

FROM IDG

Forward-looking CIOs are not only **modernizing** legacy systems, but **redefining** how IT works. Here's a look at how to shift from being an IT order-taker to a **next-gen technology leader**.

Secrets of highly INNOVATIVE CIOs

BY MARY K. PRATT

**5 IoT TRENDS
TO WATCH 4**

**DOUBLING
DOWN ON
INNOVATION 16**

**GOOD BUSINESS
METRICS DRIVE
RESPONSIVE IT 19**

SPONSORED BY

SMART by **GEP**



emerging TECH

4 Five IoT trends to watch

transformation NATION

7 MRE IT makes the shift to entrepreneurship

applying TECH

16 Doubling down on innovation

leading TECH

19 Good business metrics drive responsive IT

22 3 considerations for redesigning the IT organization



cover story

Secrets of highly innovative CIOs

Forward-looking CIOs are not only **modernizing** legacy systems, but **redefining** how IT works. Here's a look at how to shift from being an IT order-taker to a **next-gen technology leader.** **10**

BY MARY K. PRATT

CONTACT US

WHO COVERS WHAT

www.cio.com/about/contactus.html

EMAIL

editor@cio.com

PHONE

508-872-0080

FOLLOW US ON...

[Twitter](#), [Facebook](#) and [LinkedIn](#)

Copyright © 2018 CIO.com. All rights reserved. Reproduction in whole or in part in any form or medium without express written permission of CIO.com is prohibited. CIO and CIO.com and the respective logos are trademarks of International Data Group Inc.



FROM IDG

EDITORIAL

EXECUTIVE EDITOR

Amy Bennett

ART DIRECTOR

Terri Haas

SENIOR EDITOR

Jason Snyder

SENIOR WRITERS

Clint Boulton, Sharon Florentine
Thor Olavsrud, Sarah White

CIO EVENTS + CIO EXECUTIVE COUNCIL

SVP/GENERAL MANAGER

Adam Dennison

EXECUTIVE DIRECTOR OF CIO PROGRAMS

Maryfran Johnson

IDG COMMUNICATIONS, INC.

PRESIDENT

Kumaran Ramanathan

U.S. PRESIDENT

Charles Lee

FOUNDER

Patrick J. McGovern
(1937-2014)

DIGITAL TRANSFORMATION – IT & PROCUREMENT’S COMMON AGENDA FOR THE FUTURE

How can the CIO organization help procurement achieve this strategic goal?



“ In leading enterprises across the world, we are helping Procurement and IT leaders drive transformations of value and make a step-change in productivity. ”

Dr. Subhash Makhija
Chief Executive Officer & Co-Founder





Digital transformation today is a key business priority that’s placed CIOs and their teams in the spotlight. Enterprise IT teams are expected to drive this change across the business by addressing the technology needs of individual business units. And procurement — an increasingly strategic contributor to enterprise growth and competitiveness — is a prime candidate for digital transformation.

Technology is driving procurement toward a dramatic re-engineering of its processes. As a result, the CPO’s remit is changing, moving from the tactical toward the strategic. Some procurement organizations are finding it hard to keep up with the pace of change. But this is where the CIO and the IT team come in, bringing knowledge and skills that far increase the likelihood of successful technology implementation and digital transformation.

As a reliable procurement technology partner, GEP helps organizations transform to embrace a digital future that promises improved operational efficiencies and productivity gains. Talk to us today to build your roadmap for digital transformation.

ACCESS A WEALTH OF RESOURCES CURATED BY LEADING INDUSTRY EXPERTS

Procurement leaders worldwide look to GEP for process, technology and industry expertise. We’re happy to share what we’ve learned over nearly 20 years of complex problem solving. So we maintain the GEP Knowledge Bank, where you’ll find:

-  Issue-oriented white papers and webinars
-  Need-to-know research reports
-  Insight-packed case studies
-  Practical guides, playbooks & primers in a variety of easy-access formats

[Visit the GEP Knowledge Bank](#)

5 IoT trends to watch

Many organizations are already incorporating IoT technologies into their products, processes and workflows, but 2018 is shaping up to be a breakout year for deployments.

BY THOR OLAVSRUD

The internet of things (IoT) and industrial internet of things (IIoT) will surge in 2018, with organizations ramping up deployments and incorporating IoT technologies into products, processes and workflows. We spoke with a number of IT lead-

ers and industry experts about what to expect from IoT deployments in 2018. Following are five IoT trends to watch.

1 New data infrastructure will be required Collecting sensor data is well and good, but the end goal is to gain actionable insights from

that data — and that will require new data infrastructure.

“In 2018, the number of companies harnessing IoT capabilities in the field will continue to expand rapidly due to technological advancements that have been made with sensors and the value being realized through the data they collect,” says Neil Barton,

CTO of data infrastructure automation specialist WhereScape. “The blessing, and possibly the curse, of the staggering rate that companies are deploying IoT sensors is the vast amounts of data that is produced when tracking things in real time.”

Companies seeking to put that data to good use will face the

added complexity of combining vast troves of data in a wide variety of formats, Barton adds.

“To capitalize on this, companies need to implement technology that can handle the constant stream of data in addition to looking at more effective ways to analyze the data, such as machine learning and deep learning, in order to get actionable insight,” Barton says.

2 Processing extends to the IoT edge

In 2018, expect to see data fabrics and computation that span on-premises facilities into multiple clouds. But these data fabrics will extend even further, predicts Ted Dunning, chief application architect at MapR Technologies. Dunning expects full-scale data fabrics to extend right to the edge next to devices, and, in some cases, threads of the fabric will extend right into the devices themselves.

Dunning predicts a need to tier IoT devices by sensitivity to par-

tition and latency. Some devices don’t need constant connection to the internet, while even a few milliseconds of latency could lead to catastrophic results for other devices.

“If you were to unplug the controller of a robot arm from the robot arm, you could get catastrophic motion from that robot arm that could kill somebody,” Dunning says. The controller must live right next to the robot.

“Big data is now being applied to things that are much higher up in this tiering than before,” he adds. “I can’t have a fire control system on a ship take extra time to launch just because we’ve turned the ship

a certain direction.”

Sastry Malladi, CTO of edge computing platform startup Fog-Horn Systems, agrees that the momentum for edge analytics and edge intelligence in IIoT will accelerate in 2018.

“Almost every notable hardware vendor has a ruggedized line of products promoting edge processing,” Malladi says. “This indicates that the market is prime for industrial IoT adoption.”

Because of this, Malladi sees traditional industries, such as manufacturing, embracing edge analytics to drive new revenue streams or significant improvements for their customers.

“The **blessing**, and possibly the **curse**, of the staggering rate that companies are deploying IoT sensors is the **vast amounts of data** that is produced when tracking things in real time.”

– NEIL BARTON, CTO, WHEREESCAPE

3 IT and OT will step up collaboration

IT and operational technology (OT) have traditionally been separate domains. That’s likely to change in 2018, with IIoT deployments forcing IT teams and OT teams to work together to achieve success.

“What was considered a wide gap between the two sectors — IT and OT — will bridge thanks to the recognized collaboration needed to successfully deploy IIoT solutions and initiatives,” Malladi says, noting that OT will affect the design of IIoT apps in 2018.

Ken Hosac, vice president of business development at Cradle-

point, a provider of cloud-based networking solutions, believes OT teams will lead the IIoT charge in 2018.

“In 2018, there will be more IoT projects deployed by business operational teams than IT teams,” Hosac says. “By addressing security issues that could undermine IoT progress, companies will be on track to take full advantage of this revolutionary technology over the coming years.”

4 IoT security remains wait-and-see

Cisco predicts that as many as 1 million new connections per hour will be added to the internet by 2020, expanding the attack surface and making IoT vulnerabilities more critical and more dangerous.

“IoT will move from being seen as a massive security risk in the enterprise to a critical part of an enterprise’s security posture,” says Scott Manson, cybersecurity lead

for the Middle East and Africa at Cisco. “A proactive and dynamic approach to security and a layered defense strategy are the keys to protecting IoT devices from infection and attack — or at least mitigating the impact when some are inevitably compromised by adversaries.”

For now, industries have been slow to adopt IoT-specific security solutions. FogHorn Systems’ Malladi believes this stems from two emerging trends:

- Traditional IT security vendors are still repositioning existing products to address IoT security concerns.

- Many new entrants are developing solutions specific to a layer in the stack or a particular vertical.

“Often IoT deployments are considered greenfield and emerging, so these security breaches still seem very futuristic, even though they are happening now,” Malladi says. “The good news is

“IoT will move from being seen as a **massive security risk** in the enterprise, to a **critical part** of an enterprise’s security posture.”

—SCOTT MANSON,
CYBERSECURITY LEAD FOR
THE MIDDLE EAST AND
AFRICA, CISCO

major security threats, like WanaCry, Petya/Goldeneye and Bad Rabbit, do resurface IIoT security concerns during the regular news cycle. However, until security solutions are more targeted and evoke trust, they may not help move the needle.”

5 Business value will be key focus

Malladi also sees business cases and ROI being critical for IIoT success in the year ahead.

“The year 2017 was about exploring IIoT and led to the explosion of proof of concepts and pilot implementations,” Malladi says. “While this trend will continue into 2018, we expect increased awareness about the business value edge technologies bring to the table. Companies that have been burned by the ‘big data hype’ — where data was collected but little was leveraged — will assess IIoT engagements and deployments for definitive ROI. As edge technologies pick up speed in proving business value, the adoption rate will exponentially rise to meet the demands of ever-increasing IoT applications.” ♦

Thor Olavsrud is a senior writer at CIO.com.



MRE IT makes the shift to entrepreneurship

How MRE Consulting's IT staff stepped out of its comfort zone and brought an internal tool to market.

BY BRENDAN MCGOWAN

At MRE Consulting, IT staff had long focused on minimizing revenue loss from outages that could derail the work of the company's consultants.

"Prior to my arrival, some members of the team had taken it upon themselves to generate a tool that could help them proactively monitor some of the situations that would cause these outages so that we could get

them fixed, minimizing the downtime,” says Ken Piddington, CIO of the Houston-based professional services firm. “[There] was never a thought that this could do anything more than just help us be better at what our core business was.”

But Piddington saw untapped potential in this internal solution. The IT staff consulted with key customers — implementing the tool, monitoring business impact and soliciting feedback. Piddington and his team were pleased to learn that the solution had shown promise and that MRE’s customers were benefitting from increased capabilities and service levels.

“So then it came to saying, ‘I think we can take this to market,’” Piddington says. “That’s where the big journey started at that point. It was a real culture shift to get us there because we’re not a products company.”

After the trial phase in late 2016, MRE refined and formalized the tool, launching it the follow-

“What I learned was just because you can build something really cool **doesn’t mean it’s really a product** and that you’re actually prepared to take it to market.”

—KEN PIDDINGTON, CIO, MRE CONSULTING

ing year under the name Audix Insights. The value proposition was compelling: Audix Insights would incorporate asset intelligence, asset health details, business intelligence and predictive analytics to provide transparency into IT operations and aid decision making.

Getting product to market

Following the positive customer feedback from the trial period in 2016, the IT team was bullish on a product launch. One of Piddington’s key partners within MRE had approved investment funds. Yet the CIO quickly recognized the massive gulf that separated them from success in a hypercompetitive external solutions market.

“What I learned was just because you can build something really cool doesn’t mean it’s really a product and that you’re actually prepared to take it to market,” Piddington explains.

Piddington considered whether he would buy Audix Insights if he were still in his previous role as CIO at energy supply company Global Partners. The answer: He wouldn’t. He thought not only about the product, but about the strategic roadmap, competitive differentiation and ability to support customers at scale. In short, Audix Insights lacked a product strategy.

“It wasn’t that the product wasn’t good,” Piddington explains. “But we just had to ask, ‘How do we support it? What if we get 100 custom-

ers tomorrow? Now what? Where do we go from here? How do we understand the pricing models?’”

Embracing entrepreneurship

As the product matured and external interest increased, Piddington and his colleagues embraced a new role — that of the entrepreneurial IT shop.

Customer success stories helped justify continued investment from the CEO. A national restaurant chain, for example, used the platform to monitor its unreliable point-of-sale kiosks during the dinner rush. Additionally, two large companies leveraged Audix Insights to monitor their IT environments during a merger’s consolidation phase.

During the sales process for Audix Insights, Piddington acted as a subject matter expert, providing technical details to potential clients. He found that his perspective helped him connect with prospective customers.

“I’d immediately have more credibility or trust with the potential customer because I have been, and am in, the same shoes as that CIO or senior vice president of operations,” Piddington says. “I know what they are going through. I know what a day in the life is like to them. I understand their pain points.”

Creating new IP

When MRE finessed its go-to-market strategy for Audix Insights, it took the rigorous but necessary steps to create new IP — an acronym that, according to Piddington, stands not only for “intellectual property” but “innovation partnerships.” By collaborating with executive management and sales, and

“I know what they are going through. I understand their pain points.”

—KEN PIDDINGTON

by making trial runs with trusted clients, Piddington and his team paved the way for Audix Insights and created more value across the entire MRE ecosystem.

“[You must] be able to start small and figure out where your gaps are, from what you do today to where you want to go,” Piddington says. “[Ask] how you build that journey or that map to where you want to be, and have all the skills and experiences you need to deliver the things your organizations need to do, that you’re maybe not capable of doing today.” ♦

Brendan McGowan is the global media bureau and client research manager for the CIO Executive Council.

CIO LEADERSHIP
LIVE
CIO
FROM IDG

Catch the Conversation!

WATCH, LISTEN AND LEARN as CIOs from around the country talk one-on-one about business strategy, tech innovation, IT leadership, digital transformation and more with host **Maryfran Johnson**, Executive Director of CIO Programs at IDG.

- **WATCH** episodes live-streamed to *Twitter @CIOonline*
- **LISTEN** to the podcast on *iTunes, Google Play, SoundCloud* or *Stitcher*
- **VIEW** all previous episodes at <http://idg.me/2ojHxRU>
- **JOIN** the conversation [#CIOonlinelive](#)

UPCOMING GUESTS:

April 12



Klara Jelinkova
CIO
Rice University

May 2



Sanjay Shringarpure
CIO
E. & J. Gallo Winery

May 10



Jack Clare
CIO and Chief Strategy Officer
Dunkin' Brands

June 7



James Rinaldi
CIO, Director for Information Technology,
NASA's Jet Propulsion Laboratory

Visit us online at: www.CIO.com

Forward-looking CIOs are not only **modernizing** legacy systems, but **redefining** how IT works. Here's a look at how to shift from being an IT order-taker to a **next-gen technology leader**.

Secrets of highly INNOVATIVE CIOs

BY MARY K. PRATT

As one of the original fintech companies, TD Ameritrade has leveraged technology to do business differently.

CIO Vijay Sankaran says he's well aware of that tradition.

"This ability for technology to innovate is probably one of the most important things for us," he says. "The cornerstone of that is

how technology facilitates speed and how it helps with the prototyping and adopting of new paradigms."

Innovation is often portrayed as the mind spontaneously lighting up. But Sankaran and other innovation leaders say innovation happens in organizations that structure their people, processes and technology the right way.

“As businesses mature, what ends up happening is a more execution and operation mindset can creep in. So you have to be very deliberate around how you get new juices and ideas flowing,” Sankaran says.

Although there’s no single formula that guarantees innovation, there are strategies that innovative CIOs and their IT departments employ to drive the kind of ingenuity that can transform a business. Here’s a look at six key actions that innovative CIOs take in transforming their businesses. Embrace them or be out-innovated.



They’re ditching legacy systems

Digital companies born into the cloud and agile world have an advantage: They’re not burdened by legacy systems. “They’re able to be faster and more flexible and can

“As businesses mature, what ends up happening is a more **EXECUTION AND OPERATION MINDSET** can creep in. So you have to be very deliberate around how you get new **JUICES AND IDEAS FLOWING**.” — VIJAY SANKARAN, CIO, TD AMERITRADE

focus more of their spend on creating value vs. keeping the lights on,” says Rudy Puryear, a partner and director in Bain & Co.’s Chicago office and leader of the consulting firm’s IT practice.

That doesn’t mean CIOs at older companies are always left in the dust. Puryear says those CIOs who have modernized their infrastructure can deliver fast, flexible, value-creating and differentiating projects just as well as their digital company colleagues.

But CIOs with mostly legacy systems? Not so much, he says.

Puryear says Bain research

shows that some organizations spend up to 80 percent of their resources on maintaining legacy environments — “and trying to keep it from breaking” — vs. forward-looking, innovative projects.

“If the company is spending \$1 billion on IT and only 20 percent is invested in the future and that has to interface back into the legacy environment, that has a productivity or legacy tax behind it. So the business isn’t getting anywhere close to \$1 billion out of that investment,” he explains.

Puryear says CIOs focused on innovation have committed to

modernizing their environments; they’re not just delivering stand-alone innovative projects on the edges, as those aren’t enough to truly transform any organization.

“The reality is that traditional IT isn’t really ready for digital. Leading CIOs understand that. They embrace new adaptive architectures so that everything they build and buy going forward is more modular microservices and plug and play. They have a cloud-first mindset, and they embrace far more agile, product-centric operating models,” he says.



They develop innovation-focused processes

To drive innovation, Sankaran says he and his 1,500-member technology team have adopted new technologies and work processes.

That includes moving from a shared services model to a product-first agile culture over the past 18 months, a move that has helped IT nearly triple its output. It also includes adopting increased automation and a DevOps environment to support technologists as they work to deliver game-changing applications quickly.

Sankaran says he's also taking additional steps to ensure TD Ameritrade can continue to foster innovation. He's testing integrated collaboration platforms to support cooperation and communication across the organization. "It's really around how you share ideas in a more natural way and how you

"CIOs have to drive that process of **ENVISIONING THE FUTURE.** And if they're not thinking about this last mile, they run the risk of technology enabling and not **TECHNOLOGY INNOVATION.**"

— MICHAEL GRETCZKO, PRINCIPAL, DELOITTE CONSULTING; GM, CONNECTME

create communities of communication," he says.

Sankaran started an advanced technology group tasked with evaluating emerging technologies, identifying prototype opportunities and bringing them to market. And he's implemented programs, such as an incubation process and hackathons, to spur and develop innovative ideas wherever they come from.

Management experts say they see progressive CIOs making similar

moves as they adopt agile, DevOps, automation and innovation labs to speed delivery of new ideas. But, they note, those CIOs represent only a fraction of the IT leaders. For example, consider that Deloitte's 2017 Global CIO Survey found that 74 percent of CIOs surveyed "are investing less than they should in emerging technologies that could contribute to innovation and growth."

Seth Robinson, senior director of technology analysis with the

nonprofit tech trade organization CompTIA, says companies must have processes for people to explore technologies that have potential to drive innovations and test how those technologies could transform the organization's processes and workflows.

"IT has been focused on lowering costs and investing in pieces that are strategic. But in terms of being collaborative and IT understanding business goals and then being able to take those back into the tech department to come up with innovations, that's not something we see as the standard course of business. Only leading CIOs are doing that," Robinson says.



They reimagine work

Technology drives innovation today, no doubt about that. But successful CIOs remember that technology itself is only part of the equation,

says Michael Gretczko, principal at Deloitte Consulting and general manager of ConnectMe.

“It’s fundamentally about changing how people work,” Gretczko says. “And to truly innovate, CIOs

have to change how people work. They’ve got to be considering the people component and partnering with their HR counterparts. We see the most progressive CIO understanding that.”

Gretczko says he sees innovative CIOs, in collaboration with other executives, ask how jobs will change and how customer interactions with the organization will be different. Moreover, they’re articu-

lating how and why those changes will benefit the business to ensure they’re not adopting new technologies simply for technology’s sake.

“CIOs have to drive that process of envisioning the future. And if they’re not thinking about this last mile, they run the risk of technology enabling and not technology innovation,” Gretczko adds.



They leverage their positions

For Peter A. High, president of consulting firm Metis Strategy LLC, what separates CIOs capable of delivering innovation from the others is their attitude.

“There are very few other executives who have a reason to get into every strategic meeting, but great CIOs recognize they have strategic insight across the organization that few other executives have, and [they leverage] that strategic perch



that they have,” he says.

Here’s how High sees it: Most companies have an enterprise strategy that lists goals like reduce costs, grow revenue, enter new markets and develop new products. The strategic plan often doesn’t get into explicit details about how the various roles — marketing, operations, sales and so on — will drive those.

“But a CIO who recognizes those gaps and fills them in with the other chiefs, that’s really an essential step for innovation,” he explains. “This is where the CIO can add value. [The CIO] can understand more than anyone else where there are common needs and divergent needs across the organization and then on the back of that develop IT’s own plans.”

He says leading CIOs do that and as a result have officially incorporated that strategic focus into their roles. He points to the 2015 decision at Dunkin’ Donuts to promote the existing CIO, Jack Clare, to the

“I would be hard-pressed to find an IT organization that doesn’t have **POCKETS OF INNOVATIVE BRILLIANCE**. But that doesn’t matter if the organization doesn’t respect IT.” — LARRY WOLFF, PRESIDENT AND COO, OUELLETTE & ASSOCIATES CONSULTING

newly created position of chief information and strategy officer, as one of several examples.

High also notes that CIOs who leverage their unique position within organizations don’t refer to the business units (or the business unit employees) as customers, as if IT is second to them. “They refer to them as their colleagues,” High says.

Furthermore, he says these CIOs see the organization’s end customers as IT’s customers and, thus, have a focus on how IT can drive new products and services that impact top-line growth.



They build the right talent and culture

Yes, technology and processes must be part of any innovation initiative today. But CIOs need people who understand those pieces and have the vision to leverage them in new ways. Moreover, the company’s culture must support and reward innovation through training programs that develop the technical and business knowledge needed now, such as collaboration and DevOps skills.

“You can’t innovate if you don’t have that talent and culture,” says Larry Wolff, president and COO of Ouellette & Associates (O&A) Consulting.

Wolff points to a 2016 CIO survey from tech research firm Gartner that found talent and culture were top obstacles to CIOs achieving their objectives. “Most people fall short of looking at, ‘Do I have the organizational structure, the people and the skills to execute these operational changes?’”

Indeed, in its “Building the Digital Platform: Insights From the 2016 Gartner CIO Agenda

INNOVATION is often portrayed as the mind SPONTANEOUSLY LIGHTING UP.

Report,” Gartner says, “Talent has now been recognized globally as the single biggest issue standing in the way of CIOs achieving their objectives.” It cites the biggest talent gaps are around big data, analytics and information management, followed by business knowledge/acumen. Gartner adds, “Talent management practices are not keeping up with the ever-increasing and changing needs of the digital world.”

Wolff says he sees innovative CIOs take very deliberate action on this front.

“They have a very focused and deliberate workforce and talent strategy, and they create a disciplined spirit of continuous improvement,” he says. Wolff adds that they have strong project management

skills on staff, they’re good at collaborating and negotiating with the business to determine priorities, and they say no to business peers when they’re requesting work that deviates from the strategic vision.



They have credibility with business peers

O&A and Babson College developed the IT Maturity Curve following a year-long research study about IT leadership. This maturity curve puts CIOs into four groups, with the least mature identified as IT supplier and the most mature labeled as innovative anticipator.

Wolff says one element that all innovative anticipator CIOs have

in common is credibility with their business-side peers. He explains that the other chief executives, along with their direct reports and their staffers, know that IT operates efficiently and effectively and thus they can trust IT to deliver on the high-stakes items.

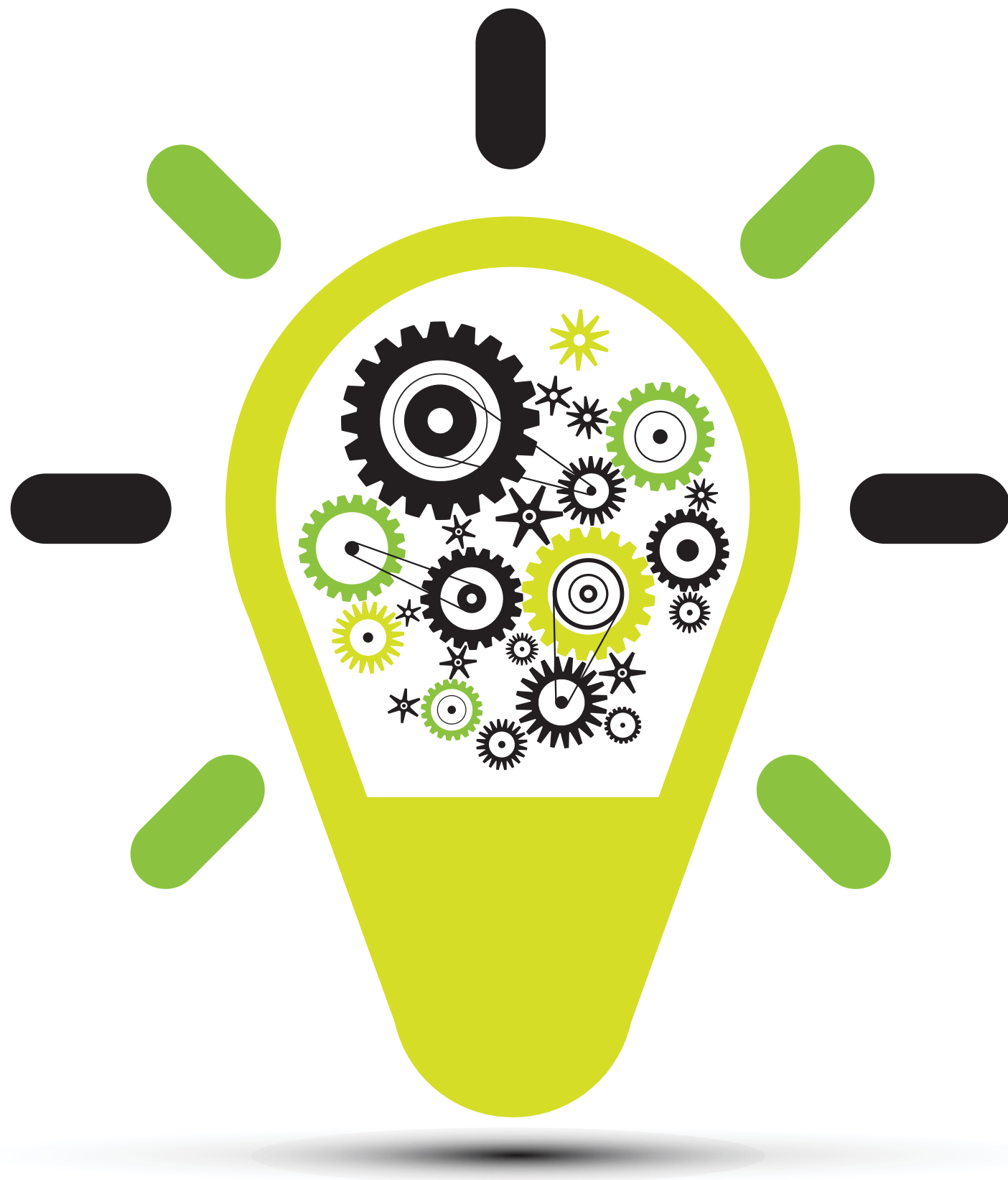
He cites his own past experience to illustrate his point. Wolff joined a \$400 million company as CIO, tasked with turning around an IT shop that struggled with basic operations. He improved governance, project management and IT training, all of which allowed his team to better keep up with daily demands. That, in turn, gave them the bandwidth to move into strategic projects. Those wins won their business colleagues’ confidence to tackle innovative initiatives —

including one using predictive analytics to identify which sales leads would become customers, a project that saved \$50 million in annual costs.

Building credibility isn’t a revolutionary idea; CIOs have long been advised to do this by delivering exceptional operational services. But it still applies today, Wolff says.

“I would be hard-pressed to find an IT organization that doesn’t have pockets of innovative brilliance. But that doesn’t matter if the organization doesn’t respect IT. Business will not accept innovation from a low-performing IT organization,” he says. ♦

Mary K. Pratt is a regular contributor to CIO.com.



Doubling down on innovation

From reverse pitching to crowdsourcing, CIOs are embracing an array of approaches to innovation to facilitate digital transformations.

BY CLINT BOULTON

Digital disruption across industries is forcing companies to experiment with new digital capabilities to augment existing offerings or slide into new markets.

And few CIOs claim they are moving fast enough, as two-

thirds of business leaders surveyed by Gartner believe their companies must pick up the pace of digitalization to remain competitive. Here's a look at what several leading CIOs are doing to spur innovation at their organizations.

Data-driven dining

Casual dining restaurants are struggling to adjust to consumers' increasing preference to order in. The disruption has sent many chains scrambling to partner with food delivery services. But not Bloomin' Brands, which is building its own delivery network, according to executive vice president of digital and CTO Donagh Herlihy.

Why launch a delivery service? First, Herlihy says, delivery partners take a bite out of profits, gobbling up as much as 25 percent of a guest's ticket. Moreover, delivery partners own the data generated by an order, leaving the restaurant partner in the dark. "I don't know if you have a good or bad experience, and I can't market to you," Herlihy told CIO.com. The latter issue is key, as Bloomin' is upgrading to more personalized, targeted marketing. "We have to be very data-driven," he says.

To groom regular customers,

At a **"reverse pitch"** event, entrepreneurs were invited to learn about business challenges that aren't addressed by existing vendors.

Bloomin' is ramping up its guest loyalty program, which includes 4.6 million consumers. The service, available via the Bloomin' mobile app, checks guests in when they enter the parking lot and allows patrons to pay for meals from their phones without waiting for their server to bring the bill. Bloomin' is also enabling users to track deliveries via its mobile app. "You can never be convenient enough," Herlihy says.

Tapping the crowd

Allstate is recruiting helping hands to maintain its "good hands" image. The insurer offers roadside assistance but has struggled to get tow trucks on the scene quickly, with

waits as long as 60 to 75 minutes — a long time, especially when you've just run out of gas or need a jumpstart. "It's a pain point," says Suren Gupta, executive vice president of technology and strategic ventures at Allstate. "Why do we need a tow truck to come in and help out with gas or a jumpstart? It's expensive and takes time."

Gupta decided Allstate could crowdsource that help. The \$40 billion insurance giant last year launched the Good Hands Rescue Network, available to drivers who have downloaded the Good Hands mobile app to their phones. When customers break down, they can launch the app, talk, tap or text a chatbot to request

help and any one of 1,000 rescuers, including cab drivers and lay drivers looking for extra cash, will come fill up their tank or give them a jumpstart. The move has helped reduce wait time to 37 minutes on average, Gupta says. Such innovation is part of Gupta's mandate to diversify revenue at Allstate.

Pitching entrepreneurs

Since joining Northwestern Mutual in 2006, Karl Gouverneur has made what he calls "Silicon Valley safaris" in search of innovation. The company's head of digital innovation has "speed dated" with startups, hosted hackathons and worked with the company's internal VC firm and business incuba-

tor to cultivate new technologies. Now Gouverneur is pursuing a relatively new mode of innovation to boost digital capabilities.

At a “reverse pitch” event, entrepreneurs were invited to learn about business challenges that aren’t addressed by existing vendors. Challenges include automating the procurement contract process, reducing referral friction and automating ways to identify prospects based on a financial representative’s social media contacts. Teams that accept the challenge can earn seed investment of up to \$85,000, access to corporate mentors and networks, and working space at Northwestern Mutual’s downtown Milwaukee, headquarters.

Ideally, the pitch would percolate into series A funding for the entrepreneur. “The outcome is for them to become a viable company that can grow and become a 10x play,” Gouverneur says. “We want a product that has breadth and

To keep this **flywheel** going, the wholly-owned subsidiary reinvests **8 percent** of its revenue into R&D.

depth, product market fit and they see a path to the future.”

Entrepreneurial engine

Union Pacific CIO Lynden Tennison is tasked with digitalizing an old industry. Unable to find commercial applications to support the railroad giant, Tennison had his team build applications UP sorely needed. But it soon became clear to UP that the software and hardware it built had commercial applicability, says Tennison.

Under Tennison’s guidance, UP launched PS Technology, a commercial entity that sells railroad tech solutions to the company’s rivals and partners. Thanks to PS, UP is now one of the largest

providers of locomotive simulation systems. To keep this flywheel going, the wholly owned subsidiary reinvests 8 percent of its revenue into R&D.

Building on that entrepreneurial spirit, Tennison also launched Breeze Broadband Communications, which harnesses the communications towers and other infrastructure supporting the railroad to deliver wireless broadband to underserved rural markets. PS and Breeze, which were conceptualized within the IT department, have helped boost UP revenue by \$50 million, says Tennison. ♦

Clint Boulton is a senior writer at CIO.com.



Good business metrics drive responsive IT

Are your IT measurement metrics still focused on efficiency and not what is meaningful to the business? If so, it's time to make a change.

BY MARTHA ROUNDS

DIGITAL TECHNOLOGIES HAVE significantly impacted most enterprises, and IT is on the front line of change. In a recent IDC survey, 45 percent of CIOs and senior IT executives said that one of the

top three objectives they've been given by their companies is to "create competitive advantage for the business."

Charged, as always, with delivering technology with reliability, responsiveness and flexibility, IT today is being asked to deliver even

more — leveraging digital transformation to change and disrupt the business, customers, markets and competitors. And because of the stakes involved, there is a growing need to be able to evaluate the business and financial impact of every new IT initiative.

New, more meaningful IT metrics can make a difference, but recent IDC research shows that 60 percent of companies aren't using them. Many IT organizations — to their detriment — still lack mechanisms to evaluate whether they are fully supporting

45% of CIOs and senior IT executives said that one of the top three objectives they've been given by their companies is to **"create competitive advantage for the business."**

their companies' digital strategy.

The first challenge is to identify which metrics really matter to the organization.

Using business metrics to drive IT

Traditional IT measurement, with its long-term focus on efficiency metrics for managing infrastructure, applications and components, doesn't work for many of today's transformation initiatives.

To understand which metrics are meaningful to the business, Niel Nickolaisen, CTO at O.C. Tanner, a 1,600-person global provider of employee recognition programs, starts by questioning

the company's CEO and other senior executives: What do you think is the engine that drives this organization? If you could distill down to one metric, how would you measure whether we're making progress? "I start to synthesize that," he says, "and I come back saying, 'If these are the two or three primary metrics for our business, here's my take on how I translate those into my IT goals and objectives. If I use these two or three metrics and made improvements in these metrics, is that the contribution you need from us?'"

Failing to use business metrics in C-suite conversations anchors IT in a bygone era, says Joe Topinka, CIO at SnapAV, a

fast-growing private company that manufactures and distributes high-quality products for audio/video and connected-home installations. "It relegates IT to more of an operational role. And it reinforces this notion that IT really isn't a business unit and it's more of a necessary evil."

Topinka says the key is to spend time with other executives to understand the strategic goals of the company and associated metrics, map the IT organization's portfolio of projects to those strategic imperatives, and then measure how IT will affect those strategic imperatives. The exercise "really resonates with non-IT executives," he says. "They get it."

Skin in the game

How do you make sure that business metrics are taking hold?

Incorporating business metrics into compensation plans can be a powerful step toward shared incentives for IT and non-IT goals. More and more CIOs have business metrics built into their compensation. Nickolaisen's bonus is calculated the same way as the other executive bonuses, including any business metrics embedded in the company's bonus structure. C-suite executives are "all in the same boat because ultimately we need to support each other," he says. "If it looks like our client satisfaction scores are dropping, for example,

I don't want to point the finger at the head of client services. I want to discuss with our team some things we could do from a technology perspective that would improve customer satisfaction."

bit because that way everyone has got some skin in our game," Nickolaisen says.

Similarly, there's a customer satisfaction metric in the bonus calculation for all salaried employees,

"Failing to use business metrics in C-suite conversations anchors IT in a bygone era."

—JOE TOPINKA, CIO, SNAPAV

At the next level down, most salaried employees have a bonus program that includes business metrics — including the level of user adoption of IT-built systems and on-time completion of high-priority IT projects. Those metrics are for the whole company, not just the IT team. "If we do better on those metrics, the entire company benefits. If we do worse than that, everyone's bonus suffers a little

including IT. "What contribution does a software engineer, or a guy on the IT service desk who's never going to interact with one of our customers, have to that? I don't know, but I want him thinking about it." ♦

Martha Rounds is a research director with IDC's IT Executive Programs. IDC's Mitch Betts and Bill Keyworth also contributed to this story.

SECURITY Smart™

NEWSLETTER

SAFEGUARDING YOUR SECURITY AND PRIVACY AT WORK AND AT HOME

From the editors of *CSO magazine*, Security Smart is a quarterly newsletter ready for distribution to your employees—saving you precious time on employee education! The compelling content combines personal and organization safety tips, making it applicable to many facets of employees' lives.

Security Smart has an easy-to-read design and clear, engaging and entertaining articles so you are assured that your intended audience of employees—your organization's most valuable assets—will read and retain the information. Sign up today to start having this newsletter distributed as a key tool in raising security awareness within your organization.

- **Most security breaches happen due to human error**
- **4 out of every 5 data breaches caused by human error are unintentional**
- **4 out of every 5 security events caused by insiders have a negative impact on their enterprise organization (including loss of confidential information, critical system disruptions, reputational harm, lost customers and more)**



Subscribe today!

To view a sample issue of the newsletter, learn about the delivery options and to subscribe visit:

WWW.SECURITYSMART.COM

CSO
BUSINESS RISK LEADERSHIP

Security Smart is published by CSO, A business unit of IDG Enterprise. | ©2015 CSO

3 considerations for redesigning the IT organization

Designing a robust IT organization for the future does not require a “big bang” approach.

BY KHALID KARK

FACED WITH RAPIDLY changing business environments, many CIOs today struggle to be as agile and nimble as they need to be. The fact is, traditional IT systems and processes were developed to build battle-ships, but businesses are now demanding speedboats.



Creating a “business relationship management” box in the org chart won’t solve this problem, nor will shuffling current IT leaders. Instead, an ongoing nipping and tucking of organizational structure can align IT to corporate strategy and outcomes.

Here are three considerations for designing your IT organization for the future.

1 Organize by capability

A focus on business capabilities is a significant departure from the traditional IT organization structures such as the plan-build-run model, which focuses on technical competencies. [Deloitte’s Global CIO Survey](#) found that building and investing in capabilities that align to the company’s core value proposition will allow the CIO to focus on activities that are crucial to differentiating in the marketplace and delivering maxi-

mum value to their organizations.

For example, a consumer products company may view product development as a necessity that must be cultivated and resourced carefully, while low-cost producers or fast followers may view it as a luxury. Capabilities that don’t

source 20 percent of specialists with deep technical chops while simultaneously adding the same number of product specialists. They will have intimate knowledge of their individual business areas and be measured on their contribution to business growth

good thing. Often the company’s prevailing culture can have a significant influence over its subcultures, and IT leaders need to be mindful of this. An IT innovation team focused on emerging technologies and business disruption and a core system

Traditional IT systems and processes were developed to build **battleships**, but businesses are now demanding **speedboats**.

differentiate a company from its competition are candidates for cost reduction by centralization, automation, outsourcing or a shared service approach.

A CIO of a retail organization is radically redesigning his IT organization by taking a product-centric approach. He plans to out-

and revenue, while system maintenance and infrastructure will be managed by a third party.

2 Protect IT subcultures

Every IT organization has many subcultures, and that’s a

operations team focused on five-nines reliability each have specialist subcultures that are worth protecting. Is your organization design versatile enough to allow both mavericks and conformists to thrive?

There are many ways to protect a distinct IT subculture. For exam-

ple, put it under the leadership of a well-respected corporate executive, which could give it the credibility and clout to resist external influences. Or, grant the unit certain liberties and exceptions, such as the ability to bypass certain governance steps in favor of rapid prototyping.

A CIO for an online business in APAC, with the support of the CEO and board, created a team of mavericks responsible for disrupting the existing online business. In three years, this small team generated 14 percent of the company's total online revenue.

3 Clarify the new rules of engagement

Many CIOs start their tenure by [developing a new strategic vision and organization design](#) and then declaring victory. Then, when CIOs fail to bring significant change, sometimes staff are blamed for resist-

ing change when, in fact, it is a failure of the organization's design, not its people.

New organization design needs to be accompanied by new rules of engagement. The successful execution of organization design often depends on

New **organization design** needs to be accompanied by **new rules of engagement**.

continual measurement across three key dimensions — leadership behaviors, capabilities, and accountability metrics — with dashboards that signal organizational intent. What are the parameters for success or fail-

ure? What types of talent need to be recruited? What training is needed to reinforce the organizational design principles?

One CIO took a three-phased approach to his organization design. First, he started holding his leadership team accountable for

modeling intended behaviors such as a 48-hour email response time, spending at least a day with customers, and identifying and mentoring high-potential employees. Second, he identified key business capabilities such as data analyt-

ics and business process automation and created cross-functional centers of excellence. Third, he changed IT's performance metrics to include business outcomes and created a public dashboard for estimating IT's business impact.

.....

Organization design is complex; changing one area can produce unanticipated consequences in another. A resilient IT organization design may require iterative changes and adjustments. It isn't as simple as putting names in boxes — but it isn't impossible. Good luck with your efforts! ♦

Khalid Kark is a managing director with the U.S. CIO Program, Deloitte LLP.

This publication contains general information only and Deloitte is not, by means of this publication, rendering accounting, business, financial, investment, legal, tax, or other professional advice or services.



**NEW ON THE CIO
AGENDA**

Learn how IT can help procurement achieve digital transformation. GEP’s procurement technology experts share four key technology elements that the CIO organization must consider while helping procurement digitally transform itself.

DOWNLOAD



**MAXIMIZING
EFFECTIVENESS**

What can IT and procurement do to maximize the effectiveness of their collaboration? This concise piece provides four proven strategies that will take CIOs and CPOs a long way toward achieving the results and value both teams are aiming for.

DOWNLOAD



**THE CONNECTION
BETWEEN
HAPPINESS AND
PRODUCTIVITY**

In this all new article, experts from GEP discuss the technology connection between happiness and productivity. It also includes a few handy tips on selecting the right enterprise software for maximum impact on the workforce.

DOWNLOAD



**PLANNING
WORKPLACE
TRANSFORMATION**

Experts from GEP explain how the CIO organization can harness technology innovation to improve productivity at the workplace by identifying three things the IT community should focus on when planning the digital workplace transformation.

DOWNLOAD



**EMBRACE THE
FUTURE**

As enterprises prepare for a digital future, GEP’s tech experts put forth the case for IT teams to embrace change and do things differently. This paper suggests progressive thought processes for CIOs looking to break an established order and embrace disruptive innovation.

DOWNLOAD