

Deloitte.

The three billion
Enterprise crowdsourcing
and the growing
fragmentation of work



Contents

Foreword	1
Introduction	2
What is crowdsourcing?	4
Using the crowd in business	9
From closed to open	13
Endnotes	14
Contacts	16

Acknowledgements

The authors would like to acknowledge the support they have received from a number of people in Deloitte while researching this publication, including Greg Howard, Renee Hunt and Ankur Borthakur.

We would also like to thank Marcus Shingles and Jonathan Trichel from Deloitte Consulting LLP for their formative thinking.

In this publication, references to Deloitte are references to Deloitte LLP, the UK member firm of DTTL.

Foreword

Today's innovation problems are tough to solve. The traditional methods that have served your enterprise well for decades no longer seem to work, and your current crop of young, talented millennials don't want to stick around to help. Exponentially advancing technology, a rapidly growing online worker population and improved access to education all add up to a confusing medley of options.

You know that the best solution is out there somewhere but in an increasingly volatile, uncertain, complex and ambiguous world, it's not always obvious what combination of people, skills and technology you need.

Thankfully, this dynamic environment is an enabler and not an inhibitor of an emerging, solution-finding method called crowdsourcing – the umbrella term for a variety of approaches that harness the time, expertise and resources of large crowds of online people. Crowdsourcing offers a way for enterprises to find new solutions and to offer otherwise frustrated and nomadic employees a greater diversity of work. It's also creating new opportunities for individuals to change the way they work, learn new skills and earn rewards wherever they are, even in remote corners of the planet.

Once seen as the preserve of obscure state-sponsored competitions or corporate innovation projects, crowdsourcing is now considered mainstream, increasingly embedded in the core business activities of small and large enterprises alike. In 2014, Gartner predicted that 75 per cent of high-performing enterprises will use crowdsourcing in some form by 2018. Today, the online crowd is helping enterprises tackle a wide range of challenges, from menial tasks to more complex needs requiring specialised skills. It's having spectacular results, too, in certain situations creating better and more scalable solutions at lower cost than even the best in-house teams.

Should you be thinking about crowdsourcing? Is it only for start-ups and small businesses or can it be used at enterprise scale? Can crowdsourcing be useful for more than just a technology solution? What are the 'killer apps' and how do they work? How do you manage the crowd to create value? And what are the cultural and commercial challenges you will face? In the following pages, we take a close look at crowdsourcing and tackle these questions.

In our view, crowdsourcing is part of an ecosystem of rapidly maturing technologies and methods that look set to play a fundamental role in the future of commerce and society. This paper – the latest in our series of reports under the title of 'Disrupt: Deliver' – aims to help business and public sector leaders understand the new and emerging opportunities for organisations in all sectors to create and deliver compelling services for their customers using the power of disruptive innovation.

We hope that you find this paper useful and we look forward to your feedback.



Vimi Grewal-Carr



Carl Bates

Handwritten signature of Vimi Grewal-Carr in black ink.

Vimi Grewal-Carr
Managing Partner for Innovation
Deloitte LLP

Handwritten signature of Carl Bates in black ink.

Carl Bates
Partner, Lead for Crowdsourcing
Deloitte LLP

Introduction

“To answer the most vexing innovation and research questions, crowds are becoming the partner of choice.”

Kevin Boudreau, Karim Lakhani¹

Throughout history, crowds have been invited to tackle tough literary, scientific and technological challenges that have stumped even the most brilliant minds.

In 1567, King Philip II of Spain offered a reward to anyone who could devise a simple and practical method for precisely determining a ship's longitude at sea.² The reward was never claimed. Almost 150 years later, in 1714, the British government established the 'Longitude rewards' through an Act of Parliament, after scientists, including Giovanni Domenico Cassini, Christiaan Huygens, Edmond Halley, and Isaac Newton, had all tried and failed to come up with an answer.³ The top prize of £20,000, worth over £2.5 million today, provided a significant incentive to prospective entrants.

Ultimately, the Board of Longitude awarded a number of prizes for the development of various instruments, atlases and star charts. However, it was John Harrison, a clockmaker from Lincolnshire, who received the largest amount of prize money overall – over £23,000.⁴ What is, perhaps, most astonishing about Harrison's 300-year-old sea clock design is that a test of a working version in 2015 demonstrated that it is “the most accurate mechanical clock with a pendulum swinging in free air”, keeping to within a second of real time over a 100-day test, according to Guinness World Records.⁵

The crowd was not just useful for technological breakthroughs. In 1879, when Sir James Murray was responsible for editing the first edition of the Oxford English Dictionary (OED), he put out a call for volunteers to identify all of the words in the English language together with quotations illustrating their use.⁶ During the next 70 years, the OED received over six million submissions from tens of thousands of contributors. Murray's initiative has been compared to the modern-day Wikipedia in terms of the scale of its ambition to gather and curate knowledge.⁷ Wikipedia, itself, has grown from 15,000 articles at the end of its first year, in 2001, to over five million English articles today, which have been edited over 800 million times by a crowd of nearly 28 million registered users.⁸

Businesses also 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.⁹

After conversations about how today's businesses were beginning to use the internet to outsource work to individuals, Jeff Howe and Mark Robinson, editors at Wired Magazine, were first to coin the term “crowdsourcing” in 2005.¹⁰ In conceptualising the term the following year, Howe suggested that “crowdsourcing represents the act of a company or institution taking a function once performed by employees and outsourcing it to an undefined (and generally large) network of people in the form of an open call. This can take the form of peer-production (when the job is performed collaboratively), but is also often undertaken by sole individuals.”¹¹ The term ‘crowdsourcing’ is often used interchangeably with ‘open innovation’.

Right now, crowdsourcing competitions like the \$30 million Google Lunar XPRIZE, the \$25 million Michelson Prize or the £10 million 2014 Longitude Prize are challenging – and incentivising – professional scientists, engineers, entrepreneurs and innovators from all over the planet, amateur and professional alike, to develop novel solutions to the world's ‘wicked’ problems.^{12, 13, 14} In more straightforward applications of crowdsourcing, platform providers like Lionbridge and Samasource are helping enterprises with language translation, data validation, image tagging and other routine tasks that require flexible access to large numbers of people with basic computer skills.^{15, 16} Wikistrat, OnFrontiers and 10EQS tap into the specialist expertise of hundreds of thousands of people worldwide to provide flexible, non-routine services such as consultancy, market intelligence, strategy development and research.^{17, 18, 19}

Despite a growing number of success stories, though, relatively few businesses draw on the crowd in a systematic way. Pushing problems out to a vast group of strangers seems at odds with conventional corporate wisdom. Managers, who have traditionally looked inward for solutions, are understandably wary. How, for example, can you protect intellectual property if it is exposed so publically? How can you manage the crowd to ensure it delivers? How can you integrate a crowdsourced solution into existing corporate processes and systems? What about the costs? And how can you be sure you'll even get a good solution?

Today's workers are also frustrated with the directions their careers are taking. They want to work on a greater diversity of projects, and concentrate their time on those activities that drive both reward and social worth. Yet traditional career paths in business prize ever-deeper industry knowledge, experience or management prowess – and workers trudge along these for years, and sometimes decades. Millennials, who represent one of the largest segments of the labour force, are not afraid to switch jobs frequently, and now expect to work an average of 12 to 15 jobs during their lifetime.²⁰ Many of the millennials that Deloitte has surveyed do not believe that their current employers are taking full advantage of their skills, and as many as one in four would quit their jobs given the chance.²¹

Employers, as a consequence, are in a never-ending 'war for talent' – cossetting specialists and experienced professionals, and grappling with ever-tighter immigration rules, which limit human capital flows across country boundaries. And employees are looking for alternative approaches to work and reward. In such a fluid employment environment, how can you motivate and incentivise employees to stay? How do you help them to develop new skills? How do you inspire them to help tackle your own challenging problems or even give something back to society?

According to eYeka, a global market leader in creative crowdsourcing for marketers and creatives, 85 per cent of the top global brands have used crowdsourcing in the last ten years.²² Gartner, Inc. anticipates that by 2018, 75 per cent of the world's high performing enterprises will be using crowdsourcing.²³ That's leading crowdsourcing companies, such as eYeka, InnoCentive, Kaggle and TopCoder, to 'industrialise' approaches to finding optimum solutions, and they now manage many aspects of the innovation process to help businesses tackle problem-solving with a minimum of effort.^{24, 25, 26, 27}

And if it's not the aggregate 'wisdom of the crowd' being sought but simply the best person to fulfil a specific task, then companies like Gigwalk, Upwork, 99Designs, Streetbees, DesignCrowd and Writology help businesses connect with and manage talented experts right across the world.^{28, 29, 30, 31, 32, 33}

For individual workers, the crowd creates opportunities for a different kind of employment, greater freedom of choice and sometimes bigger rewards, too. The idea of open source talent via crowdsourcing is itself growing in scale, sophistication and importance as an alternative staffing model.³⁴ According to influential innovation academics Kevin Boudreau and Karim Lakhani, "Crowds are energised by intrinsic motivations, such as the desire to learn or to burnish one's reputation in a community of peers."³⁵ Reputation aside, the earnings of the most successful crowdsourcing challenge participants can now also easily exceed \$500,000 per annum.³⁶

This paper is intended to help businesses understand crowdsourcing and its benefits. On the following pages, we examine what makes crowds tick and how businesses can use the collective insight offered by crowdsourcing to deliver greater diversity and breadth of ideas and knowledge. We tackle many popular misconceptions associated with crowdsourcing, such as it can only be used at small scale by start-ups and small businesses. We also cover potential challenges to process, risk, people and culture. And, in light of our research, we explore how businesses can take simple but effective steps to find innovative solutions that work for their business and for their employees.

Today's workers are also frustrated with the directions their careers are taking. They want to work on a greater diversity of projects, and concentrate their time on those activities that drive both reward and social worth.

What is crowdsourcing?

“Not everyone in the crowd wants to make silly videos.”

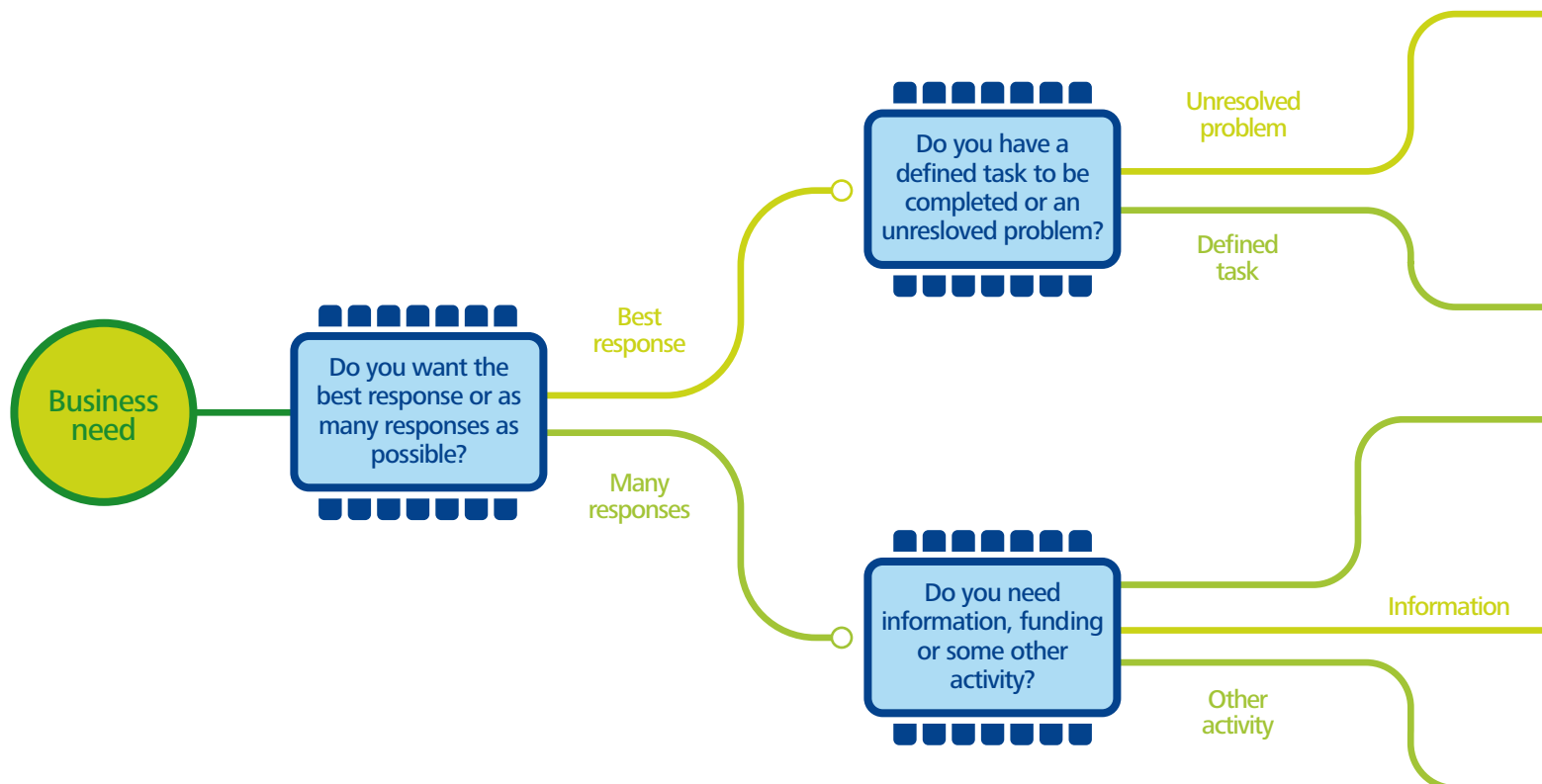
Jeff Howe ³⁷

Right crowd, right problem

As Jeff Howe said in his book, crowdsourcing is not a silver bullet for commerce.³⁸ But the crowd does provide an array of different approaches to help enterprises operate more efficiently amid ongoing shifts in policy, science, technology and skills, and the fluidity exhibited by the wider economy. Businesses and other organisations are finding that the crowd can help with a wide range of challenges, from simple rote tasks, like image labelling, raising money or voting, through to far more complex problems, like brainstorming ideas, designing new products or even strategic planning.

Crowdsourced problems can be vast in scope, such as SETI@home, a ‘citizen science’ project conducted by Zooniverse in conjunction with the SETI Institute, which asked people all over the world to help with the search for extra-terrestrial intelligence.³⁹ Or they can be exquisitely precise, such as seeking a new technology to remove microbubbles from extracorporeal bloodstreams, a current challenge competition managed by InnoCentive.⁴⁰

Figure 1. Choosing the right crowd for the right problem [double-page spread]



Some attempts have been made to classify the astonishing diversity of use cases into a standardised set of general crowdsourcing approaches. But even these typologies are in disagreement: some are problem-based while others are task- or even platform-based.^{41, 42, 43} Crowds, too, can be widely varying in size and skills of their members. For example, the freelance workers registered with on-demand micro-tasking platform TaskRabbit help consumers with everyday tasks, including cleaning, moving or delivery work, whereas the business challenges run by the competition site Kaggle, “the home of data science”, typically require members of the crowd to have high-end computer science, physical science, statistical or mathematical skills.^{44, 45}

So how can you choose what crowdsourcing approach is right for you? In Figure 1, we illustrate the paths to various crowdsourcing models.

Enterprise crowd platforms

Open approaches to innovation have long been the norm for some companies. P&G’s ‘Connect + Develop’, for instance, has enabled the company to establish more than 2,000 successful agreements with innovation partners around the world.⁴⁶ In 2001, IBM started an internal innovation experiment that has now evolved into its ‘InnovationJam™’ platform, which it uses to work with clients, helping participants to ‘jam’ by contributing their expertise and opinions in various topic areas.⁴⁷

But more and more companies and public sector organisations are now ditching traditional innovation processes and are, instead, working with enterprise-scale platforms to reach broader crowds capable of generating answers and executing tasks faster and more cost effectively than their own employees.

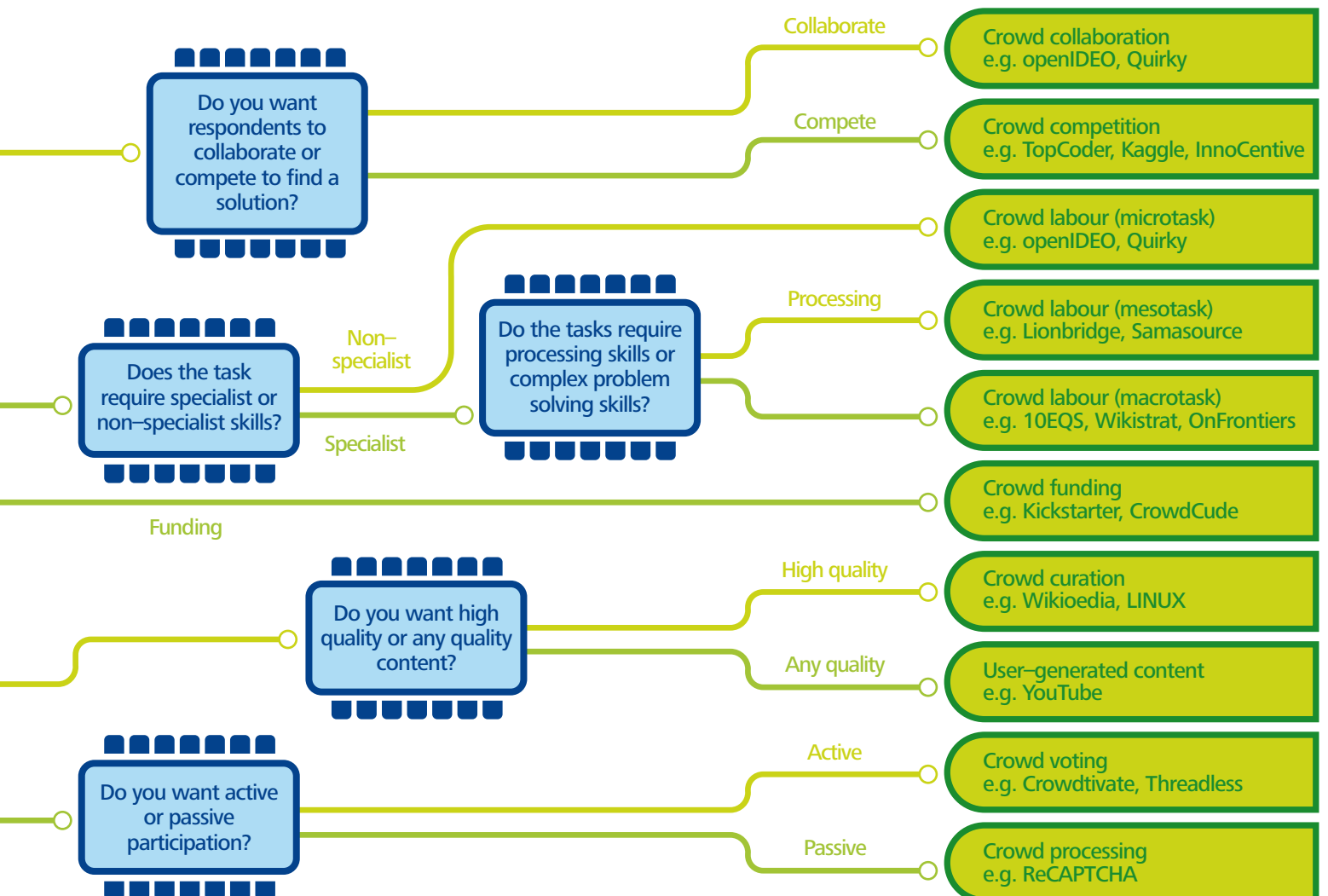


Figure 2 illustrates different types of crowdsourcing platforms and their relative strengths and weaknesses.

Figure 2. Enterprise crowd platforms

<i>Crowdsourcing model</i>	<i>Good for</i>	<i>Not so good for</i>	<i>Examples</i>
<i>Crowd collaboration</i>	<ul style="list-style-type: none"> • Tasks requiring the aggregate 'wisdom of the crowd' • Generating outside ideas 	<ul style="list-style-type: none"> • Promoting individual capabilities or expertise • Predetermined outcomes 	<ul style="list-style-type: none"> • 99Designs • X Prize • Quirky
<i>Crowd competition</i>	<ul style="list-style-type: none"> • Creating actionable solutions • Developing prototypes • Building a sense of community • Generating outside ideas • 'Gamification' 	<ul style="list-style-type: none"> • Predetermined outcomes 	<ul style="list-style-type: none"> • TopCoder • Kaggle • InnoCentive • Applause
<i>Crowd labour (microtasks)</i>	<ul style="list-style-type: none"> • Well-defined, everyday tasks for individuals that require general skills only • On-site manual work, such as store restocking, furniture assembly and cleaning • Large crowds • When you don't want to hire permanent employees or contractors • Real-time market intelligence or data gathering 	<ul style="list-style-type: none"> • Poorly defined, unstructured or non-routine activities • Tasks requiring subjective judgement • Tasks requiring specialist or higher-level cognitive skills 	<ul style="list-style-type: none"> • TaskRabbit • Amazon's Mechanical Turk • Streetbees • Gigwalk • Samasource
<i>Crowd labour (mesotasks)</i>	<ul style="list-style-type: none"> • Well-defined tasks that require specialist processing skills • Routine but time-consuming activities, such as data entry • When you don't want to hire permanent employees or contractors 	<ul style="list-style-type: none"> • Poorly defined, unstructured or non-routine activities • Tasks requiring subjective judgement or specialist skills 	<ul style="list-style-type: none"> • Lionbridge • CrowdFlower
<i>Crowd labour (macrotasks)</i>	<ul style="list-style-type: none"> • Poorly defined or unstructured tasks or problems, such as strategy development, research or consulting • Tasks requiring subjective judgement or specialist skills • When you don't want to hire permanent employees or contractors 	<ul style="list-style-type: none"> • Routine tasks and activities 	<ul style="list-style-type: none"> • 10EQS • Wikistrat • OnFrontiers • Applause
<i>Crowdfunding</i>	<ul style="list-style-type: none"> • Fundraising • Start-ups • High transparency 	<ul style="list-style-type: none"> • Financing ongoing operations • Loosely structured initiatives • High short-term expectations 	<ul style="list-style-type: none"> • Kickstarter • CrowdCube
<i>Crowd curation</i>	<ul style="list-style-type: none"> • Building and sharing knowledge 	<ul style="list-style-type: none"> • Solving defined problems 	<ul style="list-style-type: none"> • Wikipedia • TripAdvisor
<i>User-generated content</i>	<ul style="list-style-type: none"> • Building large content repositories 	<ul style="list-style-type: none"> • Ensuring the best possible quality of content 	<ul style="list-style-type: none"> • YouTube • iStockphoto

Source: Deloitte

Five billion workers by 2020

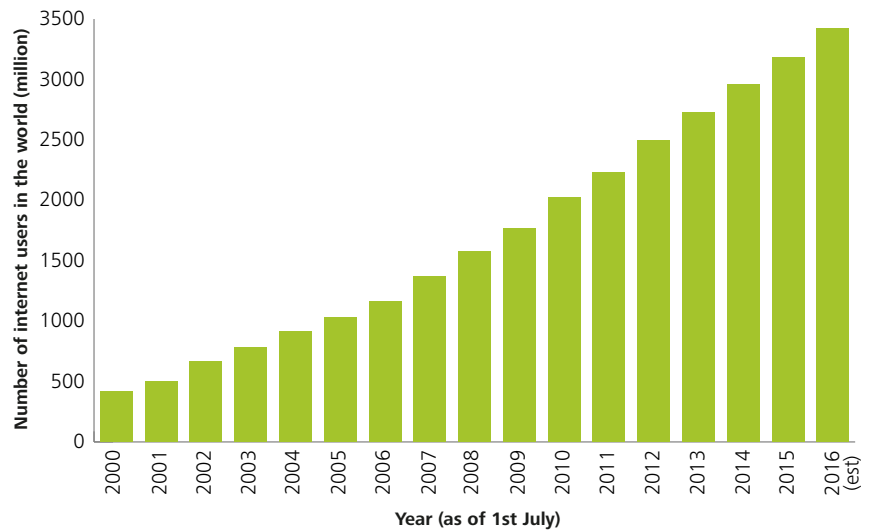
The internet is the engine of the modern-day crowdsourcing platform. It provides both a broadcast mechanism for organisations to set or announce challenges and a network for connecting people and their diverse ideas, skill sets and knowledge. The number of internet users worldwide is growing exponentially, and has risen from just 414 million in 2000 to over 3.4 billion in 2016.⁴⁸ At the current rate of growth, there will be approximately five billion internet users by 2020.

The countries driving this growth include India, China, Brazil, Indonesia and the US, which collectively added over 136 million internet users last year (China, alone, accounted for over 108 million).⁴⁹ The change in India's online population last year was over 30 per cent and, despite their comparatively small populations, the other fastest risers, with 12-month growth rates in excess of 15 per cent, include Mali, Lesotho, Cameroon, Vanuatu, Mauritania and Liberia.⁵⁰

Mobile access to the internet is also growing, with 52.7 per cent of the global mobile phone population accessing the internet from their mobile phone in 2015.⁵¹ This number is expected to reach 63.4 per cent by 2020, which means that mobile phones will be the most popular way for people to access the internet within four years.⁵²

One of the principal benefits of greater online connectivity is improved access to and provision of education – particularly in developing economies and currently impoverished nations. Through programmes such as UNESCO's Framework for Action, digital technologies are enabling international commitments to be made to provide high quality primary and secondary education to all children, focusing on numeracy, literacy, analytical problem-solving and other higher-level cognitive, interpersonal and social skills needed in the future global economy.⁵³

Figure 3. Number of internet users in the world



Source: Internet Live Stats

The implications for enterprises of this growth in connectivity and education are immense. Crowdsourcing harnesses the creative and competitive spirit of people all over the world. Sun Microsystems co-founder Bill Joy said in 1990, "No matter who you are, most of the smartest people work for someone else".⁵⁴ Geolocation and low-cost mobile applications make it easy for smart people everywhere to participate – even if just to do small tasks. And in an increasingly volatile, uncertain, complex and ambiguous operating environment, to develop a competitive advantage – or even just to survive – "companies today need armies of people," says Vivek Wadhwa, a Fellow at Stanford Law School.⁵⁵ But rather than these armies being permanent employees, the crowd gives all organisations the ability to scale up and down dynamically to match changing workload demands, and to find experts in different markets and geographies.

"No matter who you are, most of the smartest people work for someone else."

Bill Joy, Sun Microsystems co-founder

Boudreau and Lakhani describe a well-functioning crowd as being “loose and decentralised” and the problem exposed to “widely diverse individuals with varied skills, experience, and perspectives.”⁵⁶ As more people from all walks of life shift online, therefore, the crowd can begin to operate at a scale that “exceeds even that of the biggest and most complex global corporation, bringing in many more individuals to focus on a given challenge.”⁵⁷ The diversity of backgrounds, knowledge, skills and abilities within the crowd can, under certain circumstances, lead to better, cheaper or more scalable solutions than those developed by teams of in-house specialists.

How is this different from outsourcing or temporary agencies that have been around for decades? Crowdsourcing platforms can now 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, such as smartphones, that provide on-the-spot data entry and performance verification. For example, Clickworker, a German crowdsourcing company, draws on a pool of 700,000 ‘clickworkers’ in 136 countries to take pictures, and gather geodata and other types of information for surveying and research.⁵⁸ Others, such as Gigwalk, use mobile technology to help organisations find and manage geographically dispersed teams and workers, enabling more effective performance monitoring and management.⁵⁹ For temp agencies or outsourcers, the talent pool is constrained by their rosters. In contrast, enterprise platforms like OnFrontiers and Wikistrat 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.^{60, 61}

Crowdsourcing is not a panacea, though, and does not always represent the right approach. So how should businesses new to crowdsourcing get started? What do they need to think about and do to ensure they benefit from the many crowdsourcing platforms available? How can they integrate crowdsourcing solutions and approaches into existing business models? In the next section, we take a look at how businesses create value from the crowd.

As more people from all walks of life shift online, therefore, the crowd can begin to operate at a scale that “exceeds even that of the biggest and most complex global corporation, bringing in many more individuals to focus on a given challenge.”

Using the crowd in enterprise

“Organisations, by their very nature, are designed to promote order and routine; they are inhospitable environments for innovation.”

Theodore Levitt ⁶²

How does the crowd deliver value?

The crowdsourcing ecosystem is still relatively young, but as new platforms and use-cases emerge, the potential for disruptive impact on the enterprise is significant. In shifting towards a more ‘outside-in’ approach to problem-solving, for example, crowdsourcing changes the way that businesses, public sector organisations and other enterprises create value. The size of a company, the number of employees, the tools and other intellectual property developed, or the exclusive agreements a company has with partners in its supply chain no longer limit the capacity of any organisation to discover and apply knowledge. Instead, it is the greater access to knowledge the crowd provides and, in particular, the frictionless flows of diverse ideas enabled by crowdsourcing that now create value.

For businesses, the benefits of crowdsourcing can include:

- **Faster design** – in 2012, DARPA, the US Defence Advanced Research Projects Agency, decided to crowdsource its next-generation amphibious fighting vehicle after shutting down its traditional procurement, which had already cost taxpayers \$13 billion.⁶³ The winning design was announced in April 2013, just six months after the competition was launched.⁶⁴
- **Faster prototyping** – When small-scale prototyping matters, TechShop, a US-based chain of workshops described as an “inventor’s playground”, allows members of all skills levels to use its suite of modern industrial tools and machines, such as 3D printers and robots, to build their own projects quickly and cost-effectively.⁶⁵
- **Higher quality** – Allstate, the second largest general insurer in the US, sponsored a competition in which the crowd created a liability prediction model that was 271 per cent more accurate than the original.⁶⁶

- **Greater elasticity** – when consumer products change – as they do frequently, but also sporadically – CrowdSource uses the crowd to provide retailers with new product titles, descriptions and marketing copy, enabling the retailers to benefit from increased agility and a faster time to market.⁶⁷
- **Appetite for tedious tasks** – TaskRabbit enables anyone to earn money by performing simple tasks or errands for customers who are time-poor or do not have the skills required for many types of task, such as assembling flat-packed furniture, moving house or decorating.⁶⁸
- **Access to new pools of external talent** – SpringRole has been described as the “TaskRabbit of recruiting” by HR Tech Advisor.⁶⁹ SpringRole enables ‘regular’ people to make money for the simple task of referring their friends for job openings.
- **Better engagement and retention of internal talent** – Thomson Reuters uses crowdsourcing internally to tap into the skills of its 17,000 technologists, finding new problem solvers and breaking down department silos.⁷⁰

In certain situations, crowdsourcing can also lead to lower costs. For example, Colgate Speed Stick used the crowd to create a Super Bowl advert for the bargain-basement price of \$17,000, compared with the nine-figure sums usually associated with traditional agencies.⁷¹ In general, crowdsourcing has forced down the costs of experimentation while simultaneously improving the quality of output. This has allowed all organisations, not just the largest corporations, to consider the benefits they can achieve from the crowd.

Don't get lost in the crowd

Crowdsourcing has broad implications for every organisation attempting to use its business model, and decision-makers face a complex array of risks and issues that, left unchecked, may prevent them from achieving the benefits they seek. Tinkering around the edges of your organisation to get ideas to flow is one thing but building crowdsourcing into core delivery activities to realise benefits at scale is not as straightforward as simply 'outsourcing' challenges to established crowdsourcing platforms.

Academics Eoin Whelan, Kieran Conby, *et al*, go so far as to suggest that, "the majority of the open innovation literature, across all fields of research, shows a bias towards its favourable aspects".⁷² They suggest that a number of the inherent deficiencies of crowdsourcing also need to be brought to the attention of businesses. For example, there will always be aspects of business operations or governance too important or too risky to deliver using a faceless crowd. Moreover, simply handing off work to the crowd will not automatically lead to benefits. Instead, ensuring that ideas converge on an appropriate solution swiftly and cost-effectively means understanding how the crowd works and the steps that need to be taken to set up and manage its activities, and to integrate its outputs. In the same way that managing an offshore team requires additional investment in management effort, so too does the crowd.

In Figure 4, we explore the key issues and questions that business leaders should be asking before committing to the crowd.

Although crowdsourcing is not the only answer, if it is planned, initiated, managed and integrated according to a defined strategy then it offers organisations a relatively easy way to experiment with new problem-solving approaches, to design and develop new product prototypes, to make new connections and to develop talent – and to scale what works.

Academics Whelan, Conby, et al, suggest that a number of the inherent deficiencies of crowdsourcing also need to be brought to the attention of businesses.

Figure 4. Key issues and questions

<i>Issue</i>	<i>What's the problem?</i>	<i>Key questions to ask</i>	<i>Suggested approaches</i>
Lack of understanding or conceptual clarity about crowdsourcing	<ul style="list-style-type: none"> The crowdsourcing concept is not clearly communicated or understandable; there's a lack of consensus on what the term refers to Limited applicability of the crowd, and knowing when it is the right approach Finding the right platform and partner 	<ul style="list-style-type: none"> Where could crowdsourcing provide the greatest benefits to my business? For example in innovation, access to talent or process/task completion. Is crowdsourcing right for my organisation? And, if so, what is the business case? Where would there be too much risk associated with crowdsourcing? With whom do I interact within my organisation to collaborate and deliver? What are my competitors and peers doing with the crowd? What problems or opportunities do we share? Can we use crowdsourcing to leapfrog our competitors or to steal a march in a new market? 	<ul style="list-style-type: none"> Identify a champion in your business to whom you can turn for expert advice and insight Assess whether you need to appoint a senior business owner, and if crowdsourcing fits with your existing plans for alternative delivery models Ensure that you engage the right crowd for your type of problem Develop a clear, concise and coherent strategy for using crowdsourcing in your business
Ensuring good quality of submissions from the crowd	<ul style="list-style-type: none"> Ensuring a good quality of submissions Minimising any additional effort associated with managing the crowd or platform provider 	<ul style="list-style-type: none"> Are my requirements well defined? Do we understand how the ideas and solutions generated by the crowd will be integrated with our existing products and operations? Can the tasks or activities be easily broken down into their component parts? Can we provide continuity between crowd and in-house teams? For example, do we know how to reassemble solutions for component parts, and do we have the right people to do this? Are there other crowdsourcing projects from which I can draw lessons? How do I ensure responsibility for and buy-in to products created by the crowd? Who will manage these once integrated into our organisation? 	<ul style="list-style-type: none"> Ensure that the context in which the crowdsourcing project sits is well understood by all internal parties as well as the crowd Aim for a balance in the scope of work between open activities (those that require submission of a number of diverse ideas) and closed tasks (those that focus on just getting a simple job done)
Difficulties associated with outsourcing to the crowd in traditional 'line' organisations	<ul style="list-style-type: none"> Working with the crowd requires a different, more open approach compared to more traditional delivery methods Governance processes are set up to deal with classic rather than agile development methodologies Wholesale changes to business processes and assessment of risk are difficult, if not impossible 	<ul style="list-style-type: none"> What and where are the bottlenecks in our business that would prevent or inhibit crowd-based approaches? Where does good practice exist already in our organisation? What will be the impact of crowdsourcing on our legacy approaches and systems? 	<ul style="list-style-type: none"> Focus internal teams on the bigger picture – not just on the crowdsourced task – and make them responsible for and empowered to deliver the integrated solution Identify 'pilot' activities at the edge of the business that can be used as a testbed for crowd-based development approaches, and also to test risk issues and appetite Follow-up pilots with new projects and activities to cement new ways of working Look for examples of best agile practice in your business, and bring 'edge-leaders' into the core Engage early with operations, risk and legal

<i>Issue</i>	<i>What's the problem?</i>	<i>Key questions to ask</i>	<i>Suggested approaches</i>
Challenges to talent and organisational culture	<ul style="list-style-type: none"> • Permanent employees feel threatened when activities are outsourced to the crowd • The organisation feels like it is losing control and ownership of the solutions it delivers • Ability to scale up and down resource as demand varies • Difficulty in attracting the right talent quickly enough to solve my problems 	<ul style="list-style-type: none"> • Who in my organisation will be most affected by crowdsourcing and are they supportive? • Do I understand where the crowd is better-placed to answer questions than my permanent staff? • How can (and should) I enable my employees to engage as part of the crowd? • Where can the crowd be used best to enable my employees to spend more time on their highest value activities? • How do the projects fit with our strategy? What other impacts will there be on our organisational structure and talent? 	<ul style="list-style-type: none"> • Identify clearly the boundaries between 'business-as-usual' projects and crowd projects • Encourage employees to participate in the crowd to develop new skills and experience – but set reasonable limits • Encourage employees to collaborate and work across organisational boundaries – exploiting synergies and different ways of thinking • Identify similar historical projects hosted by crowdsourcing platforms and encourage employees to attempt these challenges and learn from them
Keeping hold of confidential information and intellectual property, and additional risks associated with using the crowd	<ul style="list-style-type: none"> • The creation of work products by the crowd could lead to intellectual property infringement and reuse risks • Crowd members are strangers to the organisation, and have not necessarily gone through the same rigorous recruitment process • Misuse and leakage of data is an increasingly large risk given the increasing volumes of data being used, produced and stored by the crowd and crowdsourcing platforms 	<ul style="list-style-type: none"> • Have we identified the potential risks, and do we have a plan to mitigate them? • Have we made security and privacy a priority? • Do we control or understand all of the assets that the crowd will use in generating their ideas and solutions? Who has access to these? • Do we understand the standard terms and conditions of the contract with the crowdsourcing platform provider? • Have we thought about what our customers think about our use of the crowd and how are we engaging them? 	<ul style="list-style-type: none"> • Before sending data to the crowd, work to anonymise or obfuscate data appropriately • Break down problems into smaller, discrete components to ensure they are tackled systematically and carefully – then integrate the solutions • Draft a risk register and clear project plan

Source: Deloitte

From closed to open

“Challenges ask great questions. How can we do something better? Open innovation is about asking to do more with less, to do things better and faster and to get a great diversity of insight.”

Matt Chapman ⁷³

For centuries, traditional businesses have relied upon closed approaches for their success: they recruit and retain specialists, and then deepen their skills and experience over the ensuing years; they develop proprietary tools, tactics, techniques and procedures to help them do business, drawing upon decades of project work and intellectual property; they sell products and services that evolve only gradually and compete in markets where the competition is doing the same; and they build up a protective armour of sorts, shielding themselves against risk and change. Being closed, and keeping things ‘in-house’, was simply the way that businesses worked. Failures could be kept locked up; credit for successes could be clearly assigned.

But today’s dynamic operating environment demands a different and more agile approach from businesses and other organisations. And while some bold predictions suggest that crowdsourcing will put an end to these working conventions overnight, the reality is that the crowd offers a practical way for enterprises to experiment, to interact with the crowd and to offer faster, better, and sometimes cheaper solutions. For individual workers, too, crowdsourcing provides an opportunity to engage with businesses in a new way, to work with experts from a wide array of different fields, to develop new skills and interests, and, if they so desire, to take on challenges with a real social purpose.

Linus Pauling, the American scientist, author and educator, said, “If you want to have good ideas you must have many ideas. Most of them will be wrong, and what you have to learn is which ones to throw away.”⁷⁴ As the crowdsourcing ecosystem and the online population both steadily build over the next few years, the opportunities that exist for businesses and public sector organisations to discover and develop “good ideas” will multiply rapidly.

As a consequence, organisations that fail to harness the strength and diversity of the crowd, instead adopting a ‘wait-and-see’ attitude, are likely to be overtaken by stripped-down, more nimble organisations that appreciate the shrinking half-life of knowledge and the power of connectivity over in-house content.

For start-ups and entrepreneurs, interest in the crowdsourcing space is growing rapidly. For legacy organisations more averse to risk and experimentation, the situation is not quite so certain. However, the stability and scope of services now offered by today’s enterprise crowd platforms should stir ever-greater numbers into action. These organisations can start by identifying specific opportunities where inherently closed approaches to current challenges create bottlenecks to innovation, slowing down processes and driving up costs. By solving concrete – even if small – problems at their edges, organisations can more effectively identify the technical, organisational, cultural and talent changes necessary to realise the broader benefits of crowdsourcing – and then scale and repeat.

Ultimately, crowdsourcing is not just about greater access to talent. It is also about tapping into new sources of data and deeper pools of knowledge that cannot easily be accessed by any other approach. Alongside technologies like artificial intelligence and robotics, crowdsourcing looks set to play a pivotal role in future business. It will affect the way that workers and organisations interact, the way that businesses engage with their customers and, ultimately, the productivity and diversity of our economy.

Endnotes

1. "Using the Crowd as an Innovation Partner", Kevin J. Boudreau and Karim R. Lakhani, Harvard Business Review, April 2013. See also: <https://hbr.org/2013/04/using-the-crowd-as-an-innovation-partner/>
2. "Weighing the World: The Quest to Measure the Earth", Edwin Danson, Oxford University Press, 2006.
3. Ibid
4. "Longitude found: John Harrison", Royal Museums Greenwich. See: <http://www.rmg.co.uk/discover/explore/longitude-found-john-harrison>
5. "John Harrison's 'longitude' clock sets new record – 300 years on", Steve Connor, The Independent, 18 April 2015. See also: <http://www.independent.co.uk/news/science/john-harrisons-longitude-clock-sets-new-record-300-years-on-10187304.html>
6. "How the Oxford English Dictionary started out like Wikipedia", Nate Lanxon, Wired.co.uk, 13 January 2011. See also: <http://www.wired.co.uk/news/archive/2011-01/13/the-oxford-english-wiktionary>
7. Ibid.
8. Wikipedia statistics from: <https://en.wikipedia.org/wiki/Special:Statistics>, accessed 24 March 2016.
9. "Corporate crowdsourcing", IdeaConnection. See also: <http://www.ideaconnection.com/crowdsourcing/>
10. "On Language", William Safire, New York Times Magazine, 5 February 2009.
11. "Crowdsourcing: A Definition", Jeff Howe, Crowdsourcing Blog, 2 June 2006. See also: http://crowdsourcing.typepad.com/cs/2006/06/crowdsourcing_a.html
12. See: <http://lunar.xprize.org/>
13. See: <http://www.michelsonprizeandgrants.org/michelson-prize>
14. See: <https://longitudeprize.org/>
15. See: <http://www.lionbridge.com/>
16. See: <http://www.samasource.org/>
17. See <http://www.wikistrat.com/>
18. See: <https://www.onfrontiers.com/>
19. See <http://www.10eqs.com/>
20. For example, see: https://www.experience.com/alumnus/article?channel_id=career_management&source_page=additional_articles&article_id=article_1247505066959
21. "Deloitte Millennial Survey 2016", DTTL, February 2016. See also: <http://www2.deloitte.com/content/dam/Deloitte/global/Documents/About-Deloitte/gx-millennial-survey-2016-exec-summary.pdf>
22. "The State of Crowdsourcing in 2015: How the world's biggest brands and companies are opening up to consumer creativity", eYeka, 9 April 2015. See also: https://en.eyeka.com/resources/analyst-reports#CSreport2015?utm_campaign=csr&utm_content=1&utm_medium=act&utm_source=prc&utm_term=en
23. "Predicts 2015: Sourcing Strategies Shift From 'Built to Last' to 'Built to Adapt'", Gartner, Inc., 26 November 2014. See also: <https://www.gartner.com/doc/2925517/predicts--sourcing-strategies-shift>
24. See: <https://en.eyeka.com/>
25. See: <https://www.innocentive.com/>
26. See: <https://www.kaggle.com/>
27. See: <https://www.topcoder.com/>
28. See: <http://www.gigwalk.com/>
29. See: <https://www.upwork.com/>
30. See: <https://99designs.co.uk/>
31. See: <http://www.streetbees.com/>
32. See: <http://www.designcrowd.co.uk/>
33. See: <http://writology.com/>
34. "The new meaning of 'open source talent'", CIO Journal by Wall Street Journal, 24 September 2013. See also: <http://deloitte.wsj.com/cio/2013/09/24/the-new-meaning-of-open-source-talent>
35. "Using the Crowd as an Innovation Partner", Kevin J. Boudreau and Karim R. Lakhani, Harvard Business Review, April 2013. See also: <https://hbr.org/2013/04/using-the-crowd-as-an-innovation-partner/>
36. See: https://www.topcoder.com/tc?module=ComponentRecordbook&c=overall_money
37. "The rise of crowdsourcing", Jeff Howe, Wired, 6 January 2006. See also: <http://www.wired.com/2006/06/crowds/>
38. "Crowdsourcing: Why the Power of the Crowd is Driving the Future of Business", Jeff Howe, September 2009. A summary of the book can be seen at: <http://www.bizbriefings.com/Samples/IntInst%20---%20Crowdsourcing.PDF>
39. See: <http://www.seti.org/seti-institute/project/details/setilive>
40. See: <https://www.innocentive.com/ar/challenge/9933816>
41. A widely cited problem-based crowdsourcing typology is that proposed in the book: "Crowdsourcing", by Daren Brabham, published in 2013. His typology can also be seen at: <http://www.intellitics.com/blog/2013/11/14/daren-brabham-crowdsourcing-typology/>
42. For types of crowdsourcing task are proposed in Jeff Howe's book: "Crowdsourcing: Why the Power of the Crowd is Driving the Future of Business", Jeff Howe, Crown Business, September 2009.
43. For an example of a platform-based typology, see: "Ross Dawson: Six tools to kickstart your crowdsourcing strategy", Neil Davey, MyCustomer.com, 1 July 2010. See also: <http://www.mycustomer.com/marketing/strategy/ross-dawson-six-tools-to-kickstart-your-crowdsourcing-strategy>
44. See: <https://www.taskrabbit.com/m/tasks>
45. See: <https://www.kaggle.com/>
46. See: <http://www.pgconnectdevelop.com/>
47. See: <https://www.collaborationjam.com/>
48. See: <http://www.internetlivestats.com/internet-users/#trend>
49. See: <http://www.internetlivestats.com/internet-users-by-country/>
50. Ibid.
51. Number of mobile phone users worldwide from <http://www.statista.com/statistics/274774/forecast-of-mobile-phone-users-worldwide/>
52. Ibid.

53. "Education 2030 Framework for Action – Towards inclusive and equitable quality education and lifelong learning for all", UNESCO, December 2015. See also: <http://unesdoc.unesco.org/images/0024/002432/243278e.pdf>
54. Bill Joy quote - "How fast can you learn?", Rich Karlgaard, Forbes, 9 November 2007. See also: <http://www.forbes.com/forbes/2007/1126/031.html>
55. "Benefits of Crowdsourcing", Vivek Wadhwa, The Wall Street Journal, 29 October 2014. See also: <http://www.wsj.com/articles/benefits-of-crowdsourcing-1414625224>
56. "Using the Crowd as an Innovation Partner", Kevin J. Boudreau and Karim R. Lakhani, Harvard Business Review, April 2013. See also: <https://hbr.org/2013/04/using-the-crowd-as-an-innovation-partner/>
57. Ibid.
58. See: <https://www.clickworker.com/>
59. See: <http://www.gigwalk.com/>
60. See: <https://www.onfrontiers.com/>
61. See: <http://www.wikistrat.com/>
62. "Creativity Is Not Enough", Theodore Levitt, Harvard Business Review, August 2002. See also: <https://hbr.org/2002/08/creativity-is-not-enough>
63. "How crowdsourcing can make products better, cheaper, faster: Lessons from a military-led amphibious tank project", Professor Howard Yu, IMD. See also: <http://www.imd.org/research/challenges/TC005-16-darpa-yu.cfm>
64. "This is the Million-Dollar Design for DARPA's Crowdsourced Swimming Tank", Spencer Ackerman, Wired, April 2013. See also: <http://www.wired.com/2013/04/darpa-fang-winner/>
65. "Step inside an inventor's playground", Ryan Bergeron, CNN, 9 October 2015. See also: <http://edition.cnn.com/2015/10/09/living/tech-shop-mike-rowe-somebodys-gotta-do-it/>
66. "Predicting liability for injury from car accidents", Kaggle. See also: <http://www.kaggle.com/solutions/casestudies/allstate>
67. See: <http://www.crowdsourcing.com/solutions/copywriting-services/product-descriptions/>
68. See: <https://blog.taskrabbit.com/category/task-ideas-tips/>
69. See: <https://hrtechadvisor.com/springrole-brings-crowdsourcing-gamification-recruiting/>
70. "Thomson Reuters uncovers internal engineering talent with crowdsourcing", Nicole Laskowski, TechTarget, April 2014. See also: <http://searchcio.techtarget.com/opinion/Thomson-Reuters-flushes-out-internal-engineering-talent-with-crowdsourcing>
71. "A Tongal-produced ad scores a Super Bowl touchdown," Peter Diamandis, Huffington Post, March 4, 2013. See also: http://www.huffingtonpost.com/peter-diamandis/a-tongal-produced-ad-scor_b_2806396.html
72. "Editorial: The Role of Information Systems in Enabling Open Innovation", Whelan, E., Conboy, K., Crowston, K., Morgan, L., Rossi, M., Journal of the Association for Information Systems, Volume 15, Special Issue, November 2014. See also: <http://aisel.aisnet.org/cgi/viewcontent.cgi?article=1692&context=jais>
73. "13 revealing quotes on open innovation in humanitarian organisations", Lauren Parater, UNHCR Innovation, 3 August 2015. See also: <http://innovation.unhcr.org/13-revealing-quotes-on-open-innovation-in-humanitarian-organizations/>
74. "The Impact of Linus Pauling on Molecular Biology", Francis Crick, The Pauling Symposium 1995, Oregon State University. See also: http://oregonstate.edu/dept/Special_Collections/subpages/ahp/1995symposium/crick.html

Contacts



Vimi Grewal-Carr
Managing Partner for Innovation
+44 (0)20 7303 7859
vgrewalcarr@deloitte.co.uk



Greg Howard
Deloitte Pixel Lead
+44 (0)20 7303 8225
grhoward@deloitte.co.uk



Carl Bates
Partner, Lead for Crowdsourcing
+44 (0)20 7007 7590
carbates@deloitte.co.uk



Harvey Lewis
Director of Insight
+44 (0)20 7303 6805
harveylewis@deloitte.co.uk

Deloitte refers to one or more of Deloitte Touche Tohmatsu Limited (“DTTL”), a UK private company limited by guarantee, and its network of member firms, each of which is a legally separate and independent entity. Please see www.deloitte.co.uk/about for a detailed description of the legal structure of DTTL and its member firms.

Deloitte LLP is the United Kingdom member firm of DTTL.

This publication has been written in general terms and therefore cannot be relied on to cover specific situations; application of the principles set out will depend upon the particular circumstances involved and we recommend that you obtain professional advice before acting or refraining from acting on any of the contents of this publication. Deloitte LLP would be pleased to advise readers on how to apply the principles set out in this publication to their specific circumstances. Deloitte LLP accepts no duty of care or liability for any loss occasioned to any person acting or refraining from action as a result of any material in this publication.

© 2016 Deloitte LLP. All rights reserved.

Deloitte LLP is a limited liability partnership registered in England and Wales with registered number OC303675 and its registered office at 2 New Street Square, London EC4A 3BZ, United Kingdom. Tel: +44 (0) 20 7936 3000 Fax: +44 (0) 20 7583 1198.

Designed and produced by The Creative Studio at Deloitte, London. J6256