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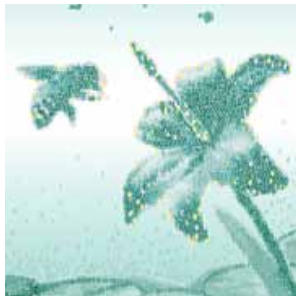
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Three Levels of Pull

Adapted from *The Power of Pull*

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> ILLUSTRATION BY KAI AND SUNNY

Deloitte.

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Last year, in the midst of a deep recession, we found ourselves troubled by the suspicion that short-term circumstances were masking an even more disturbing long-term trend. What if, when the recession ended, the U.S. corporate sector was still performing poorly?

What we found in a subsequent research effort seemed to confirm this hypothesis. The 2009 Deloitte* Shift Index, which leveraged more than a dozen data sources, four surveys, five proprietary methodologies, and 26 metrics to provide a macroeconomic view of deep, long-term disruptions in the business landscape, showed that return on assets (ROA) for U.S. firms has steadily fallen over more than four decades to almost one quarter of where it was in 1965, even as labor productivity has continued to rise. Even the highest performing companies are struggling on average to maintain their ROA levels, while losing their leadership positions at an ever-faster rate. By contrast, the companies in the bottom quartile of ROA performance saw their returns decline by 35-fold over the same period.[1]

What underlies this long-term decline in U.S. corporate performance? Perhaps the most singular factor is competitive intensity, which more than doubled in the four decades we studied. It may be, as we argue in *The Power of Pull* (Basic Books, 2010), that U.S. companies' failure to keep pace with heightened competitive intensity—as reflected by the long decline in ROA—reflects the limits of an outmoded approach to doing business. We call this legacy approach "push." Broadly speaking, push describes a method and means of organizing activities and actions. Push operates on a key assumption—that it is possible to forecast or anticipate demand. And it follows the logic laid out by historians such as the late Alfred Chandler, who wrote classics like *Scale and Scope* and *Strategy and Structure* – logic maintaining that companies exist to exploit the benefits of being big. They exist, in other words, to maximize efficiency at scale.
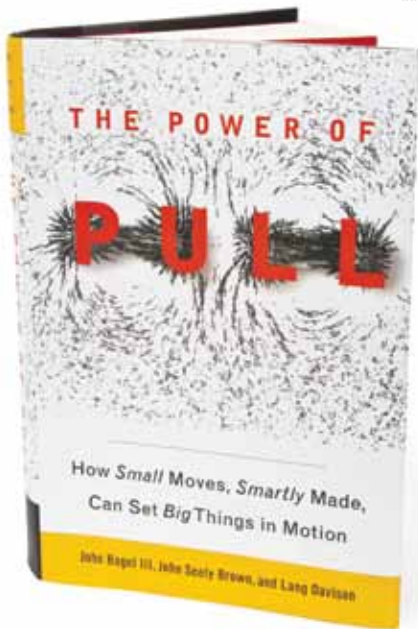
The logic of scalable efficiency arose in response to the spanking new transportation and communications infrastructures that emerged in the 19th century with the invention of the steamship, the railroad, the telegraph and, soon thereafter, the telephone and the automobile. These infrastructures for the first time enabled large-scale manufacturing facilities serving national markets. As a result, a new type of business enterprise was born, one using the infrastructure and relative stability of the day to get bigger quickly through push marketing and production at scale.

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Of course, we no longer live in the 19th century. Today we have a new digital infrastructure – consisting of the institutions, practices, and protocols that together organize and deliver the increasing power of digital technology to business and society. As the world becomes less certain, scalable efficiency is losing its way. Yet our economy is chock-a-block with businesses that exist to maximize efficiency at scale. These businesses presume predictability in order to push out mass produced products supported by mass marketing programs. They rely on command and control in a world that's increasingly difficult to command or control. These businesses are losing their leadership positions at an ever-faster rate because they continue to push in a world where push no longer works as effectively as it once did.[2]

Pull gives us access to what we need, when we need it, even if we're not quite sure what "it" is, and allows us to harness and unleash the forces of attraction, influence, and serendipity.

What we need, rather than a managerial philosophy based on the communications and transportation infrastructures of the 19th century, is one geared to the digital infrastructure of the 21st. We need a new rationale for our biggest private and public sector institutions – to re-imagine them in line with the world around us. Rather than scalable efficiency, we need scalable connectivity, learning, and performance. Rather than push, we need institutions that pull.

WHAT IS PULL?

Pull is the ability to draw out people and resources as needed to address the opportunities and challenges of an uncertain world. Pull gives us access to what we need, when we need it, even if we're not quite sure what "it" is, and allows us to harness and unleash the forces of attraction, influence, and serendipity. Using pull, we can create the conditions by which individuals, teams, and even institutions can achieve their potential in less time and with more impact. The power of pull provides a key to how all of us—individually and collectively—can turn challenge and stress into opportunity and reward as digital technology remakes our lives.

Pull is about expanding our awareness of what is possible and evolving new dispositions, mastering new practices, and taking new actions to realize those possibilities. It's about figuring out how to be systematic in how we combine work and life to pursue our passions, how to find others who share our passion but bring different experiences and perspectives to challenging performance needs, and how to create conditions where we're more likely to happen upon interesting people,

resources, and opportunities – even as we contribute the same chances to others. We all pursue some of these techniques—searching, tapping into networks of one kind or another, connecting with people who share our passions—but almost none of us do it systematically or even consciously. And few of us know how powerful these ideas and techniques, properly deployed, have the potential to be.

Pull works at three primary levels, each of which builds on the others. At the most basic level, pull helps us to find and *access* people and resources when we need them. At a second level, pull is the ability to *attract* people and resources to us that are relevant and valuable, even if we were not even aware before that they ex-

"Show me the stuff that I really need that I don't even know exists," isn't much of a search string. Access only truly works when we know what we're looking for.

isted. Think here of serendipity rather than search. Finally, in a world of mounting pressure and unforeseen opportunities, we need to cultivate a third level of pull – the ability to pull from within ourselves the insight and performance required to more effectively *achieve* our potential. We can use pull to learn faster and translate that learning into rapidly improving performance, not just for ourselves, but for the people we connect with – a virtuous cycle that we can participate in. All three levels of pull are connected and enabled by a continually evolving and sequentially built "pull platform" that helps individuals and institutions make the most of pull's possibilities and potential.

THE FIRST LEVEL OF PULL: ACCESS

The first and simplest level of pull is all about flexible access – the ability to fluidly find and get to the people and resources when and where we need them. Access involves the ability to find, learn about, and connect with resources (people, products, and knowledge) on an as-needed basis to address unanticipated needs. As the world is remade by digital technology—a process we have termed the *Big Shift*— this capability becomes increasingly central to our survival, much less our success. As the convergence of digital infrastructures and public-policy regimes supporting economic liberalization lead to intensified competition and growing economic pressure, it becomes increasingly difficult to forecast demand, requiring non-push based approaches to resource mobilization. Rather than pushing resources based on reasonably accurate demand forecasts, we must find ways to access a broader range of resources in shorter periods of time to respond to unanticipated events as disruptions become ever more frequent. From something

that was nice to have, access is becoming essential to survival in an increasingly unpredictable world.

Pull Platforms

Access is particularly challenging in the business world, where institutional boundaries have tended to limit visibility and the ability to connect with needed resources. What we call *pull platforms* can help us to overcome institutional barriers in the business world as well as to expand our reach in our personal lives.

Pull platforms are designed to flexibly accommodate diverse providers and users of resources. SAP's Developer Network—a collaborative ecosystem consisting of customers, business partners, experts, and independent parties, many of whom are organized in "communities of innovation" that focus on particular performance challenges or opportunities)—is one good example.[3]

These platforms are open-ended and designed to evolve based on the learning and the changing needs of the participants. "Platforms" in the literal sense are tangible foundations; here we are using the term metaphorically to describe frameworks for orchestrating a set of resources that can be configured quickly and easily to serve a broad range of needs. Think of Travelocity's travel service, or the emergency ward of a hospital, and you will see the contrast with the hardwired push programs. Emergency wards, of course, exist to help only in dire situations. Yet they demonstrate the feasibility and value of pull-oriented approaches in more traditional settings. In the emergency room, the medical personnel make skilled decisions as to the time necessity of their interventions and are ready to pull from and mobilize a wide variety of resources that are on hand to help whoever comes in with a problem.

The contrast between push programs and pull platforms is quite stark. Pull platforms tend to be much more modular in design. Of course, push programs can also be modular, but the modules are specified for the benefit of the provider and usually tightly integrated. On pull platforms the modules are for the convenience of the participants in the platform. For example, many "open university" initiatives allow students to take courses (which are "modules" in a degree-granting program) online whenever they choose, in different sequences and groupings, giving maximum flexibility to the student. Modules are created to help to make resources and activities more accessible in flexible ways, since the core assumption of pull platforms is that the needs of participants cannot be well anticipated in advance. In pull platforms, the modules are designed to be loosely coupled, with interfaces that help users to understand what the module contains and how it can be accessed. Because of this loosely coupled modular design, pull platforms can accommodate a much larger number of diverse participants. In fact, pull platforms tend to have

increasing returns dynamics – the more participants and modules the platform can attract, the more valuable the platform becomes.

In many cases, pull platforms are initially deployed to serve a specific need, but, because of the flexible design, these platforms rapidly evolve in unexpected directions and end up serving a broad range of needs. Instant-messaging networks were initially deployed to help teens and hackers to communicate more rapidly, but they are now actively used by financial traders who want to gain an edge in rapidly moving financial markets. The design of these platforms is emergent, shaped by the participants themselves as their own needs evolve. This kind of organic growth is very appealing, on the one hand, because it makes the most of a company's initial investment as other participants contribute. It's somewhat scary, on the other hand, for managers who are used to controlling what takes place. Who knows? Perhaps the community will start talking about or even recommending competing products. Yet companies like SAP have found they can influence and shape the direction in which the community goes—so that it creates the most value for all the participants—without over-controlling things.

Pulling the Wool

SAP isn't the only company making use of pull platforms. Li & Fung operates in a variety of industries, but it got its start in the apparel industry. It was there that the company initially developed an operating model that it is now extending into other industries. In the apparel industry, Li & Fung's customers are apparel designers in the United States and Europe. It works with these customers to define their needs in terms of apparel production and then configures supply networks that are not just customized for the individual customer, but customized down to the individual item of apparel.

Li & Fung does not perform any of the supply-network operations itself. Instead, it works with more than 10,000 business partners in more than forty countries around the world to ensure that exactly the right capability is deployed to support each item of apparel. For example, the participants required to produce a high-end wool sweater might be quite different from the participants required to produce a low-end wool sweater. Li & Fung has a deep understanding of the capabilities of each of its partners. Its role is to identify the appropriate partners, define and sequence their roles in the supply-network process, and perform quality checks to ensure that each customer is getting exactly what it needs. Everything else—all raw material sourcing, production activities, and logistics activities—is performed by Li & Fung's partners.

In effect, Li & Fung has organized a global pull platform for apparel designers. In sharp contrast to traditional supply-network managers, who have focused on

limiting the number of supply-network partners and creating tightly integrated operations, Li & Fung is rapidly expanding the range of participants to provide an even broader range of access to specialized capabilities that can be flexibly "pulled" by individual customers to serve their specific needs.

THE SECOND LEVEL OF PULL: ATTRACT

The first level of pull—access—is very powerful. But in a world of near-constant disruption, its value is finite. Many of us are increasingly finding that we no longer even know what to seek, even with the growing power of search. While it's great that all sorts of information is indexed and sorted on the web, even a daily tour through one's Facebook newsfeed reveals many new people and resources that could be relevant.

How do we find out which ones? How do we specify, when we go to Ask. com, Bing, or Google, the areas of knowledge and expertise that would be most valuable? "Show me the stuff that I really need that I don't even know exists," isn't much of a search string. Access only truly works when we know what we're looking for.

We must supplement search engines and their equivalents by exploring additional ways of pulling people and their knowledge to us. To address this challenge, we will need to master the techniques of attraction in both our personal and professional lives – and learn to harness the power of serendipity, which is the faculty of finding people and things that we did not know we were looking for.

While most all of us already know how to attract something toward ourselves when it's something or someone we've already encountered, few of us seem to realize that we can shape serendipity to attract the people and things we need but didn't realize we were searching for. As we begin to engage with this level of pull, we'll foster encounters with people who can be helpful in expanding our horizons and creating the new knowledge that enables us to achieve new levels of performance. Yet brief encounters are typically of little value. You have to do more than have a brief conversation or e-mail exchange: You have to invest time and effort and build trust-based relationships if you are to access the knowledge that is most valuable. Building these relationships requires reciprocity: We must be willing to give if we are to receive.

We need serendipitous encounters with people because of the importance of the ideas that these people carry with them and the connections they have. People carry tacit knowledge. You can't learn brain surgery just from a text. You've got to stand next to someone who already knows and learn by doing. Tacit knowledge exists only in people's heads. That means we must not only find the people who

carry this new knowledge but get to know them well enough (and provide them with sufficient reciprocal value) that they're comfortable trying to share it with us.

Amplifying and Filtering

All of this might make attraction an effective form of discovering the things we didn't know we didn't know, but it also brings up a problem: How can we possibly have enough time to put this into practice? There are only 24 hours in the day. Worse yet, the more effective we are in attracting the attention of large groups of people, the more challenging it becomes as these people seek us out and want to interact with us. How do we avoid getting so overwhelmed by what we've set in motion that, like Garbo, we only want to be left alone?

To master attraction, we need amplifiers that can help us reach and connect to large groups of people around the globe that we do not yet know (and may not even be aware exist). These amplifiers relate to our choice of where to live, what
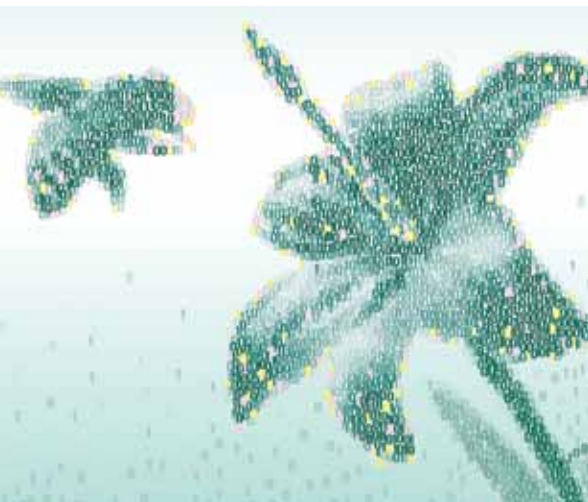
By simultaneously amplifying while filtering, we can shape serendipity in order to attract from the edges of our fast-moving world the people and knowledge we need in order to thrive.

gatherings we attend, how we conduct ourselves online, and what we do to draw the attention of others. We also need filters to increase the quality as well as the number of unexpected encounters and ensuing relationships that are truly the most relevant and valuable. These filtering techniques help separate the wheat from the chaff in our interactions with others and become ever more crucial as we begin serendipitously drawing more people toward us. By simultaneously amplifying (to increase the sheer number of unexpected encounters) while filtering (to spend time only on those interactions that yield value to us and to others), we can shape serendipity in order to attract from the edges of our fast-moving world the people and knowledge we need in order to thrive.

Platforms for Attraction

What might the platform look like at this second level of pull? Here institutions begin to play a crucial role. In addition to the access functionality provided at the first level, here companies create platforms enabling individuals to build a reputation that's easily visible by other participants. These reputation mechanisms—such as the "contributor recognition program" SAP has built into its Developer Network, in which you earn points as you contribute your knowledge and expertise—heighten the reputation and recognition of top contributors within the community, which both distributes the top-ranked knowledge while attracting other participants to it. Both factors help make knowledge and people visible to people who can benefit from it—even though they weren't previously aware it existed.

SAP is also able to use its pull platform to attract solvers who can help with thorny performance challenges and problems. As the open source maxim says, "With enough eyeballs, all bugs are shallow." But first you've got to attract the eyeballs.

THE THIRD LEVEL OF PULL: ACHIEVE

Executives can use the techniques of access to find what they need, and those of attraction to draw new people, ideas, and information to them. Institutions can abet individuals in this by providing them with platforms that allow them to both reach out and to attract. But pull goes beyond these basics.

Accessing and attracting in fact have diminished value unless they are coupled with a third set of practices that focus on driving performance rapidly to new levels. These practices involve participation in, and sometimes orchestration of, something we call "creation spaces"—environments that effectively integrate teams within a broader learning ecology so that performance improvement accelerates as more participants join.

Creation spaces allow large numbers of participants, often in the millions, to come together to test and refine the practices required to master this third level of pull – achieving their potential more effectively. You can see these creation spaces coming into being in a wide range of activities at the edges of business and culture. Although from a distance it may look like they are emerging spontaneously, self-organizing in response to the needs of the participants, a closer look reveals that creation spaces are carefully crafted by their organizers, especially in the early stages, to engage the right kinds of participants and foster specific types of interactions, all within environments that unleash the potential for increasing returns to participation and investment.

In fact, these creation spaces may change the way the "experts" look at business strategy. The "experience curve," first popularized by Boston Consulting Group in the late 1960s, has proved remarkably accurate in describing how performance improves in industries as diverse as semiconductors, toilet paper, and beer. It has been a foundation of business strategy for decades. Yet in all these industries experience curves are also diminishing returns curves—the more experience an industry accumulates, the longer it will take to accumulate enough experience to deliver a comparable increment of performance improvement. By making the most of the techniques of pull that we outline, creation spaces may deliver a very different form of performance improvement curve—one that rises even more rapidly as more and more people join the effort, demonstrating a powerful increasing-returns effect. We call this a *collaboration curve* to highlight the central role of new forms of collaboration in delivering higher and higher performance levels. Collaboration has always been central to value creation, but harnessing these three levels of pull will amplify the power of collaboration, producing increasing returns that previously have been beyond the reach of most collaboration efforts.

The moral of the story? To get better faster at whatever it is you do, you've got to be supported by a broad array of complementary people and resources from which you can pull what you need to raise your rate of performance improvement.

Passion for one's working activities plays no small role in this dynamic. When people chase what they love, they will inevitably seek out and immerse themselves in knowledge flows, drinking deeply from new creative wells even as they contribute their own experiences and insights along the way. A powerful virtuous cycle begins playing out as more and more people enter creation spaces in their quest to learn faster. In the process of engaging and participating in knowledge flows, they begin to generate new knowledge flows that create even richer environments, attracting the next wave of participants.

It is no accident that most of the early examples of creation spaces—in chapter four of our book we discuss emergent creation spaces in open source software development, World of Warcraft (an online role playing game), and big wave surfing—initially attract individuals rather than institutions. Passionate individuals naturally seek out these creation spaces to get better faster, while most institutions are still deeply concerned about protection of knowledge stocks and do not yet see the growing importance of knowledge flows in driving performance improvement.

As passionate individuals engage and experience the performance benefits of participation, they will help to drag institutions more broadly into relevant creation spaces, becoming catalysts for the institutional innovations required for effective participation. Of course, these innovations include further improvements to the pull platform itself. At this third level of pull the platform evolves to include

shared workspaces where teams can come together to develop joint products and comment on each other's efforts, creating a continuing, cumulative record of what's already been solved in the past. This, of course, is the model Wikipedia uses, as do open source efforts. As they track the changes, improvements, and innovations made over time by participants, they allow subsequent efforts to stand on the shoulders of those who went before. This brings efficiency to the sharing of tacit knowledge creation – which is never an easy task. As this sharing goes beyond the boundaries of a team or work group, knowledge markets and exchanges begin to form and, eventually, increasing returns come into play: The more people participate the more knowledge accumulates and the better everybody gets – and faster.

A key point about pull platforms: they're cumulative. You can't get to the third level of pull without having established a platform at the first level. Having established a platform at level one, however, you can build on it to extend what you've already got rather than having to reinvent it each time.

Shorter-term economic cycles notwithstanding, the slow performance erosion affecting the U.S. corporate sector is an established and long-term trend, one that reflects the diminished usefulness of a push-based philosophy and approach whose time is near its end. Fortunately the outlines of a new approach are already visible, on the edges and peripheries of our established business and cultural environments. This new approach holds the promise to broadly refashion many of our managerial approaches and practices, and even to remake the structure of our business institutions as they focus on practices and arrangements better suited for the digital age.

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Endnotes

1. Deloitte Consulting LLP, 2009 Deloitte Shift Index, by John Hagel III, John Seely Brown, and Lang Davison, July 2009.

2. Between 1965 and 2008, the rate at which firms suffer a decline in performance, as measured by ROA, relative to other firms, increased more than 40 percent. See, "Measuring the Forces of Long-Term Change: The 2009 Deloitte Shift Index," by John Hagel III, John Seely Brown, and Lang Davison, July 2009.

3. For more about the SAP Developer Network, see "How SAP seeds Innovation," by John Hagel III and John Seely Brown, *Business Week*, July 23, 2008. <http://www.businessweek.com/innovate/content/jul2008/id20080723_353753.htm?chan=innovation_innovation+%2B+design_top+stories>