHERYL ORANGE
Managing Director, Information Technology
FedEx Services

CHRIS PERSAUD
Director of Technical Operations
School District of Palm Beach County

MICHAEL RYAN
VP, Technology Strategy
Freddie Mac

SETAL SETH
Associate Director of Technology Operations
Children's Hospital Los Angeles

VINEET SINHA
Director and Product General Manager
Johnson Controls

SUDHI SINHA
Vice President & General Manager, Johnson Controls Digital Solutions
Johnson Controls

Making employee experience a CIO priority

Employee dissatisfaction can have a long-term negative impact on your business. Here's how to turn things around.

BY MITCH BETTS AND MARTHA ROUNDS

CIOs are under tremendous pressure to cut costs, produce innovative new products and services, hire top talent, and even transform the organization's business model. With so much on the CIO's to-do list, the internal employee experience is in danger of falling to the bottom of the CIO agenda.

Digital transformation has set the CIO's attention on external customers, but "there's a piece of the IT organization whose customer is the employee. Yet that always seems to come last in terms of attention and funding.

IT departments generally don't put the best talent on that," says Claus Jensen, CTO at CVS Health.

IT departments should "apply the exact same energy, care, professionalism and techniques that we apply to systems we build for our customers to the systems for our employees," Jensen says. "We know how to build systems that are delightful for people to use. Yet for some obscure reason, we never do it for ourselves. Show me someone who says that using the HR system is a delightful experience."

Employee dissatisfaction with IT tools can have a ripple effect that can result in long-term damage and a lack of competitiveness. An improved employee experience,

IT departments should "apply the exact same **energy**, **care**, **professionalism** and **techniques** that we apply to systems we build for our customers to the systems for our employees."

—**CLAUS JENSEN**, CTO, CVS HEALTH

however, will pay off in "better talent, more effective collaboration, a better mood in your organization—the list is long," Jensen says.

Here are three steps you can take to make a positive impact on employee experience.

1 Commit to take action

For Jensen, the employee experience won't turn around if you don't commit to improving it. Transformational CIOs, who aspire to be influential across the organization, must address the employee experience to be successful, Jensen says. "Decide that you care and that you're willing to spend time on doing something about it."

Improving the employee experience must become "a CIO pri-

ority" or it won't happen, adds Niel Nickolaisen, CIO of O.C. Tanner, a company that provides employee recognition software and services.

2 Engage regularly and measure progress

For Nickolaisen, fixing process problems is an embedded part of his regular six-month planning cycles. The key questions are: "What specific things are we going to do in terms of people and process to make this a better place to work? Who owns it, and how are we going to measure that this thing got done? And then how do we measure whether or not it worked?"

Every June, the whole company takes a survey to identify any areas

for improvement. In addition, the IT department has a separate survey focused on the characteristics of high-performing teams.

Jensen agrees that the employee experience should regularly be on the CIO's to-do list. Weekly is ideal, but Jensen acknowledges that, even with his strong feelings on the subject, during some busy periods he can only manage to address employee experience "frequently," not every week.

3 Lead in technology use
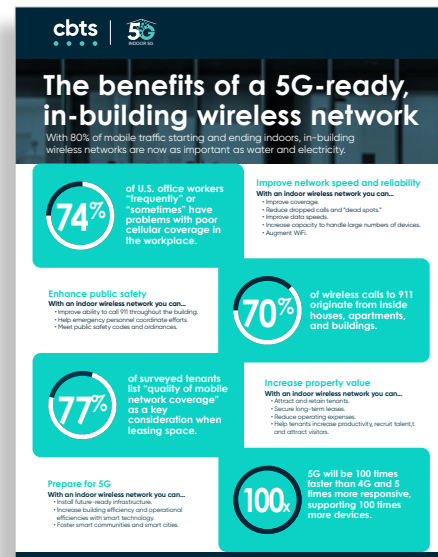
Nickolaisen believes CIOs have a responsibility to influence not only the future direction of the organization's external products and services but also the internal processes and culture of the entire

organization—because they're all affected by technology.

"You can have a great workplace culture that's not a high-performing culture, and I want both," Nickolaisen says. It helps to be experimenting—at a regular cadence—with ways that new technologies (e.g., analytics, mobile, virtual or augmented reality, and process automation) could make the employee experience a richer one, he says.

CIOs are uniquely positioned to lead the organization in the use of technologies that enable employees to be more productive and focus on higher-value tasks. "Our world in IT changes faster than anybody else's, so we have to be a model," Nickolaisen says. "Then, I influence the rest of the organization to improve its agility." ♦

Mitch Betts is a contributing author for IDC's IT Executive Programs. Martha Rounds, research director for IDC's IT Executive Programs, assisted in writing this article.

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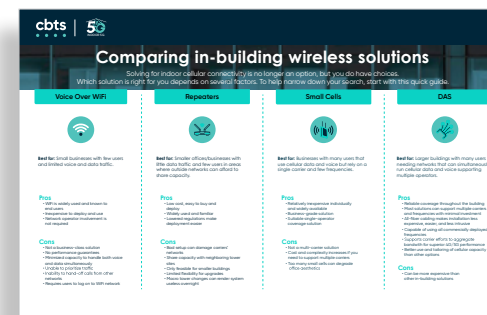
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