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Introduction

WELCOME to Deloitte's fifth annual *Technology Trends* report. Each year, we study the ever evolving technology landscape, focusing on disruptive trends that are transforming business, government, and society. Once again, we've selected 10 topics that have the opportunity to impact organizations across industries, geographies, and sizes over the next 18 to 24 months. The theme of this year's report is *Inspiring Disruption*.

In it, we discuss 10 trends that exemplify the unprecedented potential for emerging technologies to reshape how work gets done, how businesses grow, and how markets and industries evolve. These disruptive technologies challenge CIOs to anticipate their potential organizational impacts. And while today's demands are by no means trivial, the trends we describe offer CIOs the opportunity to shape tomorrow—to inspire others, to create value, and to transform “business as usual.”

The list of trends is developed using an ongoing process of primary and secondary research that involves:

- Feedback from client executives on current and future priorities
- Perspectives from industry and academic luminaries
- Research by alliance partners, industry analysts, and competitor positioning
- Crowdsourced ideas and examples from our global network of practitioners

As in prior years, we've organized the trends into two categories. Disruptors are areas that can create sustainable positive disruption in IT capabilities, business operations, and sometimes even business models. Enablers are technologies in which many CIOs have already invested time and effort, but that warrant another look because of new developments, new capabilities, or new potential use cases. Each trend is presented with multiple examples of adoption to show the trend at work. This year, we've added a longer-form *Lesson from the front lines* to each chapter to offer a more detailed look at an early use case. Also, each chapter includes a personal point of view in the *My take* section.

Information technology continues to be dominated by five forces: analytics, mobile, social, cloud, and cyber. Their continuing impact is highlighted in chapters dedicated to wearables, cloud orchestration, social activation, and cognitive analytics. Cyber is a recurring thread throughout the report: more important than ever, but embedded into thinking about how to be secure, vigilant, and resilient in approaching disruptive technologies.

For the first time, we've added a section dedicated to exponential technologies, working with Singularity University to highlight five innovative technologies that may take longer than our standard 24-month time horizon for businesses to harness them—but whose eventual impact may be profound. Examples include artificial intelligence, robotics, and additive manufacturing (3-D printing). The research, experimentation, and invention behind these “exponentials” are the building blocks for many of our technology trends. Our goal is to provide a high-level introduction to each exponential—a snapshot of what it is, where it comes from, and where it's going.

From a Consumer Products lens, we provided industry sector specific perspective on majority of the topics including CIO as a venture capitalist (how to leverage brand categories perspective for portfolio planning), crowdsourcing (specific strategies including crowdfunding, flexible workforce and data analysis contests), wearables (discussing the Empowered Employee and the Persistently Connected Consumer) and digital engagement (Omnichannel Brand Engagement, Ubiquitous Sensors and other topics).

Each of the 2014 trends is relevant today. Each has significant momentum and potential to make a business impact. And each warrants timely consideration—even if the strategy is to wait and see. But whatever you do, don't be caught unaware—or unprepared. Use these forces to inspire, to transform. And to disrupt.

We welcome your comments, questions, and feedback. And a sincere “thank you” to the many executives and organizations that have helped provide input for Tech Trends 2014; your time and insights were invaluable. We look forward to your continued innovation, impact, and inspiration.



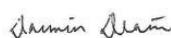
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Disruptors



Industrialized crowdsourcing

Sometimes more is better

Enterprise adoption of the power of the crowd allows specialized skills to be dynamically sourced from anyone, anywhere, and only as needed. Companies can use the collective knowledge of the masses to help with tasks from data entry and coding to advanced analytics and product development. The potential for disruptive impact on cost alone likely makes early experimentation worthwhile, but there are also broader implications for innovation in the enterprise.

ENTERPRISE adoption of crowdsourcing can allow specialized skills to be dynamically sourced—from anyone, anywhere, as needed—for everything from data entry and coding to advanced analytics and product development. The potential for disruptive impact on cost alone could make early experimentation worthwhile, but there are broader implications for innovation in the enterprise.

Sun Microsystems co-founder Bill Joy said it well in 1990: “No matter who you are, most of the smartest people work for someone else.”¹ His intent was not defeatism; it was a rallying cry to tap into the collective experience and enthusiasm outside of organizational boundaries. Today, enterprises are doing just that: harnessing the crowd to help with a wide mix of challenges, from menial tasks and complex needs requiring specialized skill sets to creative endeavors and even strategic planning. The idea of open source talent² via crowdsourcing is becoming industrialized—growing in scale, sophistication, and importance as an alternative staffing model. The goal is not just cost savings but also quick access to specialized resources, the ability to dynamically scale up (and down) around workloads, and geographic coverage in quickly changing markets.

Businesses have a rich history of trying to tap into crowds, using consumer surveys, focus groups, and experiential marketing to provoke customer engagement. Product R&D, in particular, has seen significant activity, with open innovation campaigns launched by many large companies, including 3M, BMW, General Mills, and Stanley Black & Decker.³ More recently, companies have moved to flatten and rewire their structures, making it easier for people *within* the organization to connect with information and specialists to grow ideas and solve pressing problems across a wide spectrum of domains.

There’s a crowd for that

The business applications of crowdsourcing run the gamut from simple tasks to complex solutions. Below is a sampling of the categories and emerging platforms for harnessing the crowd.

- **Simple, task-oriented crowdsourcing.** Companies need arms and legs to execute simple, short, transactional units of work. Language translation services, data entry, photograph tagging, and transcription are popular items that allow large workloads to be split across remote workforces. Routine tasks that require physical presence such

as performing store pricing checks, pulling products during recalls, restocking retail shelves, or serving as data collectors, also fit into this category. Crowdsourcing platforms such as Amazon's Mechanical Turk, Gigwalk, TaskRabbit, Elance, Field Agent, and Quri fill this niche with an on-demand labor force, often global, numbering in the hundreds of thousands and performing millions of jobs.⁴ The goal is not just low costs but also speed and scale.

- **Complex, experience-based crowdsourcing.** Complex tasks require abstract thinking, specialized skill sets, and sophisticated problem solving. The crowd is typically made up of diverse, qualified individuals, including software engineers, data scientists, artists, designers, management consultants, and hobbyists with advanced academic degrees or industry experience. Tasks typically require not just scale but also creative problem solving, with the goal of achieving breakthroughs to old problems through innovative thinking. Platforms for this type of crowdsourcing include 10EQS, crowdSPRING, Kaggle, oDesk, and Tongal.
- **Open-ended, idea-generating crowdsourcing.** These applications involve challenges oriented around invention, idea generation, and product and brand innovation. Breakthroughs may come from specialists or, increasingly, from the general public. The challenge becomes one of provoking and harvesting that potential. Corporations are increasingly entering into partnerships with crowdsourcing platforms in this space to focus their efforts. Examples include General Electric's opening of its patent library to Quirky⁵ and Qualcomm's Tricorder challenge with the XPRIZE Foundation.⁶ IdeaConnection and InnoCentive are other platforms in this space.

- **Funding, consumption, and contribution crowdsourcing.** Large enterprises should be aware of three other models of crowdsourcing that are gaining momentum. The first is crowdfunding, in which entrepreneurs solicit sponsorship from the masses, looking for support or capital to develop ideas, products, and businesses. Indiegogo and Kickstarter are two of many platforms in this space. Collaborative consumption models have also emerged, in which certain assets are available "as a service" to the crowd. Automobiles through Uber and lodging through Airbnb are two examples. Finally, we're seeing platforms where the crowd contributes ideas and information, sharing knowledge that could be useful to others. The open source software movement and Wikipedia are based on this model. Other more recent platforms include Crowdtap and Sourcemap.

Battalion at the ready

How is this different from outsourcing or temporary agencies that have been around for decades? Industrialized crowdsourcing providers leverage platforms that can match buyers to a much broader base of sellers while reducing many of the administrative hassles, combining cloud, mobile, social, and web technologies to create new marketplaces.

For location-based assignments, individuals carry GPS-enabled devices that provide on-the-spot data entry and performance verification. Others may provide bidding systems, processes for billing and payment collection, performance monitoring, and performance ratings. Platforms can provide easy access to specialists from many walks of life—professionals, freelancers, and hobbyists—who have the motivation, qualifications, and flexibility to create innovative ideas and execute assignments promptly. For temp agencies or outsourcers, the talent pool is constrained by their rosters.

In crowdsourcing, the needle in the haystack comes to you, with skills and interests aligned with your ask.

Buyers can access large pools of people in short order, typically at low transaction costs—a few dollars per store visit or pennies per photo tag. For free agents, these assignments allow them to earn extra money with fewer commitments and more flexibility than traditional employment offers. And individuals qualified for these projects are often attracted by intrinsic rewards beyond just money—prestige, competition, learning, or job opportunities. Many crowdsourcing platforms provide rewards or leaderboards, letting talent be recognized as leaders in their fields.

Some of the more compelling results come from harnessing the crowd via contests. These can be offered for entertainment or prestige by applying gamification⁷ techniques. Alternatively, top talent can be invited to compete on an assignment by offering financial incentives for the more effective responses. Sponsoring companies pay only for “winning” solutions while gaining access to a wide range of ideas. Talent has the freedom to select projects that match its interests and ambitions and is given a platform to showcase its work. Colgate Speed Stick used this model to spark a Super Bowl ad for the bargain-basement price of \$17,000, compared with nine-figure investments associated with traditional agencies.⁸ Allstate sponsored a competition in which the crowd created a liability prediction model that was 271 percent more accurate than the original.⁹

Leading companies are blasting through corporate walls with industrialized solutions to reach broader crowds capable of generating answers and executing tasks faster and more cost effectively than employees. Companies are also gaining access to niche, unproven experience that might be hard to find and retain in-house. And with the crowd, you pay only for the task being completed.

The crowd is waiting and willing. How will you put it to work?

A sampling of crowdsourcing platforms



Gigwalk¹

A mobile, flexible workforce for jobs in the field

FOUNDED 2011



oDesk²

A tool for hiring and managing remote freelancers

FOUNDED 2005



Kaggle³

Competitions for predictive modeling and analytics

FOUNDED 2010



Tongal⁴

Collaborative contests for video production

FOUNDED 2008



Quirky⁵

A product design incubator and marketplace

FOUNDED 2009

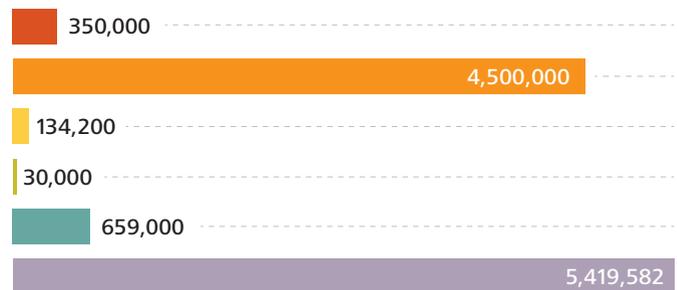


Kickstarter⁶

A global funding platform for creative projects

FOUNDED 2009

USERS Number of contributors in the community



JOBS Number of completed projects



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Consumer Products Perspective

The industrialized crowd is rapidly evolving to become one of the most influential technology trends for Food, Beverage, and Consumer Products manufacturers. Increasingly Consumer Products companies are looking outside their organization to harness the wisdom, arms and legs, social connections, and creativity of the crowd to solve long standing issues in new and innovative ways. Several examples have been highlighted in this section already; however, few organizations have developed a cohesive strategy around efficiently tapping into the crowd. The following are a series of demonstrated and emerging areas where Food, Beverage, and Consumer Products manufacturers can begin to tap into the crowd to develop new and enhanced capabilities.

- **Helping Define New Products and Generate Demand** – Ask the community what they think and they will tell you. Make that product and they'll become your first product advocates. Examples of this exist with Quirky (highlighted in this section under “Have patents, will innovate”) in which wisdom from the crowd is tapped to create new products which are then sold to this same crowd. Or a food product manufacturer who polled its product enthusiasts to solicit their opinion on which flavor they'd like most. In this model, when the new product hits the shelf, these voters are anticipated to convert into the product's first advocates.
- **Allowing Consumers to Cast Their Dollar Votes Before the Product is Real** – The advent of the “crowdfunding” model allows the average consumer to cast his or her vote for new products by investing his or her own money before a product hits the market. This model provides consumers with early access to pre-release products or could involve equity interest in the future success of the product. For manufacturers, this can help defray investments in R&D, manufacturing, distribution, and marketing before bringing a new product to market. Some small and medium sized manufacturers have already allowed consumers to “invest” in products while they are still an early idea stage.
- **Enabling Manufacturers to Build Cost-Effective, Flexible Workforces at Scale** – Manufacturers are constantly seeking out additional insights into how their products are merchandised in the retail environment. Traditionally, this presented a scale issue given the number of retail store locations. With new workforce models capable of engaging mobile, on-demand workforces, the scale hurdle is no longer a barrier to achieving these insights. New mobile workforce platforms enable manufacturers to tap into an on-demand workforce with coverage across the globe. In this new model, manufacturers can understand pricing, merchandising, and promotional performance on-demand, in near real-time, and with more accuracy (highlighted in this section under “Crowding store shelves”).
- **Finding the Next Blockbuster Insight** – With the battle for analytical talent reaching new heights, manufacturers can create data analysis contests that harness the wisdom of a community of data scientists and analytics enthusiasts. These contests allow participants to leverage real data sets provided by the manufacturer to develop new predictive models that can make a positive financial impact.

Consumer Products Perspective

- **Building the Next Killer Campaign** – Marketers striving to embed the “voice of the consumer” in their marketing campaigns can take this to the next level by asking the consumers themselves to create the marketing communications. Several platforms have begun to offer rewards and incentives for consumers who participate in developing marketing campaigns (highlighted in this section under “Crowd wars: The ‘fan’tom menace”).

- **Attracting Top Talent** – Referral programs have always been critical to finding and attracting top talent. The use of social tools to engage a much broader set of individuals and develop referral campaigns can help manufacturers manage their talent gaps far more efficiently.

Food, Beverage, and Consumer Product Goods manufacturers have many opportunities to harness the potential of the crowd. Leading organizations are taking advantage of the consumer’s willingness to play a role in the ideation, design, funding, development, management, and analysis of their products and sales. Looking to the future, manufacturers may be able to augment most functions of their business through external sources for competitive advantage.

Lessons from the front lines

Crowd wars: The “fan”tom menace

In 2013, Kellogg’s Pringles teamed with Lucasfilm’s Star Wars to launch “The Force for Fun Project,” a Tongal-enabled contest challenging consumers and fans to design the next Pringles television commercial.¹⁰ By engaging a crowdsourcing platform, Pringles hoped to open its doors to access new ideas and inspire fresh, fan-driven digital content while generating millions of impressions.

The Force for Fun Project was staged in three rounds, with a bonus “wild card” round to identify additional finalists. First, fans were invited to submit a 140-character vision in the “ideas round.” The top five ideas advanced to the “pitch round,” where filmmakers could present a vision for a video production based on one of the five ideas. The winning pitches, as identified by Pringles and Star Wars executives, advanced to the final “video round,” receiving a production budget to bring the pitch to life. In the final round, seven finalists were selected for a chance to win The Force for Fun Project grand prize, which included a \$25,000 cash prize and a national television spot.

To drive additional buzz for the video finalists, Pringles and Star Wars solicited 10 die-hard fans and bloggers to feature the videos (with additional, behind-the-scenes content) on their own social platforms.¹¹

The six-month initiative generated over 1,000 idea submissions, 154 video pitches, over 1.5 million YouTube views, 6 million social impressions, and over 111 million overall impressions. Furthermore, the contest and winning videos received media coverage across mainstream media and digital outlets. On

September 24, 2013, the winning commercial was broadcast to over 12 million viewers during ABC’s series premiere of Marvel’s *Agents of S.H.I.E.L.D.*

Civic crowdsourcing

As the budgets for civic organizations continue to shrink, municipalities, nonprofits, and other public organizations are reaching out to the public through crowdsourcing, which allows civic organizations to tap into their constituents for tools and services at a fraction of the cost of traditional sourcing approaches.

One example is the City of Chicago. After Mayor Rahm Emanuel signed an executive order making all non-private data available, the city sought ideas for providing the data to the public in a usable way.¹² Targeting local software engineers, hobbyists, and “hackers,”¹³ the city initiated a crowdsourcing effort that yielded a number of app proposals, ranging from a 311 service tracker to a tool displaying real-time subway delays.

Another example is the Khan Academy, a nonprofit organization that provides free educational content online. It uses volunteers to translate the website into different languages—crowd-provided localization services. A Spanish site was released in September 2013, and videos have been translated into more than a dozen languages.¹⁴

The City of Boston introduced the Citizens Connect mobile app in 2008, encouraging Bostonians to report problems ranging from broken streetlights to missed trash pickups. The reports are connected to the city maintenance tracking system, allowing work crews to be rapidly deployed to fix problems as reports come in and alerting citizens

when work orders are resolved. Since the app debuted, the number of reports has risen from 8,000 in 2009 to more than 150,000 in 2012.¹⁵

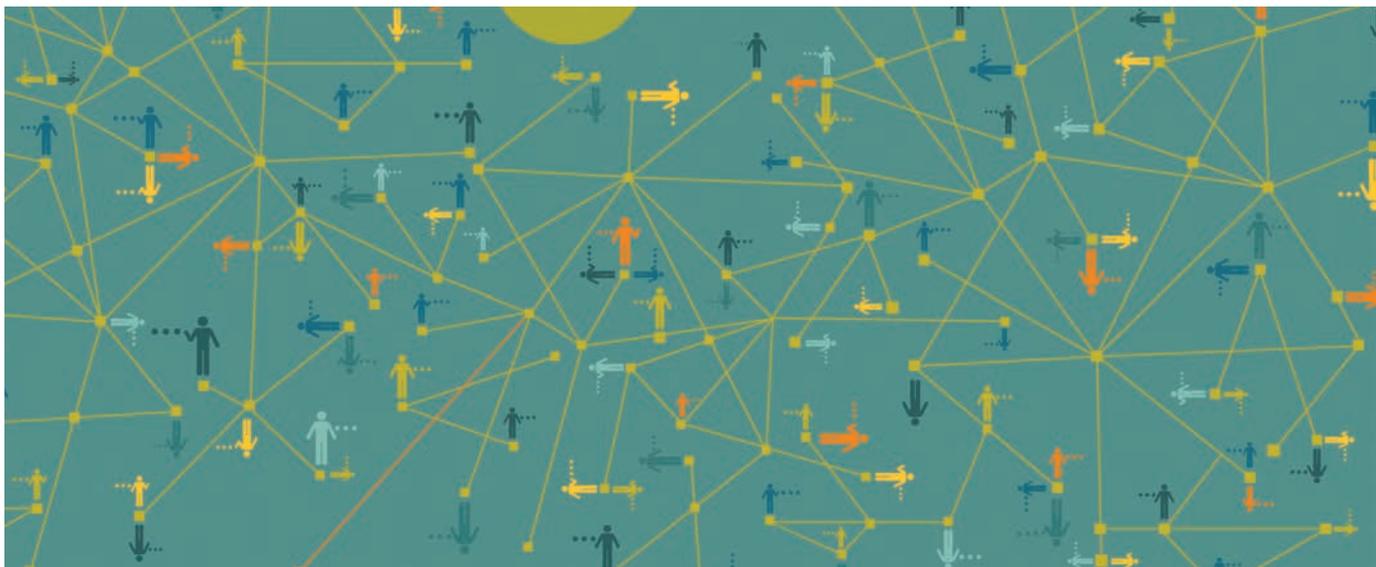
Have patents, will innovate

Product development and innovation can take years for large companies to develop from initial idea to an item available on retail shelves. Start-up company Quirky is challenging current wisdom by crowdsourcing the product development process, shortening the invention timeline of new products from years to weeks.

In 2012, Quirky caught the attention of GE when it launched 121 new products and sold 2.3 million units.¹⁶ The compressed development schedule impressed GE leadership so much that the company

opened its patent library to the Quirky community to enable development of new consumer products.

Products developed by Quirky begin as one of approximately 3,000 ideas submitted weekly by the Quirky community. As ideas are submitted, community members vote for the ideas they like. Those with the most votes are reviewed by industry specialists and community members who select products for production. During development, the community influences the product roadmap by voting on issues ranging from color and price to engineering. With four products completed,¹⁷ the Quirky and GE team plan to release dozens more over the next five years, with GE already providing \$30 million in funding.¹⁸



Crowding store shelves

Innovation is likely at an all-time high in the consumer products industry. Traditionally, new initiatives and technologies took months, or even years, to implement. Today, the timeline can be weeks. Consumer product companies and retailers are finding benefits in rapid experimentation to keep up with the pace of change and stay on the leading edge of innovation.

A leading retailer chose to experiment with crowdsourcing to improve its data collection. It engaged with Gigwalk—a company that taps into the general population to perform micro-tasks for enterprises. Millions of “gigwalkers” use a mobile app that matches them with available jobs, or “gigs,” based on their geographical area and skillset. Participants are then promptly paid for executing those tasks.

The company participated in a pilot program to investigate a hunch that stores were missing out on sales because of out-of-stock products. The company set up a series of gigs to monitor and collect data on the stocking of its stores’ displays. It was hoping that by collecting and analyzing this data it could identify an opportunity to decrease lost sales.

The company wanted to use new technologies and techniques to tackle age-old industry challenges around out-of-stocks. It started by defining customer scenarios and identifying the specific data to be collected. The crowdsourced team would walk into more than a dozen stores twice a day and identify the missing products. A team member could scroll through a list of the company’s products on the mobile app, click the ones that were missing, and use the drag-and-drop menu to enter product information.

The pilot went live a month after conception, but the first week yielded subpar results, with only a 21 percent task adoption rate among the available resources. So the company changed the way the gig was constructed and how the crowd would be incentivized. For example, it realized the term “SKU” was not well understood by many consumers; to aid comprehension, the company more clearly showcased the data that was to be collected. In addition, the company adjusted the pricing structure to reward “gigwalkers” for completing additional store audits. The new model also disclosed the goals and value of the company’s crowdsourced data collection initiative. The changes proved to be powerful. In the second week the adoption rate was 84 percent, and in the third and fourth weeks, the rate rose to 99 percent.

The crowdsourcing experiment enabled the retailer to create datasets around its products. By creating a visual heat map, the company was able to view, store by store, which products were out of stock throughout a day across its stores in the pilot group. It was also able to improve the internal processes that corresponded to those products and reduce the number of out-of-stock items. The company estimated it could save millions of dollars if the piloted process enhancements were implemented in stores across the country. The retailer also created a geospatial map to identify routing issues that might be contributing to out-of-stock items, and was able to make changes to its distribution methodologies accordingly.

At a reasonable cost, and in a relatively short period, the company was able to use crowdsourcing to collect data; glean insights about its products, brands, and distribution; and improve processes to reduce its risk of lost sales.

My take

Salim Ismail, founding executive director and global ambassador, Singularity University

CIOs have one of the hardest roles in business today: They need to manage reliability, performance, and security while simultaneously guiding innovation and absorbing new technologies. Talent is a massively limiting factor—especially with regard to disruptive technologies like data science. Along with other techniques, crowdsourcing can offer a way to address these challenges.

I see two primary areas where companies can leverage the power of crowdsourcing. The first is in the micro-task world, where a company can create small pieces of work to outsource. The second is in the engagement world, where a company can use a crowdsourcing platform for a defined role such as software development. It's easier to do the latter, but as we atomize processes to smaller and smaller tasks, there is no reason those cannot also be outsourced. The dilemma emerges when you get to mission-critical processes. Outsourcing those can carry enormous risks, but it can also provide incredible scalability. I predict that in the next several years it will become more common, with startups leading the charge and larger organizations following suit to remain competitive. In information-based industries, this is likely to be crucial. Quirky, a consumer packaged goods (CPG) startup, manages a community of 500,000 inventors to submit ideas. Airbnb leverages the crowd to supply rooms for people to stay in.

Regardless of which approach you take, I believe that crowdsourcing is here to stay. The number of people online is projected to increase from 2.4 billion today¹⁹ to 5 billion by 2020.²⁰ These minds, armed with their ever-more-affordable tablets of choice, will dramatically increase the general availability of intellectual capital. And the technologies and resources now exist for virtually anyone to become skilled in anything very quickly. So the question becomes, "How will you adapt?"

The first step for the C-suite is to gain awareness: Many executives I talk to are unfamiliar with crowdsourcing. To CIOs who think, "That's interesting, but not for me," I would say that if you're only looking for innovation internally, you'll likely find yourself in trouble. There is too much happening outside your company walls for you to risk ignoring it, let alone not leveraging it. Consider the newspaper business, which was disrupted by Craigslist, or the music business, which was disrupted by the iTunes® application.²¹ Your business counterparts should expect that they will be disrupted even if they don't yet know in what way. For this reason, I urge traditional businesses to figure out how to cannibalize themselves, or someone else likely will. Yes, there is discomfort and risk involved, but that can be mitigated, and it is ultimately less dangerous than your business failing.

When you tap into the crowd, you sacrifice certainty for breadth of creative input, but as long as the crowd is large, you have the potential for incredible results at fractional costs. We're entering a world where businesses are either the disruptor or the disrupted, and there is no middle ground. I believe that taking advantage of trends like crowdsourcing can help companies keep the upper hand.



Where do you start?

UNDERSTANDING how to use crowdsourcing to help reach organizational goals may not be intuitive, and the range of potential projects and platforms can add to the confusion, especially as you're educating your business counterparts. Data security, privacy, and compliance risks may be raised as roadblocks. That said, every industry can find acceptable areas in which to experiment, perhaps in unlikely places. Goldcorp is a mining company that shared its top-secret geological data with the crowd, offering \$500,000 for finding six million ounces in untapped gold. This \$500,000 investment yielded \$3 billion in new gold in one year.²²

Tapping crowd power through an online platform is a low-risk investment with potentially high returns, but only if you choose appropriate projects.

- **Scope.** Focus on a clear and specific problem to solve—one that can be boiled down to a question, task, or request with measurable definitions of success. One of the benefits of crowdsourcing comes from garnering ideas that aren't limited by your organization's preconceptions of how your business or market works. The scope of a task can require deep domain experience but should not be dependent on your own organization's context.
- **Focus on gaps in your organization's own abilities.** Begin your search in areas where your own talent gaps have held back progress. What could you learn or accomplish if you had affordable manpower readily available? What complex problems have confounded your people? What

solutions seem out of reach, no matter what you try? These may be problems worth pitching to a crowd that isn't contaminated by "what's not possible." Crowds are likely to consider data or information that insiders assume is irrelevant.

- **Keep an open mind.** Crowdsourcing is rarely initially championed by a C-level executive, but the CIO may be in a position to help educate business leaders on its potential. A broad perspective across the enterprise, combined with an open mind, may help CIOs recognize unexpected applications that could benefit the organization. Leaders should foster a culture where appropriate crowd experiments are encouraged while minimizing security, privacy, and compliance risks. Employees may feel threatened by crowdsourcing, perceiving it either as a "big brother" tactic or a means to replace the existing workforce. Consider making crowdsourcing a tool *for* your employees. For example, the sales team for a consumer goods company can use a crowdsourcing app to harness cheap labor to perform the mundane parts of their job. By letting your employees orchestrate the crowd, concerns can be alleviated.
- **Get ready for what's next.** Crowdsourcing is in the early stages, but it's not too early to consider long-term opportunities for new ways to get work done. Could a native mobile app that feeds directly into your systems streamline field data collection and reporting in the future? Could the time come when it would make sense to provide access to corporate assets to free

agents? A crowdsourced labor pool will become a legitimate component of many organizations' distributed workforce strategy. Start thinking now about what policies and processes need to be in place. Incentive structures, performance management, operating models, and

delivery models may, in some cases, need to be redrawn. Use crowdsourcing as a tangible example of the shift to social business²³—allowing early experimentation to make the case for more profound investments and impacts.

Bottom line

Crowdsourcing is still in its early stages, but today's online platforms are sophisticated enough to provide substantial benefits in solving many kinds of problems. The potential for disruptive impact on cost alone makes early experimentation worthwhile. More important are the broader implications for innovation in the extended enterprise. Today you can expand your reach to engage talent to help with a wide range of needs. It's important that your organization has the ability to embrace new ideas that may be generated by your crowdsourcing initiatives. That means industrializing not just for scale and reach but also for outcome.

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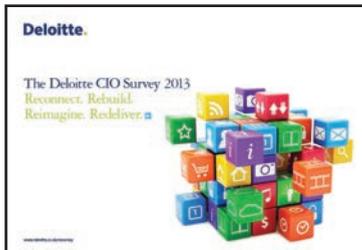
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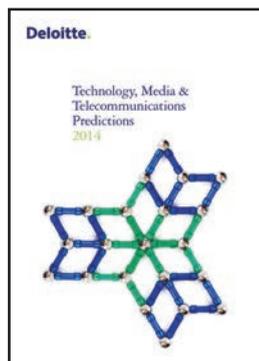
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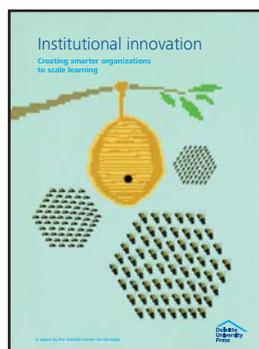
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