

How businesses are using Web 2.0: **A McKinsey Global Survey**



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More than three-fourths of executives who responded to a McKinsey survey say they plan to maintain or increase their investments in technology trends that encourage user collaboration, such as peer-to-peer networking, social networks, and Web services.

More than half say they are pleased with their past Internet investments, though some regret not boosting their own capabilities to exploit technology. More executives said they should have acted faster than slower.

Retailers, who consider their companies cautious investors in the past, are stepping up their pace today. Similarly, many executives in emerging markets such as India and Latin America intend to move more quickly to capture the perceived benefits of these technologies.

In a follow-up discussion, respondents describe how these innovations are creating a new way of bringing technology into businesses, one that is easier to implement and more flexible than traditional top-down approaches. They also offered insights into how and why their companies are using Web 2.0 and where these technologies may offer a sustained competitive edge.

How businesses are using Web 2.0:

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By and large, executives are satisfied with their previous investments in Internet technology, and most are investing in trends that promote automation and networking online.

The rising popularity of user-driven online services, including MySpace, Wikipedia, and YouTube, has drawn attention to a group of technological developments known as Web 2.0. These technologies, which rely on user collaboration, include Web services, peer-to-peer networking, blogs, podcasts, and online social networks.

Respondents to a recent McKinsey survey show widespread but careful interest in this trend.¹ Expressing satisfaction with their Internet investments so far, they say that Web 2.0 technologies are strategic and that they plan to increase these investments. But companies aren't necessarily relying on the best-known Web 2.0 trends, such as blogs; instead, they place the greatest importance on technologies that enable automation and networking.

During an online discussion convened to dig more deeply into these results, it became clear that companies using Web 2.0 technologies have developed a new way of bringing technology into businesses. And, according to many participants, this new approach is easier to implement and more flexible than traditional top-down approaches. Discussion participants are seeing some business impact from these technologies and seem generally optimistic about their benefits, particularly in how they help a company refine its strategy.

¹ *The McKinsey Quarterly* conducted this survey in January 2007 and received responses from 2,847 executives worldwide, 44 percent of whom hold C-level positions; all data are weighted by GDP of constituent countries to adjust for differences in response rates.

Successful investments so far

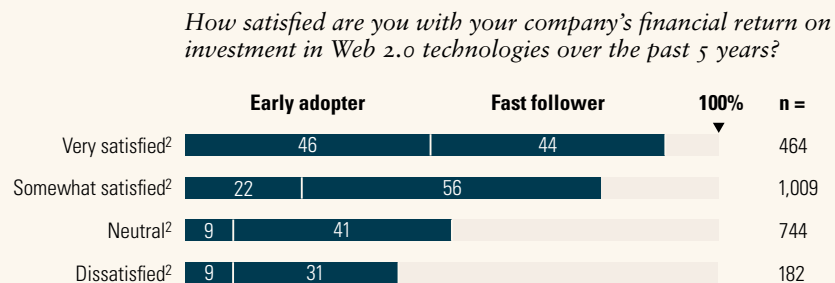
More than half of the executives surveyed say they are pleased with the results of their investments in Internet technologies over the past five years, and nearly three-quarters say that their companies plan to maintain or increase investments in Web 2.0 technologies in coming years. (A mere 13 percent say they are disappointed with previous investments.)

Companies that acted quickly in the previous wave of investment are more satisfied than late movers. Less than a fifth of all those surveyed say they are very satisfied with their returns. Of those who rate themselves as very satisfied, 46 percent are “early adopters” and 44 percent “fast followers” (Exhibit 1).

Exhibit 1

Different outlooks

% of respondents who cited given level of satisfaction, by category¹



¹Respondents whose companies were late followers or did not invest are not shown.

²Very satisfied = paid off beyond expectations and/or faster than expected; somewhat satisfied = paid off as expected and in reasonable amount of time; neutral = paid off as expected but took longer than had been hoped; dissatisfied = didn't pay off as expected or the payoff has taken too long.

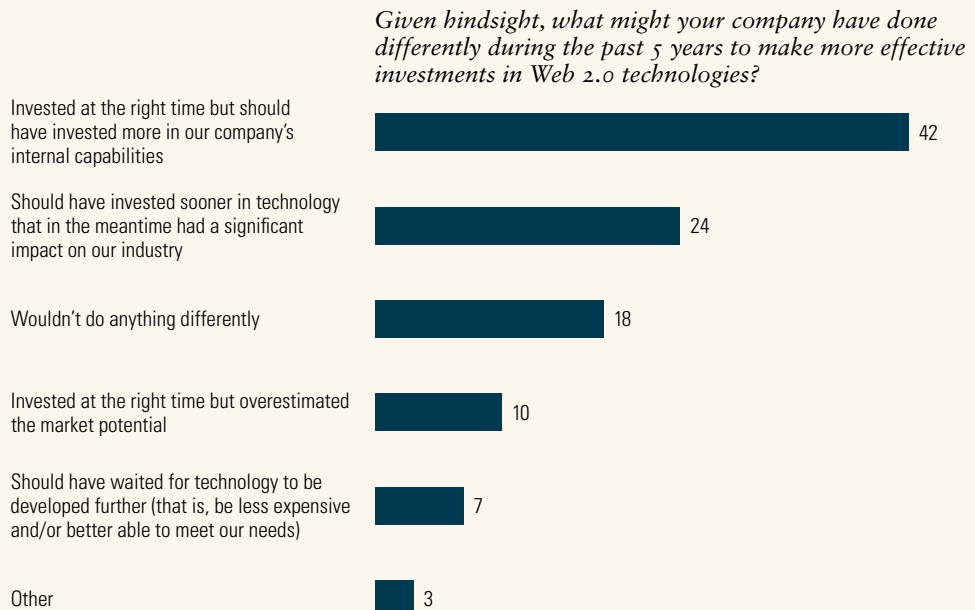
Asked what might have been done differently to make the previous investments in Internet technologies more effective, only 18 percent say they would not have acted differently. Forty-two percent say they would have strengthened their companies' internal capabilities to make the most of the market opportunity at hand

(Exhibit 2). Among the 24 percent who say they would have moved faster, many describe their companies as fast followers or early adopters—a strategy consistent with the view that speed is of the essence in technology investments.

Exhibit 2

Rethinking investments

% of respondents (n = 2,623)¹



¹ Respondents who answered "don't know" are excluded; figures do not sum to 100%, because respondents could select multiple answers.

What's next?

Among the executives familiar with the nine Web 2.0 trends cited in the survey (see the sidebar, “What’s in Web 2.0”), more than three-fourths say that their companies are already investing in one or more of these trends. The most frequently cited investment is Web services, being used or considered by 80 percent of the respondents familiar with the tools. Peer-to-peer networking also is popular; 47 percent say they are using or considering it (Exhibit 3).

Few executives say that their companies are using more than two of these technologies. But nearly two-thirds of those whose companies are investing in them think they are important for maintaining the company’s market position, either to provide a competitive edge or to match the competition and address customer demand. More than one-third labeled them “experimental.”

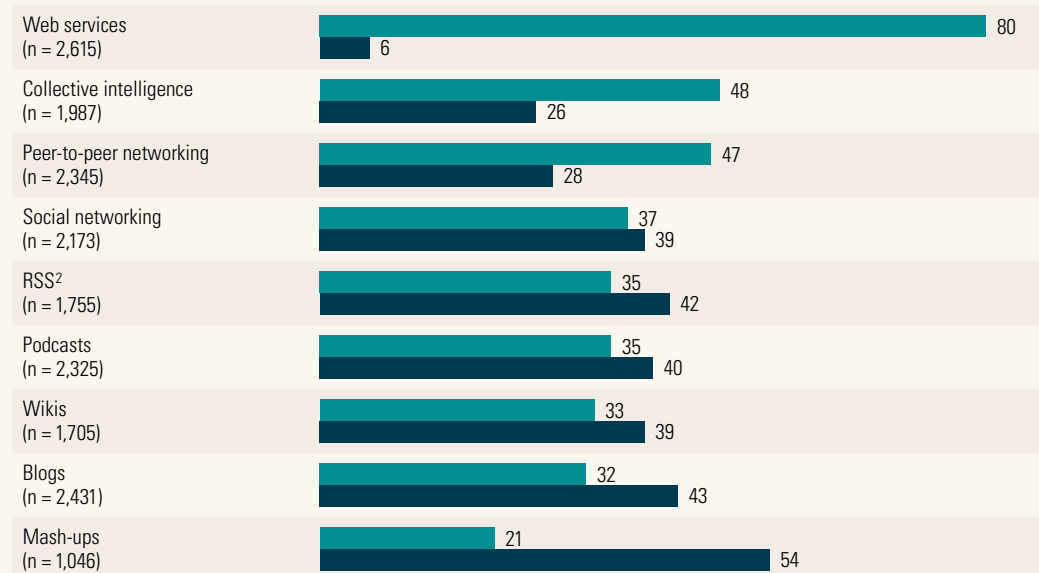
Exhibit 3

Popular bets

% of respondents¹

■ Using or planning to use
■ Not under consideration

Is your company investing in any of the following Web 2.0 technologies or tools?



¹ Respondents whose investment plans are uncertain are not shown; respondents who answered “not familiar enough to say” or “don’t know” are excluded.

² Really Simple Syndication.

Executives from some industries and regions that were slow to invest during the past five years are poised to move more aggressively now. For example, retail executives, whose companies

were more likely than the average company to invest cautiously in the past, now overwhelmingly say they will increase investment in Web 2.0 technologies in the coming years (Exhibit 4).

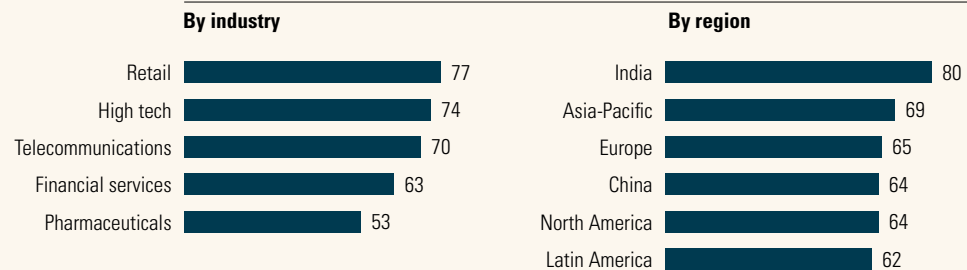
Exhibit 4

Interest is high in India

% of respondents

What are your company's plans for investing in Web 2.0 technologies over the next 3 years?

Investment in these types of technologies will increase



What's in Web 2.0

Blogs (short for Web logs) are online journals or diaries hosted on a Web site and often distributed to other sites or readers using RSS (see below).

Collective intelligence refers to any system that attempts to tap the expertise of a group rather than an individual to make decisions. Technologies that contribute to collective intelligence include collaborative publishing and common databases for sharing knowledge.

Mash-ups are aggregations of content from different online sources to create a new service. An example would be a program that pulls apartment listings from one site and displays them on a Google map to show where the apartments are located.

Peer-to-peer networking (sometimes called P2P) is a technique for efficiently sharing files (music, videos, or text) either over the Internet or within a closed set of users. Unlike the traditional method of storing a file on one machine—which can become a bottleneck if many people try to access it at once—P2P distributes files across many machines, often those of the users themselves. Some systems retrieve files by gathering and assembling pieces of them from many machines.

Podcasts are audio or video recordings—a multimedia form of a blog or other content. They are often distributed through an aggregator, such as iTunes.

RSS (Really Simple Syndication) allows people to subscribe to online distributions of news, blogs, podcasts, or other information.

Social networking refers to systems that allow members of a specific site to learn about other members' skills, talents, knowledge, or preferences. Commercial examples include Facebook and MySpace. Some companies use these systems internally to help identify experts.

Web services are software systems that make it easier for different systems to communicate with one another automatically in order to pass information or conduct transactions. For example, a retailer and supplier might use Web services to communicate over the Internet and automatically update each other's inventory systems.

Wikis, such as Wikipedia, are systems for collaborative publishing. They allow many authors to contribute to an online document or discussion.

Similarly, while executives from China and Latin America typically say that their companies are late followers or had invested cautiously, they now plan to invest at the same rate or even faster than companies in Europe and North America. The level of investment in each of the Web 2.0 technologies cited in this

survey varies across regions, with China being a fast adopter. The use of and plans for Web 2.0 technologies in general are well balanced globally (Exhibit 5), although some locations (such as India) stand out for their enthusiasm.

Exhibit 5

A choice of technologies

% of respondents using or planning to use Web 2.0 technologies

■ Low ■ Medium ■ High

	Asia-Pacific	China	Europe	India	Latin America	North America	Other developing markets
Blogs	25	20	26	29	23	32	19
Collective intelligence	32	37	35	33	31	30	35
Mash-ups	7	6	8	10	5	8	6
Peer-to-peer networks	43	50	38	39	43	37	39
RSS ¹	19	20	20	18	17	25	20
Social networks	22	36	30	29	28	27	29
Wikis	19	10	23	26	17	20	12

¹Really Simple Syndication.

Why Web 2.0?

Executives say they are using Web 2.0 technologies to communicate with customers and business partners and to encourage collaboration inside the company (Exhibit 6). Seventy percent say they are using some combination of these technologies for communicating with their customers. For example, about one-fifth of them say they are using blogs to improve customer service or solicit customer feedback.

Respondents report that to communicate with business partners and, secondarily, to achieve tighter integration with suppliers, companies are using Web services, peer-to-peer networking, collective intelligence, RSS (Really Simple Syndication), and peer-to-peer networking.

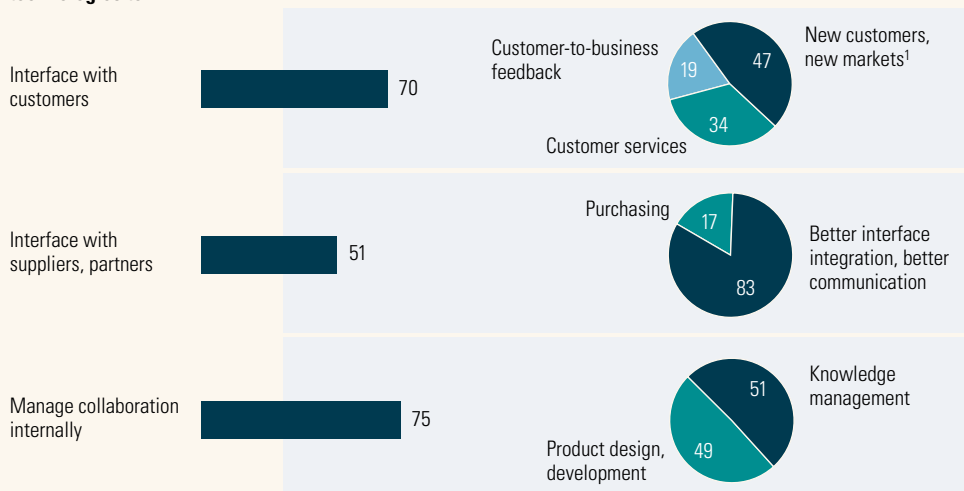
Companies are using the same technologies to help manage knowledge internally. Just over half of respondents say they used one or more Web 2.0 technologies for that purpose. Just under half use these tools for designing and developing new products—for example, setting up systems to gather and share ideas.

Exhibit 6

How they use them

% of respondents who report using Web 2.0 technologies

Respondents report using some combination of technologies to . . .



¹Sum of responses for entering new markets and acquiring new customers in existing markets.

Finally, among the executives surveyed, technologies for automation and collaboration appear to be gaining more traction than some of the technologies that have received more attention in the press (Exhibit 7). Blogs,

podcasts, and mash-ups trail technology trends that allow people to contribute knowledge to a common effort or allow machines to exchange information more easily.

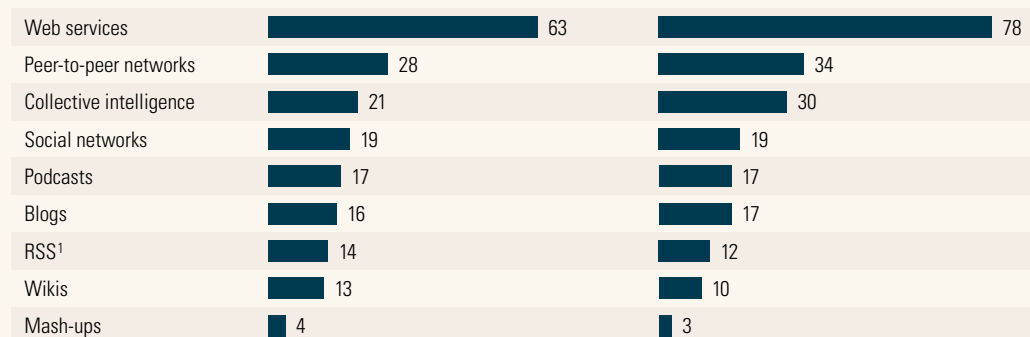
Exhibit 7

Business relevance drives usage

% of respondents

Is your company investing in any of the following Web 2.0 technologies or tools?
(n = 2,847)

Identify the 3 technologies or tools that are most important to your business.
(n = 2,433)

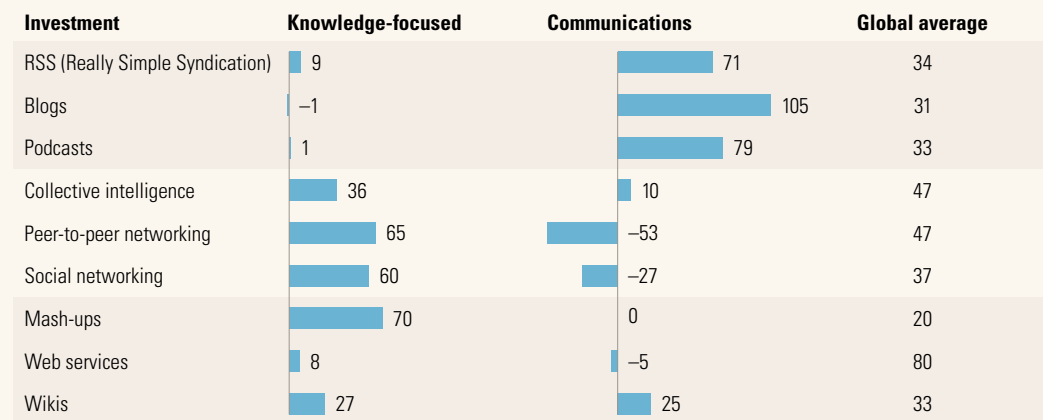


¹Really Simple Syndication.

However, looking at companies that have invested in specific technologies, two distinct groups emerge. Some 43 percent of companies are even more focused on networking and collective intelligence technologies than the global average (Exhibit 8); these companies are likelier than others to be large, in high tech, and

in Asia. And some 22 percent are much likelier to have invested in RSS, blogs, and podcasts than others; these companies are also likelier to be in industries such as media and telecommunications and located in North America.

Exhibit 8

Who, what, whereDeviation from average,¹ %

¹This exhibit is a result of cluster analysis. The percentages in the two left-hand columns refer to the percentage difference from the global average.

Respondents' discussion

During an online discussion convened to dig more deeply into the preceding results,² it became clear that companies using Web 2.0 technologies have developed an easier and more flexible way of bringing technology into businesses, compared to traditional top-down approaches.

A key theme that emerges from the discussions is that many of these technologies start at a company's grassroots level. Because many of these tools are easy to implement, small groups of interested individuals can launch informal pilots to test their viability. *"We have been very customer driven and quite ad hoc,"* one executive explains. *"As we grow we are formalizing the process, but it is still driven by inspiration [and] passion from key stakeholders."*

Another central point is that although many of these technologies came into prominence as consumer services, discussion participants are using them throughout their businesses as tools and can already see some impact on the business. *"Wikis are adding the greatest value,"* one executive says. *"Blogs and podcasts are more focused outside the organization, supporting sales and marketing efforts. . . . Technology is just the way of doing business."*

In addition, some note that as collaboration tools spread through the organization, they help break down hierarchical and functional boundaries, since they facilitate passing information up, down, and around: *"We use a CRM³ package where I can easily find out what my customers like and dislike and have suggestions from the help desk guy on how to improve our service. The message does not need to flow through layers within our organization to reach me."*

Discussion participants seem generally optimistic about the benefits of these technologies, particularly as they help companies refine their business direction: *"The most valuable aspects today are providing a means for customers to have a dialogue with us. This provides benefits to both parties. If we get something wrong, our customers let us know very quickly and they expect to know when we are going to address it. This rich dialogue also brings us ideas and suggestions on future product developments, which is extremely valuable."*

²The discussion brought together senior executives, including CEOs and company owners, from Europe and North America. Participants were grouped into two categories: those who told us they are using relatively few of the technologies we asked about and those who said they are using three or more.

³Customer relationship management.

Promising starts

In this follow-up discussion, wikis, blogs, and RSS technologies were the most commonly mentioned ones. Although these were not the technologies that executives cited in the original survey as the most used by companies across industries,⁴ discussion participants see them as having immediate value for their organizations. As one executive says, *“Collaborative and communications technologies are clear winners.”*

Several executives, for example, say they are using wikis (software that allows a group of people to contribute to an online document or collection) as a way to encourage collaboration within their companies, especially for knowledge development. *“A typical example is the use of a wiki to get to a commonly agreed terminology set. . . . Users are able to respond to language and messages that emanate from the center and translate that into a set of terms that is meaningful in their own context.”* This participant adds that wikis *“capture a good deal of unstructured and anecdotal information that would otherwise have been lost.”* Another notes that wikis are necessary because his organization has outgrown its ability to gather and share knowledge informally.

Other participants are hoping to take these technologies further, by using them to develop knowledge or software. *“As a software integration provider, I think there*

are opportunities to use the collaboration techniques more actively in the software life cycle. We would be interested in harnessing collaboration tools built on Web 2.0 for developers.”

Blogs are also frequently mentioned as a channel to communicate with customers and, in some cases, critics: *“We use blogs as a means of communication and engagement with our customers, but also to help engage our prospects and detractors in a positive and productive discussion. We find that it helps to manage our reputation.”*

Mash-ups—combining two technologies to create a new and distinct application, such as displaying locations on a map—were the trends least referenced in the original survey, but several participants say they are using them to address customer needs. *“We are using mash-ups based on customer demand to display physical locations consumers can interact at. Google has set the bar with consumers.”*

⁴These three technologies are more likely to be used by media and telecommunications companies, which have been quick to adopt Web 2.0 technologies for distributing content.

Adoption and barriers

Most Web 2.0 tools are simple-to-use applications that are hosted offsite (for example, wikis, blogs, and social networking), which makes them easy to implement. Given that ease, it's not surprising that many discussion participants say grassroots efforts are often as effective as formal pilot programs. One executive says, *"These projects started at the grassroots level; however, the value was rapidly demonstrated. This led to projects being taken up by their 'natural' owners within the organization [who] continue to invest and develop the projects."* Another panelist goes further, asserting that top-down management would have been a hindrance: *"The most effective efforts started as grassroots efforts. The role of senior management was to provide the support for this to continue and then get out of the way. Executives cannot mandate successful adoption of Web 2.0 technologies. Their role is to supply permission and resources—and set the boundaries—and [then] let intelligent and motivated teams run with this."*

The ease of exploring these technologies is cited as a factor in helping advocates avoid typical barriers to implementation (or perhaps just inertia) by quickly pulling together prototypes. *"The ease of implementation can be used to overcome the usual resistance to trying things and taking risks. A simple [working] prototype and some data from the sandbox with real users is very compelling when compared to the traditional business approvals process."*

Some participants cite a difference between the way their companies implement more technical and integrated technologies (for example, Web services) and the more user-friendly technologies. *"We committed to Web services as a long-term technology decision. . . . Our use of blogs has been driven more by teams tied to the customer relationships."* Others suggest that the grassroots adoption style reflects the novelty and availability of the new technologies. *"We have been very customer driven and quite ad hoc in the past. As we grow we are formalizing the process, but it is still driven by inspiration [and] passion from key stakeholders."* Inspiration often comes from outside the company, sometimes even outside the industry. *"An idea was seen that people thought, 'Wow, that's cool.' That was the starting point for the discussion [about] how we could use something like that to help us."*

The discussion also highlights some difference in adoption styles between executives who are using many Web 2.0 technologies and those who are exploring few. The more prolific users show a tendency to leap into grassroots efforts, while the light users appear to take a more cautious and traditional approach: *"Decisions on new technology have tended to be driven by one or two specialists in the technology team, generally led by the CTO.⁵ Other board members will be involved where significant financial investment is required."* Indeed, some executives report the same adoption barriers

⁵ Chief technology officer.

as those they face with more traditional or expensive technologies, including caution on the part of senior management and apathy among customers. *“The old shareholders do not understand the use of IT and they think of it as a cost, not an opportunity.”* A newspaper executive adds, *“We are struggling to do the right thing to transform our business while trying to inform and engage the public who, frankly, don’t seem very interested.”*

However, in other environments, one executive says, *“No encouragement is necessary. The tools are simple and sometimes fun. The ability to click-and-drag graphics, videos, [and] sound bites into a forum provides different dimensions to information. What’s gone are the old BBS⁶ text boards.”*

⁶Bulletin Board Systems.

Measuring impact

While many panelists assert that Web 2.0 technologies are subject to the same scrutiny as other investments (specifically, do they return enough value to justify their costs?), a general sense emerges that it is, in many cases, too soon to tell. However, participants also assess these technologies by their impact on business performance, which they define in many ways—including better customer engagement, more efficient collaboration within the company, and an improved ability to manage its reputation online.

Some executives say the tools are already having visible effects, such as better communication with customers. *“The most valuable aspects today are providing a means for customers to have a dialogue with us.”* One panelist cites blogs and RSS as factors that are helping to reduce the customer churn rate. Perhaps even more important, several participants are tapping customers’ opinions and expertise to improve product design. *“We now see customers, particularly the professionals and customer experts, as having a much greater role in the development of new products,”* says one. Another adds, *“Our success is based on allowing [clients] to participate in the process.”*

There is a wide variance in how long panelists are willing to wait for the tools to demonstrate their value. This period is sometimes tied to whether a company is using more or fewer of these technologies. One executive from a company using fewer notes, *“The key for us is to identify value . . . at an early stage.”* Others, such as this participant from a company using

several Web 2.0 technologies, say they are willing to give the tools more time: *“These are still early days. The tools and technologies that we have today will evolve into what will become the next step. We are not necessarily at that point today.”* And some warn against rushing to judgment: *“You need to give people room to make mistakes and to shape it to their needs. You also need time. Without a commitment to those things, the command-and-control freaks will strangle it off with quantitative, mechanistic models. . . . Many of the old models for calculating return are either of limited value or simply destructive.”*

Another participant notes that nothing resembling best practice has yet emerged for implementing these tools or measuring their success: *“There is perhaps, at best, sound practice. Approaches are so dependent on context for success that slavishly following models used elsewhere will almost certainly restrict creativity and innovation.”*

Competitive advantage?

Executives tend to invest in new technologies and processes because they hold out the promise of either increasing competitive advantage (for example, by enabling new services or improvements to existing ones) or reducing costs. While opinions differ among discussion participants as to whether Web 2.0 technologies have yet demonstrated any economic impact, some consensus emerges that the technologies are valuable internally (mostly by improving collaboration) and externally (by strengthening connections among suppliers, partners, and customers). *“It’s too early to claim competitive advantage . . . but we have used blogs to strengthen our stakeholder communication and we are currently implementing wiki technology in our intranet and extranet sites. The main benefit seems to be the stronger sense of community that we can nurture through technologies that are more interactive, less push.”*

The views of discussion participants on whether these tools can offer enduring competitive advantage differ significantly. The variance not only highlights differences between executives at companies where more of these tools are in use and other executives, they also parallel an ongoing debate among technology executives and other experts as to whether technology can offer enduring competitive advantage. Web 2.0 tools, participants who are using them the most suggest, may lead to a long-term advantage.

Some participants, especially those whose investments have focused on changes in their IT systems and who have invested less in Web 2.0, tend to view advantages as fleeting. *“While we have been in the forefront of most technology upheavals over the past two decades, none of our investments have provided us with any significant competitive advantage for a significant duration. The technologies tend to get adopted by competing financial institutions with no meaningful time gap [and] tend to get commoditized very rapidly.”*

Others see these technologies as enabling a different way of doing business, both internally (for example, by aggregating knowledge from throughout the company) and externally (by tapping customers for product-development ideas). These respondents, such as this executive from a company using several technologies, tend to expect a more sustainable advantage. *“Web 2.0 tools are helping to encourage interest in collaboration across the organization and helping us to explore new and different ways of collaborating. In time this may bring us some form of competitive advantage, but it would be hard to quantify anything at this stage.”*

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The contributors to the development and analysis of this survey include **Jacques Bughin**, a director in McKinsey’s Brussels office, and **James Manyika**, a director in the San Francisco office.
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