The Necessity of Pervasive Collaboration

Synopsis

Technological innovation has dramatically altered the composition of companies, changing how business is conducted and how resources are deployed. The communications revolution has created an incredibly interconnected marketplace in which the geographical location of people and data has become almost irrelevant.

Many successful firms have progressively moved toward flat and decentralized organization structures in which tighter collaboration between increasingly specialist resources has become paramount. New collaboration platforms are being deployed not just to harness the collective capability of employees within company boundaries, but also to tap into the collective intelligence of the public to create content, solve problems, or complete business-related tasks.

This white paper argues that the adoption of communications and collaboration technologies, including, among others, rich-media conferencing, presence tools, and online communities, is not just another passing fad. Collaboration is not simply about “bringing people together,” although such soft benefits merit consideration in themselves. There are now many examples of firms creating competitive advantage by cleverly adopting select collaboration tools.

This paper highlights several examples of firms using collaboration successfully to capture the collective intelligence of both company-internal and external stakeholders. When adopted judiciously, voice- and video-based collaboration technologies can help foster innovation, enhance employee productivity, save costs, increase customer loyalty, and promote organizational flexibility.

Although initial attempts have been marked by trial and error, successful early adopters have created convincing positive use cases for collaboration tools. In highlighting different examples, this white paper aims to strike a balance between discussing the science of the present and the art of the possible.

Introduction

In the past half-century, new communications technologies have created unparalleled business opportunities by offering cheap, reliable, and almost ubiquitous access to people, resources, and information, which were previously largely unconnected. Many have commented that with each innovation, the pace of adoption and the speed of impact seem to have accelerated. As Tom Forrester wrote in *The Information Technology Revolution*, “If the automobile and airplane business had developed like the computer business, a Rolls Royce would cost $2.75 and would run for 3 million miles on one gallon of gas. And a Boeing 767 would cost just $500 and would circle the globe in 20 minutes on five gallons of gas.”

The proliferation of wireless technologies, the encouraged investment in broadband Internet, and the widespread use of mobile telephony, among other factors, have enabled a much greater frequency of interaction and almost instant access to others any time and anywhere. This “death of distance” was declared more than a decade ago by Frances Cairncross, then senior editor at the *Economist*: “The death of distance as a determinant of the cost of communicating will probably be the single most important force shaping society in the first half of the [21st] century. Technological change has the power to revolutionize the way people live, and this one will be no exception. It will

---

alter, in ways that are only dimly imaginable, decisions about where people work and what kind of work they do, concepts of national borders and sovereignty, and patterns of international trade.2

As a result, one could be forgiven for thinking that distance has become all but irrelevant in today’s hyperconnected society. In search of cost arbitrage and global talent, many industries have embraced the globalization of supply chains and the offshoring of noncore business functions.

However, technological innovation has often been disruptive and its adoption phased. Doubts about the real merits of a new technology, or general resistance to change, can lead to delay or outright rejection. Cultural, social, and linguistic factors also play a role. It is no different with some of the new communications and collaboration tools and platforms that have started enjoying widespread attention in recent years, including instant messaging, blogs, wikis, telepresence, mashups, and social networking, to name but a few. Nevertheless, when adopted appropriately and deployed correctly, such technologies can have a tremendously beneficial effect on companies and communities alike.

The following sections describe how information technology is “flattening” and decentralizing businesses: transforming the traditional corporate operational model and changing the way people work and communicate. Next, we explore several examples of companies and industries that have embraced a more collaborative model and are reaping real-world benefits. We then examine the challenges that arise in a flat, decentralized business model and the ways that companies are addressing those challenges. Finally, we provide important recommendations and considerations for implementing collaboration initiatives successfully.

Industry Examples of Collaboration at Work

The following sections detail how decentralized organizational structures are changing the way businesses operate and allowing them to address challenges more effectively. Each section includes real-world examples of companies in various industries harnessing collaboration to succeed. Sections include:

- Companies in Healthcare, Pharmaceuticals, and Other Industries Are Replacing Hierarchical Structures with Networks of Collaborative Specialists
- Manufacturing, Supply Chain, and Other Businesses Are Becoming Increasingly Decentralized
- Retail Companies Are Harnessing Diversity to Boost Innovation
- Companies in the Energy Industry and Other Sectors Link Dispersed Knowledge Workers
- Retail Banks Use Collaboration to Improve the Branch Experience

Companies in Healthcare, Pharmaceuticals, and Other Industries Are Replacing Hierarchical Structures with Networks of Collaborative Specialists

Successive technology “revolutions” have created an information society of knowledge workers in most developed countries, and increasingly in developing countries. The oft-noted trend toward more knowledge-intensive economies has generated a rising demand for highly skilled workers.3

As a consequence of the wave of information technology innovations in the last few decades, specialist realms of knowledge have proliferated, and organizations have undergone a natural hierarchical flattening. In the 1980s, Peter Drucker, a

---


3 The Not-So-Bitter Pill?

Healthcare spending has been increasing rapidly as a percentage of national spending. Nevertheless, the pharmaceutical industry has suffered from falling margins, caused in large part by declining productivity in field sales and research.

Only a third of marketed drugs ever achieve revenues adequate to cover R&D costs, and it can take up to 15 years to develop a successful compound at a cost of up to $1 billion. In the process, around 6000 compounds will have been originally identified, only 20 of which ever reach the preclinical trial stage, and only five of which will get through to third-stage clinical trials, for ultimately one drug to be approved for commercial launch. This equates to an investment in excess of $1 million per week.
management consultant, envisioned the collapsing of management layers in the average large business. “[…] The typical business will be knowledge-based, an organization composed largely of specialists who direct and discipline their own performance through organized feedback from colleagues, customers, and headquarters. For this reason, it will be what I call an information-based organization.”

The emergence of flatter organization structures with higher numbers of specialists creates the need for synchronization of efforts and collaboration among stakeholders. Clear illustrations of this need can be found in the pharmaceutical industry, and more particularly in sales and R&D. (See sidebar.) Following about 15 years of consolidation, the top 10 firms in this sector account for about half of the global market. Most have large, geographically dispersed R&D units numbering thousands of researchers, interacting with an ecosystem of joint venture partners, academic institutions, and other third parties.

This is not to say that all organizations will inevitably flatten at the same pace. But a trend toward specialization is undeniable. “The information-based organization requires far more specialists overall than the command-and-control companies we are accustomed to. […] This change is already under way in what used to be the most clearly defined of all departments, research.

“In pharmaceuticals, in telecommunications, in papermaking, the traditional sequence of research, development, manufacturing and marketing is being replaced by synchrony: specialists from all these functions work together as a team, from the inception of research to a product’s establishment in the market.”

Manufacturing, Supply Chain, and Other Businesses Are Becoming Increasingly Decentralized

Decreased communications costs have also been a primary contributor to the decentralization of organizations. Many centralized corporate hierarchies have started morphing into decentralized networks of competency clusters. Cheap communications technologies allow for the efficient dissipation of knowledge, fast and without distortion.

Furthermore, some have argued that decentralization is a necessity in today’s economy to allow for rapid adjustments to almost constant change and local triggers. “That is because the organization must be structured to make decisions quickly. And those decisions must be based on closeness, to performance, to the market, to technology, and to all the many changes in society, the environment, demographics, and knowledge that provide opportunities for innovation if they are seen and utilized.”

Collaboration technologies can help overcome some of the challenges posed by the flattening and decentralization of organizations.

The virtues of decentralization tend to be twofold: higher worker performance and easier coordination. This effect can be explained by higher levels of employee motivation as a result of a heightened sense of individual responsibility. “Results from experimental and empirical studies show that allowing people to make decisions about their own working conditions often makes a material difference in how they perform. The second thing decentralization enhances is coordination. Instead of having to constantly resort to orders and threats, companies can rely on workers to find new, more efficient ways of getting things done.”

Nevertheless, decentralization also presents challenges to many firms seeking to speed up interactions between scattered resources. For instance, delays can easily creep into product development or manufacturing supply chains as a result of numerous handovers between interdependent links. Collaboration technologies can help overcome some of the challenges posed by the flattening and decentralization of organizations. (See box.)

### Unchained Supply Chains

The average car today contains more than 15,000 parts. As of early 2009, Ford had 1600 parts suppliers, down from 3300 in 2004. Even Toyota, famed for its just-in-time manufacturing process, sources more than 2 billion units per annum from more than 200 suppliers.

Cisco, an IT solutions vendor, is a leading supplier of Cisco TelePresence™ systems, which offer an immersive conferencing experience using high-definition life-size video and document sharing tools. Among its recent customers, Cisco has equipped a global Fortune 100 high-tech semiconductor manufacturer with Cisco TelePresence rooms to facilitate more transparent collaboration and to accelerate decision making among research, development, and engineering (RD&E) functions.

The US-headquartered firm in question had expanded its operations overseas dramatically in order to take advantage of a global talent pool in Europe, India, and China. In the process, it had become increasingly reliant on interactions with a complex, fragmented internal and external ecosystem for innovation.

By enabling more frequent and intuitive collaboration, the company noted a measurable increase in the effectiveness of the RD&E functions and the quality of the innovation process. It also estimated that time-to-market improvements increased margins by about $18 million and reduced R&D costs by $5 million.

### Retail Companies Are Harnessing Diversity to Boost Innovation

Clearly, harnessing the collective intelligence of numerous cross-disciplinary specialists in a flat, decentralized organization structure is no easy task. However, there is ample anecdotal evidence to suggest that such collaboration yields results precisely because the group is big and diverse enough.

One of the primary factors for collaboration between scientists is the division of “cognitive labor”: “it is difficult for a single scientist to know everything there is to know in all disciplines relevant to his field of study. […] In addition, collaboration allows scientists to tackle interdisciplinary problems and guarantees a diversity of perspectives.”

It is this diversity of perspectives that avoids the emergence of “groupthink.” Collective decisions tend to be more accurate when information is aggregated from many disparate sources who have exercised independent thought. IBM, an IT solutions and services provider, holds Innovation Jams to accelerate idea exploration and problem solving. During its 2006 Jam, more than 150,000 people were brought together from 104 countries and 67 companies. As a result, IBM launched 10 new businesses with seed investments totaling $100 million.

Taken a step further, “crowdsourcing” is used to tap into the collective intelligence of the public to create content, solve problems or complete business-related tasks. While some crowdsourcing models explicitly seek the insights of the public and reward successful contributors, it is also possible to capture customers’ collective intelligence passively. (See box.) In all cases, the total cost to “crowdsource” is usually just a fraction of what would normally have been spent on company-internal resources.

It is well documented that blue-chip firms headquartered in the United States and Europe have increasingly hired overseas in recent times. This “war for talent” was originally promoted by the scarcity of qualified graduates in domestic markets. For example, six countries (China, India, Japan, Russia, South Korea, and Taiwan) now produce about 60 percent of the world’s engineering bachelor’s degrees, with this percentage expected to increase in coming years.

---

10 IBM, [https://www.collaborationjam.com/](https://www.collaborationjam.com/).
However, many firms have found in the process of hiring overseas talent that diversity is actually also good for overall profitability, above and beyond the obvious advantage of cost arbitrage in certain markets. Over the past decade, companies with strong inclusion and diversity outperformed the NASDAQ stock market by 47 percent, the Standard & Poor’s 500 Index by 23.5 percent, and the Dow Jones Industrial Average by 48 percent.12

Of course, cultural diversity in itself will not yield a competitive advantage unless other contributing factors are present. Without the establishment of a meritocratic and learning-oriented company culture, richness of perspective will matter little. Even then, true cross-border, cross-community collaboration often needs a catalyst in the form of technology for it to be productive and pervasive.

Companies in the Energy Industry and Other Sectors Link Dispersed Knowledge Workers

In some industries, the interconnecting of geographically dispersed subject matter experts is not just a desirable pursuit but an economic necessity. Scarcity caused by ever-increasing specialization is at times further compounded by demographics. Certain fields of study have become less fashionable among new generations of students. The petrochemical industry, for example, is facing a serious dearth of geophysicists. (See sidebar.)

The healthcare industry is facing similar challenges. Rapid aging of populations and the resulting increase in chronic conditions have contributed to significant growth in healthcare costs. This problem is further compounded by a shortage of healthcare practitioners. This shortage is even more acutely felt in rural areas where recruiting and retaining staff is a constant challenge, and low population densities preclude investment in more health facilities.

As a result, telemedicine has become increasingly popular with governments looking for more cost-effective ways of providing treatment. It is also a popular option among those suffering from long-

term illnesses, as they generally prefer to be treated at home, rather
than in a medical facility. Telemedicine is an attractive option as it offers
a degree of retained independence. However, traditional technologies
have so far not offered a sufficient quality of experience to allow reliable
triage and diagnosis, or intuitive and satisfactory usage by the patient.

The Aberdeen Royal Infirmary in Scotland, a healthcare provider, has
recently deployed a combination of state-of-the-art voice, video, and call
center technology, transmitting medical information over a secure
network to create a virtual face-to-face experience for patients and
caregivers who may be miles apart.15

The platform interfaces with medical diagnostic equipment, such as
stethoscopes and monitors that can measure blood pressure,
temperature, and pulse rate to capture the physiological condition of the
patient. Attendants are available to operate the medical devices on
behalf of the remotely located caregiver and to maintain the technology
in good operating condition.

Critically important in the adoption of such solutions is the quality of
experience, for both the recipient and the provider. The
“HealthPresence” solution in question augments traditional telephone-
based triage and consultation because of the richer information
exchange and intuitiveness of the medium. With at least one in five
Scottish nationals suffering from at least one chronic illness, such cost-
effective and scalable approaches may become an integral component
of future healthcare strategies.

Retail Banks Use Collaboration to Improve the Branch Experience

The quality of customer experience is of even greater importance when strongly correlated with a customer’s
likelihood to spend. Discount retailers do not invest in upmarket premises or elaborate in-store facilities as shoppers
will come regardless, in search of price-competitive everyday goods. Retail bank branches, in contrast, need to be
purpose-oriented and welcoming environments to inspire confidence and trust. The challenge is that pressures to
reduce operating costs have led to a reduction in branch staff headcount.

In addition, the popularity of the branch is waning, with the mass affluent leading the trend toward mobile sales forces
and the Internet as preferred channels. The latter is especially the case for relatively simple credit and insurance
products. Although the branch continues to be the primary conduit for banks to sell their goods, they have to work
harder at offering a differentiated experience.

To avoid high “rotation” levels (defined as the proportion of new and canceling clients over the total number of
accounts of a bank), banks need to focus on customer satisfaction. Research has shown a clear correlation among
high customer satisfaction, low rotation rates, and high cross-selling ratios. “Customers in Nordic countries are
generally fairly satisfied with their banks. On the other hand, customers in Southern Europe as well as in Germany

18 Peter Perry, Otto Waterlander, and Varya Davidson, Resourcing the challenges of maturity – an oil-industry view, Booz Allen
are less pleased with their banks. Linking customer commitment with the level of cross-selling indicates that countries
with high customer commitment show the highest cross-selling ratios.19

To achieve high satisfaction levels, certain basic requirements should obviously be met: appointments should be well-
organized, and advisers should be knowledgeable. Moreover, consumer surveys have indicated that privacy, product
knowledge, and instant query resolution are among the three most valued attributes when visiting a bank branch.
“Some banks have achieved excellence, but there tends to be a huge gulf between best practice and average
performance, suggesting that for the majority of banks, there is ample
opportunity to improve performance and boost revenues.”20

These data suggest that technology investments are likely to continue
pace to improve the efficiency of branch operations. “Despite a shift in
sales strategy from volume (top-line growth) to quality (focus on credit
quality and profitability), which will drive a decline in operating income
growth, banks across main regions will maintain IT investment on the
branch networks.”21

Realistically, retail banks cannot afford to have experts across the entire
product portfolio available at every branch. However, referrals and
callbacks lead to drastically lower cross-selling ratios. Increasingly, banks
are exploring the use of video-enabled “expertise virtualization”: even though particular product experts are no longer
located at a particular branch, they are still available remotely at a moment’s notice.

Integrated appointment and calendaring applications can be combined with high-quality voice and video
communications to facilitate a meeting with the appropriate expert, avoiding delays and handovers in the sales
process. Moreover, in contrast to legacy video conferencing systems, modern video technologies offer a sufficiently
high quality of experience to make participants (almost) forget the medium used to bridge physical distance. Video is
a compelling medium because 64 percent of communication is nonverbal.22 Making financial experts immediately
available using a nonintrusive medium helps reduce referrals and increase cross-selling ratios.

Recommendations and Considerations

The following sections offer important recommendations and considerations when evolving to a more collaborative
business model. They include:

- Harnessing Collaboration to Fuel Innovation
- Expanding the Reach of Collaboration to Consumers and the Public
- Addressing the Operational Challenges of a Decentralized Organizational Structure
- Providing Knowledge Workers with the New Skills and Tools They Need to Collaborate Effectively
- Addressing Institutional Reservations About Collaboration

Harnessing Collaboration to Fuel Innovation

Few companies manage to be successful through successive economic cycles. Even the most successful and well-
run firms struggle to continue to dominate their market segments in the long run. Very few management teams have
the ability to consistently spot market transitions and repeatedly harness disruptive innovations. Why is that the case?

Companies generate successful economic outputs mostly through the adoption of standardized processes defined to make employees address specific tasks in the most consistent and effective manner possible. “The very mechanisms through which organizations create value are intrinsically inimical to change.”\(^\text{23}\) All too often, market leaders will stick with “proven” success formulas, only to be overtaken by unexpected new market entrants or more nimble competitors.

Continuous self-questioning is required, based on constant reviewing of competitive intelligence. However, “[t]here is a great psychological component to analyzing and convincing others of critical intelligence. For too many managers, denial, rationalization, groupthink or not-invented-here attitudes are among the reasons why a competitive revelation never bubbles to the surface.”\(^\text{24}\)

Traditionally, businesses have invested in the creation of homogeneous research departments or innovation think tanks with internally nurtured talent. To prevent stagnation of innovation within company boundaries and to stay ahead of the competition, many have embarked on acquisitions and joint ventures. But even the absorption of additional new talent may not suffice to perpetuate the cycle of innovation.

As a result, some companies have ventured more disruptive approaches. “The management of innovation is changing. No longer is the creation and pursuit of new ideas the bastion of large central R&D departments within vertically integrated organizations. Instead, innovations are increasingly brought to the market by networks of firms, selected according to their comparative advantages, and operating in a coordinated manner. In this new model, organizations de-construct the innovation value chain and source pieces from partners that possess lower costs, better skills and/or access to knowledge that can provide a source of differentiation. […] In short, firms increasingly seek superior performance in innovation through collaboration.”\(^\text{25}\)

Recent studies have shown that “collaborative innovation networks” (COINs) are among the most productive engines of innovation. They are teams of self-motivated people with a collective vision to achieve a common goal, an innovation, enabled by technology to share ideas, information, and work. “They are supposed to work better because they allow for building organizations that are more creative, productive, and efficient by applying principles of creative collaboration, knowledge sharing and social networking. Sponsors and members of COINs often change their work and leadership styles to become more creative innovators, more efficient communicators and more productive collaborators.”\(^\text{26}\)

Prototypes of COINs were introduced as early as 2000: Daimler Chrysler spent just over $10 million in optimizing its procurement function to save about $50 million in its first year of operation. The company had not deliberately set out to create a COIN-like network, but was attempting to better capitalize on emerging technologies and simplify its transaction processes in the face of stiff competition. Through its e-Extended Enterprise (e3) initiative, DaimlerChrysler found that the adoption of a global, collaborative innovation network was instrumental in creating the right business environment to address its challenges.

Early proof points of COINs yielding better results than traditional innovation approaches have spurred the creation of pioneering ventures, which have enshrined the principle of collaborative innovation in the core of their business model. One such example is InnovationExchange, a web-based community of problem solvers who work on innovation challenges sponsored by Global 5000 companies and not-for-profit organizations. A recent list of

---

challenge submitters included a hospital looking to solve an existing purchasing and inventory problem to save up to $20 million per year, a consumer goods firm seeking to launch an alternative alcoholic beverage aimed at the 21 to 34 years of age category, and a not-for-profit organization searching for new ways to overcome hunger and malnutrition. The community works on a pay-for-performance basis, which allows customers to tap into an important source of innovation at minimal risk.27

Many early adopters in the corporate world are now rapidly exploring ways to adopt successful collaborative practices already firmly established in the consumer and private spheres. Facebook, for example, currently has more than 300 million active users, with already 65 million who regularly gain access through a mobile device. More than 50 percent of users log on daily, and 70 percent engage with platform applications every month.28

Literally billions of pieces of content on Facebook and similar social networks provide de facto near-real-time consumer feedback about new products, offer informal advice about emerging health issues, or allow companies to prospect future employees. Lego, the toy manufacturer, continuously seeks to tap into the creativity of its customer base by offering free, downloadable, easy-to-use software for creating new designs and by organizing competitions to win Lego prizes. Technology-enabled collaboration, both within an organization and with outside contributors, can truly spur innovation and offer powerful competitive advantage to those firms willing to embrace it.

Expanding the Reach of Collaboration to Consumers and the Public

This paper has highlighted several examples where collaboration was applied to harness the collective intelligence of both company-internal and external stakeholders. When adopted intelligently, voice- and video-based collaboration technologies can not only help foster innovation, enhance employee productivity, and promote organizational agility, they can also increase customer loyalty. (See box.)

Not all attempts are immediately successful. “[T]o drive innovation, many top CEOs are collaborating beyond their organizations, with their extended networks of suppliers, customers, business partners and others. Such collaboration, however, is easier said than done. In fact, 50 percent of strategic alliances fail.”29 This even applies to the world of politics. Members of parliament may increasingly be establishing a web presence and adopting blogging to seek electorate participation in policy creation, but they often do not achieve true two-way communications with their constituents.30

In contrast, some businesses have managed to arouse true consumer passion for their products and to successfully elicit regular customer interaction. “Companies […] can boost their odds of harnessing the power of collective action by employing the right tactics, such as emphasizing two-way communication with consumers. Above all, a mind-set shift is needed: managers hoping to foster and encourage the diffusion of radical innovation need to start thinking like insurgents. Those who do so are likely to become more effective at influencing their own organizations too.”31

To achieve this ambition, a leap of faith may be required, based on a belief that external agents and third parties can be marshaled effectively for economic gain. Leading manufacturers and services firms advertise business problems on sites such as InnoCentive and InnovationExchange to tap into problem solving skills of a community of more than 100,000 bright minds through a pay-for-performance model.

New consumer-oriented techniques have also revolutionized the realm of marketing. With the recent success of video exchange portals such as YouTube, one could be forgiven for thinking that video has only recently emerged as a

29 Lawrence Owen, Charles Goldwasser, Kristi Choate, and Amy Blitz, The power of many, ABCs of collaborative innovation throughout the extended enterprise, IBM Institute for Business Value, 2007.
30 BBC News Online, February 2009.
and language groups rather than mileage will come to define distance.” Moreover, the main challenge is no longer an insurmountable obstacle, there are still de facto hindrances to transparent knowledge dissemination. “Time zones

To some extent, reports of the “death of distance” are exaggerated. Although geographical distance is no longer an issue, new challenges arise in the form of other distance factors, such as time zones and language groups. These factors affect the ability of knowledge workers to effectively communicate and collaborate.

Several challenges become immediately apparent, “information stress” being one of the most commonly experienced by knowledge workers. Information filtering and personalization techniques have simply not kept pace with the volume of data being generated.

What search engines have done for data, “presence and location” capabilities aspire to do for people. New collaboration and communications platforms are able to incorporate smart presence and location services. Imagine instant messaging applications that can confirm who is available instantly, be it using text-, voice-, or video-based communications. Also imagine corporate directories (that is, company-internal phone books) being populated with skills profiles and granular search functions against such profiles. The combination of these capabilities allows for

Press “1” for Social Networking

Deteriorating economic conditions have placed an even greater emphasis on customer loyalty. New techniques are being pioneered to both improve the “stickiness” of customer buying experiences and the quality of customer service experiences. Call centers are being rebranded as “contact centers” because of the integration of multiple contact mechanisms, including voice, instant messaging (IM), “click-to-dial” capabilities, email, SMS, interactive voice response (IVR), and video chat. Not only do these new channels offer higher convenience and quality of experience to customers, but companies also see an opportunity to save on agent costs.

An additional emerging trend concerns the use of outbound communications. “To date it has been mainly the healthcare, collections, and travel and tourism industries that are using outbound emails, SMS and calls to notify customers proactively of order status, flight changes, or to send reminders about prescription refill dates, appointments and payments. Following this, customers typically have the ability to speak with an agent if necessary, and enterprises are able to control incoming calls more effectively.”

Customer analytics and knowledge management have been in use for years in order to better understand customer concerns and to spot emerging trends more rapidly. Now, previously untapped “Web 2.0” tools such as social networking, blogs, and video communications are being adopted to enrich the multichannel contact center experience.

For example, Twitter has been used as an effective and fast mechanism to post news updates to customers and to respond to queries. It was originally launched as an online platform to stay “hyperconnected” with friends, family, and coworkers through the exchange of quick, frequent answers using SMS. Bank of America has piloted the use of Twitter to respond to customer questions and to arrange for an agent callback through a private message containing their telephone number.

At present, some of the newer tools and features are only being used avidly by a young and tech-savvy minority. Over time, many are likely to be embraced by broader customer segments. Video contact centers, for instance, are increasingly being deployed by midsize retail banks, healthcare providers, and retail organizations. Video enriches the interaction between the caller and the agent, who can demonstrate things to each other, and each party can see the other's reactions to gauge if they are being understood.

Addressing the Operational Challenges of a Flat, Decentralized Business

The progressive flattening and decentralization of many organizations have had a significant effect on how business is conducted. In addition, the possibility of near-ubiquitous “online” presence and the proliferation of data in ever more specialized knowledge realms have required changes to our everyday working practices.

Several challenges become immediately apparent, “information stress” being one of the most commonly experienced by knowledge workers. Information filtering and personalization techniques have simply not kept pace with the volume of data being generated.

What search engines have done for data, “presence and location” capabilities aspire to do for people. New collaboration and communications platforms are able to incorporate smart presence and location services. Imagine instant messaging applications that can confirm who is available instantly, be it using text-, voice-, or video-based communications. Also imagine corporate directories (that is, company-internal phone books) being populated with skills profiles and granular search functions against such profiles. The combination of these capabilities allows for

much more immediate and targeted consultation of knowledgeable, possibly distant peers, without the need for manual inquiry or time-consuming availability checks.

It is not just a question of saving time. There are cognitive limits to the number of information transactions and people interactions that can be processed. “Companies that succeed in the future will be those expert not in time management, but in attention management.” Collaboration tools can facilitate easier location and better prioritization of what is really needed, thereby saving attention, time, and money.

Even though productivity improvements of this nature may at times be hard to quantify in financial terms, their impact often makes a very material difference to the effectiveness and competitiveness of organizations. “The single greatest challenge facing managers in the developed countries of the world is to raise the productivity of knowledge and service workers. This challenge, which will dominate the management agenda for the next several decades, will ultimately determine the competitive performance of companies. Even more important, it will determine the very fabric of society and the quality of life in every industrialized nation.”

Providing Knowledge Workers with the Skills and Tools They Need to Collaborate Effectively

While the average worker of the past spent most of her time working along, today’s workers spend the bulk of the workday in collaboration with a group. That is a tremendous shift in working patterns.

In developing its flagship A380 aircraft, Airbus’s French and German partners made the fateful decision to work with different versions of Dassault Systems’ design software. Due to incorrect “translations” between the different versions specifically and insufficiently integrated collaboration in general, development and production were delayed about two years at a cost of $6 billion. The issue was not just software, but the absence of a collaborative platform and process for dealing with the problems created.

Leading firms distinguish themselves from others by their willingness to invest in developing such “collaborative capabilities.” “All too often, firms assume[d] that their existing employees, processes and infrastructure were capable of meeting the challenge of collaboration. But successful collaboration doesn’t just happen, it is a skill that must be learned.” And technology can be a useful, if not to say necessary, enabler.

To that end, technology has to become more people-centric. “The next generation of technology is all about moving toward ‘people-centric’ environments where people are placed at the center of activities. They rest on the simple idea that technologies should enable collaboration between people, not limit it. In addition to people and mesh connectivity, it should allow them to choose the services they want and use them according to their separate or joint needs for tools. The old model was essentially transactional; the new one is interactive.”

---

Addressing Institutional Reservations about Collaboration

Not all businesses will readily embrace collaborative workplace practices, nor should they do so necessarily or indiscriminately. Many executives have expressed concerns about the loss of the traditional command-and-control organization structure. Does efficient decision making ultimately not rest on clear instructions by a seasoned few rather than on aleatory interactions among the many?

To be sure, fruitful collaboration is no substitute for strong leadership. Clear communications and constant feedback are essential to shape and direct creative flows in the collaborative workforce.

However, concerns about adopting a more collaborative operational model are often overstated. In this day and age, “huge numbers of workers [have access to] the information they need to make more choices for themselves. Today, many more people in business can have the kind of freedom that used to be common only in small organizations. And that can be very good news for both productivity and quality of life. When people are making their own decisions, for instance, rather than just following orders, they often work harder and show more dedication and creativity.”

Of course, not all organizations will reap benefits from embracing collaborative workplace practices to the same degree. However, most information-based organizations are likely to lose a competitive edge over time if they do not pursue at least partial adoption of collaboration.

As a result, the future workforce is likely to look very different, with employees being less defined by specific functions or static responsibilities. “In essence, agility and adaptability will become an employee’s core competence. Skills-based credentialing will emerge as a means of measuring a potential employee’s agility and as a quality assurance tool for a flexible, shifting workforce.”

Summary

Making Collaboration Work in a Flat, Decentralized World

For many firms, the adoption of collaboration tools and other social media has been marked by trial and error. Often, management teams have been unable to grasp potential financial benefits or corporate cultures have been unresponsive in the wake of halfhearted leaders.

As with most new technologies, early adopters rapidly create a “peak of inflated expectations,” whereas most mainstream buyers will prefer to cautiously enter a “slope of enlightenment” after many of the initial teething problems have been remedied. However, most components that make up a collaborative platform today have been in existence for several years. What are different now are the scale of adoption and the manner of combination.

“[F]undamental changes are beginning to take place among the satisfied companies as a result of their ambitious use of Web 2.0. These companies are not only using more technologies but also using them to change management

---

practices and organizational structures. Some are taking steps to open their corporate ‘ecosystems’ by encouraging customers to join them in developing products and by using new tools to tap distributed knowledge.”

Not all collaboration technologies will yield equally impressive results for all organizations. Results will to a large extent be dependent on factors as varied as corporate culture, risk appetite, business mix, IT maturity, and market segment competitiveness. In most cases though, promising use cases for collaboration tools can be readily identified given sufficient scrutiny. In many ways, it is more a difference of degree than a difference of kind.

Any potential adopters should therefore ask themselves critical questions, such as:

- What types of information should be readily dispersed, and what types of interactions between employees should be actively encouraged?
- What are the risks associated with more open collaborative working practices, and how can they be best mitigated?
- Does the considered approach fit with the organization’s overall makeup, or does it constitute a radical departure?
- What are the primary expected gains from the adoption of such technologies?
- Can particular initial use cases be identified to stimulate interest, and what incentives can be created to encourage and accelerate “grassroots” adoption?
- Which leading vendors and peers can offer best practice advice?
- Who will be responsible for the implementation and ongoing nurturing of the new collaborative platforms?

Lessons learned from successful early adopters and industry leaders show a recurring pattern: “A higher level of usage is found at companies that encourage [collaboration] by using tactics such as integrating the tools into existing workflows, launching Web 2.0 in conjunction with other strategic initiatives, and getting senior managers to act as role models for adoption.” When and how particular tools are the most effective depend on both the audience and the use case. The following table offers select examples.

<table>
<thead>
<tr>
<th>Collaboration Technology</th>
<th>Audience</th>
<th>Use Cases</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Type</strong></td>
<td><strong>Description</strong></td>
<td><strong>Interpersonal</strong></td>
</tr>
<tr>
<td>Blogs</td>
<td>An interactive website where individuals post ideas, thoughts, and announcements</td>
<td>•</td>
</tr>
<tr>
<td>Video blogs</td>
<td>Similar to blogs but with video capture, sharing, commenting, and editing capabilities</td>
<td>•</td>
</tr>
<tr>
<td>Document management</td>
<td>Networked repositories for sharing and editing of documents</td>
<td>•</td>
</tr>
<tr>
<td>Podcasts</td>
<td>Audio (MP3) and video (MP4) broadcasts</td>
<td>•</td>
</tr>
<tr>
<td>Real-time communications</td>
<td>One-click (to call, video, chat) functionality and instant messaging.</td>
<td>•</td>
</tr>
<tr>
<td>Cisco TelePresence</td>
<td>High-definition video conferencing as a substitution for in-person meetings</td>
<td>•</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Collaboration Technology</th>
<th>Audience</th>
<th>Use Cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>RSS</td>
<td>Really Simple Syndication: an XML-based format for content distribution.</td>
<td>•</td>
</tr>
<tr>
<td>Cisco WebEx™ conferencing</td>
<td>A software-as-a-service platform for team collaboration</td>
<td>•</td>
</tr>
<tr>
<td>Wiki</td>
<td>A collaborative editing website</td>
<td>•</td>
</tr>
<tr>
<td>Discussion forums</td>
<td>Threaded online conversations categorized by topic</td>
<td>•</td>
</tr>
</tbody>
</table>

In order for collaboration to become a success, trust must therefore be built among collaborating members of a virtual team. Developing and maintaining trust in such a team tends to be driven by both a “calculus of self-interest” and a sense of “moral duty.” Although there seems to be no standard pattern for building trust, there is ample anecdotal evidence to suggest trust can be fostered through the demonstration of tangible executive example-setting and the encouragement of truly collaborative cultures where objectives tend to be formally shared across company silos.

**Conclusion**

Ultimately, nearly all organizations will be forced to question how they should adapt working practices to new and changing business realities. "For many employees today, collaborative, complex problem solving is [already] the essence of their work. These ‘tacit’ activities—involving the exchange of information, the making of judgments, and a need to draw on multifaceted forms of knowledge in exchanges with coworkers, customers, and suppliers—are increasingly a part of the standard model for companies in the developed world. [...]During the next decade, companies that make these activities—and the employees most involved in them—more productive will not only raise the top and bottom lines but also build talent-based competitive advantages that rivals will find hard to match."44

How much benefit can be derived from the adoption of collaboration tools depends on the extent to which organizations transparently embed the tools into those processes and initiatives which truly create competitive advantage. For those who manage to do so, pervasive collaboration will no longer be seen as necessary, but inescapable.

Kenneth De Spiegeleire is a consulting director at Cisco. His practice provides advice to leading global firms about the adoption of collaboration technologies. He currently lives in Zurich, Switzerland.

---
