Soaring Out of the Process Silo
By Robert Hoyle Brown

The Center for the Future of Work
The Work Ahead is a research series providing insight and guidance on how businesses - and jobs - will evolve in the digital economy.

By digitizing the processes at the heart of their companies, business leaders can turbo-charge operational efficiency and propel massive revenue growth and cost savings. In this installment, we provide data-based insights and tactical advice on applying new digital technologies to front-, middle- and back-office work processes to realize new levels of business performance.
Digital technologies often make life more convenient. Apps help us summon a car, pay for our lattes and even order ready-to-eat meals delivered to our doorstep. Experiences like these with our smartphones or smartwatches are fun, but let’s be honest: In the grand scheme of things, many of them are somewhat trivial. Nonetheless, they are daily reminders of the apropos phrase, “Software is eating the world.”

What is less appreciated is the impact of “being digital” on back-office systems, applications and processes that are at the heart of most big businesses – processes that drive work that matters today and tomorrow. This includes everything from processing insurance claims, to caring for patients, to growing personal wealth. If you’re a chief operations executive, that means software is also eating your processes – with the hors-d’oeuvres soon to be served up in unseen, expensive and undifferentiated middle- and back-office functions.

Because in a digital world of algorithms, automation and AI, the platform becomes the process.

For many business leaders, digital platforms will increasingly serve as a potent fuel that launches processes out of their silos – and businesses into orbit – by digitizing small steps and closing gaps between customers, suppliers, partners and employees. Organizations whose processes are left lingering on the launch pad risk irrelevance.
Your work ahead – your ticket to the digital economy – is connecting “old” processes to new technologies.

To understand what the future holds for the digitization of business processes, we surveyed 2,000 senior executives across industries and an additional 250 middle managers. Six key findings substantiate the critical lessons learned in their journeys so far:

01 Digital is a two-stage, cost-plus-revenue rocket ride to outsized business process success. The average impact of cost reduction plus revenue increase on all core processes across the board – resulting from investments in digital – was about 4.6% in the last 12 months, according to respondents. In dollar terms, that equates to $364 billion in 2015. By 2018, respondents said the potential baseline revenue impact grows to a total of $770 billion.

02 Digital process leaders are unlocking additional digital potential energy at both the top and bottom lines. Leaders in process digitization are pushing the envelope way beyond the averages above, unlocking outsized gains by digitally rewiring all their core processes. Such companies say an 11% additional improvement to the top and bottom lines is possible today, and will grow another 19% by 2018. That’s a potential “Process Leader’s Bonus” of $700 million per company by 2018 across all the industries surveyed.

03 Managers are from Mars; senior executives are from Venus. Senior executives are more optimistic about process vision and execution than middle managers are. Only 22% of middle managers foresee a positive impact on revenue from digital processes by 2018, compared with 39% of senior executives.

04 Software is eating processes. But that’s OK! In every functional area – such as HR and finance in the back office, R&D in the middle office, and sales on the front lines with customers – “the platform is becoming the process,” and is linking customers, partners, suppliers and employees for greater digital impact.

05 IT is universally seen as the function pushing digitized processes forward. The information services and technology function was rated as the leading business area by senior executives and managers alike for positively affecting cost and revenue today and in the foreseeable future.

06 The importance of analytics to develop insights and meaning-making is immense. Senior executives aligned with process functions foresee a 23% surge in the need for analytical skills by 2020.

Our Work Ahead research illuminates the fact that most businesses will invest more in all manner of processes to drive savings, unlock new potential, break down hierarchical silos and – quickly – fuel the engines of the business. By doing so, they will achieve escape velocity from “the way we’ve always done it” and soar into the heights of the work ahead to drive meaningful and lasting change.
Like individual missiles stuffed in underground launch silos, processes (and their data) are disjointed. The advent of ERP systems 25 years ago was all about connecting “islands of information.” By applying new digital approaches to inchoate processes, however, it appears that this time, the alignment is for real (and better late than never). In the next era, armed with new and powerful levers to drive real process change, there will be nowhere to hide in dark corners of the back office anymore.

Now, operational heads, chief analytics officers, CEOs, shared-services leads and process owners must all confront the surly legacy of those rigid, “as-is” processes from yesteryear. It’s easy for CEOs and senior executives to proclaim that “legacy is poison”; the hard part is jettisoning old ways of doing business.
There is much low-hanging process fruit that could benefit – in weeks and months – from the application of new digital technologies. One example is robotic process automation (RPA) software, which makes both people and businesses smarter by automating rote work. Another example is standardized process platforms, which are increasingly being sourced via utility-style business process as a service (BPaaS) models. BPaaS is changing the game by delivering outcomes that are no longer tied to the number of people “doing the process.”

As our research shows, this delivery model means reduced costs and greater revenues for the business. With digital approaches, platforms become the process – and elevate them into a massive cash machine, not a cash-eating black hole.

What we’ve seen of “all-things-digital” in the last few years will render yesterday’s silos obsolete.

It is simply the prologue of what’s to come: a true ignition sequence of innovation, creativity and the upgrading of every aspect of process-aligned work. Middle- and back-office functions will move to the front office as all processes evolve into cost-reduction and revenue-generation machines.

To accomplish this, businesses need to take the time to really observe customers, their motivations, pain points, frustrations and experiences with their company’s products and services, and what this means to customers in their lives. For digital processes to really change an organization – to be more than just this year’s lipstick on last year’s pig – companies need to digitally connect processes across the full expanse of workflows in ways that create vastly more humanized transactions and experiences, catalyzed by new digital approaches (see Figure 1, next page).
New Process Operating Models for a Digital Age

Whether it’s social, mobile, chatbots, voice recognition, or even good old-fashioned face-to-face conversations, customer-facing functions need a seamless combination of all digital channels. It’s imperative that automated and standardized middle- and back-office processes and platforms undergird and align to put the focus back on the customer – not the process.

The Digital Front Office
Channel-agnostic
Interactive, Insightful and Instant

Adaptive Middle Office
Platform-driven, agile, technology-based
Imaginitive and intelligent

Mechanized Back Office
Shared services, embedded technology, intelligent automation
Industrialized automation

Figure 1 Source: Cognizant Center for the Future of Work
Most senior executives see the future potential of digital as a two-stage booster rocket, and many believe its ability to drive revenue is nearly twice as strong as its ability to reduce costs. This isn’t “cosmic theory” – if you’re a senior process executive and not adapting fast enough, your organization could be marginalized.

Why? Because digitally-infused processes cut costs and create fuel for investment—and revenue is the mechanism that accelerates forward motion for the company.

In 2015, the average baseline impact of digital investments on cost reduction plus revenue increase on all core processes across the board was $364 billion, or about 4.6% of total revenue (see Figure 2, next page). But looking ahead, the size of the opportunity really comes into view. By 2018, surveyed executives believe digital’s potential baseline impact will more than double to 11.4% of total revenue, or $770 billion per year. That’s a total economic impact over the next two years of about $2.3 trillion across all the companies studied by driving digital process change. That’s big money.

But we think that may be a dramatic underestimate of the process-level impact of digital. By relentlessly driving digital change across all processes, leaders can unlock nearly an additional 19% increase in combined cost and revenue gains. Now take your protein pills and put your helmet on.²
Simultaneous Digital Process Step-Changes Could Fuel Additional Top- and Bottom-Line Gains

In this study, we classify digital “leaders” as companies that are using digital technologies in ways that have significant impact on their businesses, both on increasing revenues and reducing costs. They are also ahead of their competitors and peers in applying digital to transform their businesses. Executives at such companies – specifically those whose organizations have seen large or very large digital impact – are already unlocking much more value from their efforts. They’re doing this by transforming all of their core processes digitally, gaining a potential Process Leader’s Bonus of an 11% additional improvement in their top and bottom lines today.

Unconvinced? Think these are small percentages that won’t affect you? Think again. As General Electric CEO Jeff Immelt observed recently, “Small changes go a long way.” In other words, organizations must start small but then scale big to drive meaningful, simultaneous process change.

From a cost savings perspective, over the next few years, leaders believe that if they digitally changed all their processes, they could reap significant new operational savings – up to 9.5%, collectively.

As our data shows, small steps can add up to a large impact – but at first blush, the numbers appear muted. As Figure 3 reveals, the digitization of purchase and procurement processes yielded, on average, a paltry extra 2.0% of revenue in 2015.

When cost reduction is coupled with additive, top-line revenue gains, however, the Process Leader’s Bonus takes off. From a cost savings perspective, over the next few years, leaders believe that if they digitally changed all their processes, they could reap significant new operational savings – up to 9.5%, collectively. From a revenue perspective, by 2018, they also believe they could add 9.1% to the top line. Overall, leaders stand to potentially accrue 18.6% extra top- and bottom-line gains by 2018, by digitizing their processes (see Figure 3). That is a huge amount of money; a potential Process Leader’s Bonus will average $700 million per company by 2018 across all industries surveyed.

Said differently, like liquid oxygen mixing with kerosene to launch a Saturn V launch vehicle, the Process Leader’s Bonus of cost savings ignites business process outperformance with revenue growth.
Being a Digital Leader Drives Additional Revenue and Cost Reduction in Core Processes

Digital is a two-stage, cost-plus-revenue rocket-ride to business process outperformance. If they rewired all their core processes digitally, leaders think they could potentially gain 11.2% additional improvement on the top and bottom line today, and attain 18.6% additional cost and revenue improvements by 2018.

Response base: 2,000 senior executives
Note: Information Services and Technology as well as Sales, Marketing, and Customer Service data is not applicable for 2018
Source: Cognizant Center for the Future of Work
It should be noted, however, that the revenue boost for most organizations will be much lower than the 9.3 percentage points shown in Figure 3; many companies today are only dabbling in digital, using an incremental, siloed mindset. Even most of the leaders are currently focused on just a couple of different process areas. That’s why the Process Leader’s Bonus is so tantalizing – like a space shuttle throttling up, advantages start to accrue when companies do just a bit more.

Moreover, we think these estimates are conservative – according to McKinsey, as many as 45% of the activities that individuals are paid to perform can already be automated. Leading industry analysts such as Forrester Research predict that by 2020, 64% of job tasks for management, business and financial roles will be cannibalized by automation (read: the middle and back offices), and the impact at the front office on sales and related tasks will be 52%. In our own research, we see the same trend with respect to anticipated staff reductions of greater than 25% in every front; middle- and back-office process in every vertical industry.

Let’s just say the truth is somewhere in the middle. But it’s important to understand this: Leaders really can make an impact, now. And the main lesson is simple: If you are driving change – simultaneously – these small numbers will start to add up, quickly. In an age of BPaaS, automation and AI, even if you aren’t at the bleeding edge of “digital leadership,” it is highly likely that your organization could garner a 20% (or more) outcome in terms of efficiency or revenue improvements.

Disconnects in Digital Process Vision and Execution: Managers Are from Mars, Senior Executives Are from Venus

Executives driving the digital process shift – as well as their current and incoming employees – also will need to be on-board with these possibilities. Overall, leaders who are aligned on digital process vision and execution will reap the rewards. But with apologies to John Gray, when it comes to our respondent base, it’s also evident that managers and senior executives hold widely divergent perspectives on the digital opportunity.

When it comes to digital’s impact on processes, middle managers – many of whom are in the day-to-day trenches of driving change – perceive everything as boiling down to cost. Senior executives, meanwhile, consider digital uniformly as a revenue driver. In the all-vision, all-the-time world of senior executives, the potential for process-by-process revenue-generation impact of digital will be massive. This mindset holds true for all functions within the business, even traditional staff and cost centers, such as HR, procurement, supply chain and finance.

Figures 4a and 4b make this abundantly clear: Exactly 22% of managers, as well as 22% of senior executives, concur that the information services and technology function is the leading area that will bolster cost reduction in the next three years. But when it comes to revenue growth in that time period, 39% of senior executives forecast a huge impact, compared with only 22% of middle managers. In short, senior executives are much more optimistic and positive about the future – almost double middle managers’ sentiments on cost alone.

Senior executives are much more optimistic and positive about the future – almost double middle managers’ sentiments on cost alone.
One possible explanation for this difference of perspective is that it’s highly likely that middle managers feel intense heat from on-high to deliver process change. Senior executives see the potential of digital; midlevel managers must deliver on it. We all know which one is the more difficult task!

Just as managers and executives agree that the biggest area of cost reduction impact from digital over the next three years will be in the IT domain, they also concur that the area that will see the least impact will be in HR. At the same time, 15% to 20% of respondents see strong or very strong impact of digital on cost and revenue – hardly a trivial range.

### Midlevel Managers’ Top 5 Process Areas for Expected Cost Reduction and Revenue Growth

Middle managers are much more tepid on digital’s ability to impact revenues than senior executives are. Both managers and executives see that the biggest area of cost reduction impact from digital over the next three years will be in the Information Services & Technology domain.

![Graph showing the top 5 process areas for expected cost reduction and revenue growth](image)

Respondents were asked to rate the impact of digital on cost and revenues in each business process area (percent of respondents saying “high” or “very high” impact).

*Figure 4a*  Response base: 2,000 senior executives, 250 middle managers / Source: Cognizant Center for the Future of Work
Senior Executives' Top 5 Process Areas for Expected Cost Reduction and Revenue Growth

Senior executives see digital uniformly as a revenue driver. They are much more optimistic than middle managers about digital’s ability to drive process-level revenue growth by 2018.

Respondents were asked to rate the impact of digital on cost and revenues in each business process area (percent of respondents saying “high” or “very high” impact).
What all this means is that operations leaders must undertake rapid process reformation. Moreover, there are right and wrong ways to get started with process digitization that can ensure business relevancy today and tomorrow.

In the next section, we’ll discuss how this plays out for some specific process areas. We’ll reveal where, how (and how fast) you can start. Forget blaming inertia; you’ll need to tap digital fuel to achieve escape velocity – and break free of business-as-usual constraints that jeopardize business success.

**Digital Platforms Ingest F&A Processes**

Like Pavlov’s dogs, digital software waits to gobble up tasty – yet tired and aged – workflows moldering in dark corners of the back office. And in the foreseeable future, the finance function will likely become the chosen appetizer.

For a generation, the financial management function has seen increased cost efficiencies associated with offshoring and shared services. Often, the human value-add consists of little more than rote and repetitive prep tasks that “get data ready to get ready” – like collating, searching, cleaning and integrating data – rather than contributing true “value” through tasks like making recommendations.

Imagine the overall impact of injecting digitally-catalyzed efficiency into an area long in need of a major shakeup. But because it’s in the back office,
F&A is usually perceived as an overhead, G&A expense. You can hear the skeptics now: “The finance guys are pencil-pushers - when I didn’t fill out their form just-so, I got chewed up in their process buzzsaw. There is no way they can, or will, contribute to revenue-generating activities.”

That’s why a silo mentality bedevils those who abstain from the long view on the potential of digital process change. As Figure 5 illustrates, survey respondents closest to the finance function - specifically finance senior executives - see productivity and efficiency as chief levers to improve their work. Yet, 70% cited the ability to communicate better, an outlier among finance leaders. This perhaps highlights a need for finance executives to build bridges outside the back-office silo and see the horizon beyond their domain.

Finance executives also think digital will help them work faster and lead and manage better. All of these elements make a critical difference in helping finance better contribute to the revenue-generating activities for the business.

Using new digital finance approaches, businesses can radically improve tasks such as days-sales-outstanding, working capital and a host of other levers that materially impact revenue generation. Platforms such as Catalyst (a cloud-based Cognizant F&A BPaaS solution) use a “born-automated” approach to drive productivity benefits in enterprises’ accounts payable functions by as much as 50%. Other companies, such as Intacct, Xero and its strategic partner Expensify (with its promise of “expense reports that don’t suck”), are enabling smaller outfits to apply the BPaaS model to automate processes, reduce cycle times and speed financial close - often at the click of an “I accept” button.

“Not for my mission-critical processes,” you may scoff. Or, “Those platforms are only for midsize companies.” But at what point did platforms like Workday and Salesforce reach a watershed, and go beyond small and midsize businesses? Over a decade ago.

Changing things for the better in F&A with digital process integration is just the beginning. Consider the eminent possibility that blockchain - as a massively scaled, distributed and encrypted ledger that presents an entirely new digital process platform - may roll like a tank tread through the transaction-based accounts receivable/accounts payable cornerstones of the modern finance function. Though in its infancy, blockchain has the potential to completely reengineer long-established norms within the most risk-adverse parts of the typical Fortune 500 company’s operations. (For more on blockchain, see our report “Blockchain: Instead of Why, Ask Why Not?”)

**Digital technologies will...**

(Percent of respondents who said “high” or “very high” impact.)

- Improve my productivity 80%
- Help me work more efficiently 75%
- Help me communicate better 70%
- Help me collaborate more efficiently 69%
- Allow me to be more creative and innovative 66%
- Help me work faster 65%
- Help me lead and manage people better 64%
- Help me serve customers better 61%

**The Effect of Digital Technologies on the Future of Work in Finance Jobs**

Finance leaders see productivity and efficiency as chief levers to improve their work. Yet the ability to communicate better, using digital to work faster and lead/manage better were outliers compared with other sectors.
Getting Finance First in Line

Finance has never been regarded as the frontier of innovation (to put it politely); yet that may be about to change. Executives and leaders recognize that reimagining this often unglamorous – but vitally important – function is crucial to enabling a competitive position in markets that are changing faster than ever. Here are some steps your organization can take to anticipate and accelerate change.

**TODAY:**

*Discover the art of the possible.*

Realize that the way finance has been done since the advent of the pen-and-ledger is changing. With new digital apps and platforms, the untethering of finance process inputs and outputs from source systems, touchpoints, complexities and dependencies allows for new ways of working. The first order of business is to deploy intelligent automation (or “systems that do”) to chew through any and all rote and repetitive accounts payable/receivable work in which humans are essentially doing the same thing on a “swivel-seat” basis. (For more on systems that “do, think and learn,” see our Cognizanti journal article, “Intelligent Automation: Where We Stand – And Where We’re Going.”)

**TOMORROW:**

*What could “good” really look like?*

If you could imagine better and different outcomes for finance, then imagine what the ideal would be and work backwards from there. The cost savings that finance leaders achieve via new, digital approaches can fuel innovation in tasks such as days-sales-outstanding or control gaps. And that’s just a start – consider the improvement to in-the-moment decisions vs. the friction and latency of “we’ll get that spreadsheet to you in 48 hours.”

**ONE TO TWO YEARS:**

*Getting from here to there.*

Like launching a spacecraft to a pinpoint spot on the moon, success depends on precision mapping and alignment of process change. So continue to focus on the future state of “what good looks like.” Use frameworks to guide and control process, geographic and business unit change around all your digital finance platform enablers (whether it’s platforms such as Ariba and Concur, or newer platforms like the aforementioned Catalyst). And above all, stay the course; with these small steps, big things can happen – and finance can be a showcase for the rest of the organization. (For more on precisely targeting digital opportunities, see our white paper “Digital Process Acupuncture: How Small Changes Can Heal Business, and Spark Big Results.”)
Digitally Place the “Human” Back in Human Resources

“Employees are our greatest asset” – how many of us in our careers have heard this proclamation from on-high, and collectively rolled our eyes? In the real world, the phrase often clashes with the realities of midyear and annual performance reviews, or managers agonizing over increments of bonus and pay raises. And what about the times when a star recruit – the “big fish” you’ve cultivated for months – gets away because of a hitch in the applicant tracking process, which resulted in their taking the competing job offer from your rival? Or they showed up on their first day of work “ready to rock,” only to be asked by the front desk – “Who are you? And what are you doing here?”

We analyzed the responses from the HR leaders in our dataset on how they think digital will transform work between now and 2020. As Figure 6 shows, 65% of these senior HR managers believe that people will need to work faster. There is also a solid recognition (63%) that required skills will need to change, especially as more work becomes automated (60%), and jobs become more specialized (58%). What is also clear from HR executives is that digital tools will help workers make better decisions and foster a change in skills and collaboration with smart machines.

Surprisingly, HR executives were 40% more likely than any other group of operational executives to say that digital will significantly result in a need for fewer people (this, coming from HR, after all!). And they show tepid belief that digital will result in interpersonal relationships becoming more valuable.

One thing is for certain: The one function with an explicit charter to “help people feel like people” is HR. Yet often, HR makes for the most de-humanizing business experiences imaginable. Instead of “Welcome to the future of work,” it can too often be, “Welcome to the portal – your password was denied.”

In a future of work that will feature more automation, people – and their unique skills and talents – will continue to make the greatest contribution toward accomplishing the mission of all businesses. In the words of Professor Leslie Willcocks of the London School of Economics, automation and AI will finally let us “take the robot out of the human.” 10
Imagine an insurance company that sees immediate opportunity for expansion in Asia, and through digital recruiting (using a platform like ZipRecruiter), accelerates fivefold the process of getting sales “feet on the street.” Or, consider a firm like BetterWorks, which encourages companies to drive objectives and key results (OKRs). According to BetterWorks, companies that use OKRs are four times more likely to score in the top 25% of business outcomes.  

Here’s an action plan for how HR can get humming with humans.

**TODAY:**

*Change the mindset – it’s about your people, stupid.*

Take a good hard look at all HR processes. Are they really helping make things better for people? Look at your annual performance reviews. What about bonus cycles? Are they aligned for up-to-the-moment expectations and results in often fluid, digitally-driven business cycles? Don’t overthink it; focus on two to three HR processes that are broken or that prevent optimal utilization of skills that will help your best people thrive in the digital future of work. Use OKRs, especially in an era when “managers are from Mars” (see Figure 4). Objectives are all about where-do-we-want-to-go (i.e., “Put a man on the moon by the end of the decade”); key results are about how-we-will-get-there (i.e., “Build a lunar module weighing under 40,000 pounds by December 1965”).

**TOMORROW:**

*Sort out the balance of the “art of the job” (for humans) vs. the “science of the job” (for bots).*

Judgment is very easy for humans but very hard for computers. How can you (or the operational staff that reports to you) double-down on the unique skills of your current and future employees in a digital world? Robots are very good at the “science” of a job, especially when reliance on computational capabilities, analysis and pattern recognition poses questions on the most appropriate action to take next, based on all data available. Humans are very good at assessing situations, or the “art” of the job, and essentially asking, “What is the right thing to do in a given situation?”

**ONE TO TWO YEARS:**

*Develop a new master architecture to support “work.”*

The striking growth of subcontracting for digital functions and processes demands a flexible, distributed workforce and a work platform that can issue digital “gigs” into the labor market as demand dictates. The work platform will need to start aligning the orchestration of human and machine tasks, particularly as automation technologies and analytic processes dramatically enhance productivity and innovation through knowledge work. From an HR executive’s perspective, that not only means less paperwork; it also means far better outcomes, such as the precision development of people, mitigation of biases, improved help for legal matters, and substantially improved employee engagement to be better humans in the digital world that is swiftly approaching.

**Focus on the Front Office to Get Customers to Come Back… Again and Again**

In some ways, modernizing customer experience processes is “the story of digital” so far. It has been a powerful catalyst for redesigning and reimagining sales and the customer experience in general. And brand experience has been a huge motivator for customers - liking Netflix, crafting your own Starbucks signature drink, feeling the cool verve of Richard Branson’s Virgin empire of products and services. The more customers like the experience, the more they want to engage, give feedback and collaborate with it. For many products and services, co-creation with favorite brands is the name of the B2C or B2B game.
So, why are so many of us at our wit’s end when we experience bad customer care? Have we grown too blasé at the amazing potential of digital technologies? As customers, it’s frustrating when we see the obvious blind spots our favorite, trusted brands have failed to address when we interact with them — whether it’s the bad self-checkout robot at the grocery store, or the automated kiosk at the airline you’ve used for 20 years asking you to “Press 1 for English,” or robo-calls from your favorite charity asking for a donation, even though you made a PayPal contribution last week.

With killer apps, beautifully designed websites or even sensor-enabled soda bottles, many companies are already moving in this direction. Still, much more can be done to drive digital at the heart of the value chains surrounding customer-facing and front-office functions. Based on the responses from sales and customer service executives (see Figure 7), it’s clear that many levers connected to data will be critical to improving processes over the next decade. Approximately 61% cited cybersecurity as pre-eminent by 2025, followed closely by big data (60%) and sensors/IoT (48%). However, for many, some basic foundational engagement technologies (such as telepresence, nanotechnologies and wearables) are perceived as being far from promising in the long term.

The more customers like the experience, the more they want to engage, give feedback and collaborate with it. For many products and services, co-creation with favorite brands is the name of the B2C or B2B game.

Sales and Customer Service Executives Anticipate Strong Impact of Digital Technologies on Business

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<th>2015</th>
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<td>Wearable Technology</td>
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<td>Nanotechnology</td>
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<td>Telepresence Devices</td>
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<tr>
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For sales and customer service leaders, many levers connected to information and its management — such as cybersecurity, big data and sensors/IoT — will be critical to improving processes over the next decade.

Respondents were asked to rate digital’s impact on the importance of each technology area (percent growth in respondents indicating “high” or “very high” impact in 2015 and by 2025).
Software as a service (SaaS) platforms like Salesforce have proved the concept for sales enablement software. Already, cloud-based platforms such as Cognizant’s Onvida are powering next-generation, omnichannel BPaaS solutions and digital customer experience processes. Case in point: Onvida is helping a leading global food and beverage company drive $37 million in cost savings and over $150 million in revenue uplift. Other companies, such as Zendesk, are turning reviews, comments and messages into two-way customer service conversations. Still others, such as Afiniti, are using AI to optimize interpersonal behavior with “super agents” when nothing less than a top-flight, human-to-human call is called for.
Keep Confronting the Front Office Digitally

Practice makes perfect. Even if your customer-facing functions have been on the vanguard of your organization’s digital process change efforts, your team needs to keep refining them. The days of forcing customers to align with your company’s (often bad) processes are numbered, so it’s high time to re-imagine all front-, middle- and back-office processes to support your customers.

Here are some steps to anticipate and accelerate change.

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**TODAY:**

*Get a mirror – see the ugliness (your customers already do).*

If your company’s customer experience processes are ugly, there’s never been a better time (and better digital process tools) to fix them. Take a good, long look. Acceptance is half the battle. And even if your processes aren’t exactly ugly, but could stand to be even more beautiful, don’t stop! What’s “perfect” is always in a state of change, so keep looking, keep changing and keep perfecting. Your customers will reward you.

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**TOMORROW:**

*Beauty is more than skin-deep - customer-facing process change needs to be outside and inside.*

Digital allows opportunities to be unlocked in real time. By having meaningful data about how customers have interacted with customer support in the past, sales people can be made “smart,” and can proactively serve customers. Processes found in customer experience centers will need to recalibrate around “handling sessions,” using the digital fingerprint (or “Code Halo” *) that is generated by every customer click, like, swipe, comment, call, inquiry and so on. Patterns will emerge, such as the types of interventions and clarifications conducted, yielding a powerful lever for customer service, speed, efficiency and effectiveness. Gone is the need to complete the typical 15-step process to ascertain things like, “Why’d you call? What do you want? Where are you located?” Instead, a tangible sense of efficiency and experience is substituted – to get business moving faster and smarter.

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**ONE TO TWO YEARS:**

*Turn the mirror on customers - watch them watching you.*

Imagine the richness of process data – known and unknown – and how you could unlock it using digital technologies or new process platforms. Imagine crafting an algorithm for 10, 100 or 1,000 of the top 1% of yours customers, all of whom share certain common characteristics. Like digital stalwarts Amazon, Apple and many others, you need to use new technologies such as sensors or big data analytics to gauge how customers may be interacting with your sales or customer service processes differently. Laser-focus on aspects of your best customers’ digital interactions and transpose them, either by demographic, region or sectors of your sales force, to drive outsized results for the business.
Innovation and R&D: Out with the Old, and In(novating) with the New

Whether you’re a bank, an insurer, a consumer goods manufacturer or a retailer, by 2020 the shelf space of the Internet will (still) remain unlimited – but your organization still has to make things or offer services that people want to buy. One of the surest routes to continued relevance runs through the R&D and innovation function. What will it take to sustain and accelerate digital-driven process success in the long term?

Following the Great Recession, many companies had no choice but to cut, trim and otherwise go as lean as possible in their staffing to do more with less. In the process, many companies trimmed so much fat, they cut to the bone and sacrificed innovation. But what happens when “cutting to the bone” won’t cut it anymore? This disease - i.e., a fixation on cost reduction - leads to the unintended consequence of sacrificing innovation and blinding companies to the need to invest in the future.

We interviewed senior executives responsible for the R&D and innovation function. While data security tops the list of hurdles for 29% of R&D, innovation and product development leaders, 21% of these respondents perceive a problem of “poor alignment between investment and business objectives,” as well as worries about short-sighted thinking and using digital for incremental improvements (to avoid big disruption). In the case of those driving change and innovation, they want to strike big wins for the business, and not simply conduct “skunkworks” science projects.

New digital options can help R&D, innovation and new product development processes become a force multiplier for the business. For example, crowdsourcing options such as Kaggle and inn360 are changing the game by making process dynamics easier by pulling in a much broader base of smart people. Inn360 uses a cloud-based innovation management platform, which taps the combined brainpower of internal R&D while fostering worldwide networks of innovators, researchers and trusted suppliers. In a similar vein, the Kaggle platform leverages crowdsourcing to achieve results through competitive innovation contests.

Chief Obstacles to Digital Process Transformation for R&D, Innovation and Product Development

Managers in charge of R&D, innovation and product development were asked about their top concerns regarding digital (percent of respondents who said “high” or “very high” concern).

![Figure 8](Image)  
Response base: 34 senior R&D, innovation and product development executives  
Source: Cognizant Center for the Future of Work
Making Work Processes Exciting and New

Innovation is defined simply as a “new idea, device or method.” However, it’s also about meeting new requirements and unarticulated needs. How can your organization take its many isolated processes, and recharge those efforts to create exciting and new offerings that benefit your company’s brand? Digitally changing those solutions – and driving new products and services around them – may not sound easy, but in a digital process world, it’s critical work ahead.

Here’s how to begin.

TODAY:

Think globally – act digitally.
Imagine if your R&D function could tap the best collaborators from all kinds of sectors around the globe. How would you approach things differently if you had the right tools to rally the best-and-brightest, regardless of location or payroll status, and deploy them onto your toughest innovation challenges?

TOMORROW:

Harness the collective brainpower that’s out there.
Inventory your “collective genius” of R&D skills and brainpower. Are these aligned with your current products and services? Make sure to identify both overlaps and gaps. Carefully scan what’s on the horizon from competitors and nimble upstarts – and use digital innovation platforms. Linking platforms to “talent clusters” drives innovation. Some companies are building proprietary platforms and joining with third parties in co-innovation initiatives around R&D and customer engagement.

ONE TO TWO YEARS:

Start playing – with other people, as well as technology!
Observing how humans react to new, innovative technology is the surest way to bring the power of digital to the business process. Create a lab as a “play-space” for innovative digital processes, collaboration and ongoing experimentation for new approaches and services that can be brought to new markets. Doing so can facilitate breakthrough thinking, and elevate decisions beyond the parochial silos of front-, middle- and back-office thinking.
IT is the Digital Prism
That Can See – and Change – Every Process

Let’s face it: Valid or not, the IT department has long been perceived as the poster-child of the back office. But with the warp speed of digital, like Mr. Scott in the engine room in Star Trek, IT is giving digital initiatives “everything they’ve got” for more sustained power. (Just don’t get caught on a strange planet wearing a red shirt accompanying the main characters on landing parties.)

Love it or loathe it, the IT function is the one department in your organization that can see horizontally across everything that’s happening, or needs to happen, within the business. If IT is a leader for change, it can help operational leaders see around corners, and be the digital prism to help grapple with the unknown “dark side of the moon” of new process technologies. Our data shows that information services and technology processes may be the real heroes in the digital process story so far (see Figure 9). (For more on the changing role of the digital CIO, see our report “Being Digital: How and Why CIOs Are Reinventing Themselves for a New Age.”)

Specifically, both senior executives and managers alike rated the IT function as the leading business process for positively affecting cost and revenue today, in the next 12 months and through 2018. A digitally-savvy IT department provides a gravitational effect for other functions (such as the extra revenue generation seen in Figure 3 for leaders in procurement, or even HR for that matter) to move, adapt and lead the way for real change.

Call it the “coming-of-age” after years-long pleas to better integrate IT into the business. With the power of new digital approaches, it appears that this time, it’s for real. Better, yet, it’s exerting a gravitational force for the good, catalyzing business process change in other departments. Whether you’re a senior executive or a midlevel manager, a key step is to promote the IT function as the “hero” – make them your champions of digital process initiatives.

The IT Department Is the Chief Driver of Digital Process Gains
Long thought of as being in “the back office,” IT is the leading process catalyst for the huge benefits of digital change – today, tomorrow and in the foreseeable future.
Like the astronauts who landed on the moon, the digital process rocket ride will require both star performer heroes and “ideas” people. Of equal necessity will be capable operators to successfully execute on those ideas, make things happen and remediate problems if something goes wrong. (Remember the slide-rule-using mission control engineers in Apollo 13?)

So, which skills aligned with business processes should businesses look for? The ability to analyze will be at a premium today, tomorrow and in the future - regardless of front-, middle- or back-office changes.
We asked executives who identified themselves as digital leaders about their opinions on what’s coming at them at warp speed as it pertains to skills they’ll need. As Figure 10 reveals, about 80% cite global, leadership and innovation skills as being more important today. As digital processes proliferate, and as leaders see the value they create, these skills endure at the top of these leaders’ requirements by 2020.

But those same leaders anticipate a 23% surge in the impact of analytical skills. The importance of analytics to process insight and meaning-making is immense. The reality is that today’s digital age—compared with last century’s industrial age—can be distinguished largely by the unprecedented ability to make business meaning from massive amounts of data.

We won’t all need to be analytical data jockeys. Leaders also foresee relatively dynamic growth for those with social media skills (if you’re a Twitter data wrangler, you’re in luck).

**Skills Senior Executives Need to Drive Process Leadership**

The vast majority of process leaders cite global, leadership and innovation skills as being more important today. The most dynamic growth in demand will be the surge seen in analytical skills.

Respondents were asked to rate the impact of digital on the importance of skills (percent growth in respondents who indicated “high” or “very high” importance in 2015 and 2020).
We’ve only just begun the journey to change the behind-the-scenes business processes that impact organizations, and their work, in ways that really matter. The dual benefits of cost reduction and revenue growth are clearly “good” and “really good” for organizations.

How will you respond? The key is to get going ... or accelerate the momentum of the journey you’re already on. First things first: To lift off the launch pad, leave your silos behind, process-by-process, and turn back-office costs into rocket fuel with BPaaS platforms and AI.

From there, find old, clunky processes, and set the table for software to “start eating” them. Leaders are already generating real results. If your organization hasn’t begun its business process modernization countdown, it’s in danger of falling further and further behind. 18

At the process level, if senior managers are bought into digital’s ability to change work and processes to drive revenue, middle managers will need to (quickly) adapt to the mindset change. If they don’t, initiatives that focus on efficiency may stall, which is at cross-purposes with the real imperative – driving topline revenue growth.

It’s up to you! Make the right stuff of process digitization happen now, or be prepared to deal with the consequences.

In short, senior executives need to continuously reinforce their role as change agents that “show the way” forward ... and sometimes, frankly, to act as “bringers of doom” to those who can’t change fast enough. As NASA Flight Director Gene Kranz stated, “It isn’t equipment that wins the battles; it is the quality and the determination of the people fighting for a cause in which they believe.” 19

Note: Code Halo™ is a registered trademark of Cognizant Technology Solutions.

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Methodology and Demographics

We conducted a worldwide survey between December 15, 2015, and January 28, 2016, with 2,000 senior executives across industries, and an additional 250 middle managers responsible for other employees. Of the 2,000 senior executives, 1,661 were non-CIOs or non-IT department leaders. Of these senior executives, 1,015 affiliated themselves with the process areas shown below. The executive survey was run in 18 countries in English, Arabic, French, German, Japanese and Chinese. We used telephone interviews for executives. The study was conducted with research and economic support from Roubini ThoughtLab, a leading independent macroeconomic research firm founded by renowned economist Nouriel Roubini.)

Function

- Marketing: 26%
- Operations and production: 22%
- Sales and customer service: 13%
- Management: 10%
- Strategy, planning and risk: 9%
- Human resources: 5%
- Finance: 5%
- Innovation/R&D: 3%
- Administration: 2%
- Sourcing, purchasing: 2%
- International/Regional: 1%
- Digital business: 1%
- Legal: 1%

Region

- North America: 40%
- Europe: 40%
- Asia Pacific: 15%
- Middle East: 5%

Industry

- Retail: 25%
- Financial Services: 17%
- Consumer Manufacturing: 13%
- Industrial Manufacturing: 12%
- Healthcare Payers: 9%
- Insurance: 8%
- Healthcare Providers: 8%
- Life Sciences: 8%
<table>
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<th>Footnotes</th>
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<tr>
<td>2 Lyric from David Bowie’s “Space Oddity,” released 1969 in the UK.</td>
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<td>3 In contrast, digital “laggards” are the least likely to be using digital technologies to transform their businesses, or use digital technologies to reduce costs and increase revenues.</td>
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<td>5 It is very important to note that these numbers are additive - businesses need to ensure they're driving digital change across all their processes.</td>
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<td>12 Ibid.</td>
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<td>16 For more on Code Halos, see our website, white paper and book at <a href="https://www.cognizant.com/code-halos">https://www.cognizant.com/code-halos</a>.</td>
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<tr>
<td>17 Since operational leaders are closest to front-, middle-, and back-office functional process areas, we did not include information services and technology leaders in this list.</td>
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Robert Hoyle Brown is an Associate Vice-President in Cognizant’s Center for the Future of Work and drives strategy and market outreach for Cognizant’s Business Process Services business unit. He is also a regular contributor to the blog www.Futureofwork.com. Prior to joining Cognizant, he was Managing Vice-President of the Business and Applications Services team at Gartner, and as a research analyst, he was a recognized subject matter expert in BPO, cloud services/BPaaS and HR services. He also held roles at Hewlett-Packard and G2 Research, a boutique outsourcing research firm in Silicon Valley. He holds a bachelor’s degree from the University of California at Berkeley and, prior to his graduation, attended the London School of Economics as a Hansard Scholar. He can be reached at Robert.H.Brown@cognizant.com.
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