

# The hero's journey through the landscape of the future

From the Deloitte Center for the Edge



# About the authors

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# About the research team

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This report would not have been possible without the hard work of our Edge fellows, who over the past year tracked down case studies, interviewed industry insiders, and tirelessly answered the call for "more data" in service of telling this story.

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**Wendy Tsu** (research fellow, Deloitte Center for the Edge) is passionate in exploring the edges between learning, social impact, and innovation. As part of Deloitte Consulting LLP's Strategy & Operations practice, her focus has been in technology and education. Most recently, she has been helping higher education institutions reimagine their operating models. As part of the Center for the Edge, she has conducted research and analysis related to new forms and institutions of education and how they impact the educational journey for the lifelong learner.

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# Executive summary

**R**APID advances in technology and the liberalization of public policy have shaped a world in which large companies face increasing performance pressure amidst sinking return on assets, intense competition, and changing workforce dynamics. Individuals are taking advantage of lowered barriers to market entry and commercialization to become creators in their own right. As a result, a new economic landscape is beginning to emerge in which a relatively few large, concentrated players will provide infrastructure, platforms, and services that support many fragmented, niche players. In this way, both large players and small will coexist and reinforce each other. Some parts of the economy will be more affected by fragmentation than others, and more quickly, but the fragmentation will be enduring rather than transitory. In this new landscape, much of the

world's economic value will be created by the relationships among participants. Therefore, it is less useful to look at any one company than to consider the dynamics that will develop among the large and small players. This changing landscape will have implications for companies and individuals. Large companies will likely play one of three roles in this new landscape: infrastructure providers, aggregation platforms, or agent businesses. Today's large companies will need to assess whether the market for their core products or services is susceptible to fragmentation and choose where to focus in the future. The actions they take today can help to position themselves for the role they choose to play in the future. For individuals and small entities, the new landscape offers opportunities to transform the pressures of today into profitable new ventures.

# The journey begins

**M**ANY large companies are on shaky ground. Seismic waves are already shaping the landscape. The winners among large companies in coming decades will be those that position themselves on more solid ground in areas of the economy that will continue to support scale and scope economics. The evolving landscape, reshaped and reformed, is opening up large areas that will favor smaller, more focused, enterprises—creating opportunities for all of us to build viable small businesses that tap into our creative potential, but only if we know how to focus. Companies large and small have to be thoughtful about where they position themselves to be sustainable. Strategies of position are back with a vengeance. The time to act is now, before the ground shifts any further.

If, in 2005, someone had said that a marketplace that didn't even exist yet would grow to over a million discrete sellers with \$1.35 billion in sales in only eight years, he or she likely would have faced skepticism.<sup>2</sup> Similarly, the emergence of a platform that would enable 5.7 million individuals—most of them not professional investors—to fund over \$1 billion worth of individual- and small business-led projects might also have sounded unlikely. Yet, today, both the Etsy marketplace

and the Kickstarter crowdfunding platform not only exist but are thriving and continue to grow rapidly. Such success is emblematic of a dramatic shift in the business landscape. The simultaneous fragmentation and concentration that they exemplify will change how we do business and go about our daily lives. Companies of all sizes need to understand the forces that led to their rise, as the marketplace's

simultaneous fragmentation into many smaller entities and its concentration in certain key roles represents a crucial redefinition of who is able to start a business, what a successful business looks like, how big it can get, and what is required to sustain it.

Though it manifests differently in different parts of the economy, fragmentation refers to an increase in the number of smaller entities addressing a diverse range of

business and consumer needs. In fragmenting parts of the economy, each entity has a small addressable market, often focused on a niche; minimal investment or backing is needed to enter the market. These small entities proliferate rapidly, and no one controls enough market share to influence the industry. Crucially, this fragmentation is not cyclical or transitory; in these parts of the economy, where

“The future is already here—it’s just not very evenly distributed.”

—William Gibson<sup>1</sup>

businesses compete on specialization, personalization, and customization, “diseconomies of scale” mean that growing larger creates a performance disadvantage. At the same time, certain roles in the economy are increasingly dominated by fewer, but larger, entities. In concentrating parts of the economy, an entity cannot profitably compete without having scale or scope, and their value to fragmented players is predicated on their being leaders in the market.

We are still in the early stages of this transformation, but signals are emerging from a number of sectors that go well beyond Etsy and Kickstarter:

- Pomplamoose, an American musical duo featuring Jack Conte and Nataly Dawn, first gained fame in 2008 with their YouTube hit *Single Ladies*, which now has over 10 million views. They recorded the song in Jack's bedroom using relatively basic software and equipment. Having built a large fan base on YouTube, the band remained independent, generating income from ad revenues (via YouTube's *Musicians Wanted*, a program for sharing ad revenue), iTunes online marketplace sales, a Kickstarter campaign, and commercial work and tours.<sup>3</sup> In 2013, Conte started Patreon, an online marketplace that allows digital media creators to monetize their web presence through recurring funding from fans.<sup>4</sup> As Conte summed up in a 2012 TEDx talk, the traditional music industry did not recognize the small-business version of a band, even as online distribution and marketing were changing the economics of production and distribution and disrupting the traditional definition of a “successful musician” as someone backed by a major record label with record sales in the millions.<sup>5</sup>
- Spencer Walle, a polyglot with a love of languages who earns a living as a freelancing intellectual property translator, represents the changing face of the increasingly empowered independent worker space.
- Online retailer Nasty Gal illustrates the powerful market reach that concentrated platforms provide to small, niche businesses. A photography school dropout with a unique sense of style, Sophia Amoruso began her business by buying low-cost vintage items and reselling them for a much higher price on eBay. She promoted her business on a popular social-networking platform, which she also used to find models. As demand soared, Amoruso purchased a domain name and began selling from her own site, forging partnerships with independent labels, offering limited runs designed to sell out quickly, and continuing to use platforms such as Facebook and Instagram to cultivate a loyal following. Relying on reinvested profits, Amoruso did not use external financing until 2012, when she accepted a \$50 million investment from Index Ventures.<sup>7</sup> Sales in 2012 were nearly \$130 million.<sup>8</sup>

After graduating college and joining a small translation firm, Walle realized that he loved the industry but wanted more flexibility and autonomy. Using a combination of online freelancer platforms, direct email solicitation, and Google Groups, Walle has cultivated a strong and consistent network of customers. Earning a yearly income that averages upwards of five times his previous salary at the translation company, Walle simultaneously enjoys the flexibility and autonomy of freelancing—traveling frequently, working from wherever he chooses, and considering starting his own small company.<sup>6</sup>

Unfortunately, many large companies today don't yet recognize or understand the impact of fragmentation in their industries. Later in this report, we will discuss why the typical large company's responses, to compete or acquire, are losing tactics. Instead, companies should understand the evolution of their industry and their role within it. Ultimately, both concentrated and fragmented players



need and reinforce each other. In order to survive and thrive, businesses should consider the following:

1. Which parts of the economy are fragmenting?
2. Which parts of the economy are concentrating?
3. How will various ecosystem players interact?

Some large companies have begun to take steps toward embracing the new symbiotic relationship with fragmented entities. Companies such as GE and West Elm are exploring ways to engage with independent designers and tap into the design potential resident in the crowd. In November 2013, GE invested \$30 million in Quirky, a start-up that crowdsources ideas and uses a mix of crowd and internal capabilities to develop a product from idea to retail shelf.<sup>9</sup> One recent product: the Aros, an 8,000-BTU smart air conditioner. In addition to looking good, it can cool a 350-square-foot room, has a washable filter, and the air intake is designed to prevent Aros from using already-cooled air. The air conditioner can be turned on and off using Quirky's Wink mobile app and gives dynamic savings recommendations based on energy usage and prices.<sup>10</sup> The partnership with Quirky allows GE to extend its research and development (R&D) capabilities by tapping into a much broader ecosystem of product design talent. West Elm is also responding to the increasing demand for unique and local products or products with a "story" by working with Etsy's wholesale program to feature products—ranging from paperweights and sculptures<sup>11</sup> to t-shirts, artwork, and even bridal wear—made by Etsy sellers in their own stores.<sup>12</sup> Through national retail platforms, independent designers such as Lisa Jones of Tiny Terrains—with over 12,000 admirers and 4,500 sales transactions on Etsy since 2011—can reach new customers in physical stores across the nation.<sup>13</sup>

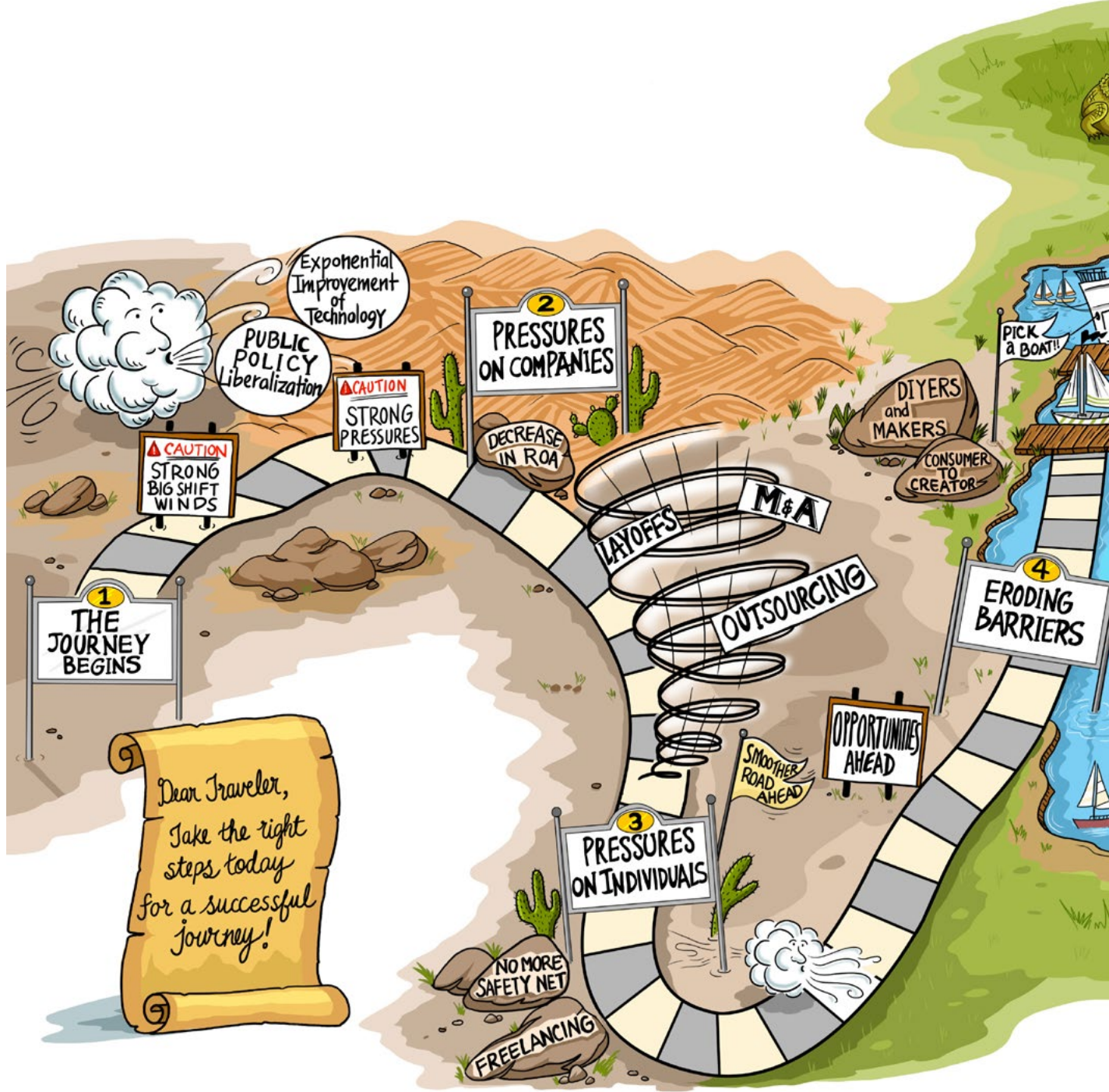
In this report, we will explore:

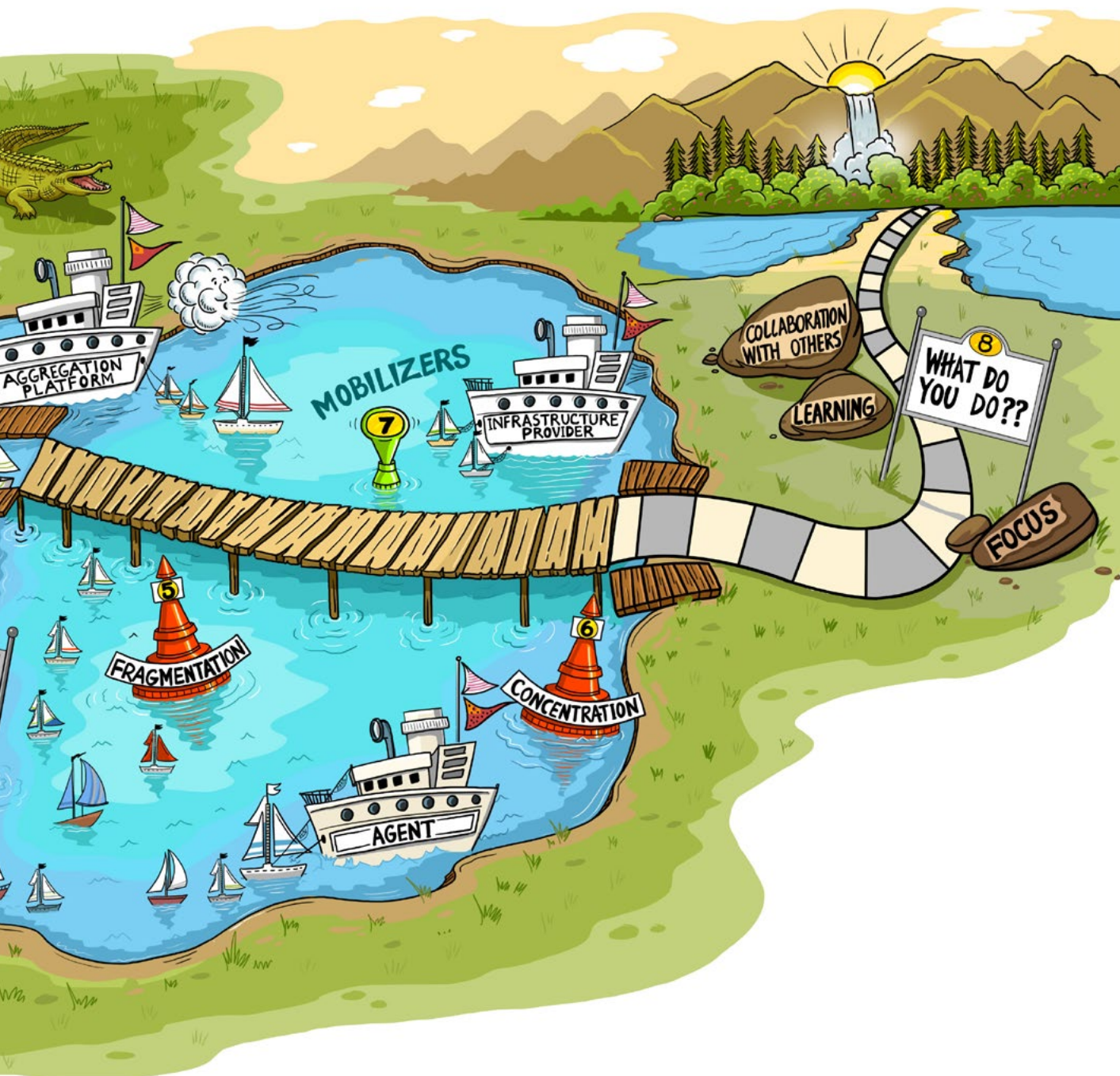
1. **Pressures on companies:** Macro trends impacting today's businesses, performance implications, and common response strategies
2. **Pressures on individuals:** The decline of the "safety nets" commonly associated with full-time employment by an established company
3. **Eroding barriers:** Forces reducing barriers to entry, commercialization, and learning
4. **Fragmentation:** The emergence of many fragmented players focused on product and service development and commercialization in the sectors of the economy where barriers were reduced
5. **Concentration:** The emergence of infrastructure, platforms, and agent roles which provide scale and scope services to the fragmented players
6. **Mobilizers:** The emergence of players focused on orchestrating the ecosystem facilitates collaboration and learning
7. **What companies can do:** Winning strategies that companies can take today to position themselves successfully for the future

In our analysis, we will evaluate the signals that we already see emerging on the edges of various industries and extrapolate from these signals to build a broader perspective.

Figure 1 illustrates the key elements of our perspective. It is a map that can be used as a guide to the hero's journey, highlighting the path that a company or an individual in the business landscape would take. Each milestone on this map—from "Pressures on companies" to "Eroding barriers" to "What do you do?"—illustrates how the changing business landscape will impact the way companies will look and interact with the overall ecosystem.

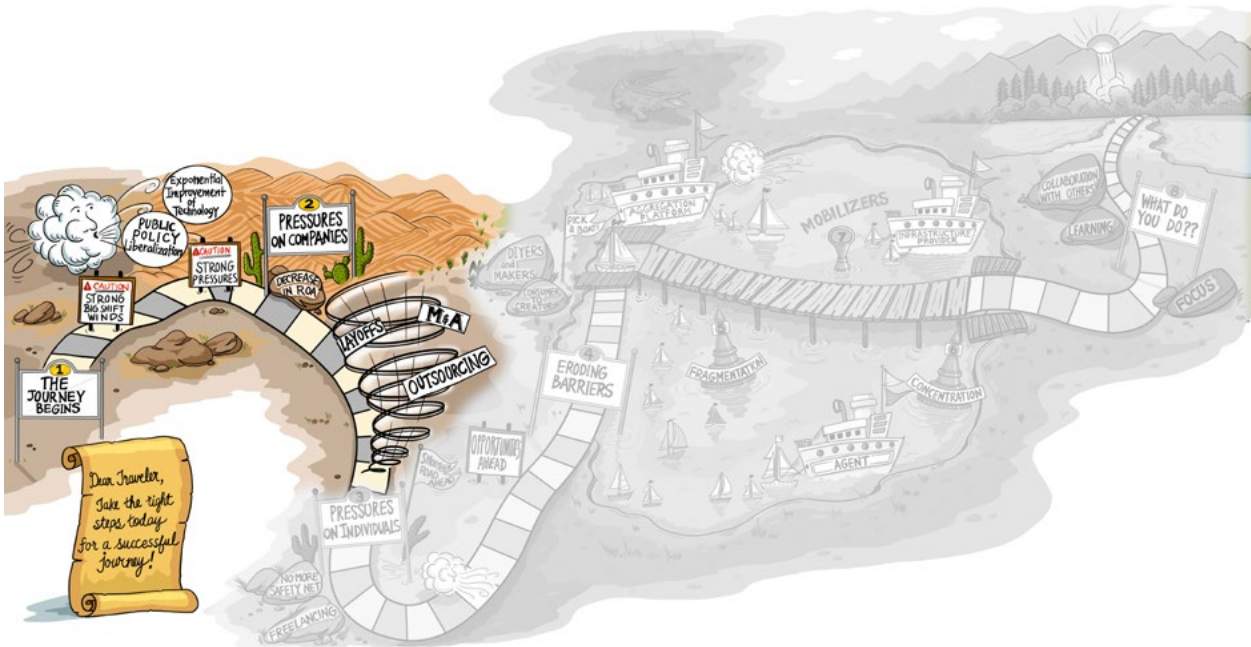
Figure 1. The journey to the future of the business landscape





# Pressures on companies

Figure 2. The journey to the future of the business landscape: Pressures on companies



OVER the past few decades, the cost performance of core digital technologies—computing, storage, and bandwidth—has improved rapidly and shows no signs of slowing down (see figure 3, *foundational trends*). This exponential improvement in digital technologies is, in turn, fueling exponential innovation in other technologies and business practices across industries and markets.<sup>14</sup> In addition, since World War II, barriers to the movement of products, money, people, and ideas, both within countries as well as internationally, have decreased.<sup>15</sup> Together, these technology and








public policy trends have had the economic effect of significantly intensifying competition and lowering barriers to entry. (For a more in-depth exploration of these forces, please see our *Shift Index 2013* series of reports.<sup>16</sup>)

The flows of talent, information, and knowledge unleashed by exponential technology improvements and liberalizing public policy are challenging traditional business and operating models and fundamentally reshaping the business landscape in a phenomenon we have termed the “Big Shift.”

The Big Shift impacts both individuals and organizations. Individuals able to quickly adopt new technologies and participate in knowledge flows are benefiting from the forces of the Big Shift as consumers and creative talent (see figure 3, *impact trends*). Consumers can now easily compare options and prices and have multiple ways to make a purchase (for example, shopping both online and in brick-and-mortar stores), and their loyalty to product brands is decreasing. Separately, top

workforce talent is highly sought after as the key to growth, innovation, and performance improvement for companies. However, top-tier talent can also now easily identify new opportunities and compare employment options, wherever they might be. As a result, creative talent has much more bargaining power and is able to command higher compensation and pursue more desirable work opportunities, putting even more performance pressure on companies.

**Figure 3. The Big Shift’s trends**

Foundational trends		The cost of computing power has decreased from \$222 per million transistors in 1992 to \$0.06 per million transistors in 2012.
		The cost of data storage has decreased from \$569 per gigabyte of storage in 1992 to \$0.03 per gigabyte in 2012.
		The cost of Internet bandwidth has decreased from \$1,245 per 1,000 Mbps in 1999 to \$23 per 1,000 Mbps in 2012.
		The overall trend of index of economic freedom, a compilation of 10 indicators measured by the Heritage Foundation, has been increasing since 1995.
Impact trends		Nearly 70 percent of customers agree that they have increased information and choice about brands.
		The compensation gap between the creative class and the rest of the workforce has steadily widened over the past 10 years.
		The economy-wide return on assets (ROA) has declined over the last 47 years, to a quarter of its 1965 level in 2012.

Source: John Hagel, John Seely Brown, Tamara Samoylova, and Matt Frost, *2013 Shift Index metrics: The burdens of the past*, Deloitte University Press, November 11, 2013, pp. 9-27, <http://dupress.com/articles/the-burdens-of-the-past/>.

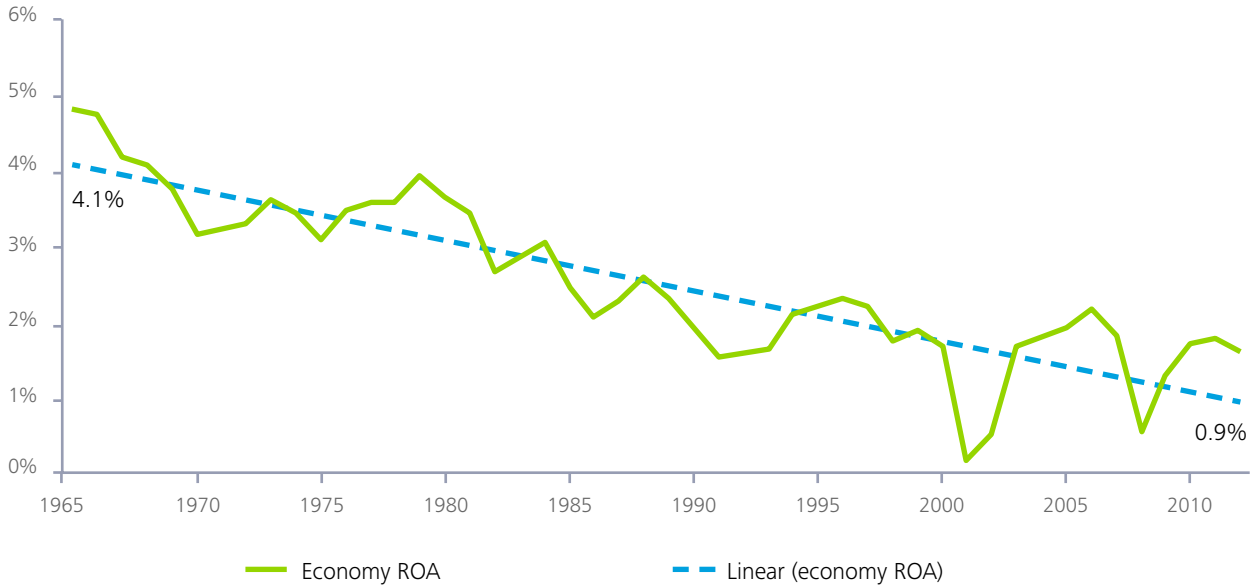
Graphic: Deloitte University Press | DUPress.com

Meanwhile, companies are struggling. The performance of US public companies, as measured by return on assets (ROA), is now just a quarter of its 1965 level (see figure 4). Competition has increased, emerging from new and unexpected areas, making it more difficult for companies to maintain performance. In the past 55 years, the average tenure of a company on the S&P 500 has declined from 61 years to 18 years.<sup>18</sup> During that same period,

the rate at which companies lose their leadership position within an industry has risen 39 percent.<sup>19</sup>

In response, many companies are resorting to short-term cost-reduction tactics such as layoffs and outsourcing, or using mergers and acquisitions (M&A) to increase scale (and buy revenue). As illustrated in figure 5, headcount reduction has been a growing response to poor performance. Many companies also try

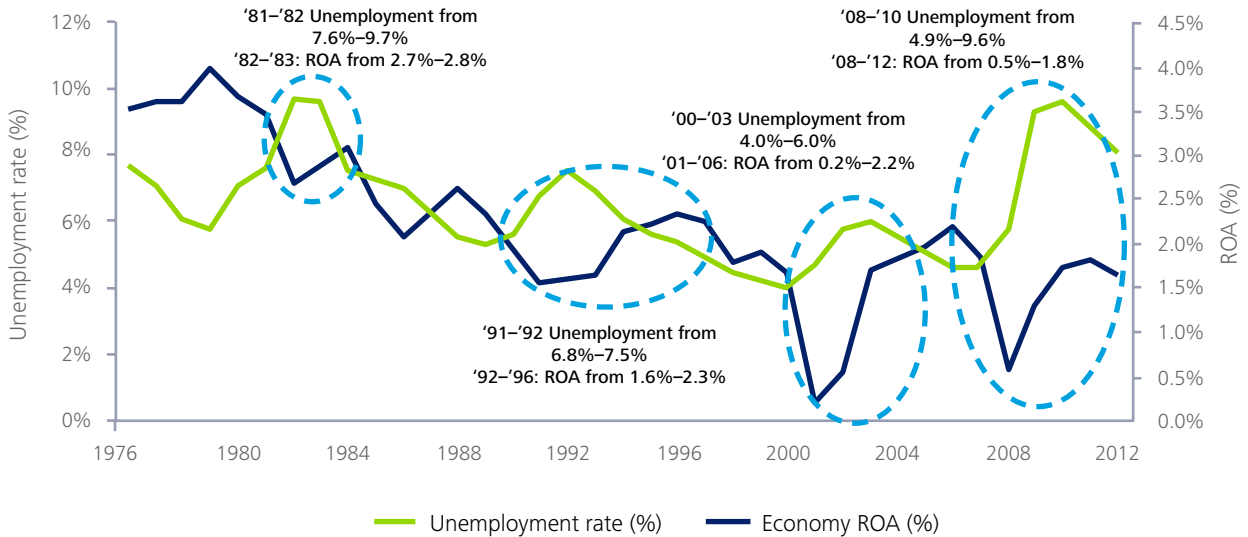
Figure 4. Return on assets for the US economy (1965–2012)



Source: Compustat, Deloitte analysis.

Graphic: Deloitte University Press | DUPress.com

Figure 5. Economy-wide return on assets and US unemployment rate (1976–2012)



Source: Deloitte analysis of data from Compustat and the US Bureau of Labor Statistics.

Graphic: Deloitte University Press | DUPress.com

to insulate against volatility by shifting fixed costs to variable costs through increased reliance on contract labor and outsourcing key business activities. In fact, both the number of contracts and total revenues from business process outsourcing (BPO) and IT outsourcing (ITO) have increased significantly since the 1990s.<sup>20</sup> Contract manufacturing is also increasing, based on a survey conducted by the International Data Corporation (IDC) in 2010. While trends vary across industries, 64 percent of companies surveyed currently outsource manufacturing to contract manufacturers. Of those companies, 43 percent expect to increase their current levels of outsourcing, and 45 percent expect to maintain current levels over the next two years.<sup>21</sup> Finally, third-party logistics providers (3PL) recorded an estimated \$250.2 billion in revenues from Global Fortune 500 companies in 2012—a 67 percent increase from 2005.<sup>22</sup>

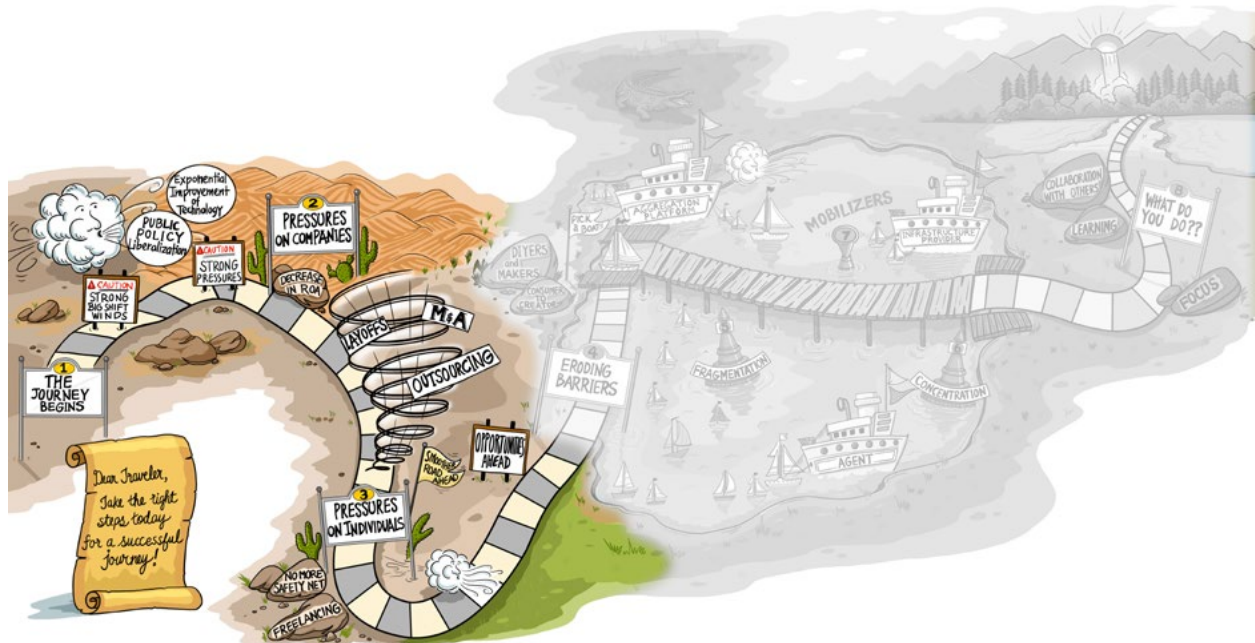
These tactics, while effective in the short term, offer diminishing returns. For example,

economy-wide ROA continues to decline despite short periods of increased performance following layoffs (see figure 5). When companies focus only on reducing costs, they risk cutting into core business operations and threatening the viability of the company. At the same time, done incorrectly, M&A activities intended to build scale can instead increase overhead and make a company less resilient and less flexible to respond to an increasingly volatile environment. Moreover, as companies pursue efficiency improvements, so do their competitors, and the benefits are quickly competed away.

Bottom line, companies have launched major performance improvement initiatives but the evidence suggests that they are falling farther and farther behind in terms of ROA, a key performance metric. The old approaches are not working but the response is to squeeze harder. This is not a sustainable situation. In the meantime, the pressure continues to mount and shows no sign of abating.

# Pressures on individuals

Figure 6. The journey to the future of the business landscape: Pressures on individuals



**T**HE short-term efficiency measures companies have taken to respond to mounting performance pressures are having an important impact on individuals. These measures have eliminated many of the benefits of working for a large organization and undermined the financial and emotional security of many workers. Individual workers, especially those not in the top tier, have borne the brunt of companies' responses to performance pressures. Workers no longer have the historical safety nets they once did, such as life-long employment and pension plans. While certain types of in-demand employees (for example,

creative knowledge workers and senior executives) are still able to command higher compensation, the statistics on unemployment and the widening compensation gap indicate that most workers are struggling.<sup>23</sup> Though the official US unemployment rate continues to hover at 6 percent as of May 2014, unofficial estimates put it at 23 percent, and further estimates suggest that 20 percent of American households do not have a single employed member.<sup>24</sup> Higher compensation for top workforce talent has translated into less investment in the rest of the workforce. However, with the average lifespan of many skills decreasing, even



those individuals who are sought after today may become irrelevant tomorrow. No one—not even top talent—is safe.

Without the benefits of stability and security once associated with employment by a large, established company, many individuals will find themselves pursuing alternative career paths, not always by choice. Over 20 percent of independent workers (not employed by a company) report striking out on their own due to job loss resulting from layoff, termination, or business closure.<sup>25</sup> Among independent Baby Boomers, the percentage of workers saying they were driven to independent work by job loss was even higher, at 27 percent. In addition, many Baby Boomers are working, or planning to work, past traditional retirement age to compensate for investment value lost during the recession. Approximately 57 percent of all US workers now plan to work past age 65, and of these, 66 percent say it is for financial reasons and health care benefits.<sup>26</sup>

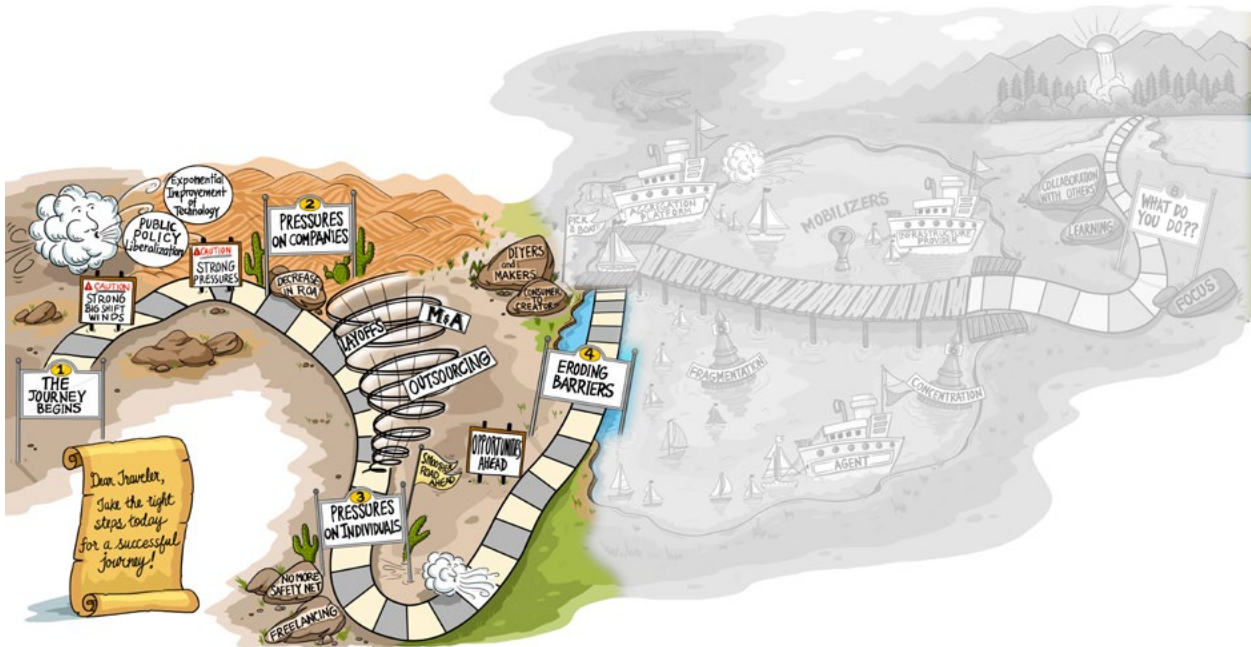
On the other end of the age spectrum, recent college graduates face both

unemployment and *underemployment*. In 2013, 11.5 percent of recent college graduates with bachelor's degrees were unemployed, compared to only 7.7 percent in 2007.<sup>27</sup> Additionally, 37 percent of college graduates over 25 are in jobs requiring only a high school diploma, while 11 percent are in jobs that require more than a high school diploma but not a bachelor's degree.<sup>28</sup> The workforce, overall, has become more educated—less than 1 percent of taxi drivers and 2 percent of firefighters had college degrees in 1970, while over 15 percent of each occupation does today.<sup>29</sup>

Clearly, the forces underlying the Big Shift are putting increasing pressures on institutions and individuals. However, the trends unleashed by the Big Shift also offer new opportunities to build profitable businesses that were previously not possible. In the next section, we will discuss how these forces are eroding barriers to building businesses and how companies and individuals can turn pressures into opportunities.

# Eroding barriers: Lowered barriers to entry, commercialization, and learning

Figure 7. The journey to the future of the business landscape: Eroding barriers



**T**HE same forces that have led to mounting performance pressures on companies and individuals have also reduced barriers to alternate ways to earn a living or find meaning. The somewhat surprising effect has been to tap into workers' latent desire for autonomy. In the past, workers sacrificed autonomy for the security and compensation associated with working for a large enterprise. The traditional trade-offs between autonomy and security are shifting, and other options beyond the umbrella of a large employer are becoming more attractive, even to top-performing workers.

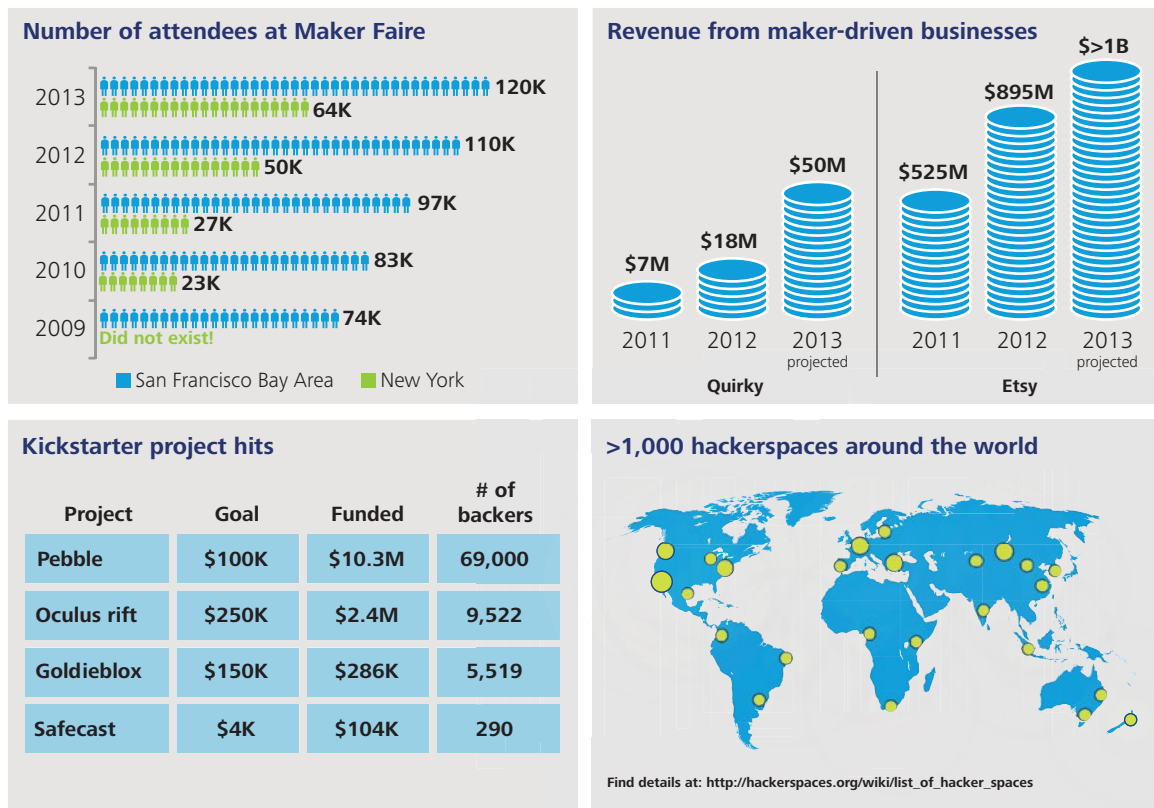
Many are driven by a desire for autonomy, flexibility, or alignment with personal values. Talented, high-performing workers are taking their increased negotiating power to pursue independent ventures or to work at companies where work is more tailored to individual priorities, values, and interests. A study by MBO Partners found that many independent workers, in particular, bring a desire for flexibility and meaning to their choice of livelihood. For example, of the 64 percent of independent workers who report being "highly satisfied," 62 percent prioritized

flexibility over compensation, with 73 percent stating that doing work they “like” trumps high compensation and 79 percent prioritizing a job that “makes a difference for someone.” Of course, being an “independent” worker does not always mean autonomy. For the 36 percent who do not report being “highly satisfied”—often temporary, on-call, and fixed-term contract workers who depend on a middleman—the lack of control over scheduling, career, and work assignments; the lack of benefits; and the uncertainty of making sufficient income all weigh heavily, particularly for those who are on this path unwillingly.<sup>30</sup>

In parallel, individuals are also beginning to move away from seeking status and meaning through consumption—for example, having a

large house, a fancy car, and expensive clothes. Instead, many are seeking status and meaning through the ability to create or participate. This trend is reflected in the growth in attendance at events like Maker Faire, the growing popularity of hackerspaces, and increasing revenues from maker-driven businesses (see figure 8).<sup>31</sup> Make Media estimates that the market for products and core components used by makers will exceed \$1 billion by 2015.<sup>32</sup> Similarly, an average of 1,600 new users sign up for online do-it-yourself (DIY) tutorial platform Craftsy every day,<sup>33</sup> bringing the site to 840,000 enrollments by January 2013, just a year after it launched.<sup>34</sup> Currently, Craftsy has approximately 4 million registered members.<sup>35</sup>

Figure 8. Maker movement overview and drivers



Source: John Hagel, John Seely Brown, and Duleesha Kulasooriya, *A movement in the making*, Deloitte University Press, January 2014, <http://dupress.com/articles/a-movement-in-the-making/>.

Graphic: Deloitte University Press | DUPress.com

## THE MAKER MOVEMENT: OVERVIEW AND DRIVERS

Nineteenth- and twentieth-century technological advances consolidated manufacturing and created a mass consumption economy. As a result, many of us today are further away from the actual creation of goods than any prior generation. However, recent technological leaps like 3D printing and customizable features have actually brought the power of creation back to the consumer. “Making”—the next generation of inventing and do-it-yourself—is creeping into everyday discourse. A plethora of physical and virtual platforms have emerged to serve the maker community, from platforms that inspire and teach to spaces that provide tools and collaborative opportunities.

While just what motivates consumers to create is yet to be quantified, a couple of themes resonate through the stories of individuals in the maker movement. First, many express a desire to create as part of permanently marking their own existence. In *Shop Class as Soulcraft*, author Matthew B. Crawford cites the journalist Hannah Arendt’s observation that part of the appeal of creating material objects stems from the belief that “the reality and reliability of the human world rest primarily on the fact that we are surrounded by things more permanent than the activity by which they were produced, and potentially even more permanent than the lives of their authors.” In other words, humans may seek to create as part of a need to contribute to our surroundings and leave a tangible legacy; we may now be seeing a shift in how we derive our self-worth. Crawford also speaks of the sense of visceral satisfaction from creating or repairing an object and of the clarity of such success relative to success in other fields; his creation either works, fulfilling its purpose, or it does not.<sup>36</sup>

Second, in today’s digital world and information economy, many makers express a sense of being divorced from the process of creating actual goods, and hence want even more to be in a “hands-on” profession. The maker movement values creation over consumption, as well as, crucially, sharing and collaborating.<sup>37</sup> For example, financial software consultant Ayah Bdeir, founder of littleBits, created modular electronics that not only fulfilled her own desire to create but that enabled others to do so as well—in contrast, in her previous career she felt separated from the products she “made” and didn’t believe that her work was constructive.<sup>38</sup>

These individuals are benefiting from lowered barriers to access and scale. With technology-guided tools that are less expensive and easier to use, the hurdles to making—either as a hobby or a business—are disappearing. The same forces that are democratizing information are also lowering the cost of producing physical objects. Never before has it been so easy to create or modify something with minimal technical training or investment in tools. Open source hardware opens the door for newcomers by undermining the proprietary foothold of larger competitors. Physical and virtual platforms reduce barriers to learning, making it easier for a maker to connect with the greater community. Events like Maker Faire accelerate the sharing and testing of ideas and techniques, allowing individuals to come out from the garages, to inspire and be inspired, and, for some, to discover an audience.

Partly because of the reduction of barriers to making and learning, the number of small maker businesses is growing. Meanwhile, the need for large-scale providers—for example, of logistics, design tools, and marketplaces—to serve these fragmented businesses is increasing as well. Incubators and other intermediaries have sprung up to assist makers in refining their inventions and finding efficient ways to bring their products to market. For example, PCH International helps makers to make the leap from having a successful product to developing a business by offering services such as contract manufacturing, e-commerce, inventory management, packaging, and retail distribution.

The maker movement has the potential to have a significant impact across a broad spectrum of sectors and regions. Besides the impact on manufacturing, we can also anticipate impacts in areas such as education, retail, government and public policy, and citizen science. Read more in *A movement in the making* and *Impact of maker movement*.<sup>39</sup>

The good news is that the same technological and political forces causing increased pressures and challenging traditional structures and practices have also created the tools and opportunities for participation, commercialization, and learning. As Chris Anderson describes, the inventors of yesterday could tinker, prototype, and patent their creations, but they could not manufacture, commercialize, and distribute a product. Those few designs that made it out of the inventor's garage were licensed by large companies, often removing the original inventor from the manufacturing process, and paid royalties only until the patent expired—leaving the inventor just as disconnected from the market as when he or she started.<sup>40</sup>

Times have changed. Today the barriers between the inventor and the market are diminishing, and individuals can own the full lifecycle of their products. Individuals are also finding that as barriers erode they have the ability to participate in numerous communities, unlimited by geography, where they can build knowledge, develop skills, and find collaborators. These communities facilitate learning across all aspects of design and commercialization of products, and they can accelerate learning for everyone, especially for participants who actively seek opportunities to learn and share. In the following section, we will examine three types of barriers that are rapidly eroding in the growing number of markets:

1. **Barriers to entry:** Access to the means of production is overcoming barriers to entry
2. **Barriers to commercialization:** Individuals and small organizations are gaining the ability to commercialize offerings by more easily finding customers, talent, and resources
3. **Barriers to learning:** The ability to learn faster by connecting more broadly with others

## Reduction of barriers to entry

The means of production are becoming more accessible to individuals and smaller companies. Technological advances are lowering the capital investment necessary to launch a new venture. Tools and physical infrastructure are becoming increasingly accessible. Liberalization in certain areas of public policy is reducing some of the regulatory barriers that have hindered the creation of new businesses.

Again, the exponential reduction in the cost performance of core digital technologies—computing power, storage, and bandwidth—is a critical driver, in this case lowering barriers to accessing the means of production, starting with digital products. Advances in computing power have reduced the importance of scale for innovation. For example, cloud computing allows individuals to access computing capabilities as needed and without a significant investment in infrastructure. Meanwhile, the cost of digital storage has plummeted as a result of the cloud, with storage cost performance increasing exponentially.<sup>41</sup> Finally, the cost of Internet bandwidth has declined, bolstering connectivity and enabling the consumption and sharing of richer data. Together, these advances have enabled small groups of individuals to launch businesses with potentially global scale for relatively little up-front capital expenditure.

In the technology industry, highly profitable businesses are emerging at a rapid pace. Mobile application developer Rovio developed the game *Angry Birds* for only \$140,000, but generated an estimated \$70 million in revenue.<sup>42</sup>

As similar examples proliferate, it is evident that tools for launching businesses based on simple, technology-based digital products are becoming more and more accessible with modest investment. The effects of this accessibility will likely increasingly spill over into other, non-digital products (for example, prosthetics), further diminishing the need for large capital investments. For example, with the cost of a 3D printer—equipment once found only in industrial settings, but now available in a more compact size with comparable resolution for

desktops—dropping from \$300,000 in 2000 to \$1,300 in 2012, it is becoming easier for individuals to independently experiment with and prototype ideas, leading to breakthroughs in physical product design and even medicine.<sup>43</sup> As technology continues to become better and cheaper, more individuals will be able to create small but sustainable economic entities.

Even for technologies that have not become affordable, the emerging “sharing economy” is helping to make them accessible. For example, TechShop, one of the larger “maker space” communities catalyzing the maker movement, offers the use of equipment ranging from milling machines and lathes to welding equipment, 3D printers, and industrial sewing machines, giving members access to millions of dollars’ worth of industrial-grade tools for a monthly membership fee comparable to that of a gym. After a series of failed pitches, mobile payments company Square’s founders, Jack Dorsey and Jim McKelvey, turned to TechShop, where they used a milling machine and other tools to develop a Square card reader prototype. With the working prototype in hand, Dorsey and McKelvey easily secured Square’s first round of funding.<sup>44</sup> These industrial tools of fabrication and production are also more accessible now because they are increasingly digitally enabled, meaning that individuals can more easily learn to use them without having years of experience and training.

While TechShop reduces barriers to production through the volume and variety of tools it offers, other co-working spaces also reduce barriers to entry by providing physical infrastructure such as office space. In the case of RocketSpace, start-ups have access to organized workspaces, conference rooms, and office equipment and amenities that allow them to meet with clients and work more seamlessly as a team without investing in real estate or equipment. These types of co-working spaces typically rent space on a month-to-month basis or even by the day, so they are less risky for individuals experimenting with a new idea or offering. These spaces also allow

opportunities for serendipitous encounters, tacit knowledge transfer, and idea-sharing with others working in related areas.

Public policy and regulation also determine how easy or difficult it is for small entities to launch businesses. In general, US public policy has trended toward encouraging fluid labor markets and creating opportunities for both competition and collaboration within many industries, both of which tend to encourage new entrants.<sup>45</sup> While this is a general trend, in specific industries regulations continue to create a significant barrier to entry. Economy-wide, the Accountable Care Act (ACA) has further empowered individuals to pursue independent ventures, by making health insurance coverage available to everyone. Prior to the ACA’s passage and the subsequent launch of health insurance exchanges (HIX) in 2013, individuals often stayed with large, established employers to secure reliable, affordable health insurance options for themselves and their families. A 2008 Harvard Business School study estimated that 11 million US workers were affected by this phenomenon, known as “job lock,” which served to discourage worker movement within the economy.<sup>46</sup> HIXs are still new enough that many US workers may not yet feel free of job lock; however, the Congressional Budget Office estimates that the ACA will reduce employment by 2.5 million full-time jobs, as workers, no longer afraid to lose health insurance coverage, elect to leave the traditional labor market in favor of independent ventures and other forms of employment.<sup>47</sup>

The confluence of cheap and accessible technology, shareable tools and infrastructure, and supportive public policy has made it more attractive for individuals to leave large organizations and create their own fragmented businesses. For these businesses to be viable, they must grow to be able to reach the market, even a small, niche market, effectively and profitably—another challenge made more surmountable by technology and platforms.

## Reduction of barriers to commercialization

With the path to market entry more accessible, technology has again been instrumental to lowering barriers to commercialization, largely through online platforms that connect individuals and organizations to the resources they seek. Specifically, individual entrepreneurs or small businesses need access to four primary resources to commercialize an idea:

- Financing
- Infrastructure
- Talent
- Customers

**Access to financing.** While low technology costs and the accessibility of shared tools allow small operations to enter markets, access to capital is crucial for businesses to grow. For many small teams, venture capital (VC) financing is not an option. The average size of a Series A deal in 2013 was \$5.4 million, a sum vastly larger than what many small entities need to reach their planned market, especially now that smaller-scale businesses can be viable.<sup>48</sup> In other cases, business owners may not want to give up equity or control of the company to interested VCs.

As a result, online crowdsourced financing platforms such as Kickstarter and Indiegogo have emerged to address the gap between institutional investors and individual entrepreneurs. Individuals and teams post a pitch for their product or service as well as a request for funding. Potential funders browse the site and pledge funding, in increments ranging from a few dollars to thousands of dollars, to the projects that interest them. In exchange, funders typically receive non-monetary rewards, such as pre-release versions of the product or a signed copy of an artistic work. In 2013 alone, 3 million people pledged \$480 million to Kickstarter projects for a total of

19,911 successfully funded projects.<sup>49</sup> Many of the projects on Kickstarter have already been prototyped, and some may even have small lots in production, but the online campaign can provide the infusion of capital needed in order to scale production to meet demand or reach a bigger market. These crowd-financing platforms can also allow entrepreneurs to quickly test demand for a product and identify early adopters. Other funding platforms serve a similar purpose for more specific audiences, with slightly different takes on the basic funding model. For example, CircleUp connects credited investors with curated funding opportunities from innovative consumer and retail companies. By harnessing the alternative funding sources gathered by these platforms, individuals can finance their commercialization activities without ceding power to third-party VCs. Depending on the goals of the funding seeker, the scale of the venture, and the nature of the product, crowdfunding alone may not be able to fully bridge the financing gap for new ventures, but it allows small players to test a market and iterate a product in a way that was not previously possible.

**Access to scale infrastructure.** In addition to capital, small players need access to scalable infrastructure, both virtual and physical. Cloud computing has been instrumental in this regard, providing flexible, cost-effective solutions that allow start-up businesses to rent data storage space or computing power and easily scale up and down based on real-time needs. The ability to do this was critical for Dropcam, a video monitoring hardware and software company that allows users to keep tabs on their homes and pets through live streaming, as well as to store high-definition video of the stream. Launched in 2009, Dropcam was hosting up to 100 GB per user per month by 2011, and storage space quickly became a limitation on scalability. Using Amazon Web Services, Dropcam is able to quickly adjust to changing demand—driven, for instance, by the introduction of a new camera or positive press that leads to a bump in new subscribers. The company can

acquire additional hosting capacity within a couple of minutes by running a simple script, thereby delivering a seamless experience to Dropcam's growing user base.<sup>50</sup>

Infrastructure in the physical realm is also becoming more accessible. Contract manufacturing, logistics services, and call center services can now be accessed in small volumes at costs that are within reach for small entities. For instance, small contract manufacturers in Shenzhen, China—once used primarily for overflow and prototyping by large multinational product companies—are increasingly offering short-run production to start-up ventures, enabling these ventures to commercialize at a smaller scale. As they have developed their small-scale capabilities, these contract manufacturers have achieved efficiencies that allow them to break even on a lot of only 10,000 units, a feat previously unattainable.<sup>51</sup> Similarly, on-demand cloud-based contact centers allow companies to deploy a call center service in a matter of days without up-front capital expenditure or integration costs. The use of these services is rapidly catching on; IDC estimates that spending in the United States for on-demand, cloud-based contact center services will grow at a compound annual growth rate (CAGR) of 17.5 percent, reaching \$1.6 billion by 2018.<sup>52</sup> These rapidly scalable logistical support options provide fragmented players with resources never before available. Flexible, inexpensive, easily scalable infrastructure—virtual and physical—lets small entities punch above their weight, enabling them to provide competitive levels of service, quality, and responsiveness to customers.

**Access to talent.** Small entities also need access to additional skills and capabilities, whether by teaming, contracting, or hiring. In the past, a small business might seek talent through temporary staffing agencies, career centers, or trade conferences. These avenues required up-front investments of time and money for both the hirer and the job seeker, and they captured only

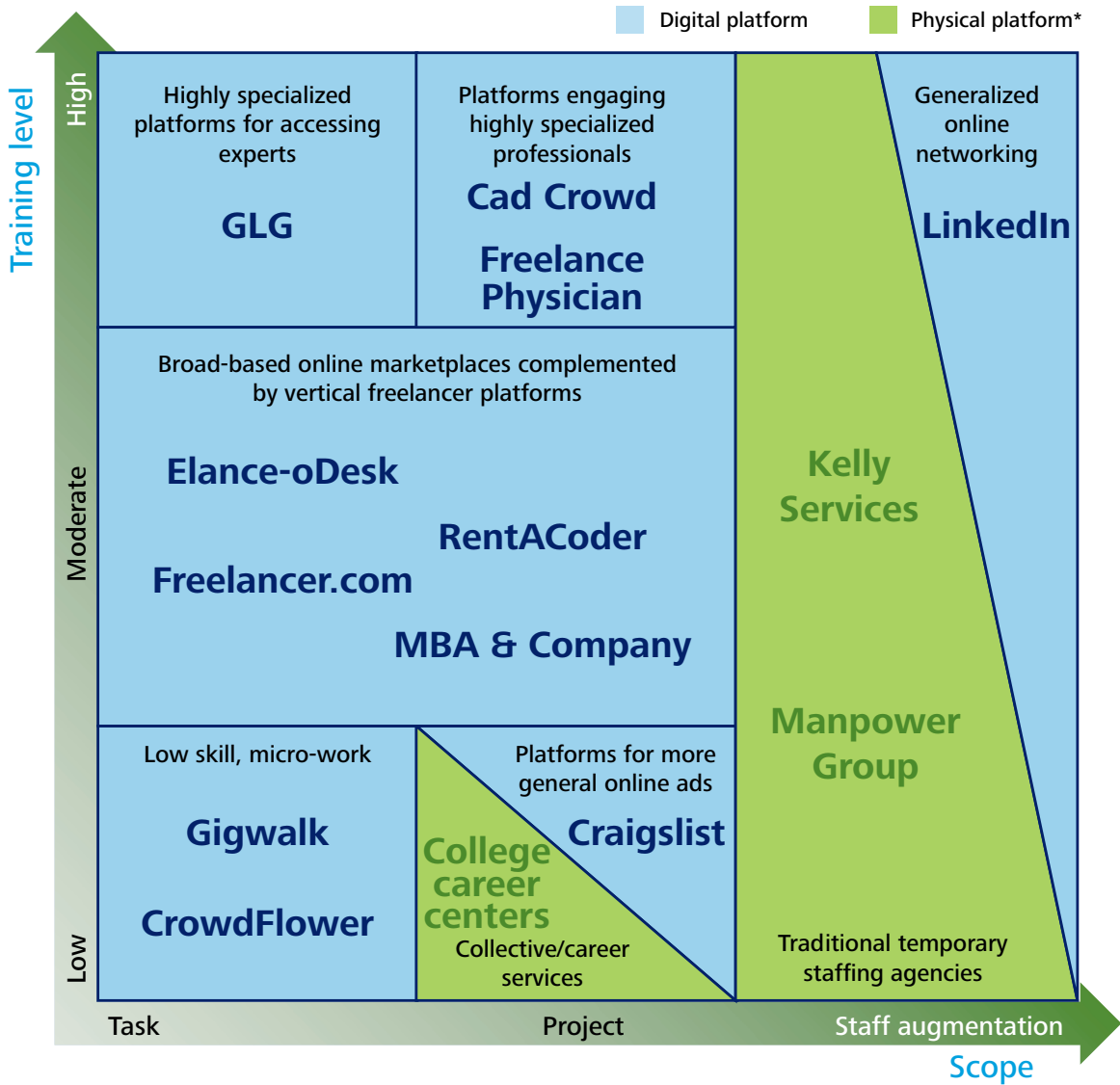
a fraction of the available workforce due to geographical constraints.

In contrast, online staffing platforms have made it much easier for freelancers to connect with opportunities regardless of location. The growth of these platforms has coincided with the growth of the independent worker population, which has increased from 16.1 million workers in 2011 to 17.7 million workers in 2013.<sup>53</sup> In late 2013, Elance and oDesk merged to form the largest online marketplace for freelancers, with a combined total of over 8 million “elancers.”<sup>54</sup> A number of niche staffing platforms have also rapidly emerged to complement the larger platforms. Andrew Karpie of Staffing Industry Analysts estimates that the number of job sites for freelancers jumped from 24 before 2008 to over 80 dedicated online staffing marketplaces at the beginning of 2014.<sup>55</sup> Such platforms have created a plethora of opportunities for small ventures to connect with talent on a flexible basis, reducing labor overhead and affording employers access to a wide range of skill sets as business needs arise (see figure 9).

**Access to customers.** With increased digitization, an entirely different set of platforms has emerged that allow small ventures to reach a large customer base, and often to deliver the actual product online, democratizing access to relevant markets. While in the physical world, product variety is limited by shelf space (or the number of movie screens), in the digital world these constraints disappear. As Chris Anderson wrote in his 2004 article *The long tail*, “Now, with online distribution and retail, we are entering a world of abundance.”<sup>56</sup> On platforms like Etsy, the leading online marketplace for handmade and vintage goods, small niche providers can connect with consumers with very specific requirements and offer goods and services that fit their preferences. Often, these consumers don't exist in large enough numbers to have created a market in any physical location. Founded in 2005, Etsy had accrued over a million sellers by 2013 and grew from \$0.17



Figure 9. Freelancer platform map



\* While these are primarily physical platforms, traditional temporary staffing agencies are increasingly building out their digital presence.

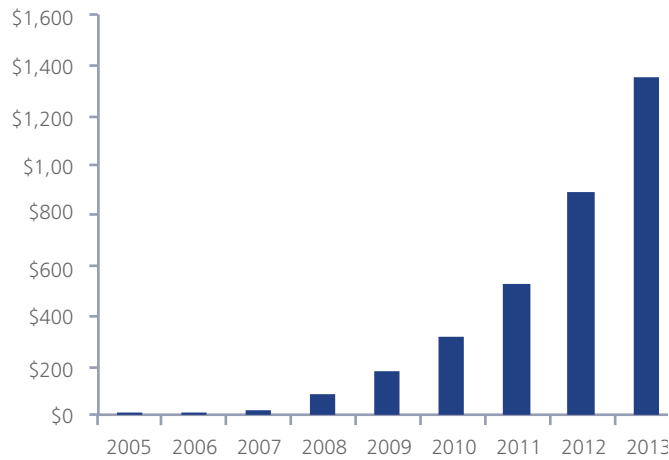
This map is intended to illustrate the diverse options for freelancers and others in nontraditional employment arrangements. The placement of companies on this map reflects current services and positioning derived from company websites and is not intended to reflect future strategic positioning or business models. This is a rapidly evolving space, with new acquisitions and partnerships increasingly blurring the boundaries between categories. For example, traditional temporary staffing agencies are increasingly developing their digital presence through partnerships and new offerings.

Graphic: Deloitte University Press | DUPress.com

### Illustration of options for freelancers and nontraditional employment arrangements

The shift to digital platforms has given both individuals and companies more options for connecting work opportunities with independent workers. Currently, platforms tend to cater to specific demographics and project types. Scope refers to the level of involvement and integration an assignment requires (for example, a task that can be done independently in one sitting versus a project that will unfold over multiple working sessions). Training level refers to how much specialized knowledge is required to complete the assignment (for example, no specialized education or trade experience necessary versus the need for a PhD or a demonstrated elite achievement). This map does not include competition-based crowdsourcing platforms (for example, Innocentive) or platforms that connect individuals directly to consumers (for example, Uber, Etsy).

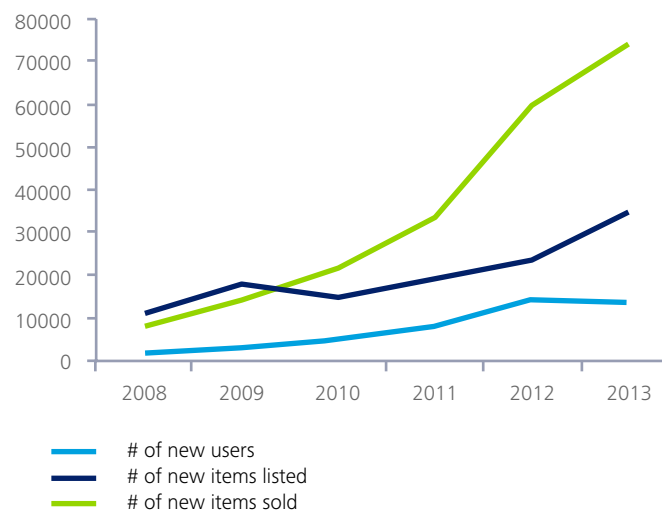
**Figure 10. Etsy merchandise sales (\$ million)**



Source: "Etsy's total annual merchandise sales volume from 2005 to 2013 (in million US dollars)", Statista, <http://www.statista.com/statistics/219412/etsys-total-merchandise-sales-per-year/>, accessed February 2014.

Graphic: Deloitte University Press | DUPress.com

**Figure 11. Etsy year-over-year new monthly growth (in thousands)**



Source: "Etsy statistics: 2012 weather report," Etsy, <https://blog.etsy.com/news/2012/etsy-statistics-may-2012-weather-report/>, accessed February 2014.

Graphic: Deloitte University Press | DUPress.com

million worth of goods sold in its first year to \$1.35 billion in 2013 (see figure 10 and 11).<sup>57</sup> As described earlier, Etsy has also recently added a wholesaler program, which allows artisans who wish to reach a broader audience to forge relationships with mass retailers.<sup>58</sup>

Similarly, Amazon's Kindle Direct Publishing allows any author to self-publish ebooks and distribute them globally on Amazon. And Netflix is increasingly used as a platform to release indie films, allowing film-makers to find audiences for their work without first wooing a large production company.

While online platforms have improved access to finance, infrastructure, talent, and customers by connecting small players with others outside their immediate ecosystem, discovery—finding the right resources and being found by potential customers—will still pose a challenge for individuals and small teams in the near term. In part, this is because new platforms are still emerging. Curators already help with discovery, and as the business landscape evolves, new roles beyond just curation are likely to emerge to help connect individuals with opportunities.

## Reduction in barriers to learning

Even after starting a venture and commercializing a product or service, individuals and small teams (and large companies) still need to learn in order to improve performance. Most of the learning around product innovation and commercialization, particularly for smaller players, will occur in the ecosystem among small entities, customers, partners, and suppliers. Here, too, platforms are emerging to facilitate creating and sharing knowledge among participants. Opportunities for formal and informal learning related to product innovation and commercialization are growing

as a result of improved access to knowledge and more ways to create and share knowledge, including:

- Online learning platforms and communities
- New organizational models to build tacit knowledge
- Feedback loops from platforms and other scale players

**Online learning platforms and communities.** The proliferation of learning platforms (for example, Udacity and YouTube) and service tools for creating online learning (for example, Schoolkeep) have lowered the costs of producing and distributing learning content. These technologies not only make it easier to share content, but also, through video, better transfer tacit knowledge by capturing actions in motion.

As content creation and distribution has become more democratized, the requirement for certification is also lessening. The ability to warrant is expanding beyond higher education institutions and educational publishing firms to corporations (for example, Google, Intuit), online accreditation organizations (for example, Balloon, Degreed, Accredible), and the crowd (through reviews, ratings, and “likes”). For example, Udemy’s open platform hosts 3 million users and 16,000 courses, from yoga to finance to web development.<sup>59</sup> Meanwhile, companies like SchoolKeep, Fedora, and Skilljar make it easier for individuals to create and operate courses on their own web domain. Educational material—ranging from academic examinations to practical tutorials—is largely open to the public for consumption. It can serve the diverse learning needs of individuals, teams, and companies over time, whether they need to master new technologies, maintain

relevant skills, or learn the next step of the business just in time.

**New organizational models to build tacit knowledge.** Beyond the more formal learning platforms, organizations are experimenting with models to facilitate sustained interactions between disparate workers and partners, connecting those with complementary talents under the banner of a common goal. Techshop, RocketSpace, and Meetup—an online social networking portal that facilitates in-person group meetings in cities around the world—all serve as platforms for disparate players to interact and share ideas and practices. These organizations also provide infrastructure and support for maintaining and governing these relationships over time. With the ability to more easily find and connect with others from whom they might learn, small players have a better chance to forge viable, sustainable businesses.

**Feedback loops from platforms and other scale players.** Another interesting way that the barriers to learning are falling is through the increased use of platforms, shared resources, and on-demand infrastructure, which has given rise to feedback loops that engage others in the ecosystem. For example, a vendor on Amazon can track not only sales of its own products, but also those of its competitors; the vendor can also see how the products compare by reading customer reviews of its own and competitors’ products. Similarly, a product company might gain insight about cost-cutting design modifications from a contract manufacturer that has developed deep expertise by serving many players in an industry. The ability to learn from others in the ecosystem—customers, suppliers, service providers—becomes increasingly important as demand for personalization and customization grows.

# Fragmentation: Staying niche, nimble, and small is the new goal for many

Figure 12. The journey to the future of the business landscape: Fragmentation



**T**HE erosion of barriers to forming and pursuing a business venture will lead to increasing fragmentation in certain parts of the economy. In this section, we'll explore:

1. Pathways to fragmentation
2. Roles that will fragment
3. Fragmentation potential of specific industries
4. Challenges to growth in fragmented arenas

## Pathways to fragmentation

For individuals and small entities, the barriers to forming and pursuing a business venture are rapidly being dismantled. As barriers fall, many small yet viable players will emerge, with increasing influence on the economy, via three primary pathways:

- Freelancers, empowered by online staffing platforms, will begin as individual contractors, but will quickly transition to forming flexible teams—colloquially called “hives”—comprised of other freelancers

with complementary skill sets. Gradually, these hives will move from just accepting work from other businesses to collectively creating their own products and services, and ultimately forming their own small companies.

- Hobbyists will transition from “moonlighting”—working full-time for someone else while pursuing their passion projects during off-hours—to being fully dedicated business owners. Consider that, while only 18 percent of Etsy’s sellers sold their products full-time in 2012, 91 percent aspired to grow their businesses. Of those who wanted to grow, 61 percent aspired to grow to a “manageable size” rather than to achieve unlimited growth.<sup>60</sup> These aspirations signal the possibility of a broad shift in the common notion of a successful business.
- “Star” performers within big companies—confident of their value and frustrated by a lack of autonomy—will increasingly choose to leave employers in favor of building businesses that use their full range of talents. Enabled by new tools and technologies, these workers may be able to experience the same, or greater, success as in their corporate jobs while deriving additional benefits

from greater autonomy and doing work that better aligns with their personal values.

This proliferation of individual and small business ventures addressing highly differentiated industry and consumer needs will drive significant fragmentation in certain parts of the business landscape. Fragmentation (within a domain) is defined by the following characteristics:

- Each player within the domain has a small, addressable market and is focused on a specific niche
- Collectively, players address a diverse spectrum of customer and market needs
- Both players and niches are proliferating within the domain
- No single player has enough market share to influence the direction of the domain long term
- A relatively modest level of investment is sufficient to enter and sustain position
- “Diseconomies of scale” are in play—it is more challenging for large players to stay in business

## CHARTING AN INDIVIDUAL PATH FORWARD

Spencer Walle has been a freelance translator for nearly three years. Driven by a passion for language, he taught himself Japanese in order to build a career for himself in the most lucrative part of the translation industry—Japanese IP translations. Walle has since built out a strong network that keeps his work pipeline flowing, and provided he actively manages his cash flow, he can live an autonomous lifestyle full of travel and flexibility. Long-term, Walle sees this freelance work transitioning into a small business.

Walle sees himself staying in the translation industry indefinitely, simply due to his passion for language. However, he can see himself getting bored with his current projects, as the work can become monotonous and there is no real advancement potential. He has considered eventually starting his own small translation company, mirroring the trend toward small business formation that he’s seen in the translation community. According to Walle, “It happens organically that translators start to work collectively.” Pretty soon they get larger assignments, hire more junior staff, and then start to require organizational trappings like an accountant—and with that, “a company is born.”<sup>61</sup>

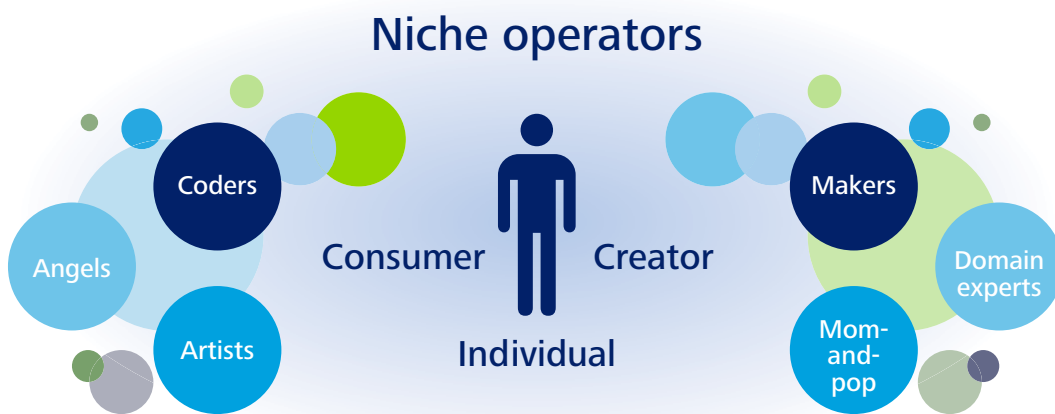
## Roles that will fragment

Fragmentation will occur at different rates and to varying degrees across the economy. Much of the fragmentation is likely to occur in product design and commercialization activities. This activity depends on creative talent, and creative talent tends to seek the autonomy available in smaller organizational settings. This creative talent can establish much closer connections to their customers and build deeper relationships over time that will help them to deliver more effective personalization and customization, opening up opportunities

creative products or acting as domain experts or contractors to support these specialized product businesses. One of the early effects of the Big Shift has been the increasing capacity for connection between participants in an ecosystem. For individuals and small teams, this means they can more easily forge connections with one another and with large companies to learn, improve performance, and pursue opportunities for long-term viability.

The fragmentation already underway is, with some rare exceptions, still on the edge of most established markets. However, early shifts—including the loosening bonds between

Figure 13. Niche operators



for customers to participate in the design and creation of the products. These more specialized players will acquire deeper insight into the needs of the highly focused niches they are serving—needs that the customers themselves have a hard time articulating or may not even recognize. However, as we will see below, not all products or services will be subject to fragmentation, and not all fragmented players will focus on product/service innovation.

## Niche operators

As described above, niche operators will tend to form specialized product/service businesses, either designing and commercializing

workers and large employers and the widespread erosion of barriers—are paving the way for more small businesses to arise. The historical growth of the independent workforce has not been reliably tracked;<sup>62</sup> however, a study by MBO Partners revealed that, in 2013, there were 17.7 million independent workers in the United States—up 10 percent from 2011. This number is expected to increase to 24 million independent workers by 2018.<sup>63</sup> Many of these workers may eventually form businesses. Over time, they should have a greater impact on their domains, competing with large companies by serving increasingly diversified consumer desires and providing personalized, even localized, products and services.

The music industry is one of the first areas where fragmentation is evident, illustrating how very diverse consumers' preferences are once they have an easy way to personalize their experience across a seemingly boundless variety of artists and offerings (genre, format, and setting). Streaming services, aggregation platforms, and self-distribution channels have made recording and distributing music easier than ever. The proportion of independent musicians in the United States—those not “owned” by a major label—has increased from 25 percent in 2003 to over 90 percent in 2012.<sup>64</sup> Independent musicians are also making up a greater proportion of the US music market's revenue, from 28.8 percent in 2007 to 34.5 percent in 2012.<sup>65</sup>

Fragmentation is likely to be most pronounced in the design, development, and production of new products and services for specific markets. This can already be seen in the software industry, where the tools of production are readily accessible to coders and the proliferation of devices has created highly differentiated customer demand. Since 2005, the number of mobile application developers has increased from 950 entities to approximately 158,000 in 2013—a 166-fold increase. At the same time, the top four players in 2013 accounted for only 11.8 percent of the industry revenue.<sup>66</sup>

As consumer demand for uniqueness or other specialized attributes causes product fragmentation, another type of fragmentation will occur in the retail space, as retailers cater to specific consumer preferences with a targeted set of niche products. A new type of retailer is emerging that uses both physical and virtual facilities to help customers more effectively navigate a vast range of products to find and use those that are most personally relevant. They will increasingly offer targeted experiences to niche customer segments—showcasing products, providing learning environments to help customers get more value from the products, and creating venues for customers to form communities around these

niche offerings. This phenomenon is different from more narrowly defined curation services, which simply provide expertise or reviews in a product category.

Increasingly, we will see similar trends across other domains where the barriers to entry, commercialization, and learning are diminishing. For example, although angel investors are already fragmented, the number of small investors could grow with the emergence of a different type of angel investor—one who, now that it is easier for individual investors to connect with individual makers, artists, or entrepreneurs, values his or her connection to a specific product or mission more than tenfold returns. Similarly, we expect to see growing numbers of highly specialized domain experts who will provide niche consulting and support services to other fragmented players.

## Fragmentation potential of specific industries

As just discussed, we expect fragmentation to be most evident in those activities centered on the design and commercialization of innovative products and services. The extent to which an industry will fragment depends upon two elements:

- The degree to which customers are expressing a desire for more specialization, personalization, and customization in the products and services they buy or are beginning to make
- The degree to which barriers to entry, commercialization, and learning are diminishing

We have already discussed how the Big Shift has empowered consumers to expect products and services that more closely meet their preferences for price, format, and timing, in addition to their preferences for product-specific variables like style, color, uniqueness, and so on. Customers, whether individuals or companies, may also begin to demand more

customized offerings as their own environments and operating requirements change more rapidly, again in response to the forces of the Big Shift. Anywhere that customers are demanding—or might be expected to start demanding—more personalized offerings has the potential for fragmentation, because effectively meeting such highly specific needs requires a high degree of creativity and the ability to thrive on small volumes of production.


Even given a demand for innovation, broader industry barriers (see figure 14) play a significant role in determining the rate at


which fragmentation occurs. Certain forces accelerate fragmentation by reducing barriers or dampen it by propping up barriers. The first set of forces in figure 14 concerns the ability to overcome barriers to entry; without them, fragmentation is unlikely to occur regardless of reductions in barriers to commercialization or learning. For this reason, the first set of forces is most important in assessing the potential for fragmentation at the industry level.


However, even in industries where the barriers to entry initially seem high, such as where production requires large physical plants, the demand for design innovation can cause


Figure 14. Assessment of barriers by industry


Illustrative industry comparison

  
Software

  
Health care

  
Media

  
Retail

  
Your industry

	Software	Health care	Media	Retail	Your industry
<b>1</b> Reduction in barriers to entry	Technological advancements in the means of production	✓	✓	✓	✓
	Accessible tools and physical infrastructure	✓	✓	✓	✓
	Liberalization in sector policy and regulation	✓	✗	✗	✗
<b>2</b> Reduction in barriers to commercialization	Access to financing	✓	✓	✓	✓
	Access to scale infrastructure	✓	✗	✓	✓
	Access to talent	✓	✗	✓	✓
	Access to customers	✓	✓	✓	✓
<b>3</b> Reduction in barriers to learning	Online learning platforms and communities	✓	✓	✓	✓
	New organizational models to build tacit knowledge	✓	✗	✓	✓
	Feedback loops from platforms and other scale players	✓	✗	✓	✓

The extent to which barriers to entry, commercialization, and learning are falling in an industry or domain determines how vulnerable it is to fragmentation.

Graphic: Deloitte University Press | DUPress.com



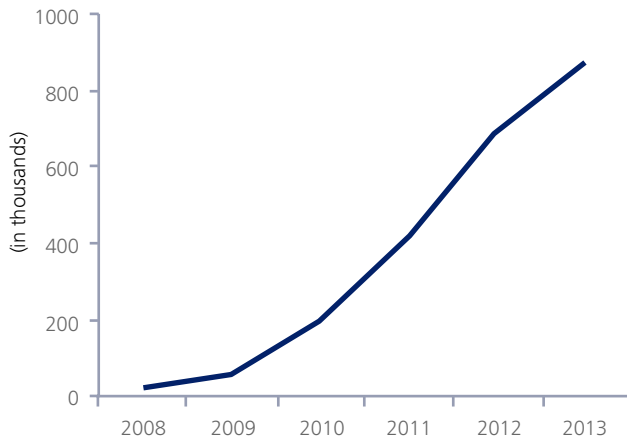
business models to evolve, reducing barriers by providing access to scale and transforming industry economics. In the semiconductor industry, for example, the high cost and scale economies of semiconductor fabrication facilities (fabs) would have seemed an insurmountable barrier to small-scale players. In the 1980s, as manufacturing began to require more precise and advanced techniques, many semiconductor companies shed their in-house fab capabilities. Companies that kept fabs sold their excess capacity to the newly “fabless” companies, but the negotiation process was often complicated and slow. Then, in 1987, Taiwan Semiconductor Manufacturing Company (TSMC) launched a new “foundry” business, making it their sole business to manufacture for fabless or limited-capacity semiconductor companies, essentially renting out partial capacity. The foundry model transformed the semiconductor industry. Fabless integrated circuit (IC) design companies now represent more than 20 percent of the global market. In China alone, the number of IC design enterprises has grown from 96 in 2000 to 518 in 2012.<sup>67</sup>

Once the barriers to entry start to come down, infrastructure and platforms to support fragmented players’ commercialization and learning activities are likely to emerge. As the barriers at all three levels diminish, fragmentation is likely to significantly increase. In contrast, in industries where one or more forces are serving to prop up barriers to entry, commercialization, or learning, fragmentation may still occur, but more gradually. In health care, for example, fragmentation is happening

on the edges where regulation is not a factor, in the markets for wellness providers and quantified-self devices. The platforms that emerge to connect and support these fragmented players may, over time, drive fragmentation in core health care services. In fact, even under regulation, highly specialized facilities focused on the treatment of specific diseases are emerging.

While the first set of forces acting on barriers to entry is most critical in assessing whether fragmentation will occur, public policy and regulation are also particularly important. Overall policies and regulations (at the federal, state, and local levels) that encourage or discourage starting new businesses, regardless of industry, weigh heavily in any decision to start a new venture. In a survey by the US Chamber of Commerce, 44 percent of small business owners cited over-regulation as one of their chief challenges.<sup>68</sup> Public policy can also act as a barrier when wielded as a tool to block new entrants. Established interests historically try to use regulations to prevent new competition; while public policy can be a driving force of change, established interests are often driving the changes in policy. Even in industries in which other barriers are diminishing, if policy and regulation prop up barriers, the process of fragmentation may be significantly slowed. The craft beer industry illustrates both the accelerating and dampening effects of policy and regulation (see sidebar, “The impact of regulations on the craft beer industry”). Thus, sustainable fragmentation relies on the continuation of policy trends that support the emergence of fragmented players.

**Figure 15. iTunes app store—number of applications**



Source: "Number of available apps in the iTunes App Store from 2008 to 2013 (cumulative)," Statista, <http://www.statista.com/statistics/268251/number-of-apps-in-the-itunes-app-store-since-2008/>, accessed June 2014.

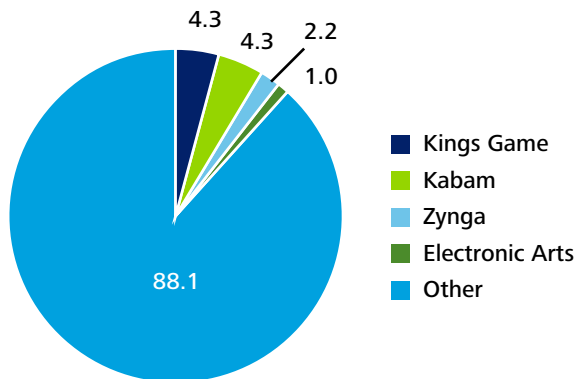
Graphic: Deloitte University Press | DUPress.com

**The impact of platforms on the mobile applications development industry**

In 2007, Apple® introduced the iPhone® mobile digital device and the App Store<sup>sm</sup> in 2008, spawning a new market for mobile application development.<sup>69</sup> A year later, Google introduced the Android and its own application marketplace, Google Play. In just seven years, the nonexistent applications development sector has grown to over \$10 billion.<sup>70</sup>

Having experienced 50 percent annualized growth since 2009, the application development space is crowded and highly fragmented. In the past three years alone, employment related to applications development has increased by 80 percent. In 2013, the largest four players—King's Game, Kabam, Zynga, and Electronic Arts—account for less than 12 percent of industry revenue, while the remaining 88 percent is distributed across over 195,000 publishers and developers.<sup>71</sup>

**Figure 16. Mobile application development, percent of market share (by revenue)**



Source: "Smartphone app developers in the US," IBISWorld, January 2014.

Graphic: Deloitte University Press | DUPress.com

**Why is this sector so fragmented?**

**Entry:** Labor accounts for 67 percent of mobile application development costs. As such, skillsets and time, not capital, are the most important resources needed to enter the market.<sup>72</sup> The low level of capital intensity has also stayed relatively steady over the past five years.<sup>73</sup> The mobile app space has limited regulation.

**Commercialization:** With marketplace platforms like iTunes®, Google Play, and more recently, Amazon's Appstore and Salesforce's Appexchange, small, third-party participants can easily reach and distribute their product to a wide range of potential customers.

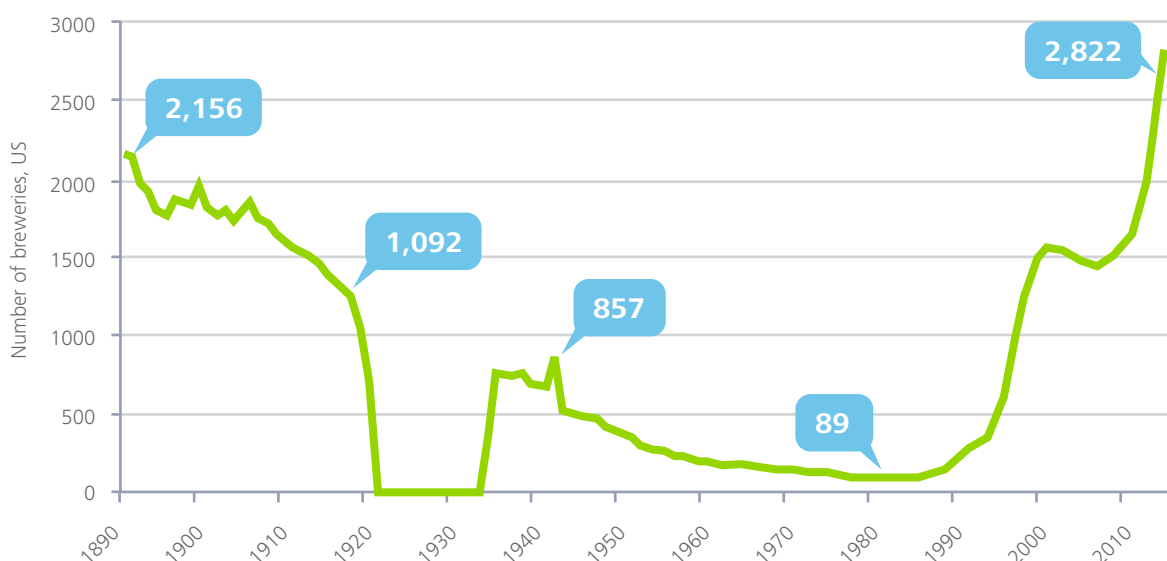
**Learning:** Given the large number of coding languages (for example, JavaScript, C#, PHP, and Objective-C) and the continuous changes in underlying devices and technologies (for example, near-field communication and radio frequency tech), mobile app developers must constantly learn new skills. Individuals now have access to a wide range of formal and informal learning tools and communities through sites such as GitHub, Codecademy, and General Assembly.

## The impact of regulations on the craft beer industry

In recent years, the US beer industry has been stagnating: Revenue from beer production grew at an average annual rate of 2.1 percent since 2009, and it is expected to decline 4.1 percent in 2014.<sup>74</sup> Craft beer's volume share (in beer barrels) of the market, however, more than doubled, from 2.9 percent in 2005 to 6.5 percent in 2012.<sup>75</sup> Even though this represents a relatively small percentage of total market sales, the upward trend in craft beer growth will likely continue: Demeter Group estimates that craft beer will represent 15 percent of the industry by 2020.<sup>76</sup>

The graph below shows the total number of US breweries since 1887. The rise of craft beer started in 1978 when President Jimmy Carter signed H.R. 1337 into law, legalizing the home production of small amounts of beer. By June 2013, 2,483 of the United States' 2,538 breweries (nearly 98 percent) were craft breweries.<sup>77</sup>

**Figure 17. Number of breweries in the United States**



Source: "Number of breweries," Brewers Association, <http://www.brewersassociation.org/statistics/number-of-breweries/>, accessed March 2014.

Graphic: Deloitte University Press | DUPress.com

The success of commercial craft brewing and the shift in consumer preferences has led some giants to explore ways to provide more unique selections of products. MillerCoors has invested in an in-house craft beer branch, Tenth and Blake, which introduced products such as Blue Moon and Leinenkugel's to appeal to the growing craft beer market.<sup>78</sup> Others, such as AB InBev, which acquired the Chicago brand Goose Island in 2011, have used acquisitions to sustain growth by leveraging new brand names, offering craft brewers scale. Goose Island doubled production from 127,000 beer barrels in 2010 to 230,000 beer barrels in 2012 and achieved national distribution in 2013, while maintaining "street cred" by maintaining independent marketing and branding.<sup>79</sup>

US craft breweries still face many barriers. Beer distribution is heavily regulated: Most states require three-tier distribution systems, leaving craft breweries few alternatives for reaching consumers directly.<sup>80</sup> Complicated regulations based on which state a seller or buyer is operating in limit many craft brewers to the shelf space and tap handles in the local market.<sup>81</sup> Imagine a world where beer could move freely between states and small craft breweries could easily access niche consumers across the country. Already the role of distributors is changing. According to Craig Purser, president of the National Beer Wholesalers Association (NBWA), distributors are "transitioning from being brand-dependent beer wholesalers to [being] brand-building beverage distribution companies."<sup>82</sup>

## Fragmentation will be a permanent feature of the business landscape

Some might argue that fragmentation is simply a *transitional* state. After all, every large company started as a small one that grew larger either organically or through acquisition. Similarly, new sectors or product categories often begin with a large number of players testing various models before a winning business model emerges and consolidation occurs around that model. As a sector matures, smaller players disappear or are acquired, as happened in the early days of the personal computer (PC)<sup>83</sup> and automobile. In 1907, 82 new firms entered the US automobile industry, but by the 1930s, three companies accounted for 80 percent of the industry's output.<sup>84</sup>

If product categories follow an S-curve adoption pattern, fragmentation at the beginning of the curve is replaced by concentration and scale as a category matures. In the past, it took approximately 25 years for a product category or sector to go through a complete life cycle. However, this timeline is getting shorter.<sup>85</sup> Increasingly, institutional and industry structures do not have time to adjust to more frequent periods of disruption. In fact, with technology advancing ever faster, amplified by the cumulative effects of innovation and public policy, the S-curves of the product life cycle are likely to become shorter, and the periods of stability between disruptions will largely disappear. This, in itself, will lead to more continuous fragmentation.

## Challenges to growth in fragmented arenas

On the other hand, not all fragmentation is tied to sector or product evolution. As niche

operators create businesses focused on product and service development and commercialization, they will discover that the same trends that lowered barriers for them may also limit the growth potential of businesses like theirs. As a result, a sustained (not transitory) fragmentation will prevail in certain parts of the economy. In areas of persistent fragmentation, diseconomies of scale will likely discourage growth for several reasons:

1. **The quicker, easier product discovery and marketplace connections enabled by technology create a long tail of opportunities, each with smaller total returns.** Consumers are no longer limited to the choices within their close proximity. Instead, as Chris Anderson explains in *The long tail*, online sales and distribution let consumers discover products and services from around the globe and expand their preferences and tastes.<sup>86</sup> Customers who once felt satisfied with mainstream options may often discover they enjoy alternatives that they didn't previously know existed. For example, in 1998, Amazon customers who viewed the then-contemporary bestseller *Into Thin Air* were recommended the out-of-print mountaineering memoir *Touching the Void*. As a result, *Touching the Void* started to outsell *Into Thin Air* two to one. Over half of Amazon's book sales now come from books outside its top 130,000 titles.<sup>87</sup> This is good news for the lesser-known titles, but spreading market share means that growth potential is moderated, even for industry leaders. A "hit" today is much smaller than it was years ago. As Anderson points out, most of the all-time top 50 best-selling music albums were created in the '70s and '80s (by acts such as the Eagles and Michael Jackson); none were

made after 2000. Measured by viewership, the No. 1 TV show today would not have made the top 10 in 1970.<sup>88</sup>

Today's consumers expect offerings that exactly fit their needs and lifestyle requirements. The good news is that digital technologies allow niche products to reach consumers. The bad news is that, given the fragmentation of the consumer base, it is harder to get an offering adopted by the mass market, earn market share, and generate large returns. Indeed, the whole idea of the "mass market" may become less relevant as niche market proliferate. Revenue opportunities may be limited to capturing a relevant niche segment instead of an entire market.

- 2. Increased competition and disruption are shortening product life cycles, reducing the total return for each product.** Product life cycles have been compressed and will continue to shrink due to lower barriers to entry, the increasing speed of innovation, and increased competition, thus reducing the potential returns for each individual player. As reported in the *Shift Index 2013* series of reports, competitive intensity (as defined by economists to be inversely related to industry concentration) in the United States has been increasing substantially over the past 47 years.<sup>89</sup> Additionally, the topple rate—the rate at which companies lose their leadership position in the market—has increased by 39 percent since 1965.<sup>90</sup> As a result, new product turnover has increased substantially. Half a century ago, companies could expect their product to remain relevant for 15 years. Today, it is more likely to be three years, and for some technology products, relevance may last only six months.<sup>91</sup> This shortening of the

product life cycle puts significant pressure on traditional go-to-market models, R&D, and resource utilization.

One factor that is putting pressure on the product life cycle is a decrease in consumer loyalty. Consumers are increasingly willing to switch between brands to find products that best address their needs.<sup>92</sup> For example, going back to the game *Angry Birds*, although the iTunes App Store was the source of the game's success, it also opened the door to intense competition. After spending 22 months on the Top 20 chart of most revenue generating apps in the US and achieving astonishing growth (from €6.5 million in 2010 to €75.6 million in 2011 to €152.2 million in 2012), *Angry Birds*' revenue stagnated in 2013, and new entrants like *Candy Crush Saga* and *Clash of Clans*, both released in 2012, now occupy the top slots.<sup>93</sup>

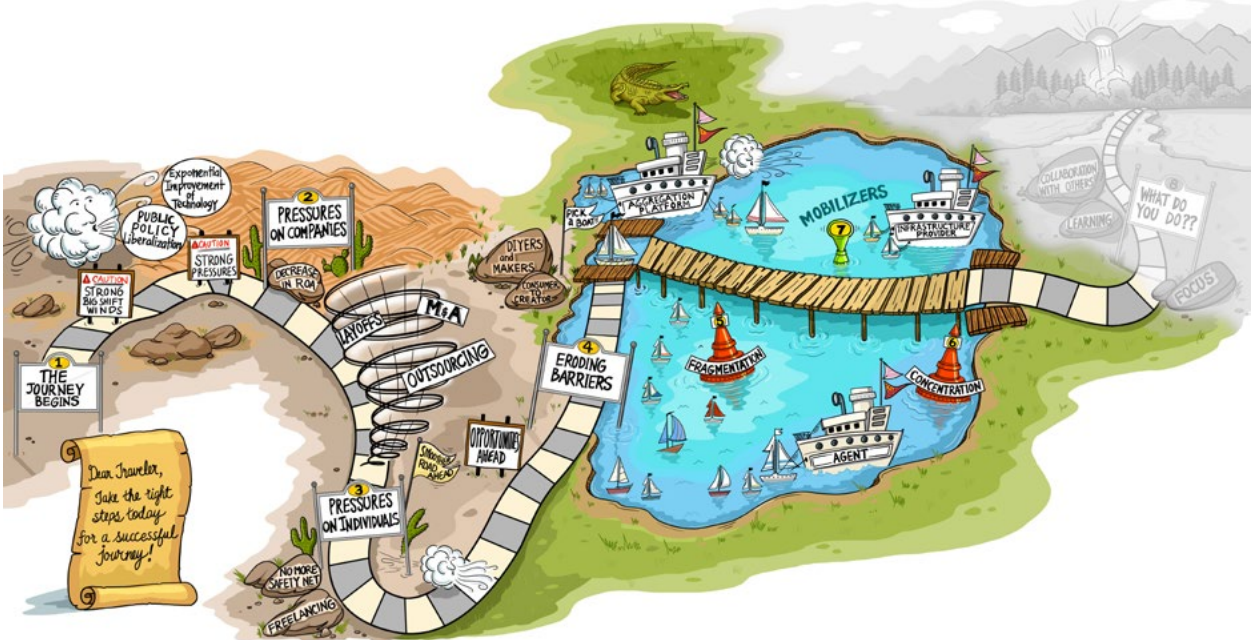
- 3. Niche players that scale will have difficulty retaining creative talent, given the increasing ability of talent to pursue other ventures.** As highlighted earlier in this report, the safety nets that used to attract workers to large, established companies are rapidly disappearing. As the benefits of staying employed by a large organization diminish, top talent will look for opportunities to increase their autonomy and creativity. Many may leave for smaller organizations where they can achieve these goals. After all, talent is not insensitive to the Dilbert paradox: While established, large companies typically state that acquiring and retaining talent is their No. 1 priority, cost reductions and layoffs are often the most common responses to economic pressures. As an organization scales, it often becomes focused on efficiency, tightly

scripting processes and governance models and thus limiting workers' autonomy and creativity. In addition, because technology and public policy have been rapidly reducing barriers to means of production, commercialization, and learning, it is often more attractive and less risky for top creative individuals to pursue autonomous work arrangements in which they can make a more direct impact on their industry or domain. With outside options becoming more attractive, achievable, and less risky, why should top talent stay in an environment that is less rewarding?

In sum, current trends suggest that fragmentation will be a sustained and even desirable outcome in the new business landscape. But not all parts of the business landscape will fragment. As we'll discuss below, this fragmentation in the product design and commercialization and related arenas creates an opportunity for more scale- and scope-intensive businesses to emerge and grow. Platforms and infrastructures will be needed to support fragmented production and distribution, and consumers, talent, and businesses will need help to navigate the large number of options available to them.

# Concentration: Emerging scale-and-scope operators will fuel and benefit fragmentation

Figure 18. The journey to the future of the business landscape: Concentration



As fragmented players focus on product innovation and commercialization, what will happen to the established companies of today, and how will they capitalize on their advantages of scale or scope?

Concurrent with the fragmentation occurring in the product innovation and commercialization space, concentration will begin to take place within parts of the economy that support niche operators. At a high level, concentrated players are those companies that maintain their competitive position by

leveraging scale and scope economics to provide operational support to fragmented players. The trends toward fragmentation and concentration will reinforce one another as large players find ways to achieve even greater scale and scope by serving the needs of a growing arena of fragmented players.

Concentration within a domain, such as an industry sector, displays the following characteristics:

- Players are tightly focused on a single business activity or function

- A significant level of investment is required to enter and sustain a marketplace position
- Players generate value by providing information, resources, and platforms to fragmented players, leveraging resources such as large-scale technology infrastructure or big data

## Roles that will tend to concentrate

As performance pressures intensify in tandem with barriers coming down, fragmentation will accelerate. Large-scale infrastructure providers and rich platforms will emerge to connect these fragmented players with resources within their ecosystems.

### Scale-and-scope operators

Large companies in the concentrating parts of the economy will adopt roles that require scale and scope in order to create value for large numbers of fragmented players.

The first scale-and-scope role is the **infrastructure provider**. Infrastructure providers deliver high-volume, routine process services. They have far-reaching networks and will likely serve both business-to-business (B2B) and business-to-consumer (B2C) needs. Many of the companies that will fill the infrastructure provider role will have made large capital investments in physical infrastructure such as transportation networks (for example, UPS and FedEx), manufacturing equipment (for example, Flextronics), or facilities. Alternatively, their infrastructure may be in the form of digital technology or based on scale-intensive business processes that can extend across industry verticals, such as routine human resources (HR) process management or risk management. Infrastructure providers will be instrumental to the viable operation of fragmented businesses, as they can provide affordable access to services and physical networks that can only be operated cost-effectively at scale.

The second scale-and-scope role is the **aggregation platform**. Aggregation platforms enable connections among fragmented players, helping to dismantle the kinds of barriers to entry, commercialization, and learning discussed earlier in this report. These platforms create connections in one of two ways: Either they foster connections among participants—both fragmented and concentrated—in the ecosystem, or they connect fragmented players conveniently and quickly to aggregated data and resources.

Platforms that foster connections typically target certain types of participants or focus on a specific purpose. For example, online marketplaces such as eBay connect sellers and consumers, while financing platforms such as Kickstarter connect artists and entrepreneurs with financiers and social platforms such as Facebook connect individuals who want to share knowledge or information with each other. Additionally, platforms that connect entities to data or other resources typically rely on deep, relevant expertise. For example, PCH International is one of several emerging platform businesses that help nascent maker businesses navigate and access the small-batch or sample factories of Shenzhen, China, based on a network of connections, experience in the region, and specific manufacturing knowledge.

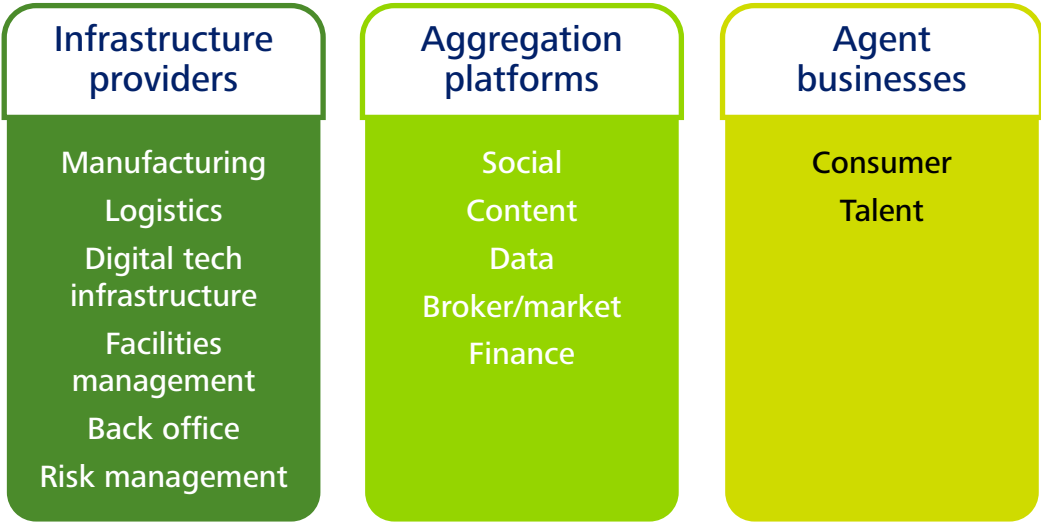
The final scale-and-scope role is the **agent**. Two types of agents exist: the consumer agent and the talent agent. Consumer agents serve as a trusted advisor to the consumer across a growing array of products and services. Talent agents connect talent to opportunities and provide advice to help individuals pursue lifelong learning and successfully evolve in terms of their business careers. Driving the need for agents are the increasingly diverse preferences and expectations of consumers, employees, and employers, as well as their growing access to a wide variety of offerings. Both types of agents create value by helping people sift through information and choices to find the products, services, and opportunities to best fit their needs.



Figure 19. Scale-and-scope operators



### Scale-and-scope operators



Graphic: Deloitte University Press | DUPress.com

The agent role has always existed, from the personal wealth manager to the Hollywood agent representing celebrities. What has changed with the advance of technology is the ways in which agents can operate and their consequent increase in reach. Agents can now function in a virtual format—from Pandora’s music recommendations to Sosh’s event recommendations—to cost-effectively address the needs of the mass market rather than targeting just the very affluent.

A talent agent employs a deep understanding of an individual’s learning and career goals

to provide proactive, holistic career coaching and learning services. The talent agent’s goal is to help the individual learn faster from new situations or new connections in the ever-changing landscape. One factor driving the need for talent agents is the increasing speed at which skills lose relevance, primarily as a result of rapid advances in technology. With no signs that technological or related business change will slow down, individuals’ skills will be ever more subject to obsolescence, and workers will face an unprecedented need to almost continually build new skillsets. As a result,

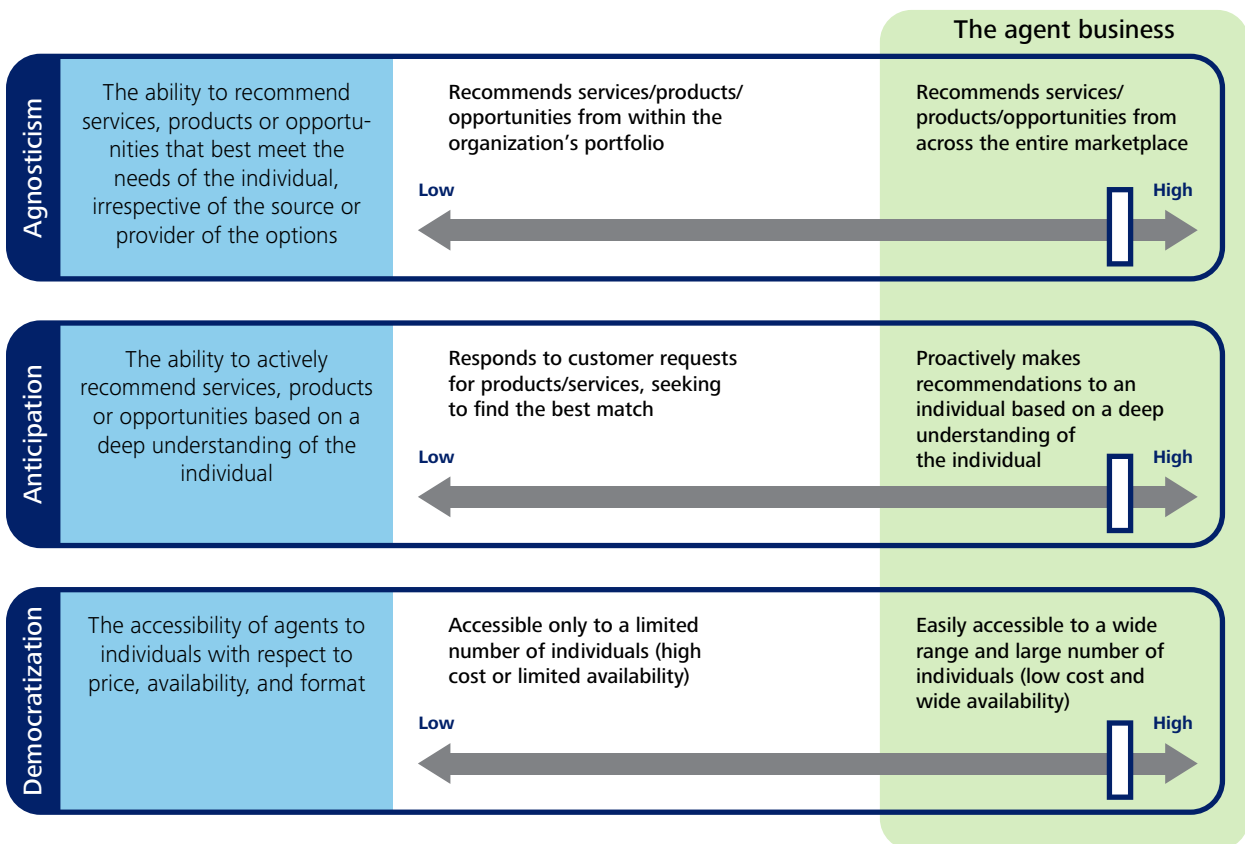
lifelong learning will become a permanent part of our professional lives, and talent agents will play an increasingly important role in helping people and organizations learn faster and improve performance.

Consumer agents will be particularly important for connecting consumers to the work of fragmented creators. As agents improve their ability to analyze customer data to generate recommendations for specific individuals, the highly specialized niche offerings of fragmented players will rise to the surface. For example, Netflix is developing ever more sophisticated algorithms to predict

movie-watchers' tastes, allowing it to provide recommendations for independent films that users likely would not have discovered on their own. Similarly, LinkedIn leverages the data each professional provides to recommend job opportunities and professional connections.

Regardless of format—physical or virtual—agents will share several defining characteristics, described in figure 20. At this time, however, no pure-play agents exist that are completely brand-agnostic, anticipate customer needs with proactive recommendations, and are widely accessible to a mass market.

Figure 20. Characteristics of agent businesses



Graphic: Deloitte University Press | DUPress.com

# Mobilizers: Connecting and mobilizing the ecosystem

Figure 21. The journey to the future of the business landscape: Mobilizers



**T**HE new business landscape has one final role: the **mobilizer**. Mobilizers will become increasingly important, especially in fragmented areas of the economy, in connecting disparate participants within the ecosystem.

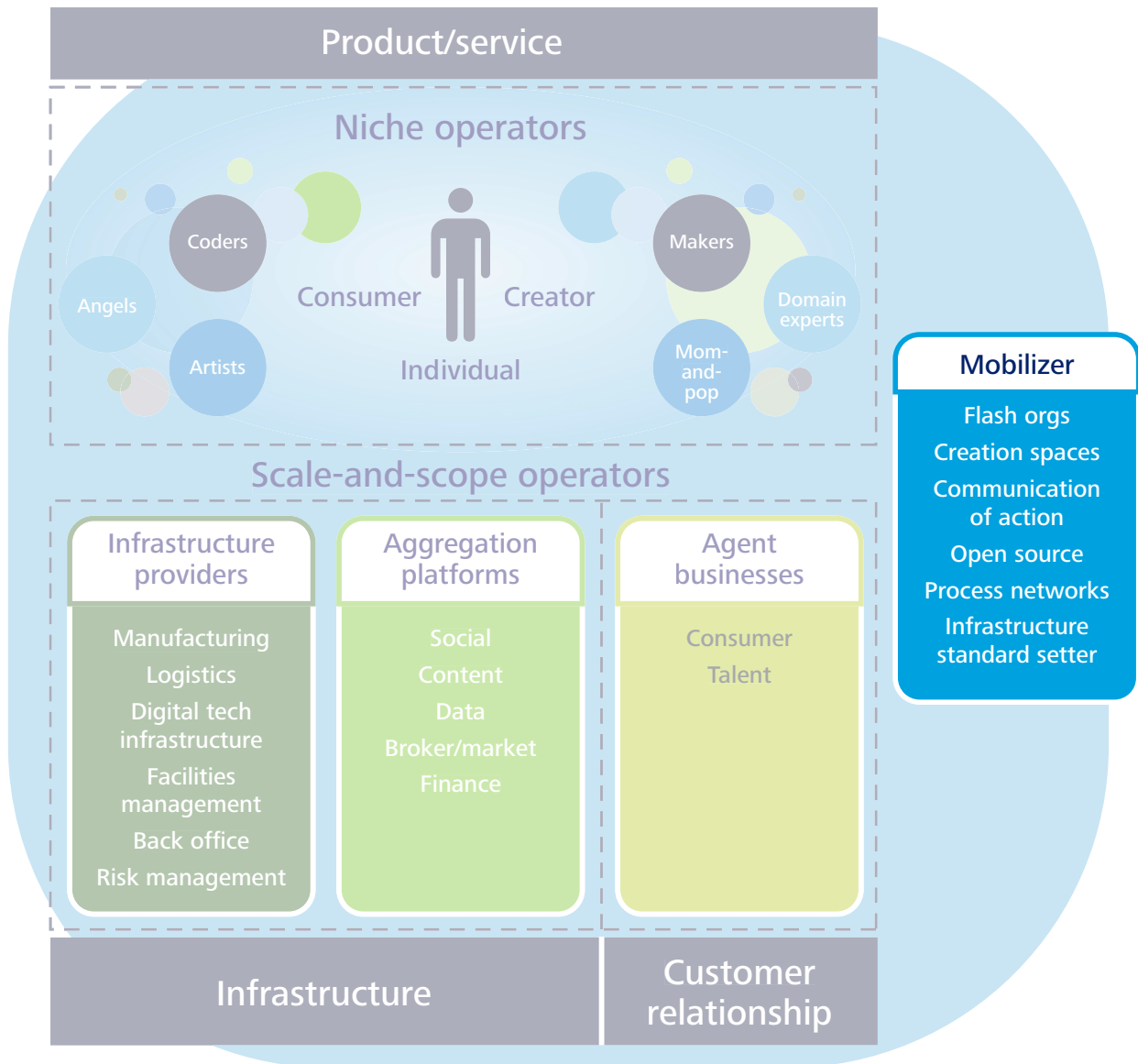
Mobilizers are entities that orient participants toward a common goal by creating an environment for a sustained, shared collaboration among ecosystem participants. Rather than aggregate participants and broker transaction-based relationships (as do aggregation

platforms), mobilizers enable a web of sustained, complex interactions that evolve over time to achieve focus, drive specific initiatives, and accelerate learning.

Mobilizers add value in three ways:

- Frame explicit, motivating goals
- Provide governance that enhances interactions
- Facilitate collaboration

Figure 22. The role of mobilizers



Graphic: Deloitte University Press | DUPress.com

### Frame explicit, motivating goals

Mobilizers unite participants—often with different motivations, capabilities, and cultures—within an ecosystem under the banner of a common goal. For instance, Code for America, a non-profit that helps residents and governments harness technology to solve community problems, was created explicitly to fill this role. With just 30 employees, the nonprofit has mobilized a network of thousands of volunteers, government officials, civic

organizations, and entrepreneurs across more than 50 US cities to improve city life through code. Among their accomplishments: improving the delivery of social services, providing real-time access to mass transit arrival times, making it easier for small businesses to navigate local requirements, generating maps of flooding to help citizens stay safe, giving residents visibility and input into land-use planning, putting health inspections on restaurants' Yelp reviews, and improving government transparency and civic engagement.<sup>94</sup>

## Provide governance that enhances interactions

Mobilizers create the infrastructural support for the maintenance and governance of connections between players in the landscape over time. For example, Li & Fung—a global consumer goods sourcing company—provides a governance structure for its vast network of suppliers by specifying standardized interfaces for work modules. Li & Fung has created standards around how each partner should operate with other partners in the ecosystem (for example, quality requirements, conflict resolution practices), thereby facilitating the flow of transactions. This system of governance makes it possible for the vast network of customers and suppliers within the Li & Fung network to operate with a high degree of efficiency.

Mobilizers may also take the form of non-profit organizations, which can exert tremendous influence over businesses by supporting an industry ecosystem with a governance infrastructure. The Internet Corporation for Assigned Names and Numbers (ICANN) does this by setting security and interoperability standards for the Internet. ICANN thereby dictates how players can interact on the Internet and determines the rules by which they do so, providing a valuable service to the vast number of organizations and individuals that rely on the Internet.

## Facilitate collaboration

Mobilizers forge connections across players with complementary talents and enable goal-directed collaboration. For example, when Li & Fung's customers request a red sweater, the suppliers know exactly what shade of red to use. Commonly understood requirements help suppliers collaborate more effectively.

Going back to Code for America, the nonprofit has not only mobilized a network of thousands of largely unpaid parties, but also facilitates collaboration between two seemingly distinct groups of professionals: coders and

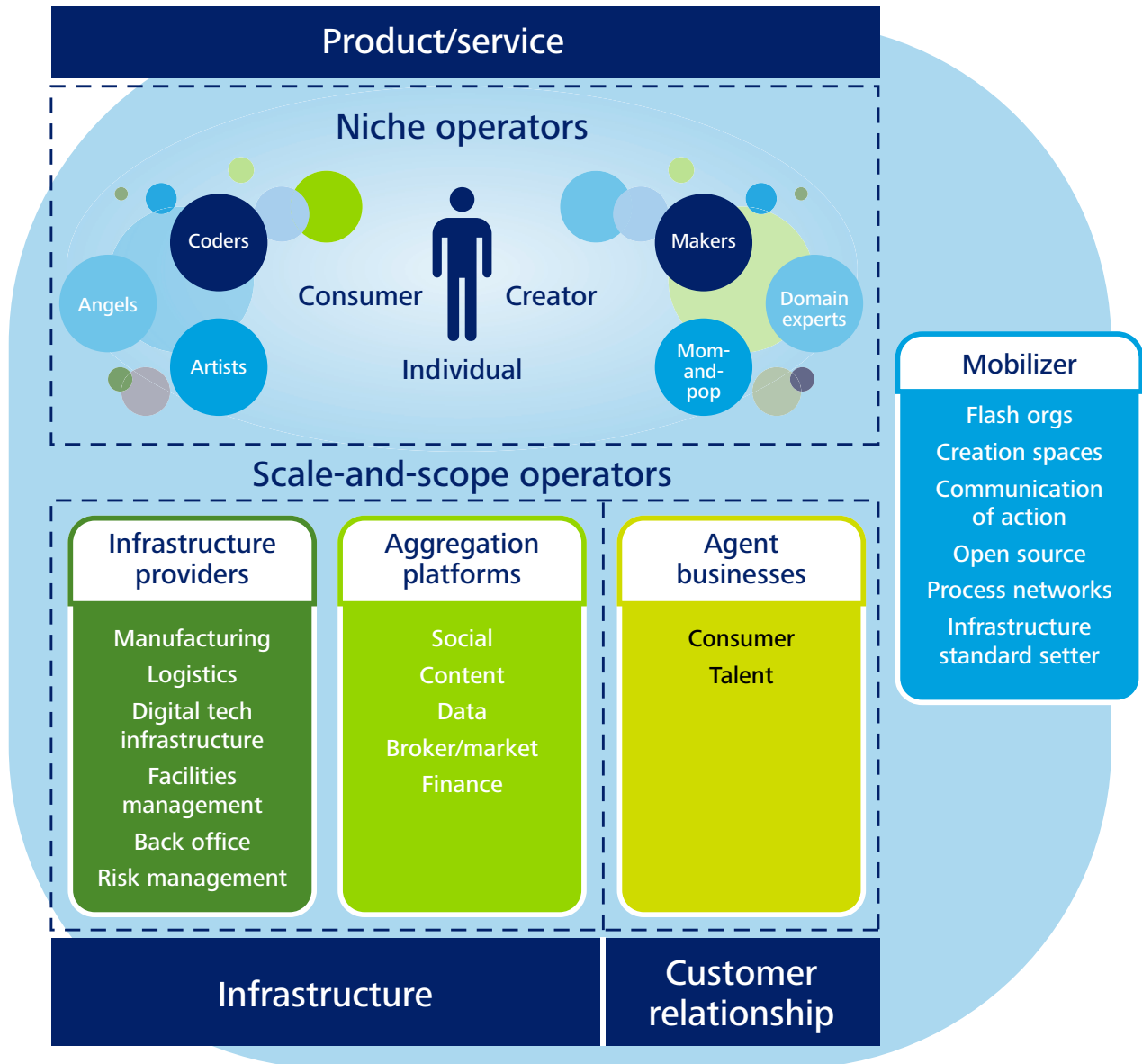
policy makers. Code for America has catalyzed rapid solutions to problems that otherwise might have taken exorbitant amounts of funding, years of planning, and prohibitive amounts of bureaucracy.<sup>95</sup>

One of the key benefits of collaboration is the exchange of tacit knowledge and the facilitation of learning across an ecosystem. For example, Ashoka, the largest network of social entrepreneurs worldwide, acts as a mobilizer through its Changemaker program. Ashoka Changemakers convenes and connects Ashoka's fragmented network of social innovators via an online, open-source platform that conducts challenges, enabling social entrepreneurs and partners to share ideas and exchange resources and analyses aimed at solving complex social problems, build relationships, and document effective in-country practices to recreate in other regions.<sup>96</sup> Some mobilizers facilitate learning more passively through the thoughtful creation of spaces, venues, or events that bring fragmented players together to connect and exchange knowledge. TechShop, for instance, was created to provide infrastructure for individuals and small businesses seeking to create their own products. However, in addition to providing access to tools (physical platform), TechShop is starting to act as a mobilizer for knowledge-sharing across the maker community. For example, TechShop's members are encouraged to interact with each other, and coaches—or “dream consultants”—help members learn how to use machines, monitor the community culture, and facilitate interactions among members.<sup>97</sup>

## The future of the business landscape map

A new business landscape will emerge (see figure 23) as the roles described above map into three types of businesses: product/service, infrastructure, and customer relationship. Each of the business types will have its own focus, economics, and value in the ecosystem.

Figure 23. Map of the future business landscape



Graphic: Deloitte University Press | DUPress.com

Some concentrated players will create infrastructure businesses, acting as either infrastructure providers or aggregation platforms. Infrastructure businesses compete on scale, providing high-volume, routine processes (or products) that support fragmented players (as well as other large companies) as they go to market, execute financial transactions, or connect with customers.

Other concentrated players will create customer relationship businesses, filling the role of consumer agent or talent agent. They will act as trusted advisors to consumers or talent, bringing offerings to individuals based on the agent's determination of which products, services, or opportunities best meet a particular customer's need. The customer relationship business competes on its scope of relationships. The

more it knows about a customer, across all his or her activities, the more helpful it can be in recommending meaningful options. Moreover, the more individuals a customer relationship business works with, the more insights it can offer based on the patterns it observes among others in similar circumstances.

On the other side of the landscape, fragmented businesses—the niche operators—will tend to create product/service businesses focused on developing and delivering creative new products and services. These businesses will compete on speed and creativity, anticipating evolving customer needs and quickly creating distinctive new products to meet those needs.

In this business environment, mobilizers will orchestrate the various business types in the ecosystem.

These three business types—infrastructure, customer relationship, and product/service—exist today, some in pure form but also bundled together within most large enterprises. As we'll discuss, large enterprises will increasingly

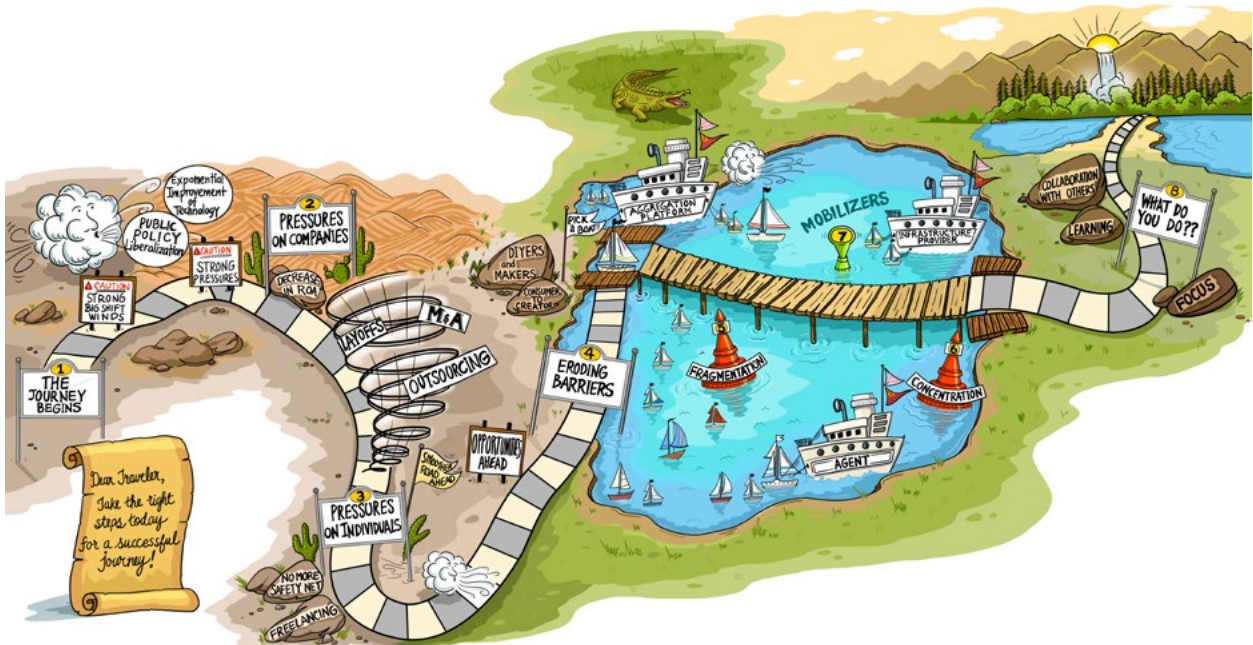
have to choose which business type to pursue, which will dictate where they land in the new business landscape.

Both the pressures introduced by the Big Shift and the barriers removed by forces in the Big Shift are beginning to dramatically alter the business landscape, introducing new roles that will lead to new types of businesses and new dynamics among marketplace players, large and small. Some industries, such as software development, have already been impacted by the trend toward fragmentation. Other sectors are evolving more slowly, but they too will be affected as technology continues to disrupt business models and industries.

In light of this evolving environment, what will be the future for Fortune 500 companies? Will they see fragmented players as a threat and a competitive problem that they need to try to shut down? Or will they see fragmentation as an opportunity to work with a more diverse array of partners to accelerate innovation and learning and achieve sustainable performance improvement?

# What do you do? Figure out where to play and play it well

Figure 24. The journey to the future of the business landscape: What do you do?



As technology continues its exponential advance, amplified by public policies that promote the movement of capital, labor, product, and resources, increased volatility and competitive intensity will likely prevail in the global business environment. Companies will need to refocus from maximizing operational efficiency to accelerating learning. Efficiency improvements are plagued by diminishing returns. However, an environment that cultivates learning and accelerates performance

improvement can turn Big Shift pressures into opportunities that create increasing returns.

For companies, focus is often a prerequisite for learning. However, many established companies today play multiple roles and participate in multiple, if not all, types of the businesses discussed: product/service, infrastructure, and customer relationship. For many companies, pursuing all three business types concurrently will become less and less sustainable. What then should these incumbents do in order to



begin positioning themselves to effectively participate in the future business landscape? We believe that they should:

- Understand the business types the company participates in today
- Where possible, focus more tightly on either the infrastructure or customer relationship business (that is, scale-and-scope roles)
- Reframe interactions with fragmented players from competition to collaboration

## Understand the business types the company participates in today

Most companies today operate multiple business types (for example, product/services, infrastructure, and customer relationship) within a single organization. Such diversity is often viewed as a strategic advantage, given the uncertainty of a rapidly changing world; a portfolio is comforting. However, when a company participates in too many business types at once, it can lack focus. Diverse groups compete for resources, chafe under inappropriate economics or metrics, and clash culturally.

The reality is that the three business types found tightly bundled into large enterprises today have very different economics, skill sets, and cultures.

- **Infrastructure management business:** Infrastructure management businesses are driven by powerful scale economics, require skills to manage high-volume, routine processing activities, and have cultures that prioritize standardization, cost control, and predictability. The facility or asset trumps the human being.
- **Product/service business:** Product/service innovation and commercialization businesses are driven by economies of time—speed to market—and, as a result, require

skills focused on rapid iteration in design and development so that market opportunities can be quickly identified and addressed. The culture prioritizes creative talent—everything is oriented toward supporting the creative “stars.”

- **Customer relationship business:** Customer relationship business types are driven by economies of scope—building broader relationships with a growing number of customers. This business type requires skills related to gathering and analyzing large amounts of data to develop a much deeper understanding of the evolving context of each customer. The culture of this business type is completely focused on the customer—the customer is king no matter how much internal turmoil and heartburn meeting customer requirements might create.

Is it any wonder that the friction across these three business types within a single enterprise is intense and continuous? Let's just take a couple of examples of how this friction leads to sub-optimization of performance. If a company really wants to build trust with its customers through a customer relationship business type, it should be prepared to connect its customers with the best products and services to meet their individual needs, even if that involves recommending products and services developed by other companies. Yet, the product/service business type within the company will want to restrict the choice offered to customers so that it only involves the products and services developed by that company.

On the culture front, product designers may have contempt for the “suits” who try to confine their creativity by seeking standardization and cost savings. Or salespeople may view back-office operations as an obstacle to effectively serving the unanticipated and unique needs of their customers. Unfortunately, in a world of mounting performance pressure, companies cannot afford to sub-optimize their performance as they seek to navigate interminable organizational conflicts. Instead, they

should focus their business activities so that they can maximize their agility, flexibility, and ability to learn.

If companies wish to continue in multiple businesses, they must develop a clear and distinctive performance leadership in each—simply being at parity with others will no longer be sufficient. Otherwise, they may be vulnerable to more tightly focused competitors that are truly performance leaders in the role they have chosen and that benefit from accessing leading capabilities in the roles they have not chosen.

These business types will each have very different cultures and resource needs that are likely to conflict with each other. But there are other reasons to question the wisdom of keeping these three business types tightly bundled together within a single enterprise, no matter how big it might be. For example, the distinct skills and capabilities required for each business type are likely to develop more rapidly if the people engaged in this business type are exposed to a broader range of business problems and opportunities than they are likely to encounter if they are only serving other parts of one company. Thus an IT department within a consumer products company will have less opportunity for rapid learning than if it provided support to a broader range of consumer product companies, as well as industrial product and financial services companies.

Here's another challenge. Employees working on IT in a consumer product company will tend to be treated as support—they will have lower status than the product designers and product managers who are coming up with creative new products and delivering them to market. Leading IT talent is likely to find working in such an environment far more frustrating than if they could work for a more focused infrastructure management business whose only business is providing IT services to other companies.

The functional, divisional, or matrix structures of many Fortune 500 firms today mix the different types of businesses, leading to the competition for resources and sub-optimization described above.

Focus can accelerate and amplify learning opportunities. It reduces the risk of time-consuming and energy-draining cultural and political battles within a single institution. It provides exposure to a broader and more challenging array of customers and use cases that can improve and develop skills. It helps to attract and retain leading talent who now clearly perceive they are core to the success of the business—now, they are heroes engaged in the primary activity of the company. Finally, focus can provide opportunities for the company's talent to collaborate with leading talent in other, equally focused enterprises.

How does a company move toward focus? The first step is to understand what types of businesses it operates today. The next is to separate those businesses operationally and organizationally so that each unit is focused around a single business type: product/service, infrastructure, or customer relationship. By consolidating business types with similar cultures and economic drivers, companies can reduce distractions and start gaining focus. For example, all infrastructure business activities, such as manufacturing, logistics, and finance, could be grouped together into a business unit that administers high-volume routine processes.

### Where possible, focus on the infrastructure or customer relationship business type

Eventually, many companies will realize that creating separate units around each business type, while helpful in the short run, is not sustainable in the long run. Competition will force them to become more focused. How? By unbundling the different types of businesses, choosing one of the core business types to pursue, and using the ecosystem to access services from leading players in the other two business types.

The transition from the current state of multiple roles to one of focusing on a single role is not easy. Focus requires letting go of

certain capabilities and relinquishing absolute control in favor of exerting influence within a larger ecosystem. Historically, many companies derived value in the marketplace through control—of product features, the distribution channel, or customer relationships. However, in the rapidly changing future environment, performance improvement will come not from control but from opening up, embracing knowledge flows, maximizing learning, and accessing leading capabilities and resources wherever they reside. Those companies that can focus on one business—product/service, infrastructure, or customer relationship—will be able to connect with and learn from other focused players and collaborate to solve performance issues.

Many organizations today have already begun to focus. The increase in the business process outsourcing (BPO) and IT outsourcing (ITO) markets indicates that companies realize that focused vendors can perform high-volume, routine process activities better and at a lower cost. The BPO market has increased since 1995 both in terms of revenue and in terms of the number of contracts. The number of ITO contracts has also continued to increase since 1995, although total ITO revenue has recently declined as a result of market commoditization and contract rate pressures. Additionally, according to a 2010 IDC survey, approximately 64 percent of companies that manufacture products outsource their manufacturing. Forty-three percent of those who already outsource stated that they expect their company's current outsourcing levels to increase, while 45 percent said they expect it to remain the same.<sup>98</sup> Finally, third-party logistics providers (3PL) recorded an estimated \$250.2 billion in revenues from Global Fortune 500 companies in 2012—a 67 percent increase from 2005.<sup>99</sup>

Most outsourcing activity today is still driven by a short-term focus on cutting costs or shifting fixed costs to variable costs, rather than the pursuit of learning or leading capabilities. However, while the 2012 Deloitte Outsourcing survey indicated that reduction in operating

costs was still the No. 1 reason for outsourcing, “improvement in customer service” and “gaining a competitive advantage” were the No. 2 and No. 3 reasons for outsourcing, with 73 percent and 49 percent of respondents, respectively, citing them as “important” or “very important.”<sup>100</sup> This indicates that the decision criteria for outsourcing may be expanding and shifting to include learning and performance improvement.

These outsourcing trends also suggest that many companies are already in the first wave of unbundling—decoupling the infrastructure businesses from the rest of the organization. Some have begun to realize that focusing on core capabilities and unbundling other functions allows both the company and the unit it unbundles to accelerate learning and performance improvement. For example, Cognizant was initially created as an internal technology unit within Dun & Bradstreet in 1994. By 1996, Cognizant began serving external clients, and it subsequently held its IPO on the NASDAQ in 1998. While unbundling from Dun & Bradstreet enabled Cognizant to focus on its core capabilities, Cognizant has since consolidated with complementary companies to broaden its scope—all within the infrastructure type of business. Between 2002 and 2012, Cognizant made 17 acquisitions, broadening its scope from providing IT services to the financial industry into providing these services to the retail, manufacturing, logistics, and health care industries. Cognizant's clients increased 423 percent during this time to over 800 individual clients in 2012. Revenues simultaneously skyrocketed from \$368 million in 2003 to \$7.3 billion in 2012.<sup>101</sup>

Similarly, General Electric (GE) decided to spin off its back-office processing unit—Genpact—in 2005. Genpact became a publicly traded company (NYSE: G) in 2007. One of the motivations for this spin-off was to expose the employees of the unit to a more diverse array of customer needs and performance issues, giving them an opportunity to learn faster than if they were simply focused on the needs of one company. Since its spin-off,

Genpact grew from approximately 32,000 employees and a revenue of \$823 million to over 62,000 employees and revenues of over \$2 billion in 2013.<sup>102</sup>

The next wave of unbundling is the decoupling of the customer relationship and product/service business types. This is at a much earlier stage of development, but we can begin to see some early signals in arenas like consumer products and pharmaceuticals. For example, as the world's innovation landscape has changed, so has Procter & Gamble's (P&G) strategy for innovation. This started nearly 15 years ago as P&G realized that to achieve the growth levels recommended for most mature companies they could no longer rely solely on internal R&D efforts, and as such, the company known for inventing the first disposable diaper and first synthetic laundry detergent, turned to identifying innovation outside the parameters of its four walls. In March 2000, the CEO, A.G. Lafley, decided to harness the change that was occurring in the innovation landscape within consumer products to change how P&G was identifying new product ideas. Noticing that most of the impactful innovation was being done at small and mid-sized entrepreneurial companies – Lafley made it the company's goal to acquire 50% of its innovation from outside the P&G walls.<sup>103</sup> Launching the "Connect and Develop" program in attempt to tap into the ecosystem of innovation around the company, P&G has developed a systematized approach to find innovative product ideas, to bring them in, and to turn them into actual products harnessing P&G's already developed manufacturing, marketing, and purchasing capabilities. By 2006, 35 percent of new products had elements that originated outside of P&G (up from about 15 percent in 2000) and 45 percent of the product development initiatives had elements that were discovered externally.<sup>104</sup>

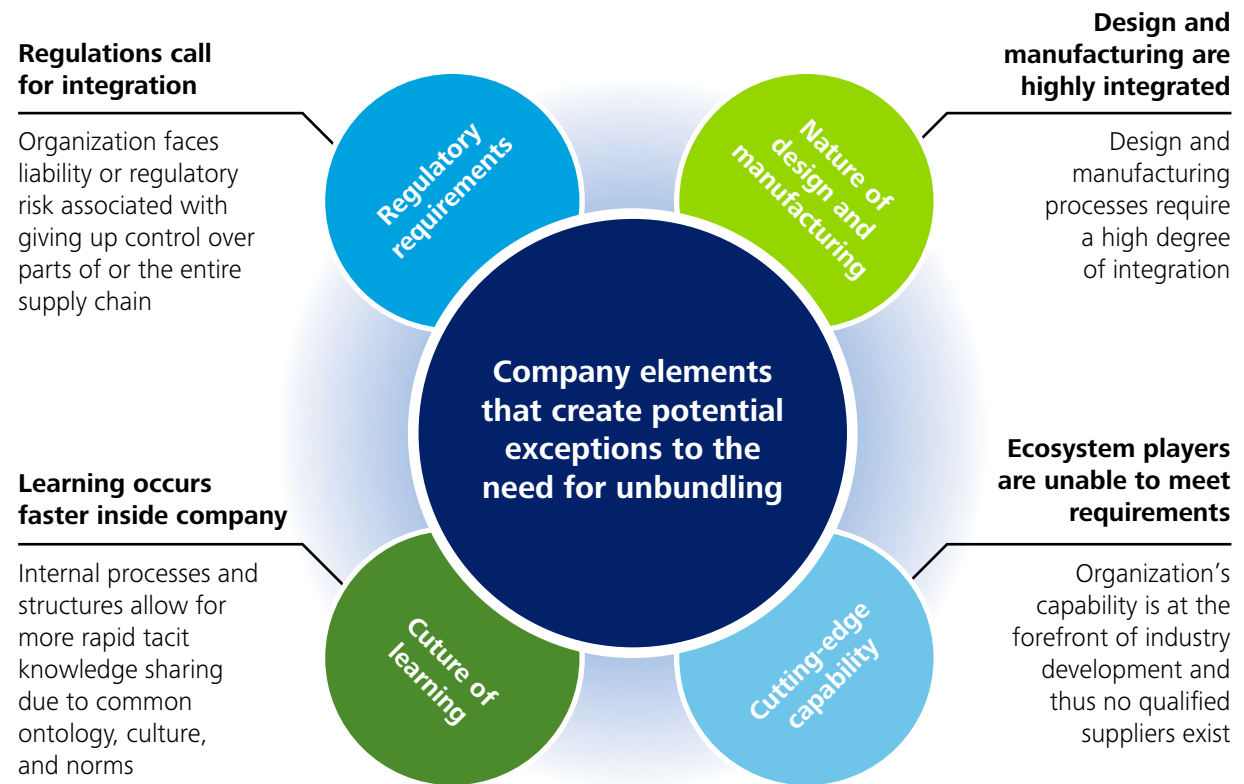
Similarly, large pharmaceutical companies are increasingly sourcing their products from more specialized third parties and leveraging their own expertise in serving health care providers. For example, in 2013, six of the

top 10 licensing deals in the pharmaceutical industry were broad technology platform deals that established research collaborations between small, specialized companies and big pharmaceutical companies. This signals a continuing trend toward externalized R&D.<sup>105</sup> Many pharmaceutical companies have also established relationships with contract research organizations (CROs). Despite representing a relatively small share of the global R&D market (9.6 percent in 2014), the global CRO market has grown at a rate of 5.5 percent and is projected to increase at a rate of 7.9 percent from 2014 to 2018.<sup>106</sup>

The likely trajectory here is that companies, facing mounting performance pressure, will seek to supplement their own internal product development capabilities by sourcing and licensing products from third parties so that more and more of their revenue is generated from externally developed products. Over time, these companies will likely focus more on understanding evolving customer needs so that they can be more effective in sourcing the best products. At some point, it is likely that these companies will begin to question whether they need to source or license these products at all and whether they can become even more helpful to their customers by connecting them to whatever products and services might be most relevant, regardless of who develops and produces them.

Once companies focus around one role, they will need to build trust-based, loosely coupled relationships with others in their ecosystem to gain access to capabilities that are no longer in-house. A key to learning faster through focus is connecting with leading talent in other focused companies as well. For example, many traditional large enterprises are finding that the expertise of contract manufacturers can be harnessed to help come up with creative new ideas to design products that can be manufactured with fewer defect rates. More fragmented product/service businesses will benefit from the holistic view of individual customers and customer segments that customer relationship businesses will be able

**Figure 25. Factors that create exceptions to the need to unbundle**



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to develop, giving them more insight into the emerging needs of customers.

It is important to note that some Fortune 500 companies will not be able to unbundle their businesses—at least not right away—due to regulatory requirements, business differentiation, or internal structures (see figure 25). For example, industries with high liability risk such as financial services and aerospace & defense are subject to forces that may slow down or even prevent companies from outsourcing parts of the supply chain or even periphery business functions. For example, the US government has implemented several regulations to ensure security and control over the supply chain for vendors that provide information technology services to the government agencies. These rules require vendors to fully understand the activities that occur throughout their supply chains—especially the amount of foreign sourcing. Vendors are also

required to create governance and processes to prevent any security risks that may occur as a result.<sup>107</sup> Due to these regulatory requirements, outsourcing supply chain activities may be difficult for some vendors.

Additionally, companies that are on the forefront of industry development and do not yet have partners or suppliers that can meet their needs may need to remain bundled, at least in the early stages of market development, in order to continue innovating. For example, Amazon invested in developing same-day delivery capabilities to offer customers an option to receive their online purchases the same day the purchase is made. None of the existing logistics vendors provided these offerings at the time.<sup>108</sup>

Some industry players also rely on being bundled as a source of competitive differentiation due to considerations of proximity or the need for extensive collaboration during

product development and testing. For example, Corning—a specialty glass and ceramics manufacturer—has a tightly integrated manufacturing and R&D process. This is largely due to the deep interdependence between the design of its glass products and the design of its manufacturing processes and operations. This deep interconnection between design and manufacturing, however, is unusual.

Finally, companies that have embraced cross-functional learning and have structures, processes, and governance in place to allow various types of businesses to collaborate and share tacit knowledge do not necessarily need to unbundle—at least while the company's own learning infrastructure is more robust than that of the ecosystem. These are companies that facilitate massive amounts of implicit and tacit knowledge flows across radically different silos through a shared culture, shared practices, and shared appreciation for diverse backgrounds and perspectives. In these environments, tacit learning from failures is valuable and can be shared in ways that a broader ecosystem with diverse languages and practices does not allow. Few companies have established these structures so far.

In any case, companies that choose to pursue multiple business types must be convinced that they can truly be leaders in all aspects. While certain situations may warrant remaining bundled, companies that decide to do so should understand which types of businesses they are in and align their operations and organizations around these types of businesses. Increasingly, as more focused and innovative players emerge, even these companies could face pressures that cause them to unbundle.

Understanding what businesses a company participates in, and focusing the operations and organization on the business types, is the first step to success in the business landscape unfolding in the era of the Big Shift. Many large companies may need to unbundle for greater focus. Next, companies should reevaluate their relationship with fragmented players—competition is unproductive in areas where fragmented organizations have

a structural advantage. In those areas, large companies should devote resources to building infrastructures, aggregation platforms, or agent capabilities in order to connect and enhance fragmented players' efforts. In short, large companies should define what scale or scope activity they do best and establish deep, trust-based relationships with other ecosystem players—including niche operators—in order to deliver more value.

## Reframe interactions with fragmented players from competition to collaboration

Many of today's large enterprises are likely to believe that the product/service business is their core competency, and to dedicate most of their resources to developing and commercializing new offerings. However, fragmentation in the business landscape is likely to be most pronounced in this business type, driven by reduced barriers to entry, commercialization, and learning. This puts large enterprises that choose to focus on this business type in a challenging environment. They may be fighting a losing battle since the competencies required to keep up with rapidly changing customer needs and the shortening product life cycle will increasingly reside with smaller, fragmented players, which are closer to the consumer and can provide personalized service due to a deeper understanding of customer needs. With a lower minimum efficient scale and lower fixed costs, fragmented players are also more nimble. By accepting that fragmented players have the advantage in this space, and scaling down product development efforts in favor of developing mutually beneficial relationships with niche product/service businesses, large enterprises can maintain access to innovative products and services.

Most of the value in this new business landscape will come from the relationships within the ecosystem. Large, established companies and small, fragmented entities can each benefit in meaningful ways from working together. Concentrated players should take a

different approach to the way they collaborate with niche operators, depending on the business type.

- **Evolve from a product to a platform business:** A large enterprise might leverage the fragmented landscape of niche product designers/vendors evolving its own products into platforms that invite the participation and contributions of specialized product creators. Increasingly, the value to the customer will come from the more specialized products and services available on the platform. For example, since the launch in 2008 of the iOS Software Development Kit, Apple® has provided the tools and content needed for third-party developers to become engaged with the mobile ecosystem by developing on top of the core smartphone operating system to create and distribute applications.<sup>109</sup> Similarly, Google had also launched the Android Open Source Project (AOSP) in an attempt to bolster the community of developers, coders, and even device manufacturers on its Android operating system.<sup>110</sup> Combined, these two platforms have created an arena for players of the fragmented landscape to create and share their products. However, the opportunities to evolve products into platforms are not limited to the software development space. A furniture manufacturer, for example, can create basic designs and then invite a broad set of makers and craftspeople to enhance and tailor the core products for particular market niches and even individual uses. Retailers can use their brick-and-mortar or online stores, as well as their brand, as a platform for local designers and niche makers to collaborate. One early signal is J. Crew’s “In Good Company” initiative, which provides select smaller brands with floor space in J. Crew’s clothing stores, giving J. Crew customers access to curated products from other brands that uniquely fit with J. Crew’s aesthetic and product line.<sup>111</sup>

- **Improve utilization of facilities through partnerships:** If a large enterprise chooses to focus on an infrastructure business type, it can leverage a broader ecosystem of fragmented players by offering elements of its scale infrastructure operations as a service to smaller enterprises that need access to scale facilities. Consider State Street Bank, which evolved from a large enterprise to a more focused infrastructure business. Founded in 1792, State Street Bank started out as a conventional bank, but by the 1970s, the bank’s large-scale back-office processing operations were its primary advantage over smaller rivals. The company decided to focus on developing back-office processing capabilities in diverse areas such as investments, trusts, and securities processing—and offer these capabilities on a contract basis to other financial institutions. State Street ultimately decided to shut down its traditional commercial bank operations and focus exclusively on growing its infrastructure outsourcing business. State Street found growth by leveraging its scale in infrastructure, and in doing so, it also provided access to the scale resources that smaller financial services companies needed to commercialize their products, reach customers, and compete with larger banks.<sup>112</sup>
- **Connect with fragmented players to understand trends:** Companies that choose to focus on the customer relationship business type can deliver more value to their clients by developing relationships with fragmented domain experts and curators. These more specialized experts and curators can help the larger enterprise keep up with the latest developments in the rapidly evolving fragmented product/service businesses that might be relevant to their clients. The companies that choose to play the roles of either consumer or talent agent will also need to develop partnerships with aggregation platforms that expand access to the

broadest array of product and service offerings from specialized providers. Given the expanding array of options and the rapid evolution of these options on these platforms, the customer relationship business will benefit by assembling a rich ecosystem of more specialized domain experts and curators to surface the most relevant and valuable options within the context of the deep understanding of individual needs and context developed by the customer relationship business. At the same time, fragmented domain experts and curators will have valuable access to data and customers through their interactions with the customer relationship businesses. For an indication of the potential opportunity here, we might look at some of the specialized consumer agents who serve very affluent customers today. For example, wealth management advisors often develop a network of investment specialists in particular areas like bond investments or real estate investments to help the wealth management advisors connect their clients with the most promising investment opportunities given the specific needs and context of each client.

Regardless of the business type a company chooses, it should access a larger ecosystem of third-party talent that can help it address challenging performance issues and emerging market opportunities by coming up with creative ideas and approaches to pursue. As the Silicon Valley entrepreneur, Bill Joy, once observed: "No matter who you are, most of the smartest people work for someone else."<sup>113</sup> Any company that does not find a way to tap into that external talent will increasingly find itself operating at a competitive disadvantage with companies that are more aggressive on this front.

A growing number of companies are emerging to provide platforms that help companies connect with relevant third-party expertise around specific business problems or performance issues. InnoCentive was one of

the pioneers in this area, helping researchers in the R&D companies of larger enterprises to connect with a diverse ecosystem of scientists and technologists to solve challenging research problems. More recently, Kaggle, an online crowdsourcing competition site, connects individual data experts with large companies that have tough data science problems they need help solving. Kaggle facilitates the process of making corporate data available to a crowd of data scientists, engineers, mathematicians, and other specialists seeking opportunities to do challenging work with large data sets. While cash prizes are awarded for each challenge, many of Kaggle's "crowd" are primarily interested in opportunities to solve problems about which they are passionate while simultaneously gaining experience and honing their craft.

Tapping into the ecosystem to crowdsource ideas may be the first step for many companies. The next step might be to develop loosely coupled longer-term relationships with smaller organizations. Some Fortune 500 companies have already been proactively forming loose partnerships with fragmented players to crowdsource innovative ideas. Through partnerships with organizations like Local Motors, Quirky, and GrabCAD, GE has made multiple efforts to connect with online communities to access and develop designs for new products. Through GrabCAD, GE fielded nearly 700 submissions from around the world to a challenge involving the redesign of a metal jet engine bracket with the goal of making it 30 percent lighter while preserving its mechanical integrity. The winner was an engineer from Indonesia who was able to reduce the weight of the bracket by 84 percent.<sup>114</sup>

While the larger companies benefit from these crowdsourcing initiatives and platforms, the fragmented community of experts also benefits by getting better visibility into research problems or business problems that map to their own area of expertise. This is one example of how ecosystems of relationships will evolve to help all participants to learn faster by working together.



# Conclusion

**W**E began our journey with three questions:

## 1. Which parts of the economy are fragmenting?

With fragmentation, we see a proliferation of small players in a domain, each with a small addressable market within a specific niche. Collectively, these players address a diverse spectrum of client and market needs. Crucially, both the number of players and the number of niches are increasing within the domain. No one player has enough market share to influence the direction of the domain over the long term, and only a modest level of investment is required to enter the market and maintain a viable business. These players are marked by “diseconomies of scale”: The bigger they get, the more challenging it is to stay in the business.

Where is this happening? We expect increased fragmentation in those areas of the economy that are focused on product innovation and commercialization. It should be especially prevalent in markets and industries where technological advances and public policy liberalization have reduced barriers to the means of production, commercialization, and learning.

## 2. Which parts of the economy are concentrating?

Concentration refers to the emergence of large-scale players that are focused on a single business activity or function. Because of significant economies of scale and scope as well as the potential for network effects, certain business roles will tend to become concentrated: infrastructure providers, aggregation platforms, and agent businesses. Concentration will occur in areas of the economy focused on infrastructure and customer relationship businesses where scale and scope provide an advantage.

## 3. How will various ecosystem players interact?

There are two broad categories of interaction in this ecosystem: transactions between the fragmented and consolidated players and broader collaboration among all players across the ecosystem.

In the former, fragmented players rely on consolidated players’ services for their very existence through information, scale resources and platforms (for example, cloud services, online marketplaces). In turn, consolidated players need fragmented players to purchase their services. Fragmented

players also provide concentrated players with agility and diverse innovation. Each business model fuels the other in a symbiotic relationship.

In the latter, mobilizers bring the entire ecosystem together for ongoing collaboration and learning, beyond a series of repeated transactions. Mobilizers enable both fragmented and consolidated players to work together more effectively to create new knowledge and drive more rapid performance improvement.

### What does this mean for your company?

The answers will be different for each company, and the pace and breadth of change will vary based on the industry's degree of regulation and openness to innovation. However, all companies should systematically assess fragmentation/concentration trends now. In those industries or domains where fragmentation is already occurring, companies will need to move quickly to reposition. In a world where the pace of change is accelerating and competition intensifying, it is increasingly risky to be complacent or to put off the hard decisions that may be required to prosper in this changing environment. This assessment is not just a one-time exercise; trends toward fragmentation and concentration need to be continuously monitored, as competition and disruption can come from unexpected regions, industries, and technologies. Look for early signals in the form of emerging disruptions and the significant erosion of barriers over time.

All players must understand what roles they currently play, where they want to be, and what assets they can leverage to get there. Large companies—as well as small companies looking for growth—cannot afford to ignore the

dynamics around fragmentation and consolidation; they must pinpoint where concentration is occurring within the economy and pivot to succeed in those spaces. In particular, the continued success of Fortune 500 companies will hinge upon the ability to position themselves effectively in portions of the economy driven by strong trends toward concentration. The winners will be those that are simultaneously aggressive and creative in serving broader ecosystems of fragmented players, anticipating those players' needs and delivering targeted, high-quality solutions that benefit from scope or scale.

Focusing around scale-and-scope roles will enable growth, as these areas will continue concentrating. This will require some shifts and repositioning, but companies can leverage assets they already have to shape the role they play. They may choose to:

- Transform into infrastructure businesses, offering high-volume, routine processes previously used for their own products as an outsourced service
- Become platform businesses, aggregating resources and vendors and connecting them with appropriate users or customers rather than acting as vendors themselves
- Become agent businesses, channeling their sector experience and existing customer relationships to provide specific recommendations based on an understanding of each customer and his or her needs

Whatever role they play, large companies will also have to connect and collaborate with mobilizers in order to unlock the collective knowledge of the ecosystem and become part of the transformation, rather than simply being impacted by it.

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