Workforce Transformation in the Digital Vortex

Reimagining Work for Digital Business Agility

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GLOBAL CENTER FOR DIGITAL BUSINESS TRANSFORMATION
An IMD and Cisco Initiative

Key Insights

- In today's turbulent business climate, digital disruptors will **displace four in 10 incumbent companies over the next five years**, according to the Global Center for Digital Business Transformation (DBT Center), an IMD and Cisco initiative.

- In response, many companies focus their transformation efforts on IT and business processes, **too often neglecting people**.

- Changing customer expectations and accelerating disruption demand **digital business agility**—the capacity of an organization to understand and react to digital threats and opportunities. **The workforce is a critical component of digital business agility.**

- In a DBT Center survey of 941 executives, however, fewer than 10 percent considered their firms' workforce management to be excellent in three foundational capabilities for digital business agility:

  Hyperawareness—ability to sense what is going on throughout the enterprise, among its competitors, and in the marketplace.

  Informed decision-making—using data and analytics to empower the workforce, resulting in better decisions at every level of the organization.

  Fast execution—responding rapidly once they have made a decision.

- To support companies as they transform their workforces, we have identified six **"digital accelerators"** that blend analytics, mobility, and other technologies to empower people. Digital accelerators give voice to employees' insights; bring analytics to the point of decision, at all levels; and allocate talent from within the organization and beyond.

- **Companies with digital business agility in their workforces were three times more likely to characterize their financial performance as "better than average"** over the past five years.

Transform Technology *and* People—or Risk Disruption

In an age when technology seemingly reigns supreme, people remain a company's greatest asset. Workforce management, however, is among the most vexing challenges facing any organization. It also presents one of the greatest opportunities. When properly channeled, the collective knowledge and skill of a workforce can drive the next multibillion-dollar market. After all, disruptive technologies and business models are fueled not by algorithms, but by *people*—innovating, collaborating, and taking bold chances.[1]

Unfortunately, many firms with talented and committed employees still cling to a portfolio of uncompetitive offerings—and their transformation efforts focus on IT and business processes, while neglecting people. As a result, these firms fail to generate the value their customers demand.[2] In this paper, we will explore how companies can meet these demands by employing *digital business agility*—an organization's capacity to understand and react to digital threats and opportunities—to reimagine how their people work.

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In recent months, the Global Center for Digital Business Transformation (DBT Center), an IMD and Cisco initiative, has explored the challenges of competing in an ever-turbulent Digital Vortex in which business models, offerings, and value chains are digitized to the maximum extent possible. As innovative disruptors drive toward the center of the Vortex, they blur the lines between industries. Digital laggards are swept aside and risk being among the four in 10 companies that will be displaced by disruption in the next five years.[3]

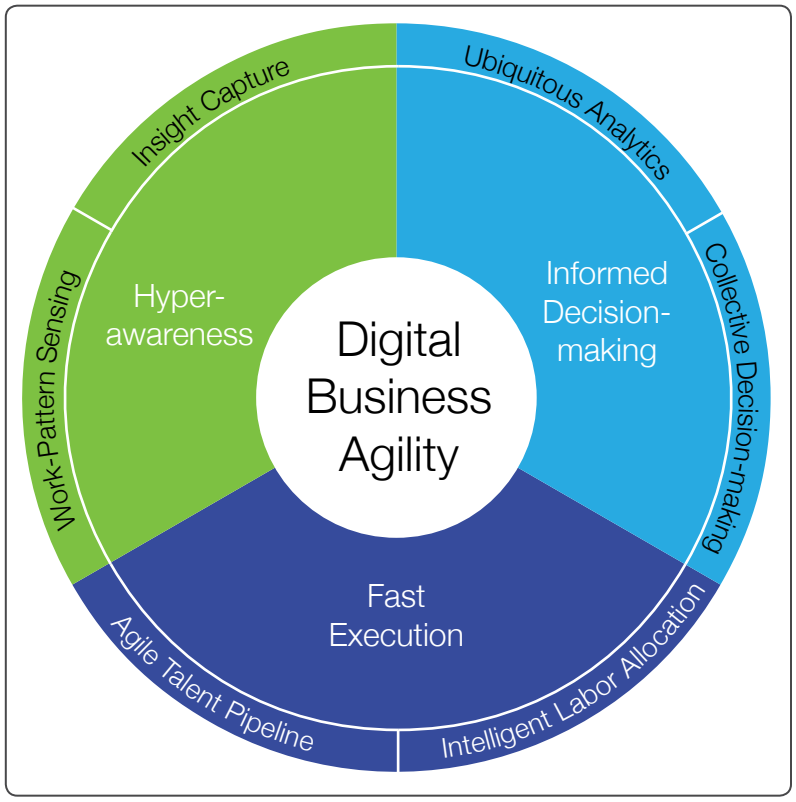
Our previous paper, "Disruptor and Disrupted: Strategy in the Digital Vortex," explained how companies must simultaneously battle digital disruptors attacking their core businesses while exploiting new revenue opportunities. To prevent a downward spiral of declining revenues, companies must learn to innovate better and faster. This is especially true for incumbents, who can be slowed by the very processes that made them successful in the first place. Incumbents don't have to be just like startups, however. They can combine their own newfound agility with their traditional strengths—including brand equity, access to capital, and large customer bases. In this way, they can position themselves for great success in the Digital Vortex.

This requires the three core capabilities of digital business agility: *hyper-awareness*, *informed decision-making*, and *fast execution*. These elements give organizations the power to anticipate what is coming next, and to act with skill, purpose, and swiftness. Above all, they empower people and transform the workforce to drive new levels of collaboration, innovation, and success for the whole company.

Build a Foundation for Digital Business Agility

Workforce management is a critical element of any digital transformation effort. Through our research and customer engagements (see "Our Methodology: Follow the Money and Ask the Experts," next page), the DBT Center has identified six specific "digital accelerators"—digital tools that apply to workforce management and support the capabilities of digital business agility. These combine people, business process change, and technology to give voice to employee insights; apply analytics at the point of decision; and identify and allocate talent to execute those decisions as efficiently as possible.

Figure 1
Digital accelerators in the employee domain



Source: Global Center for Digital Business Transformation, 2016

Each of the foundational capabilities that constitute digital business agility—hyper-awareness, informed decision-making, and fast execution—corresponds to two digital accelerators (see Figure 1). By implementing them, companies can take meaningful strides toward transforming their workforces to compete successfully in the Digital Vortex.

Hyperawareness is a company's ability to sense what is going on throughout the enterprise, among its competitors, and in the marketplace, and to recognize developments and patterns that will impact it. In the case of workforce management, hyperawareness has two key elements:

- *Collecting information about the internal and external business environment from the workforce.* This includes gleaning insights about what customers value from frontline sales associates or account managers; generating ideas for new products from engineers; or capturing frank assessments of corporate strategy

and executive decisions from the people who see their effects on a daily basis. To collect the information effectively from a workforce consisting of thousands (even tens of thousands) of employees and contractors, companies need a digital accelerator we call *insight capture*. These tools blend technologies to give employees a voice through business models that integrate what they say into their decision-making and execution.

- *Gaining greater visibility into employees' goals and activities while helping them meet their challenges safely and efficiently.* The digital accelerator we call *work-pattern sensing* gathers and analyzes data from sensors, business applications, collaborative tools, and other digital sources to understand patterns of how employees perform their work. It sheds light on the business processes that generate positive outcomes and should be spread throughout the organization.

Informed decision-making impacts big, strategic decisions that shape a company's future. It also improves the millions of smaller decisions that employees make every day. The digital accelerator we call *ubiquitous analytics* embeds analytics and informed decisions directly into the work process, giving both executives and employees the tools to make the best decisions in a given context and job role. In effect, every informed worker can become the voice of the brand.

Informed decision-making also ensures that employees with the right expertise, diverse backgrounds, and cognitive perspectives influence decisions. Companies that excel at bringing experts and diverse perspectives into the decision-making process are more successful innovators. The digital accelerator we call *collective decision-making* taps and connects the shared intelligence of the workforce while giving voice to diverse viewpoints and expertise.

Fast execution enables companies to respond rapidly once they have made a decision. This is especially critical in the Digital Vortex, where "value vampires" materialize seemingly from nowhere. These agile, innovative players drive "combinatorial disruption"—multiple sources of value that are fused to create new business models. This enables them to deliver superior value to the customer, reduce costs, and suck profit margins from the market.[4]

In the context of people management, companies can improve fast execution by ensuring they have people with the necessary skills, experience, and perspectives to execute decisions. Much of this talent may reside within the company, either in existing teams or scattered in different silos.

Our Methodology: Follow the Money and Ask the Experts

To identify the most important digital accelerators of workforce transformation, the DBT Center studied the business models of more than 75 disruptive startups. We conducted in-depth interviews with the founders and/or CEOs of 12 of the most innovative companies in the workforce management space to understand the value propositions of their companies, and how they believe digitization will transform the workforce.

We also conducted interviews with senior human resources practitioners (for example, chief human resources officers) and operational leaders at large global enterprises. This included companies from a range of industries (including retail, manufacturing, financial services) and geographies (North America, Europe, Latin America). The goal of these interviews was to understand the drivers and challenges of digitization, the benefits these companies hope to receive, and lessons learned in digital transformation of the workforce, particularly in large organizations.

To supplement the findings from the interviews, the DBT Center analyzed extensive market data, industry trends, and data from several of our primary research studies, including responses from more than 1000 global executives.

The creative synergy of teams is more important than ever for an organization's success, but many still look at workforce transformation through the lens of the individual. Getting teams right is critical to innovation, agility, and competition; and for employees, teamwork builds morale, retention, and productivity.[5]

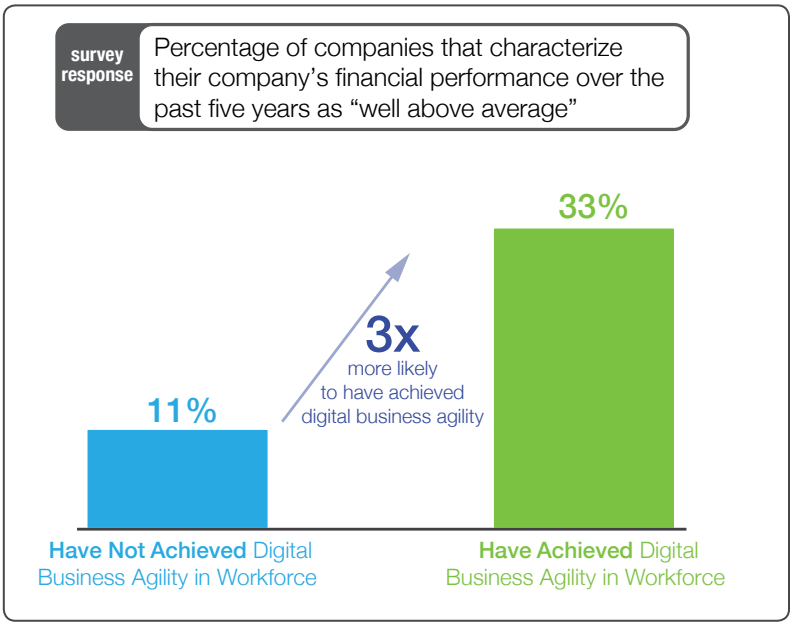
Intelligent talent allocation uses analytics tools and employee data to ensure that the right talent within the company is put to the most strategic use in teams. However, even the biggest and brightest companies will find that they have skills gaps. They need to identify and acquire talent quickly—determining which skills should be brought in-house, and which to access through partners. Either way, this demands *agile talent pipelines* to find the right people and integrate them quickly. Such tools employ a data-driven and algorithmic approach to find the best candidates without bias, and to ensure that every team is an "A team."

By implementing the digital accelerators mentioned above, and making the people, business process, and technology changes necessary to make them effective, companies significantly improve their people management and financial performance. In the DBT Center's survey of 941 executives around the world, we found that high levels of workforce digital business agility correlated with financial performance improvements over the past five years (see Figure 2).[6]

Despite the potential for performance gains associated with digital business agility, few organizations truly excel in this area.

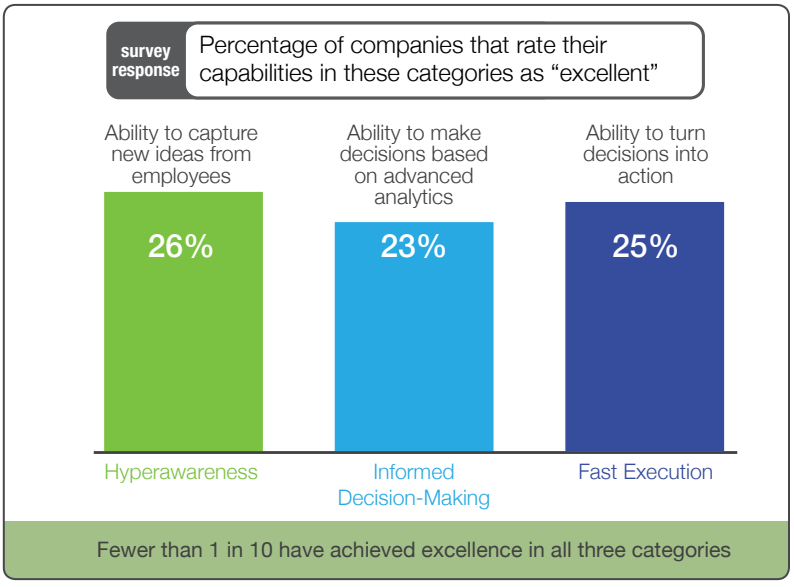
In the area of people, only one in four executives judged their firm's strength in any one digital-business-agility capability as "excellent." Fewer than 10 percent considered their firms excellent in all three capabilities (see Figure 3).

Figure 2
Workforce digital business agility drives financial performance



Source: Global Center for Digital Business Transformation, 2015
941 respondents

Figure 3
Few organizations excel in digital business agility



Source: Global Center for Digital Business Transformation, 2015
941 respondents

One might ask, "Is 'excellence' a realistic standard for companies?" The answer is an emphatic "yes"—despite the fact that in the Digital Vortex, with so much new value creation, digital disruption can signal extinction. To counter disruption and remain competitive, companies need to drive new forms of cost value, experience value, and platform value. These depend upon all three digital business agility capabilities operating in harmony.

The digital accelerators can also help companies address specific business problems, including improving employee retention and engagement, and avoiding bad decisions. Perhaps most important, they address a common question that we hear from executives every day: "Which concrete measures can I take to avoid becoming one of the four companies in 10 that will be displaced by digital disruption in the next five years?"

In this context, however, it is important to understand that "solutions are not the answer." Our discussion of these accelerators should not be interpreted as endorsements of specific applications or for taking a tactical "point-solution" approach to transformation. Transformation is more than a summation of digital solutions. While the baseline principles of transformation are important and well documented—for example, leading from the top down or focusing on change management—the goal of the DBT Center is to move to the next level. Failure to apply such principles is a good predictor of failure, but applying them without further digital transformation does little to create competitive differentiation. In the Digital Vortex, application of these maxims, while important, amounts to "table stakes."

Other transformation efforts are too grandiose, sapping organizational resources and enthusiasm for change. The sweet spot at which to concentrate transformation investments is through adopting use cases—that is, specific technology and organizational changes—that drive digital business agility and increase competitiveness. Accordingly, our initiative highlights actionable, cutting-edge accelerators (combining people, process, and technology) that deliver the digital business agility needed to fight disruptors and spur organizational renewal and growth.

"Changes driving the state of the workforce are only accelerating. I can imagine the divide getting wider and wider between companies that are managing change well versus the ones that aren't. The ones that aren't will not be able to attract or retain the best talent."

Michael Papay,
Co-founder and CEO, Waggl

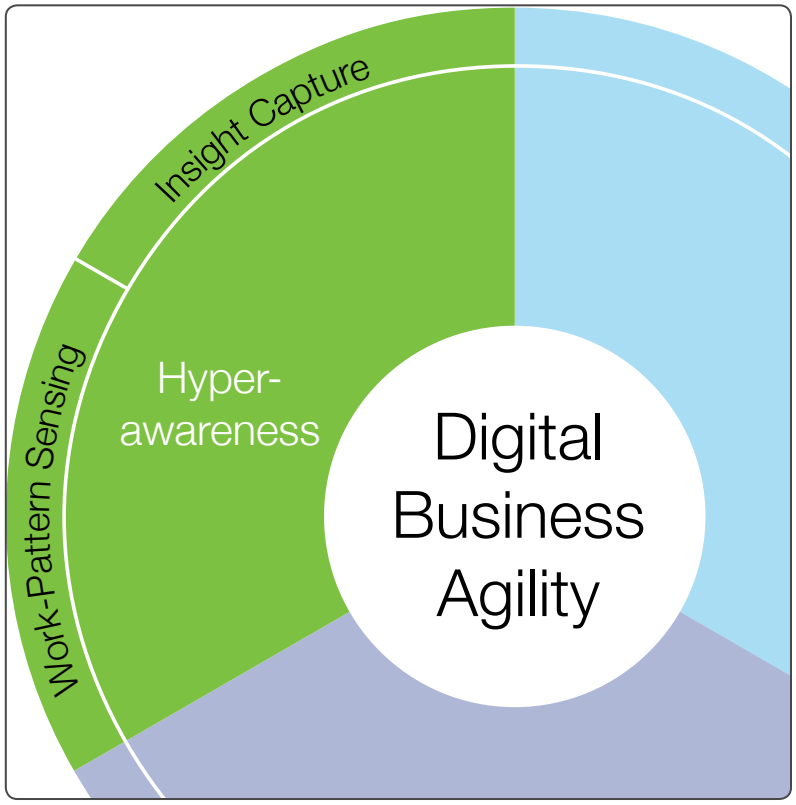
"A culture of innovation is about pursuing and implementing new ideas aggressively. It's about being ready for change. It's about connecting the right people and putting their heads together to solve problems. Ideas will flow from the process."

VP of Innovation
for a U.S.-based insurance provider

Open a Hyperaware Window into the Workforce

Collecting information about the things that matter is at the heart of hyperawareness. When it comes to the workforce, a company must be hyperaware *through* its employees. After all, they are the ones who are closest to customers and partners, and who execute the decisions made by executives. They also know what customers love and what they complain about. They know when a strategy is not working, and they respond with engagement and enthusiasm when they accomplish tasks that really matter. A company must also be hyperaware *about* its employees (including contractors). That means answering questions such as "What are they doing, and why?" and "Are they using their time, energy, and intelligence in activities that advance the company's goals and are personally fulfilling?"

Figure 4
Digital accelerators of hyperawareness



Source: Global Center for Digital Business Transformation, 2016

When companies are hyperaware through and about their people, they can mine a rich and extensive source of insights. Indeed, the very relationship between management and employees is changing. To retain talent and optimize productivity and innovation, managers need to know their employees better than ever before and, when possible, customize work experiences to optimize their talents. With hyperawareness in the workforce, executives will know what their people know, and when they know it, as they capture their insights, best ideas, and most important criticisms. Moreover, they will know what their people are doing, when they are doing it, and why. Companies that are oblivious to, or actively ignore, the thousands of "human sensors" on their payrolls will be hard-pressed to make informed decisions or execute quickly.

We will now further explore hyperawareness in the employee domain through two digital accelerators—*insight capture* and *work-pattern sensing*—that can create new forms of workforce intelligence.

Insight Capture: Get the Real Story, in Real Time

There are numerous challenges to creating hyperawareness in a company's workforce. In many firms, one-way communication from senior

leadership to the workforce is the norm. Even when companies are receptive to hearing from their employees, frontline staff, individual contributors, and even middle managers lack access to effective, real-time communications channels—especially those that are integrated into their daily workflows. As a result, companies underutilize their best early-detection mechanisms for spotting growth opportunities and fixing problems. These self-imposed blind spots also present an opportunity for hyperaware competitors to drive new disruption.

It is even more difficult for employees to deliver candid assessments or bad news. When bottom-up communications do occur, employees assume that managers welcome only information that reinforces the wisdom of their decisions. Many are hesitant to provide candid feedback to peers, managers, and executive leadership for fear of reprisal and the desire to protect their professional identities. The end result is that far from being hyperaware—getting the real story, in real time—most companies gather little information from their workforce. What they do receive is skewed by the fear that candor is a career-killer—despite the best intentions of some top executives.[7]

Some firms, however, excel at the digital accelerator we call insight capture. (For one example, see "Insight Capture In Fashion," this page.)

Companies employ a variety of technologies to capture insights from employees and analyze them rapidly to improve decision-making and employee engagement. DropThought and Glint use text analytics and natural language processing (NLP) to help companies analyze written feedback and comments from thousands of employees. This enables them to grasp employee sentiment quickly and identify the most important themes. Speech analytics is another innovative technology for capturing employee insights. This allows companies to gather conversations and verbal input, find common trends, and report them without labor-intensive collection and reporting. Speetra, a speech analytics company, offers a mobile app that enables employees to provide feedback by speaking rather than writing. Within five to 10 seconds, employees can express their thoughts and feedback.[11] Data visualization technologies make these trends easy to interpret. Finally, a number of analytics services leverage data and analysis to write succinct reports worthy of a journalist. With automation and analytics, "voice of the employee" can become a real-time sensing engine, instead of a "suggestion box" that is never checked.

These employee voices will become increasingly important in the Digital Vortex, where companies are forced to identify "value vacancies"—that

Insight Capture in Fashion

One company that excels at insight capture is the Spanish fashion retailer Zara, owned by Inditex. Insights from Zara sales associates and managers are critical to Zara's business model, which is based on sensing shifting fashion trends and delivering clothes that exemplify them before they become passé. Zara trains store managers and sales associates to elicit feedback from customers about what they like, dislike, and would purchase if it were available. They also communicate their own ideas about what will or won't sell. These insights are captured in Zara stores around the world, and reviewed by product designers at corporate headquarters. Zara's vertically integrated structure, in which manufacturing and supply chains are located in Europe for the fastest-moving product lines, gets products to stores in as little as 10 days.[8] Most important for Zara, the business model encourages customers to visit the stores to get the styles they want, because clothes are produced in limited quantities and stock turns over quickly.

For Zara, the quality and timeliness of employee insights help the company identify what will sell, with few misses. In fact, less than 1 percent of Zara's products fail—versus 10 percent for competitors—despite producing nearly 10 times more kinds of products per year.[9] Zara's store managers and employees are doing more than simply reporting what customers tell them. They are using their knowledge of fashion trends, their professional experience, and their ability to ask the right questions. At a time when most retailers are "de-skilling" frontline jobs and requiring less of their employees, Zara is counting on them to be the eyes and ears of the company, and paying more for those skills.

is, new revenue opportunities that can be addressed through digital means. As we have seen, compared with startups, some incumbents struggle to do this consistently. Innovation contests and "hackathons" can help incumbents unlock the entrepreneurial potential of their employees, who sometimes struggle to find expression in large, hierarchical organizations. However, frontline staff, individual contributors, and junior engineers often have the most valuable insights into what customers value, and which processes could be more efficient. Companies ignore these voices at their own peril.

Facebook has integrated employee-driven innovation into its operations through "hackathons," as described in the sidebar "Insight Capture with Hackathons," on the next page.

Innovation challenges and hackathons should continue to gain popularity as technology firms create platforms that make them easy to launch and manage. Examples include InnoCentive, Brightidea, and Spigit. Companies that adopt these tools must ensure that they have the right internal processes to manage competitions—along with support from top executives and junior managers to ensure that employees can devote sufficient time to innovation challenges. With such measures in place, any company can see its best ideas rise to the surface, instead of remaining trapped in hierarchies or "pocket-vetoed" by risk-averse departments.

A company's hyperawareness also improves when it has a diverse workforce. Employees from different backgrounds—geographic, educational, religious, ethnic, racial, and age-related—may interpret trends and solve problems in unique and complementary ways. They may also help the company see things through the eyes of its customer base, which in many cases is growing in diversity. We will explore the issue of diversity in more detail in our discussion of informed decision-making.

Companies may not welcome all ideas and feedback. Often, employees have strong opinions about their companies—ranging from strategic direction to the minutiae of policies and procedures—that are not shared by top management. However, differences of opinion between employees and executives, and even harsh criticism, can be healthy. Organizations must be hyperaware of disconnects between senior executives and the rest of the company, as well as between middle managers and their direct reports. They need to receive honest assessments from employees while there is still time to make changes. When weaknesses are uncovered by digital disruptors, investors, or regulators instead of by employees, the consequences can be far worse.

Insight Capture through Crowdsourcing

Cisco taps the ideas and passions of more than 70,000 employees globally through crowdsourcing innovation challenges. In 2014, it launched a companywide innovation challenge to identify large value vacancies related to the Internet of Things. The challenge was open to any employee across the company. In one week, hundreds of submissions arrived from individuals and teams. A high percentage of the team submissions crossed geographic boundaries and business units. In the end, six semifinalists were chosen to present their ideas to a panel of senior Cisco executives and subject-matter experts. Three ideas were then selected by Cisco for further development. Many of the submissions showed how Cisco could increase operational efficiency—and break down cross-functional silos—by making incremental process improvements. Cisco's innovation challenges have made the company more hyperaware, while improving employee engagement.

While it is preferable for executives to encourage—and accept—complete candor, this may not be a realistic goal due to the difficulty of transforming an organization's culture, and the natural aversion to receiving criticism. Making fundamental changes in a company's culture can be particularly challenging for organizations with large, geographically dispersed employee bases; those with histories of closed cultures; and those where layoffs or political infighting have eroded employee trust.

Anonymity can play an important role in reducing fear of retribution and promoting honest feedback. *Anonymous feedback mechanisms*[14] are vital for ensuring the flow of honest communications within companies. These online feedback tools enable employees to submit ideas and constructive criticism to senior executives, their managers, peers, or the entire company—and to do so securely. Many companies may be unnerved at the prospect of giving their employees a megaphone for voicing their ideas and concerns. However, there are a variety of ways companies can elicit honest feedback that maximizes positive impact without promoting antagonism.[15]

New anonymous feedback mechanisms are built with high ease of use, and in some cases use gamification to make feedback fun. One example is Officevibe, whose highly automated anonymous feedback platform allows companies to poll their employees weekly to capture their ideas and assess their satisfaction. The platform is simple to use and includes gamification, such as the "FaceGame" designed to help everyone in an office remember colleagues' faces and names, and the "PraiseGame," designed to make the process of providing peer feedback a positive and fun experience. Such features can encourage honest feedback while dulling the sharp edge of criticism that often leads to defensiveness. The company says that response rates for its surveys are more than three times higher than the industry average.[16]

One important characteristic of most of the emerging anonymous feedback mechanisms is that they allow for frequent or even real-time capture of feedback. Platforms such as Waggl, SpeakUp, and Culture Amp have built-in support for random or periodic (daily, weekly) employee polling and analytics capabilities. These enable HR practitioners and company leaders to distill insights quickly.

Some anonymous feedback mechanisms not only allow individual employees to submit feedback, but also to "up-vote" or "down-vote" anonymously the feedback given by their peers. This lets organizations tap into the collective sentiment of its employee base in a transparent

> "People want to like their company. That's actually hard for some company leaders to understand; they don't believe it. But people are essentially good—they just get frustrated when they don't have a voice."
>
> Ryan Janssen, CEO, Memo

Insight Capture with Hackathons

Every few months, Facebook employees have the freedom to create anything from a service improvement to a new business model in hackathon sessions ranging from 24 hours to several days. While Facebook executives acknowledge that 99 out of 100 ideas may not be worth pursuing, the ones that work have helped the social networking giant stay on top of evolving customer expectations. In 2015 alone, Facebook released several new features and apps thanks to hackathons.[12] Facebook also uses hackathons for recruitment and employee engagement. Talented programmers and even candidates for intern positions are attracted by the opportunity to create apps that could reach nearly a billion users.[13]

and efficient manner, and then determine whether an idea or criticism has broad support.

Anonymous feedback mechanisms can also provide an avenue for bringing contrary viewpoints or complaints about behavior to the surface. Sharing such information can be for the good of the company and its stakeholders, but many employees may fear embarrassment to others. Moreover, since being identified as a whistleblower can result in career stagnation or worse, employees need to know their identity will be protected. When they have protection, individuals can help their employers avoid failed product launches, expensive lawsuits, and loss of life. As MIT's Edgar Schein writes, "In airplane crashes and chemical industry accidents, in the infrequent but serious nuclear plant accidents, in the NASA Challenger and Columbia disasters, and in the British Petroleum gulf spill, a common finding is that lower-ranking employees had information that would have prevented or lessened the consequences of the accident, but either it was not passed up to higher levels, or it was ignored, or it was overridden."[20] Anonymous feedback mechanisms have the potential to prevent such devastating losses.

We are now seeing the migration of external anonymous feedback mechanisms into the enterprise itself. Memo is a free mobile app launched to enable users to post messages about their companies. Comments on the public message board are available for any user of the app to see, and company-specific message boards are viewable by anyone verified as a company employee. Memo verifies users using their LinkedIn profile, but deletes all personally identifiable information.[21] The company has launched an enterprise version of its platform for HR departments looking to bring this type of feedback in-house.

Work-Pattern Sensing: Generate Insights About How Workers Work

Hyperawareness reveals what employees do, in addition to what they know. Only by understanding how and with whom their employees work, which tools they use, and what they produce can a firm make the changes necessary to ensure that each employee is helping to accomplish an important collective goal. The growth in knowledge work[22] has made understanding how workers perform their jobs much more complex. Rather than physical labor that can be observed and measured directly, knowledge work—as well as its outputs—is often intangible. As a result, companies have little or no visibility into *how* their workers perform their jobs. It is therefore difficult for employers to uncover ways for employees to do their jobs more effectively and to drive

Insight Capture and Anonymity

Early in its history, Google recognized the importance of creating a culture of open communication. As part of his "20 percent time" for creative thinking,[17] Google employee Taliver Heath built an online platform called Dory[18] that allowed individual employees to submit questions at meetings anonymously. Other employees voted on these questions, and the ones that received the most responses rose to the top of the list in real time. Dory was quickly adopted for use during Google's weekly "all-hands" meetings so that the moderator could identify and address the most pressing issues on employees' minds. Dory is an example of an anonymous feedback tool addressing a key challenge to candor in an organization: the fear of speaking up about sensitive topics in front of a large group. This is supported by Cisco's research with more than 800 companies, which revealed that only 33 percent of employees feel comfortable sharing their ideas during company meetings.[19]

improved results for the organization. Indeed, management consultant, educator, and author Peter Drucker called knowledge work "grotesquely unproductive."[23]

The convergence of several digital technologies, including the Internet of Things, analytics, and collaboration platforms, is beginning to offer organizations the ability to sense work patterns in new ways. These technologies are shedding light on knowledge work through a digital accelerator we call *work-pattern sensing*. This analyzes data from sensors, business applications, collaboration tools, and other digital sources. The result is a clearer picture of how employees communicate and collaborate with one another, their physical movement patterns, and how they perform specific job tasks. Once these patterns are sensed and understood, organizations can take steps to drive measurable improvements in how their employees perform their jobs.

Cisco projects that by 2020, 50 billion objects will be connected to the Internet.[24] These billions of connected devices will enable the capture of data in previously unimaginable ways. By applying analytics to this data, companies can become aware of how employees collaborate and perform their work—for example, through means such as "smart" employee badges. Humanyze offers smart employee badges, each about the size of a deck of cards, which are embedded with four types of sensors—a Bluetooth sensor, an accelerometer, an infrared scanner, and two microphones. The badges capture 40 types of information, or about 4GB of data per day, allowing companies to identify patterns of work and communication in detail. For example, the badges can sense if two people are in conversation, as well as detailed dynamics of the conversation such as speaking time, interruption patterns, and tone. They can also track movement patterns, such as when employees "lean in" during conversations—a sign they are highly engaged in the discussion.

Data from the badges can be aggregated with other information sources, such as collaboration system data or performance data. It can then be analyzed and presented to both management and individuals via reporting dashboards. This innovative approach to work-pattern sensing has led to some interesting and impactful results. Bank of America has used the badges to understand the relationship between productivity and social engagement for its call-center employees. By making changes to the way it schedules teams (and even by rescheduling lunch breaks to encourage greater interaction), the bank increased productivity by 10 percent and reduced staff turnover by 70 percent.[25] Participating employees receive personalized feedback reports that provide details on their work and communication patterns, enabling them to

"There's a common misunderstanding that leadership needs to have all the answers. But they can't possibly have all the right answers; it's not realistic given the pace of change and the precision of expertise required. Communication, however, is the key to success: clearly, frequently, authentically, transparently communicating with employees and colleagues who can provide additional perspective and knowledge."

Michael Papay,
Co-founder and CEO, Waggl

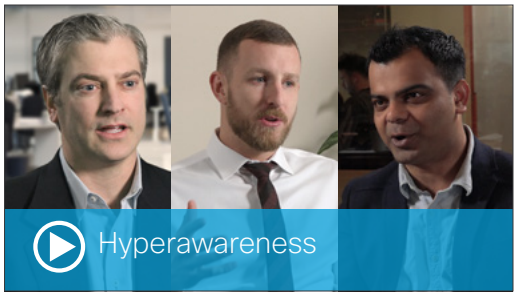
benchmark themselves anonymously (privacy is ensured throughout the process).

As the variety and power of sensors grow, and as the cost continues to decrease, we expect to see increased usage of work-pattern sensing. Manufacturers such as Steelcase are embedding sensors in office furniture and buildings to understand how workers interact.[26] Furniture maker Herman Miller and property management firm Jones Lang LaSalle (JLL) are experimenting with space-use sensors to understand how workers use conference rooms. This will help to optimize designs for the workplace of the future.[27]

Collaboration systems such as email, telepresence, and social platforms offer rich data that can be used to drive work-pattern sensing. VoloMetrix, an application provider, enables companies to analyze data from company communication systems to drive outcomes such as organizational simplification and employee productivity. For example, through data visualization, company leaders pinpoint which groups are communicating with one another, and how often. Employees can receive confidential weekly dashboards to understand how much time they spend on email and in meetings compared to their peers.

Companies using work-pattern sensing software have uncovered some surprising patterns of time-wasting activities. For example, Seagate Technology, one of the world's largest computer storage manufacturers, found that some of its groups were spending more than 20 hours a week in meetings, and wasting thousands of hours on unneeded emails. As a result, the company refined its collaboration practices.[28]

Work-pattern sensing has the potential to improve employee performance and engagement. However, leaders must consider some important issues. Understandably, privacy concerns were the greatest challenge to adoption cited by the entrepreneurs and senior executives we interviewed. Given legitimate concerns from employees, innovators in this space are experimenting with different approaches to address privacy.[29] Employers will need to be extremely clear with employees, and potentially with government regulators, about privacy protection measures when deploying work-pattern sensing capabilities.



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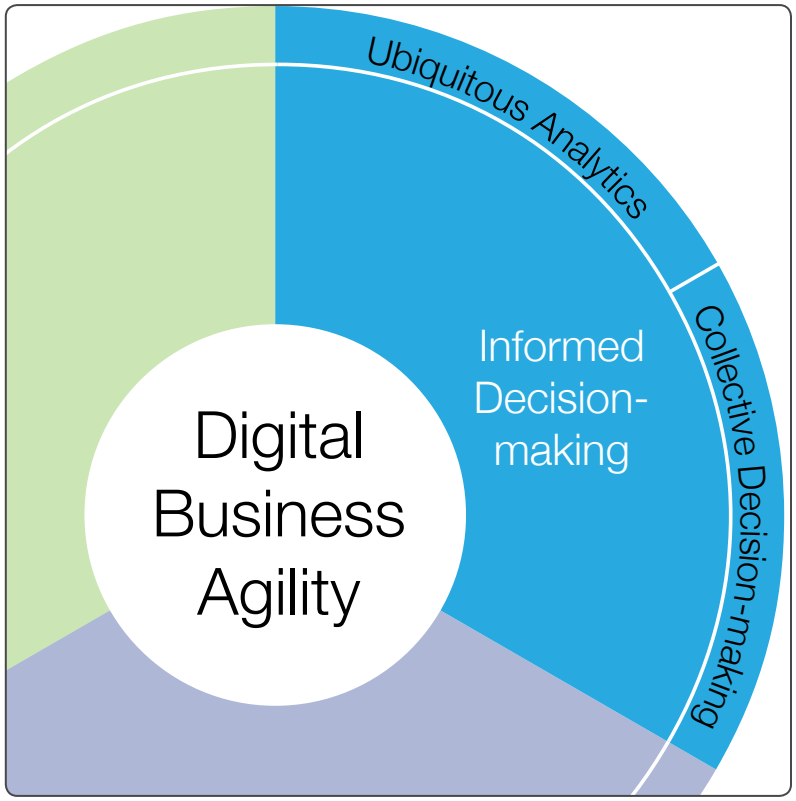
Unleash the Power of Informed Decisions

Hyperawareness is the first step on the journey to achieving digital business agility in the workforce. The next is to drive informed decision-making—taking information and data captured through hyperawareness and transforming it into insights and good decisions. In the Digital Vortex, these decisions come more frequently than ever before, with higher stakes attached to each one. As we saw in "Disruptor and Disrupted: Strategy in the Digital Vortex," senior executives must navigate a competitive environment in which rivals can emerge seemingly from nowhere, creating value for customers in new and compelling ways. As Google Executive Chairman Eric Schmidt said, "Someone, somewhere in a garage is gunning for us …. The next Google won't do what Google does, just as Google didn't do what AOL did."[30] Companies must use the information they receive from their employees, and all other sources, to make critical decisions that help them stay a step ahead of disruptors and traditional competitors alike.

Figure 5
Digital accelerators of informed decision-making



Source: Global Center for Digital Business Transformation, 2016

When they tap into the expertise and counsel of their workforces, senior executives can make informed decisions in which relevant knowledge, experience, quantitative data, and contrary views are considered. Unfortunately, companies tend to neglect the considerable expertise they have amassed—and paid for—because it is scattered throughout multiple departments or is too "junior" to participate in decision-making. The digital accelerator we call *collective decision-making* helps companies maximize the expertise and diverse views of its workforce to make better decisions.

While companies must get big, strategic decisions right, the millions of decisions their employees make every day are also essential for success. When employees have access to high-quality information tailored to their roles and requirements, they can do their jobs better. Most important, by giving every employee access to real-time information and analytics, companies can transform their business models. Armed with the right information, factory managers can switch from producing less-popular goods to those in high demand, based on real-time data. Sales

staff can offer profit-maximizing discounts or credit terms to a customer at the point of decision.

Ubiquitous Analytics: Analytics for All Drives 'Millions of Better Decisions'

The digital accelerator we call *ubiquitous analytics* can make "millions of better decisions" a reality. Sophisticated analytics and decision-making tools have proliferated in recent years, but they are often concentrated in the hands of two principal constituencies: senior executives and business analysts. As we have noted, frontline employees—those in the field, in customer-facing roles, and individual-contributor positions—are collectively making millions of individual decisions every day. A small number of specialized analysts crunching numbers from a massive company database can offer only so much insight, and have little impact on these decisions. The real value of analytics comes when every employee, irrespective of rank or location, is empowered with the best possible information to make decisions and perform his or her tasks.

This is not just important to increase the quality of decisions—it is also essential to developing a productive and engaged workforce. A 2015 study by the American Psychological Association found that senior leaders within U.S. companies reported having sufficient opportunities for involvement in decision-making more frequently than frontline employees (78 percent versus 48 percent). Not surprisingly, senior managers viewed their workplaces more positively than frontline employees—70 percent said they felt valued by their employers, compared to just 51 percent of frontline employees.[31] Employees who have little autonomy and feel that their opinions do not count tend to be disengaged[32]; this lack of engagement is costing companies between $450 billion and $550 billion per year in lost productivity in the United States alone.[33]

Most organizations believe that the average employee is not a candidate for using analytical tools. Perceptions regarding employee skill sets and attitudes usually inform such thinking. Analytics are, by definition, highly technical. As such, they are considered not suitable for a large percentage of the workforce or relevant to their jobs as benefits managers, contact-center agents, salespeople, facilities managers, and so forth. However, we are now seeing a wholesale paradigm shift in how analytics are used within the business. Individual contributors are beginning to use analytics tailored to their roles and integrated into their workflows. Complexity disappears when decision rules and contextual analytics are embedded in frontline applications.

Ubiquitous Analytics Eliminates Bias

In the area of talent acquisition (i.e., recruiting), companies have difficulty eliminating unconscious bias, which exists beyond people's awareness, but nonetheless affects their decision-making. Research studies have found that people tend to favor others who look like them, come from similar backgrounds (for example, schools or cultures), and have similar interests.[34] Unconscious bias is a barrier for organizations looking to build diverse workforces, which research shows are important in driving overall competitiveness.

When unconscious bias is taken out of decision-making, results can change dramatically. A Stanford University study found that the share of female musicians in orchestras has increased fivefold since the 1970s (from 5 percent to 25 percent), an increase helped by having musicians audition behind screens.[35]

Ubiquitous analytics is emerging as one solution for eliminating unconscious bias in people management. Unitive, a software company, created a digital platform that embeds analytics, based on psychological studies, directly into a company's hiring workflow to make informed decision-making an integral part of the business process. For example, the software's resume-review function first assesses which characteristics a hiring company seeks in potential candidates. Only then does it present recruiters with objective information about candidates, separating out nonrelevant information, such as the candidate's name, educational background, and hobbies, all factors that can drive unconscious bias.[36] This analytics-driven approach is in contrast to the usual process of scanning resumes and attributes all at once before making subjective decisions about suitability. By embedding analytics and an informed decision-making process directly into the hiring workflow, the software eliminates any opportunity for unconscious bias before it can occur.

Several technologies are converging to allow the insertion of analytics at the "point of work" to improve performance. Sensors and data-capture technologies collected via work-pattern sensing (see p. 11) can be analyzed to optimize a range of work decisions—from tactical decisions, such as which box to pick within a warehouse, to the highest-level strategic decisions. Cloud platforms and wireless connectivity make this data, the algorithms, and the resulting outputs available anytime, anywhere. Finally, augmented-reality capabilities, such as augmented visual display technology, enable workers to access detailed information to do their jobs more effectively without disrupting the work process. After all, analytics are not just for analysts. Such intuitive data visualization brings critical insights to those who may need them most, at the point of work.

In a previous paper, "Disruptor and Disrupted: Strategy in the Digital Vortex," we described the pilot project by the global logistics firm DHL to equip warehouse staff with head-mounted, augmented-reality displays. In their field of vision, workers had direct access to accurate and optimized information about aisles, product location, and quantity of product to be picked, resulting in a 25 percent productivity improvement. This is an example of "ubiquitous analytics"—embedding analytics and informed decisions directly into the work process, while freeing employees from decisions that can be made more effectively by automation and algorithms. As a result, employees spend more time on other aspects of the job, including those they may find more rewarding. DHL's approach is being explored across many other organizational functions.

Ubiquitous analytics applies to a broad range of industries and business processes. These processes could be based in an office setting, but typically reside in factories, hospitals, research labs, or even vehicles. Therefore, organizations should make ubiquitous analytics accessible through tablets, mobile devices, kiosks, and other digital channels available at the point of work.

Ubiquitous analytics is also emerging in jobs that involve person-to-person interactions. Cogito, a company that originated at the Massachusetts Institute of Technology, has developed voice analytics software for call centers. The software analyzes the voice patterns of both the customer and call-center agent in real time as they converse. Based on unique characteristics of speech, such as speed of talking, pauses, interruption patterns, and vocal tone, the software can determine the emotional state of the caller, including whether he or she is annoyed or confused. The software analyzes the speech patterns of call-center agents to inform them if they are communicating effectively or displaying

Ubiquitous Analytics Drives Faster Deliveries

United Parcel Service (UPS), the world's largest package delivery service, is deploying a computer platform called Orion, which it has spent a decade and hundreds of millions of dollars building in-house. Orion extends ubiquitous analytics into the field, enabling employees to access analytics at the point of work, while supporting informed decisions that benefit workers, customers, and the company.

There are 55,000 UPS routes in the United States, and each driver makes an average of 120 stops per day. As the percentage of deliveries generated by e-commerce sales has risen, so has the complexity of routes. Drivers and planners face the task of trying to optimize delivery routes based on a host of factors, including roadwork, traffic, special-delivery requirements, and package volume. This has been further complicated by the rapid growth in UPS's "My Choice" self-service platform. Currently with 13 million users, this service allows customers to change the time or location of their deliveries.

When they begin their shifts, UPS drivers use their tablets to access routes suggested by Orion. To determine a route, Orion computes hundreds or thousands of route alternatives and makes adjustments as new factors (such as special-request delivery times) arise. Orion also accounts for the behavioral preferences of drivers and customers, including predictable driving routes and delivery windows. To date, Orion is used on more than 40 percent of UPS's routes, reducing distances by an average of seven to eight miles per trip. UPS CEO David Abney said that by 2017, Orion could save the company $300 million to $400 million per year.[37]

empathy and confidence. Call-center agents are provided with an on-screen visual guide that displays real-time recommendations. This enables them to dynamically adapt their style of speaking to improve customer satisfaction or close a sale.

One large healthcare insurance provider has piloted Cogito's software to analyze the interactions of 300,000 members who used the company's call center. The software identified conversational patterns that were making it less likely for members to sign up for new services, allowing the agents to adjust their speaking styles in real time. As a result, customer enrollments increased by 4 percent, generating millions of dollars in additional profits.[38]

The use of real-time speech analytics to improve call-center agents' conversational approach *during* calls is a great example of embedding analytics directly into a workflow to enable informed decision-making. It also reveals how ubiquitous analytics can enable entirely new capabilities that would not be possible otherwise.

Collective Decision-Making: Empowerment from Diverse Voices

As we have seen in our discussion of hyperawareness, the starting point for innovation is the ability to tap into the expertise and best ideas of the workforce. Since every worker brings a unique blend of education, experience, and skill set, diversity is essential in spotting trends and suggesting solutions to problems. Diversity—whether through gender, race, religion, culture, age, and so forth—is equally important for informed decision-making. A diverse workforce possesses tremendous latent value. However, unless these individuals are brought together in an environment in which they can efficiently share ideas and perspectives to drive informed decision-making, that value will remain unrealized.

Collective decision-making—using the shared intelligence that emerges from the collaboration and collective efforts of the workforce[39]—can ensure that diverse viewpoints and relevant expertise are considered when decisions are made. Collective decision-making does not require consensus or that executives cede control over decision-making by yielding to the "crowd." However, companies that ensure consideration of diverse viewpoints are less likely to suffer from mistakes caused by myopia or the "gut instincts" of powerful executives. Emerging digital technologies and business models enable employees to work together to drive collective decision-making.

Corporate silos are the nemesis of collective decision-making.[41] A recent study analyzed more than 100 million emails and 60 million calendar entries over a three-month period from a company with 100,000

Ubiquitous Analytics on the Plant Floor

Los Angeles-based startup DAQRI is bringing ubiquitous analytics to industrial environments, such as manufacturing plant floors and oil rigs. The company has developed a "smart helmet" and the software to support it. The smart helmet features an augmented-reality display and integrates thermal imaging, head tracking, motion sensing, and pattern-recognition technologies. Workers using the helmet perform their jobs with analytics-driven information overlaid on their field of vision.

In one pilot, DAQRI partnered with Kazakhstan Seamless Pipe (KSP Steel), outfitting workers in a pipe-production line with smart helmets to test a "decentralized control room" model of operation.[40] The production line can produce 110 tons of pipe per hour, and generates more than 23,000 data points, ranging from production data to safety parameters. Normally, plant workers would need to access this data in a control room, necessitating trips between the control room and plant floor. Using the smart helmets, plant workers access this critical data on the plant floor, reducing unneeded trips and interruptions. According to DAQRI, the pilot delivered a 40 percent increase in worker productivity. In addition, in a hazardous environment, such as a steel plant, safety is improved when workers access information with fewer distractions.

employees.[42] Two people who were in the same business unit, function, and office interacted *1000 times more frequently* than two people who were in otherwise similar roles, but in different business units, functions, and offices. They also found that communication silos were caused by hierarchy, and that interactions across pay grades were almost nonexistent.[43]

Collective decision-making enables companies to accomplish three goals of informed decision-making:

- Enables organizations to involve the right mix of employees in the decision-making and problem-solving process.
- Provides the environment for these employees to share their ideas and perspectives efficiently and effectively.
- Offers the means to make informed decisions based on the diverse perspectives and collective "mental toolbox" of the group.

Collective decision-making depends on enabling workers to identify the right group to accomplish a task or make a decision. Today, most workers find one another through casual relationships, from referrals, or less frequently by searching employee directories that advertise areas of expertise or interest. In the future, we expect to see the emergence of tools that enable workers to identify the best people based on algorithms. Software will match individuals and assemble teams based on a spectrum of relevant characteristics that optimize diversity, experience, skill set, location, and many other factors to maximize the chances of project success.

Once members of the group have been identified, leading companies are deploying new collaboration platforms that enable a seamless flow of ideas from all contributors. The technologies primarily used to collaborate today, such as email, are often aligned to the traditional organizational structure, communication dynamics, and decision-making processes. As such, they are ill-suited to creating digital business agility.

These new collaboration platforms, such as Cisco Spark and Slack, replace email communications with room-based chat that integrates document sharing, video calling, and other capabilities. Individuals create rooms or collaboration spaces where they can communicate via text, voice, or video; post searchable content; and maintain historical communications. This new approach unlocks institutional knowledge from individual email inboxes and hard drives, and makes communications and deliverables available to all team members. It also bypasses traditional chains of communication and reporting, providing greater

> "People want meaning in their lives and they want meaning in their work. That's what all this transformation is about. It's about empowering your people to make the decisions that matter. Our belief is that an organization that creates a more engaged workforce is going to make better decisions, and do better executing on decisions."
>
> Ryan Janssen, CEO, Memo

transparency and promoting assessment of contributions based on merit. Team participants have direct access to the contributions of other members—there is no need for "filtering" results to senior management. Finally, these tools scale the number of people working on a collaborative team by integrating synchronous and asynchronous communications. New members can join and come up to speed quickly.

In addition to Spark, Cisco offers Collaborative Knowledge, a cloud-based "digital workplace" solution that enables real-time access to experts, learning, and knowledge, anywhere in the organization. It combines collaboration tools, social networks, visual knowledge mapping, and analytics for an end-to-end platform solution.

A final, crucial step in collective decision-making is capturing shared wisdom and using it to drive informed decisions. New tools promise to bring order and inclusion to the decision-making process. One example is Ranktab, a visual, collaborative decision-making platform for the web and mobile devices that uses proprietary algorithms to enable groups to drive collective decision-making through multicriteria voting. The tool helps users understand the evaluation of different options by others in the group, to discuss decisions, and to view consensus decisions in a graphical format.[44] Organizations use the platform to make hiring decisions, expedite the approval of leasing applications, and identify the most promising startups for venture funding.

In interviews about ubiquitous analytics and collective decision-making, some entrepreneurs and executives noted that is it is very difficult to change existing decision-making processes, especially within established companies. To drive change most effectively, they suggested embedding new accelerators directly within existing workflows to avoid the "yet another new tool" objection.

Our experts noted that companies are facing information overload as the volume and diversity of data mount. In addition, companies face a proliferation of workforce-related data, owing to new sources such as collaboration data, wellness monitoring, and sensors in office furniture. For unstructured data in particular, user-friendly analysis techniques are sorely lacking. Therefore, when deploying ubiquitous analytics and collective decision-making accelerators, it is important to have the end results in mind. Leaders should think about the business outcomes they want to achieve in a given function or area, develop an in-depth understanding of the process involved, and then work backwards to identify the data sources and analytics techniques required to enable these outcomes.

For more insights, please visit
http://cs.co/WorkforceInformed

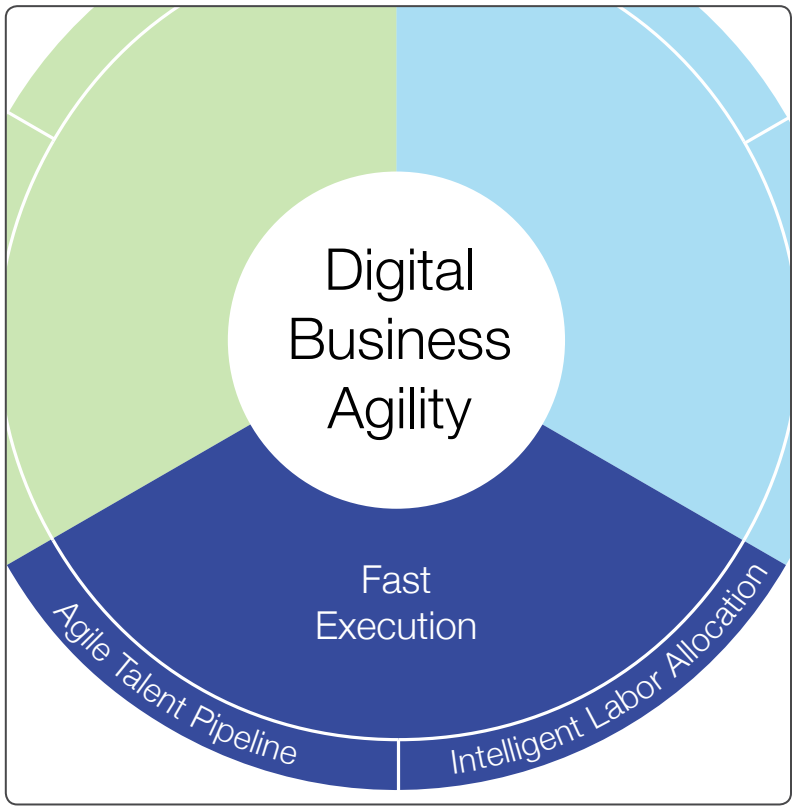
"If you have the right people around the table with the right expertise from a variety of backgrounds, if you ask the right question and you can help facilitate that, there's no question that something good is going to come out of that discussion. Figure out how to do that virtually, whether it's around the planet or around the country, with the most expert employees."

Jeff Watts,
Former Head of Global Innovation,
Property & Casualty, AIG

Find the Right Talent to Execute *Fast*

The scenario depicted in the sidebar "To Drive Fast Execution, Start with the Right Questions" (next page), shows the challenges facing companies in driving fast execution. Within most companies, the ability to optimize talent allocation and form ideal teams is poor. There is a strong need for new tools that enable employees across the organization to come together based on the best combination of skill sets, experience, perspectives, and other factors. Large companies face the daunting task of determining which employees across multiple departments and geographies possess the right capabilities to develop digital offerings and business models. These employees could be "buried" in organizations that do not appreciate their value, or understand how their knowledge could be applied more effectively. In talent acquisition, a focus on headcount, rather than a richer view of candidates' capabilities, has led to companies being inundated with resumes, most of which do not fit their requirements. In addition, the process of sourcing talent from vendors and independent contractors is cumbersome, requiring preferred vendor status, purchase orders, and approvals.

Figure 6
Digital accelerators of fast execution



Source: Global Center for Digital Business Transformation, 2016

Thankfully, the growing power of analytics, readily available data about candidates inside and outside the company, and pervasive connectivity are helping companies address these challenges. Next, we will describe how companies are using intelligent talent allocation to ensure that employees with essential capabilities are placed in the right teams and roles. Agile talent pipeline enables organizations to acquire people with the needed talents and capabilities from outside the organization, and to do so with the speed and efficiency that come with digital agility.

Intelligent Talent Allocation: Make Every Team an 'A Team'

While talent acquisition is essential for meeting the challenges of digital disruption, companies should first determine whether current employees have the capabilities most critical to success. In short, companies need a way of conducting "talent audits" that find the right employees

> "We believe that we can use technology to create deeper interpersonal relationships, mentor-like relationships for women and under-represented groups inside the enterprise, and to assist with retention, promotion, and inclusion."
>
> Eileen Carey,
> Co-founder and CEO, Glassbreakers

To Drive Fast Execution, Start with the Right Questions

In a previous paper, "Digital Business Transformation: A Conceptual Framework," we defined fast execution as a response capability that converts informed decisions into action. Once decisions have been made, the workforce must act at speed. In the area of people management, fast execution requires getting people with the right skills into the right teams and roles as quickly as possible. The following scenario is becoming more common as established companies acknowledge the imperative to find new sources of revenue as their core businesses are disrupted:

In their interactions with customers, a manufacturer's frontline employees identify a promising value vacancy[45]—a market opportunity that can be profitably exploited by digital disruption. The firm's hyperawareness capabilities bring this opportunity to the attention of senior executives. Thanks to its informed decision-making capability, senior executives assemble a cross-functional team of experts to size the market opportunity and assess the company's ability to adapt its business model to take advantage. The firm decides to fill the value vacancy by creating a new offering that requires an "x-as-a-service" model. This is a stark departure from its product-oriented value chain, where much of its traditional expertise resides. However, senior executives know they must execute this strategy quickly, because in the Digital Vortex, hyperaware competitors operate in near-real time.

In such a scenario, success depends on fast execution in people management. Senior executives need to ask the following questions:

- Which capabilities (including experience, technical knowledge, skills) do we need to execute this strategy?
- Which managers and employees within the company have these capabilities? Where are they, and can we move them into new groups?
- Which capability gaps do we have, and how critical are they to fill?
- If we must go outside the company for the people we need, what is the best way to identify and acquire them?
- How do we blend direct hires, vendors, and contractors to ensure that we get the people we most need, without investing too much in short-term requirements?

within the company. Employees with the right skills can then connect with teams and roles that present an opportunity for them to maximize their potential. *Intelligent talent allocation* can help companies do both.

Current talent allocation mechanisms within firms often do not make effective use of the data available to identify each employee's skill set, or recommend where in the organization an employee can be most successful. With so many talent allocation decisions being made in an uninformed manner, internal talent is underutilized, and teams are poorly constructed. As a result, companies can't execute fast enough. One executive with whom we spoke stressed that in many companies, the challenge is "not a skills gap, but a talent allocation gap."

"As an HR manager you should be asking yourself, 'Am I making it easy to be a candidate, to find our company, to know what types of opportunities that we have, and to apply?'"

Kristin Ruff,
VP Human Resources, iFLY

The rising importance of teaming presents a huge opportunity to use intelligent talent allocation to drive value within organizations. The ability to allocate talent effectively, especially within teams, is viewed by many experts as critical to success in an era of digital disruption. When its employees are placed on teams that allow them to utilize their strengths, in parts of the organization where they can focus on creating new offerings and business models, a firm can execute its digital disruption strategies more effectively. Cisco's Team Space, for example, uses an intuitive platform to gather intelligence on the strengths, talents, and passions of employees. Leaders can use this information to build the best teams, featuring members who are engaged and well suited to the challenges at hand.

The increasing power of artificial intelligence and analytics tools, combined with the widespread availability of employee data, can transform how talent is allocated. Workforce innovators are beginning to incorporate advanced analytics into their offerings to make talent allocation more intelligent and efficient. Visier, a provider of workforce management software, has launched what it calls "interactive talent flow visualization," which allows companies to obtain a real-time analysis of how employees have progressed in their careers and roles in order to improve talent allocation.[46]

Firms face two problems when they underutilize their most valuable employees: they get less value from them, and those employees are more likely to quit.[47] Companies can leverage internal HR data and external data sources to identify employees at risk of attrition, find more fulfilling roles for them, and place them on teams with others who will complement their skills. Using technology originally developed for the Netflix movie recommendation engine, Workday is a platform that uses HR and market information to identify workers likely to quit. The platform can offer prescriptive recommendations for job role changes that are best suited to the employee.[48]

Agile Talent Pipeline: Skilled Collaborators, Anywhere, Anytime

When a company knows the capabilities it needs but cannot find them among current employees, it must recruit people from outside its walls. Many will be hired directly, as traditional employees. Others will be sourced from a growing set of firms that aggregate valuable talent, either as individual contractors, or through crowdsourcing models, on a project-by-project basis.

Thanks to the digital accelerator we call *agile talent pipeline*, companies can assemble their teams with much greater speed and precision. They

> "For the companies of the future, their success will be defined by how well they can extract the best thinking from their teams, and how well they can turn that intelligence into actual work, into product changes, process changes, customer enhancements, and everything in between."
>
> Ray Gillenwater,
> Co-founder and CEO, SpeakUp

can also identify the human resources in which they want to invest long-term, and the ones they want to access without committing to a traditional hire. Human resources are seeing an evolution similar to cloud computing and other on-demand services. Companies can now decide which capabilities should be identified from within the organization and which should be accessed from the "talent cloud."

Agile talent pipeline enables organizations to bring in people with the diverse capabilities and perspectives needed in a rapidly changing environment. Constructing an agile talent pipeline involves developing mechanisms to access the right sources of talent, and to attract candidates with the right skills. These foundational steps in the recruiting process have been present for decades. What is changing is the agility required to navigate these steps in the digital era.

This agility is especially important when companies are looking for employees with capabilities that are in short supply. For example, there is an intensified competition for software developers and data scientists. According to the Boston Consulting Group, demand for software developers is expected to increase more than sixfold through 2022.[49] Recruiters are finding that traditional means of accessing talent no longer function in a market with such talent scarcity. Indeed, when a "value vacancy" appears, companies must act fast—or miss an opportunity. Immediate access to the right skills is critical.

In the Digital Vortex, the skills companies need are increasingly specific, yet the traditional means of advertising job openings attract many unqualified applicants. Recently, Procter & Gamble received nearly 1 million applications for 2000 positions.[50] Largely in response to résumé overload, more companies are shifting to data and analytics in their searches for candidates. This new approach has been aided by the wealth of data now available about candidates. In addition to traditional resume data, employers now can access a range of publicly available social data through sites such as LinkedIn and Facebook. However, it is not only the amount of data that has changed. Algorithms that identify the most promising candidates are advancing rapidly and multiplying the dimensions by which employers can target and select candidates. Startups such as Entelo and TalentBin offer platforms that search databases of millions of candidates based on data crawled from social sites such as LinkedIn, Quora, and GitHub. Beyond simply identifying candidates, such services use predictive analytics to filter talent by gender, ethnicity, or military experience. This data-driven approach identifies the best candidates and maximizes chances of job acceptance.

Agile Talent Pipeline in Action

A number of digital platforms have emerged to help companies access valuable talent pools. Drafted, a Boston-based startup, offers a mobile service that enables companies to offer a monetary reward or bounty (as high as $15,000) to users who "draft" or refer their friends for job openings. As of December 2015, $859,000 in rewards were available for positions across 74 startups. Drafted takes a different approach to the talent pipeline by relying on candidates' social networks and peer referrals. It is also a mobile platform, which makes sense for the technology-savvy candidates it is looking to attract. Other startups, such as Glassbreakers, Jopwell and WayUp, are building marketplaces focused on specific communities (women, minorities, and students, respectively) to enable employers to access a diverse pipeline of talent using new digital platforms.

Agile talent pipelines must also integrate with the increasingly powerful external talent platforms that are emerging for all types of work. These online platforms are set to transform the nature of the employer-employee relationship. According to a study by McKinsey, by 2025, up to 540 million people could benefit from online talent platforms through finding jobs, becoming more fully employed, or landing jobs that more closely match their skills.[51] Kaggle, Upwork, and HourlyNerd are platforms that enable companies to tap highly skilled talent on demand.

Once firms have created their shortlists, they face the most critical step: making the final selection. We described above how the ubiquitous analytics accelerator is being used in tools such as Unitive to eliminate unconscious bias in hiring. Digital tools are also driving fundamental changes in how candidates are tested, auditioned, and assessed. For example, companies such as GapJumpers, HackerRank, and HireVue offer platforms that enable companies to present coding challenges to candidates so that they can demonstrate their software development skills.[52] These digital tools enable employers to assess skills and capabilities directly rather than relying on the information presented in a candidate's resume. Digital testing platforms have been shown to demonstrate hiring success, sometimes exceeding that of human-originated decisions. A recent study by the National Bureau of Economic Research of 300,000 hires at 15 companies found that job testing improved job tenure by 15 percent; human intervention to override test findings significantly worsened results. In addition, there was no difference between test-driven and human-driven hiring in terms of job performance.[53]

An agile talent pipeline is essential for success in the turbulence of the Digital Vortex. To support digital business agility, organizations must engage the right resources at the right time for the right roles. As conditions change, the company must alter strategies or go-to-market models as it introduces new offerings to fight off disruptors or capitalize on value vacancies. In such a fast-paced environment, the ability to activate talent quickly is paramount.

For more insights, please visit
http://cs.co/WorkforceFast

"Most employees have skills that transfer across many different areas, but they're only known for the skills for which they were hired. A new understanding of an employee's value in the organization, how to allocate them to best leverage that value to the organization, is on the horizon."

Belinda Rodman,
VP of Global Services, SOASTA

Your People: Thriving in the Digital Vortex

As technologies and companies become increasingly digitized, they will continue to be pulled to the center of the Digital Vortex, where change accelerates exponentially. As we have seen, the DBT Center's research reveals that in three years, the competitive landscape for most companies will look nothing like it does today. By contrast, companies that possess strong digital business agility—especially in regard to their workforces—uncover opportunities and are rarely taken by surprise.

As discussed previously, companies that attained greater digital business agility in their workforces over the past five years were three times more likely to call their financial performance "better than average."

That makes digital business agility in workforce transformation critical for all companies—but especially for established ones. People are the biggest cost, and potential asset, for big companies, many of which have thousands of employees with varied skills, experience, and perspectives. People can be a differentiator for established companies—*if* those firms make the most of their talents. Many of the digital accelerators we have discussed are in their early stages. They present a significant opportunity to beat competitors, even startups, by attaining higher levels of digital business agility—and doing it in a critical function in which other companies struggle.

As we have seen, incumbents have their own strengths in brand recognition, access to capital, and customer bases. By compounding these areas of traditional strength with increased agility, incumbents have an opportunity to outperform many startups.

To do so, however, organizations must assess their strengths and weaknesses in workforce transformation, and then decide which digital accelerators meet their own individual needs. There are exciting new possibilities for supporting workforce transformation.

After all, no matter how smart technology gets, it won't replace humans. The real goal is for digital tools to take over more and more of the manual, tedious processes—and free us for what we do best: creative and intuitive thinking.

Workforce transformation can be daunting. Culture and technology change are rarely easy. Both require consistent leadership and buy-in from the C-suite and board of directors. The payoff, however, is clear—an organization that unleashes the full power of insights, ideas, and actions from its people.

"For a culture to be the strongest it can be, for an organization to transform to the culture that it wants to be, the transformation can't feel like an HR initiative. It needs to be a leadership commitment. You want every employee to feel like they have a voice. You also want the whole company to be celebrating the process."

Greg Besner,
Founder & CEO, CultureIQ

1. This is supported by Cisco's private sector Digital Value at Stake research, which projects that people-centric connections will drive 64 percent of future value (2015-2024), while machine-to-machine connections will create 36 percent. "Where To Begin Your Journey to Digital Value in the Private Sector," Cisco, January 2016
2. "Value" refers to cost value (savings), experience value (superior customer experience), and platform value (greater connectivity via "network effects"), as discussed in "Defining the Digital Vortex," Global Center for Digital Business Transformation, December 2015
3. "Digital Vortex: How Digital Disruption Is Redefining Industries," Global Center for Digital Business Transformation, June 2015
4. "Competing in the Digital Vortex: Value Vampires and Value Vacancies," Global Center for Digital Business Transformation, November 2015

5. "Why and Where Is Teamwork Important?," Forbes, January 2013
6. "Digital Vortex: How Digital Disruption Is Redefining Industries," Global Center for Digital Business Transformation, June 2015
7. According to Deborah J. Cornwall, managing director of Corlund Group, a leadership consultancy firm, "There's a tendency for people in large, hierarchical organizations to tell the boss what he wants to hear." The result is a limited flow of information to senior leadership that undermines informed decisions. It is important to note that information shaping will occur despite the best intentions of senior management—unless proactive steps are taken to prevent it. As the founder of one "connected workforce" startup told us, "It's not because you have created a hostile workforce or because you are a bad manager. Self-preservation is an extremely strong instinct. You're going to hear exactly what you want to hear. If you continue that process up three or four levels of management, what you ultimately have is managers looking at a mirror of their own creation."
8. "The Future of Fashion Retailing: The Zara Approach," Forbes, October 2012
9. "Here's How to Actually Empower Customer Service Employees," Harvard Business Review, July 2013
10. "How Zara Became the World's Biggest Fashion Retailer," The Telegraph, October 2014
11. "Spotlight on Technology: Let Employees Voice Their Feedback," Cornerstone on Demand, January 2014
12. "Facebook's Best Hacks of 2015," SocialTimes, January 2016
13. "Deep Inside a Facebook Hackathon, Where the Future of Social Media Begins," Wired, July 2012
14. When discussing anonymous feedback mechanisms, it is important to distinguish between confidential feedback and truly anonymous feedback. Many companies provide confidential feedback mechanisms. Using confidentiality statements, these companies promise employees that responses will not be attributed to them, often by establishing a minimum threshold for data aggregation (e.g., aggregating responses of at least five employees). However, an employer could conceivably use various means, such as attribute data and network data, to identify employees. This is why simple confidentiality statements often do not convince employees to provide candid feedback. With truly anonymous feedback mechanisms, employers cannot attribute responses to individual employees due to the technical or process measures in place, such as automatic deletion of all personally identifiable information, or the use of a third-party platform to manage feedback, data storage, and analysis. Increasingly, employers will need to prove to employees that their feedback is truly anonymous, such as by explaining the technical or security mechanisms in place to guarantee anonymity.
15. One concern often raised by company leadership is that anonymous feedback mechanisms will lead to the proliferation of "bad behavior," such as offensive posts or workplace bullying. In some cases, companies may be concerned with liability issues related to their inability to identify providers of inappropriate feedback. Whether through policy, active online moderation, or other measures, there are ways to address abuse of anonymous feedback channels. Company leaders must weigh the risks of anonymity against the benefits that it can offer a company—candid feedback that drives employee engagement, innovation, a strong company culture, and more.
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17. "The Truth About Google's '20% Time' Policy," Forbes, April 2015
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19. Cisco Enterprise Collaboration Horizons Study, 2011
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21. App Lets Workers Vent Anonymously, January 2015
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33. "How to Tackle U.S. Employees' Stagnating Engagement," Gallup, June 2013
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