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References

Learning Objectives

- 1 Understand the nature of Web 2.0 and its business applications.
- 2 Understand online communities and how social networking services are evolving.
- 3 Describe how businesses are using Web 2.0 applications to carry out a variety of business functions more effectively.
- 4 Understand how businesses evaluate the effectiveness of their social media strategies and tactics.
- 5 Describe how the Internet is evolving and the significant changes that will take place in the near future.

Integrating IT



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Web 2.0 . . . The Machine Is Us/ing Us—Michael Wesch youtube.com/user/mwesch#p/u/9/NlIGopyXT_g

Social Media Revolution—Is It a Fad? youtube.com/watch?v=IFZ0z5Fm-Ng

The Mashable Social Media Guide mashable.com/social-media/

Cluetrain Manifesto cluetrain.com/

O’Reilly Media oreilly.com/community/

World Wide Web Consortium w3.org/Consortium/

Read, Write, Web technology blog readwriteweb.com/

QUICK LOOK at Chapter 8, Web 2.0 and Social Media

This section introduces you to the business issues, challenges, and IT solutions in Chapter 8. Topics and issues mentioned in the Quick Look are explained in the chapter.

In his popular 2007 video, *Web 2.0 . . . The Machine Is Us/ing Us*, cultural anthropologist Michael Wesch notes that enhancements to the Internet known as **Web 2.0** will cause us to rethink a lot of our assumptions about things as diverse as ethics, privacy, governance, family, and even love. **We will rethink our assumptions because the interactive nature of the modern Internet allows for social connections between individuals, organizations, governments, and other entities that were not previously possible.**

In this chapter, you learn about the technologies and capabilities known as Web 2.0. You will examine how **online communities** are evolving into **social networks** and how businesses are responding to this new development. And you read how organizations are benefiting from **enterprise social networks**. Naturally, the magnitude of change occurring online has created some unease on the part of traditional-minded businesses and individual users.

We explore the use of **social media metrics** that help businesses determine the effectiveness of their communication strategies in this new environment. Finally, we take a quick glance at our crystal ball and speculate on what the future holds for the next evolution of the Internet.

“United Breaks Guitars”—An Epic Social Media Failure



On March 31, 2008, musician and lead singer Dave Carroll and his Canadian band, Sons of Maxwell, departed for a weeklong tour, flying on United Airlines (UAL) from Halifax, Nova Scotia, Canada to Omaha, Nebraska via Chicago’s O’Hare Airport. As they waited to deplane at O’Hare, Carroll and his band observed UAL baggage handlers tossing their expensive instruments around the tarmac “without regard.” Carroll’s desperate pleas to multiple UAL employees to intervene and rescue the instruments from the careless baggage handlers went unheeded. In Omaha, Carroll discovered that his \$3,500 Taylor guitar had been smashed and broken—and that it was no accident (see Figure 8.1).

According to Carroll, he attempted to resolve his claim for the broken guitar with countless UAL customer service representatives. For a year, the airline refused to accept responsibility. Ultimately, he was told that UAL would not compensate



Figure 8.1 United Airlines was unprepared to respond to the damage from David Carroll’s Internet campaign against its poor customer service. (© Andrew Paterson/Alamy)

him for the damage they'd inflicted on his instrument. Convinced that UAL had created a claim system designed to simply wear down customers, he decided to share his frustration with others via social media and to do so in creative ways.

Carroll wrote and produced three music videos detailing his experience with UAL, which he posted on YouTube. His videos created a huge base of millions of fans.

His first song, "United Breaks Guitars," became a viral Internet phenomenon shortly after it was uploaded to YouTube in July 2009. He sang:

United, you broke my Taylor Guitar/United, some big help you are. You broke it, you should fix it/You're liable, just admit it/I should've flown with someone else/Or gone by car/ 'Cause United breaks guitars.

Within days, his video received over 2.5 million views. Then the story was picked up and covered by major news media in the United States, Canada, and the United Kingdom. Within a year of its original post, the *United Breaks Guitars* video was viewed over 8.5 million times. Carroll released two more songs about his trials and tribulations with UAL. And his story has been retold and shared via countless blogs, Facebook pages, tweets (Twitter messages), and this textbook.

Carroll's ability to use social media to damage the reputation of a major corporation has both fascinated and terrified many in the business world. The 2010 business case "United Breaks Guitars," by Harvard Business School professor John Deighton and research associate Leora Kornfeld, details the damaging impact a viral campaign can have on a company's brand, reputation, and customer relationships. They discuss the complexities of dealing with viral videos, companies' limited options for countering negative publicity, and the difficulties that unprepared companies face when responding to viral campaigns.

Facing Viral Threats

Negative viral videos posted by customers are a potential threat that cannot be ignored. Companies and their executives

can no longer afford to hide behind slick advertising campaigns and press releases to protect their public image. Nor can they insulate themselves from unhappy customers with call center employees who can't solve problems when they arise. Motivated consumers, using the tools of social media, have the power to spread viral messages that can severely damage a company's brand image and expose it to ridicule and significant financial consequences. New communications strategies that make use of social media involve listening to customers, responding to their concerns, engaging them in conversation, and mobilizing them toward goals that are mutually beneficial.

In an interesting postscript to this story, the *New York Times* reported that Dave Carroll flew UAL several months after his video went viral. On that flight, UAL lost his luggage.

Capitalizing on Viral Opportunities

Several businesses capitalized on the situation. For example, Bob Taylor used the popularity of Carroll's videos to promote his own company, Taylor Quality Guitars (taylorguitars.com), and its service center, which provides quality repair of damaged guitars of any make. On July 10, 2009, Taylor released a video on YouTube to "lend his support to Dave Carroll and guitar players everywhere." In the two-minute video, he directs viewers to the Taylor Guitars Web site for advice on traveling with guitars. His video had almost 500,000 views.

United Makes Peace with the Band

UAL and the band have since made peace, according to a follow-up statement by Carroll posted on YouTube. In his statement-via-video, *United Breaks Guitars—A Statement from Dave Carroll*, Carroll mentions that UAL offered him generous but late compensation.

For Class Discussion and Debate

1. Scenario for Brainstorming and Discussion: There's an old saying, "Nobody is perfect." Even when companies mean well and do everything reasonable to please the customer, something is going to go wrong some of the time.

To hear Dave Carroll's first-hand account of the story and to watch his videos, visit davecarrollmusic.com or YouTube.com. View the videos and then brainstorm answers to the following questions:

a. Discuss the notion of social media as *insurgent media*, that is, better at attack than at defense.

- b. When you engage your customers in a conversation, they may tell you (and others) things you don't want to hear. They might criticize your product, service, management, and/or employees. Would it be smarter for companies to limit their online exposure to Web sites that project a well-thought-out message and do not encourage or allow responses from customers?
- c. Once Carroll posted his videos on YouTube, what steps could UAL have taken to minimize the damage and possibly turn things around so that it could maintain a positive brand image in the marketplace? (Hint: The major themes in social media communication are "conversation" and

“relationship.” What do you do when you’ve hurt someone’s feelings?)

- d. Apart from this situation, what are some ways that UAL’s management should consider using social media to build relationships with its customers and prospective customers?
- e. Did Bob Taylor expose his company, Taylor Guitars, to any risk? Explain.

2. Debate: Social media can be a source of risk to a company’s brand or image. One example is that Dave Carroll’s complaint, propagated by social media, received a lot of attention. However, many complaints via social media do not. If the issue is not new, not interesting, or not presented in an entertaining way, it is very unlikely to go viral.

- a. Take the position either that companies need a damage control strategy for negative social media or that such a strategy is unnecessary and not worth the investment. Defend your position with persuasive evidence.
- b. In your debate, consider the probability of the risk and how feasible it is for a company to prevent situations like this from happening.
- c. Debate the ethical issues, including the use of damaging social media by competitors. Address this question: What’s to stop anyone with an axe to grind from using social media to ruin the reputation of well-run, customer-oriented businesses?

Sources: Compiled from Erickson (2009), Reynolds (2009), Negroni (2009), and Harvard Business School Working Knowledge (HBSWK, 2010).

8.1 Web 2.0 and Social Media

In your lifetime, there has been a dramatic change in the way people use the Internet. In the early 1990s, many people did not have regular access to the Internet, and those who did typically “dialed up” their network from a home or office telephone. Dial-up access meant long waits as content from Web pages “downloaded” onto the screen. Some users joked that the letters “www” in a Web address stood for “world wide wait.” E-mail was the primary mechanism for social interaction. Online communities were often like public bulletin boards where all members of the community could read the messages that others posted. Web sites were static—essentially online billboards for the businesses that created them. Online purchasing (e-commerce) was rare and risky because there were few safeguards protecting credit card information. But all that has changed.

NEW MODELS DRIVEN BY WEB 2.0

Today, most of us access the Internet using wired or wireless broadband technology, chewing up bandwidth that was unheard of a few years ago. We expect to be able to stream audio and video files as well as watch feature-length films over wireless connections or on smartphones. We surf Web pages that constantly change their appearance in response to how we interact with them. While e-mail is still a standard form of communication in business, young people tend to view it with disdain in favor of tweets, texts, or social networking sites like Facebook. We keep track of our world, interests, and hobbies by reading blogs and online newspapers, sharing them with friends and family by postings on profile pages.

Some people write their own blogs, post videos on YouTube, or share pictures using sites like Flickr or Photobucket. E-commerce continues to grow as we buy books from Amazon, sell on eBay, download music and videos from iTunes, book travel arrangements on *Travelocity.com*, and buy concert tickets from Ticketmaster.

The transformation has happened so smoothly that we frequently don’t recognize many of the implications to businesses, agencies, and individuals. As Michael Wesch notes, we may need to rethink a lot of things.

BROADCAST VS. CONVERSATION MODELS

Internet interactivity allows for robust social connections between individuals, organizations, governments, and other entities. Organizations previously communicated with their audiences using a broadcast model, where messages flowed from the sender to the receiver. Now, they must learn to use a conversation model, where communication flows back and forth between sender and receiver. This model is made possible by IT and a change in the expectations and behavior of Internet users (Li and Bernoff, 2008).

TABLE 8.1 Web 1.0 vs Web 2.0	
Web 1.0	Web 2.0—the Social Web
Static pages, HTML	Dynamic pages, XML and Java
Author-controlled content	User-controlled content
Computers	Computers, cell phones, televisions, PDAs, game systems, car dashboards
Users view content	Users create content
Individual users	User communities
Marketing goal: influence	Marketing goal: relationships
Top down	Bottom up
Data: single source	Data: multiple sources, e.g., mashups

Source: Barefoot (2006), O'Reilly (2005)

In the next section, you read about the technological aspects of Web 2.0. It's important to recall that while IT provides the platform for this phenomenon, the changing behavior of users represents the biggest challenge and opportunity for businesses today.

Because of Web 2.0, people have different attitudes about how they want businesses to interact with them. They have higher expectations for a company's character, ethical behavior, responsiveness, and ability to meet their individual needs. Customers expect businesses to use Web 2.0 capabilities to satisfy their needs. Those companies that don't respond face a growing weakness.

Web 2.0 also represents opportunities for those who understand and master the new way of doing things. Managers who invest the time to understand and become proficient in new approaches to identifying, communicating with, and building relationships with customers online will have a tremendous advantage over managers who limit themselves to traditional methods.

WHAT IS WEB 2.0?

Experts don't always agree on a definition for **Web 2.0**. Many writers have identified characteristics that differentiate the new Web from what is called Web 1.0 (see Table 8.1). Others maintain that the term Web 2.0 is simply an inevitable, incremental advance from earlier capabilities. In a 2006 interview, Tim Berners-Lee, originator of the World Wide Web, suggests the term Web 2.0 is simply "a piece of jargon, nobody even knows what it means." Berners-Lee maintains that the Internet has been about connecting people in an interactive space from the beginning.

While the applications that are labeled as Web 2.0 may simply be an extension of earlier advances, it is the change in user behavior that matters most to businesses around the world. The new technologies dramatically increase the ability of people to interact with businesses and each other, to share and find information, and to form relationships. This perspective explains why Web 2.0 is often called the Social Web (see Figure 8.2).



Figure 8.2 Web 2.0 is also referred to as the Social Web. (© Kheng Ho Toh/Alamy)



Figure 8.3 WordPress is one of the leading platforms for online blogs. (© digitallife/Alamy)

WEB 2.0 APPLICATIONS

The following technologies and tools are valuable capabilities commonly associated with Web 2.0:

Blogs. **Blog** is short for “Web log”; it is a Web site where users regularly post information for others to read. Blogs allow readers to comment on each posting. Blog authors, or bloggers, use this approach to share opinions, commentary, news, technical advice, personal stories, and so on. Blogs are relatively easy to create and are used by individuals and businesses as a way of communicating. Wordpress, Typepad, and Blogger offer easy-to-use software (see Figure 8.3). Because it is a common practice for bloggers to use a special kind of hyperlink called a **track-back** to reference other blogs in their writing, blogs are collectively referred to as the **blogosphere**. In a sense, bloggers and those who follow them form an online social network.

Blogs are a key tool for organizations that practice **content marketing**, where valuable information is shared with current or prospective customers. Bloggers can establish a lot of credibility for themselves and their organizations by providing helpful information to people who are part of their target market. Politicians practice a similar strategy when they use blogs to communicate with their constituency. Chief executives and other managers use blogs targeted to their employees to motivate, inspire, and provide information about company goals.

Wikis. A **wiki** is a Web site that allows many people to add or update information found on the site. Wikis are a collaborative work that benefits from the efforts of many participants. Wikipedia is an online encyclopedia that is the most popular general reference work on the Internet (*Alexa Topsites*, 2010). Businesses can create wikis for a particular product and allow employees and customers to contribute information that will form a knowledge base resource for those who need information about the product.

Social Networking Services. A **social networking service (SNS)** is a Web site where individuals, who are defined by a *profile*, can interact with others. This interaction can take the form of posting messages, sharing photographs or videos, sharing links to online material, instant messaging, and so on. Social networking sites are different from the broader category of *online communities* in that they usually allow individuals to control who can access information they post to the site. For instance, on Facebook, people “friend” one another to gain access to information. An individual’s social network consists of all the friends they’ve acknowledged or *friend*ed on the site. LinkedIn uses a similar feature, allowing users to add *contacts* and to approve or deny requests to establish a connection with others.



Figure 8.4 YouTube, a video-sharing site, is the third most popular site on the Internet.
(© David J. Green-lifestyle themes/Alamy)

Sharing Sites. Some sites are dedicated to sharing various kinds of media, including video, audio, and pictures. YouTube is the best-known Web site for sharing video files (see Figure 8.4). However, YouTube is also a form of social networking site in that users interact with one another by leaving comments about videos, posting video responses, creating and sharing video playlists, and even creating *channels* for their video content.

Some sites allow users to load **podcasts**, or audio/video files that people download onto devices like computers and MP3 players. Picture-sharing sites like Flickr and Photobucket have expanded beyond simple photo sharing and now include video capabilities as well as organization and editing tools; they also let people sell photos or order products with their photo images (e.g., calendars, coffee mugs, and T-shirts). Like YouTube, they contain elements of social networking by allowing users to interact and comment on things that are posted to the site.

Widgets and Mashups. Widgets are stand-alone programs that can be embedded into Web pages, blogs, profiles on social networking sites, and even computer desktops. Common widgets include clocks, visitor counters, weather reporters, and chat boxes. Businesses frequently sponsor the development and distribution of widgets as a way of promoting themselves. For instance, *ESPN.com* offers users a number of widgets that can receive and display sports information such as scores and news and broadcast schedules. See *IT at Work 8.1* for more details.

RSS (Really Simple Syndication). RSS feeds allow users to aggregate regularly changing data—such as blog entries, news stories, audio, and video—into a single place called a news aggregator or **RSS reader** (see Figure 8.5). RSS pushes content

IT at Work 8.1

The Value of Mashups

The term **mashup** refers to an application or Web page that pulls information from multiple sources, creating a new functionality. For instance, assume that you find a Web page with a listing of popular restaurants in your community. By placing the cursor over a particular restaurant's name, a small window opens with a map showing the location of the restaurant as well as summary review information from people who have eaten there before. When you move the cursor away from the restaurant name, the window disappears.

Discussion Questions: To better understand mashup applications, visit the Tall Eye Web site at map.talleye.com/index.php. At that site, use a mashup application to answer such questions as “If I dig a hole all the way through the earth, where will I come out?” and “If I walk a straight line all the way around the globe, what places will I pass through?”

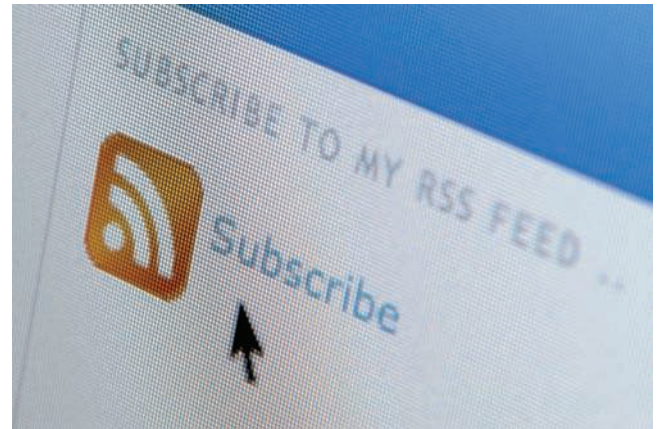


Figure 8.5 Users can subscribe to online content using RSS technology.
(©AKP Photos/Alamy)

to users so they can avoid the hassle of having to visit several different sites to get the information they are interested in. Popular RSS readers include FeedDemon, GoogleReader, and NewzCrawler. RSS enables content management, allowing users to filter and display information in ways they find most helpful. RSS readers are a special kind of mashup application.

Social Bookmarking and Tag Clouds. People have traditionally kept track of sites they wanted to remember by using the *bookmark* feature or *favorites list* on their browser. These methods allowed users to store and organize Web site addresses in folders they had created. However, as lists become long, this folder system becomes unwieldy and disorganized. Using self-defined **tags**, such as “business partners,” “travel,” and “IT vendors,” users can classify sites, allowing them to be searched using those tags. Online content posted at sites like Flickr and YouTube can also be tagged, which helps other users find that content.

Tag clouds are graphic representations of all the tags that people have attached to a particular page. Figure 8.6 shows three examples of tag clouds. The varying font sizes of words in a tag cloud represent the frequency of keywords at the site. *Delicious.com* is perhaps the most popular social bookmarking site. It also allows users to see Web pages that others have tagged with certain labels and to perform searches for sites that have a combination of tags.

While *Delicious.com* is positioned as a social bookmarking site, it also maintains a wiki, a blog, and uses RSS feeds. This shows that many popular Web sites can't be easily categorized by a single technology.

AJAX Technologies. **AJAX**, or **Asynchronous JavaScript** and **XML**, refers to a group of technologies that create Web pages that respond to users' actions without requiring the entire page to reload. AJAX languages are JavaScript, XML, HTML, and CSS, which are defined in Table 8.2. AJAX makes it possible for Web developers to create small apps that run on a page instead of on a server. This capability makes content run much faster and increases the functionality of Web sites. Why? Because without AJAX, every time you clicked a hyperlink, you would need to wait for a page to load. AJAX apps run faster because it doesn't involve waiting for an entire page to load in a browser.

Social Media. Collectively, these Web 2.0 applications are commonly referred to as **social media** because they have moved the locus of control for mass communications from large organizations to individual users. In other words, people as well as organizations control both the message and the medium. Organizations and individual users can easily share their thoughts, opinions, and experiences interactively with each

TABLE 8.3 Excerpts from *The Cluetrain Manifesto*

- Markets are conversations.
- Markets consist of human beings, not demographic sectors.
- These networked conversations are enabling powerful new forms of social organization and knowledge exchange to emerge.
- As a result, markets are getting smarter, more informed, more organized. Participation in a networked market changes people fundamentally.
- People in networked markets have figured out that they get far better information and support from one another than from vendors. So much for corporate rhetoric about adding value to commoditized products.
- Corporations do not speak in the same voice as these new networked conversations. To their intended online audiences, companies sound hollow, flat, literally inhuman.
- Companies need to realize their markets are often laughing. At them.
- Most marketing programs are based on the fear that the market might see what's really going on inside the company.
- Networked markets can change suppliers overnight. Networked knowledge workers can change employers over lunch. Your own “downsizing initiatives” taught us to ask the question: “Loyalty? What’s that?”

Source: Levine et.al, (2000).

used to spend most of their time developing sophisticated ways of getting their message heard must now develop sophisticated strategies for listening and responding to what their consumers are saying.

WEB 2.0 ATTITUDE

As you have read, the availability of Web 2.0 applications is changing not only how people behave but also the way they think about things. This new way of thinking is captured in a provocative list of 95 statements called the Cluetrain Manifesto (*cluetrain.com*). Perhaps the fundamental principle of the manifesto is described by its first thesis: *Markets are conversations*. Other excerpts from the Manifesto are listed in Table 8.3. Over time, successful companies will learn to engage customers in conversations as an alternative to the unidirectional or broadcast method of communication. While the Cluetrain Manifesto seemed idealistic, impractical, and revolutionary when it was first written in 2000, we are starting to see more examples of companies finding ways of turning those principles into action.

Most companies still struggle with the concept of *conversation*. Forrester researchers Charlene Li and Josh Bernoff (2008) describe a number of companies that recognize the power of what they call the **groundswell**, “a spontaneous movement of people using online tools to connect, take charge of their own experience and get what they need—information, support, ideas, products, and bargaining power—from each other.”

Businesses are learning to participate in the groundswell by using Web 2.0 tools to implement **Integrated Social Media (ISM) strategies**. Organizations that fail to participate effectively in the groundswell risk becoming irrelevant.

Because of the relatively low cost and ease of use, social media is a powerful democratization force; the network structure **enables communication and collaboration on a massive scale**. Figure 8.7 shows the emergence and rise of mass social media. The figure compares traditional and social media and illustrates the new tools of social media, such as blogs and video blogs (vlogs), as being in the consumer’s control. **Content is produced and consumed by people in the social media, rather than pushed to or observed by people in the traditional media.**

Notice that traditional media content goes from the technology to the people, whereas in social media, **people create and control the content.**

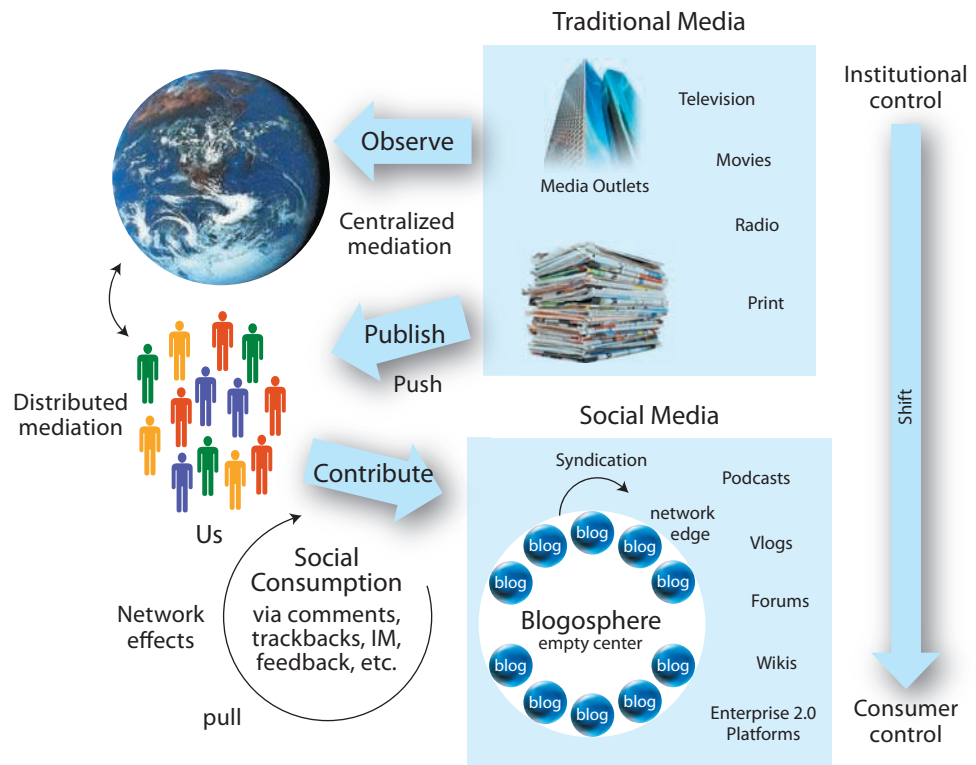


Figure 8.7 The emergence and rise of mass social media. (Source: Hinchcliffe, Web 2.0 Blog, web2.wsj2.com.)

Review Questions

1. How has Web 2.0 changed the behavior of Internet users?
2. What are the basic tools or applications that characterize Web 2.0?
3. Why is Web 2.0 referred to as the *Social Web*?
4. What are some of the benefits or advantages that Web developers gain from using AJAX technologies?
5. What are some of the most important messages for business organizations in the *Cluetrain Manifesto*?

8.2 Virtual Communities and Social Networking Services

Online or virtual communities parallel typical physical communities, such as neighborhoods, clubs, and associations, except that they are not bound by political or geographic boundaries. These communities offer several ways for members to interact, collaborate, and trade. Virtual or online communities have been around for a long time and predate the World Wide Web. The **Usenet** (usenet.com) provided the initial platform for online communities by making it possible for users to exchange messages on various topics in public **newsgroups**, which are similar in many ways to online bulletin board systems. While the Usenet is technically not part of the Internet, much of the content can be accessed from Internet sites like Goggle Groups.

Some of the first major online Internet communities include The Well (1985), GeoCities (1994), The Globe (1994), and Tripod (1995). Of these, only The Well continues to operate as an online community. The others have either changed their business model to Web hosting or have gone out of business entirely. Table 8.4 lists several types of online communities.

Online communities can take a number of forms. For instance, some people view the blogosphere as a community. YouTube is a community of people who post, view, and comment on videos. Epinions (epinions.com) is a community of people who share their experiences and opinions about products and companies. Flickr, Photobucket,

TABLE 8.4 Types of Online Communities

Associations. Many associations have a Web presence. These range from Parent-Teacher Associations (PTAs) to professional associations. An example of this type of community is the Australian Record Industry Association (*aria.com.au*).

Ethnic communities. Many communities are country or language specific. An example of such a site is *elsitio.com*, which provides content for Spanish- and Portuguese-speaking audiences, mainly in Latin America and the United States. A number of sites, including *china.com*, *mymailhk.com*, *sina.com*, and *sohu.com*, cater to the world's large Chinese-speaking community.

Gender communities. *ivillage.com* is a large community that focuses on women's interests, while *askmen.com* is an online community that caters to men.

Affinity portals. These are communities organized by interest, such as hobbies, vocations, political parties, unions [e.g., *edmunds.com* (cars), *democraticunderground.org* (politics)], and so on. Many communities are organized around a technical topic (e.g., a database) or a product (e.g., BlackBerry smartphones). A major subcategory here is medical- and health-related sites like *webmd.com*. According to Johnson and Ambrose, almost 30 percent of the 90 million members who participated in communities in 2005 were in this category.

Young people—teens and people in their early twenties. Many companies see unusual opportunities here. Alloy Digital has created a number of Web sites in this space—including *alloy.com*, *gurl.com*, *teen.com*, *takkle.com*, and *channelone.com*—which it claims reach over 30 million young people every month.

B2B online communities. B2B exchanges support community programs such as technical discussion forums, blogs, interactive Webcasts, user-created product reviews, virtual conferences and meetings, experts' seminars, and user-managed profile pages. Classified ads can help members to find jobs or employers to find employees. Many also include industry news, directories, links to government and professional associations, and more.

Social networking sites. These are megacommunities, such as MySpace, Facebook, LinkedIn, and Bebo, in which millions of unrelated members can express themselves, find friends, find jobs, exchange photos, view videotapes, and more.

Webshots, and similar sites are photo-sharing communities. Wikipedia is a community of people who create, edit, and maintain an online knowledge base. Obviously, social networking sites like Facebook and MySpace are communities and have seen tremendous growth in recent years. The mass adoption of social networking Web sites points to an evolution in human social interaction (Weaver and Morrison, 2008).

Social network analysis (SNA) is the mapping and measuring of relationships and flows between people, groups, organizations, computers, or other information- or knowledge-processing entities. The nodes in the network are the people and the groups, whereas the links show relationships or flows between the nodes (see Figure 8.8). SNA provides both a visual and a mathematical analysis of relationships. In its corporate communications, Facebook has begun using the term **social graph** to refer to the global social network reflecting how we are all connected to one another through relationships. Facebook users can access a social graph application that visually represents the connections among all the people in its network. Berners-Lee (2007) extended this concept even further when he coined the term “**giant global graph**.” This concept is intended to illustrate the connections between people and/or documents and pages online. Connecting all points on the giant global graph is the ultimate objective goal for creators of the **Semantic Web**, which you read in Section 8.5.

Online communities have received increasing attention from the business community. Online communities can be used as a platform for the following:

- Selling goods and services
- Promoting products to prospective customers; that is, advertising
- Prospecting for customers



Figure 8.8 A social graph uses nodes and ties to illustrate relationships between individuals and groups of people. (Alex Slobodkin/iStockphoto)

- Building relationships with customers and prospective customers
- Identifying customer perceptions by “listening” to conversations
- Soliciting ideas for new products and services from customers
- Providing support services to customers by answering questions, providing information, and so on
- Encouraging customers to share their positive perceptions with others; that is, word of mouth
- Gathering information about competitors and marketplace perceptions of competitors
- Identifying and interacting with prospective suppliers, partners, and collaborators (see Enterprise 2.0 in the next section)

In recent years, several companies have created online communities for the purpose of identifying market opportunities through crowdsourcing. **Crowdsourcing** is a model of problem solving and idea generation that marshals the collective talents of a large group of people. Using Web 2.0 tools, companies solicit, refine, and evaluate ideas for new products and services based on input from their customers. Business organizations that have implemented this approach include Fiat, Sara Lee, BMW, Kraft, Proctor & Gamble, and Starbucks. *Openinnovators.net* lists other examples.

SOCIAL NETWORKING SERVICES (SNS)

Social networking sites represent a special type of virtual community and are now the dominant form of online community. With social networking, individual users maintain an identity through their profile and can be selective about which members of the larger community they choose to interact with. Over time, users build their network by adding contacts or friends. On some social network platforms, organizations create an identity by establishing discussion forums, group pages, or some other presence. Social networking has increased substantially in recent years. **The Nielsen Company (2010)** reported that users spent on average over six hours on social networking sites in March 2010, more than a 100% increase over the previous year. Figure 8.9 shows the growth rate of time spent on social networking sites.

The number of social networking services has grown tremendously in recent years. It is expected that it will segment and consolidate in the future just like other industries. Among the general purpose SNS platforms, MySpace, with 113 million users (*myspace.com*), used to be the leader but has been overtaken by Facebook, with over 500 million users. Facebook is the second most visited site on the Internet after Google according to *Alexa.com* (2010), and it has publicly said it wants to be number one (Harvey, 2010; Vogelstein, 2009). Many have observed that if Facebook were a country, it would be the third largest in the world. Other large general social network services are listed in Table 8.5.

Time Spent on Social Networking Sites (HH:MM:SS)

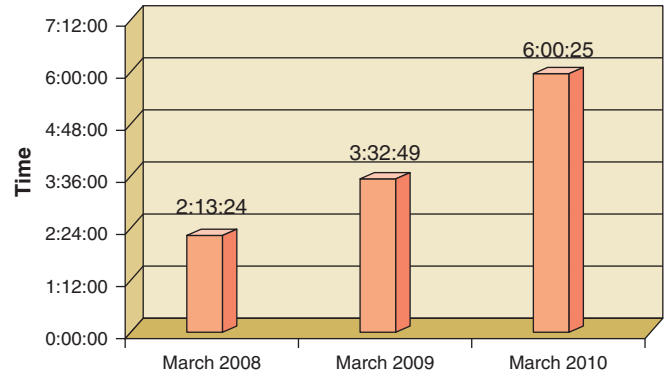


Figure 8.9 Time spent on social networking services increased dramatically in 2010. (Source: The Nielsen Company, 2010.)

TABLE 8.5 Large Social Network Services

Qzone	Caters to users in mainland China	200 million users
Habbo	Caters to teens in 31 countries.	162 million users
Orkut	Popular in Brazil and India	100 million users
Friendster	Popular in Southeast Asia	90 million users
Hi5	Popular in India, Portugal, Mongolia, Thailand, Romania, Jamaica, Central Africa, and Latin America	80 million users

The leading SNSs in the United States from 2008 through 2010 are compared in Figure 8.10. The landscape of SNS services is changing rapidly. Fortunately, a constantly updated list of SNS sites is maintained by Wikipedia. See the “List of social networking Web sites” at *Wikipedia.com*.

While SNS sites share some common features, they are not all alike. As the category matures, sites are differentiating themselves in a variety of ways. For instance, the SNS services in Wikipedia’s list differ in terms of the following:

- Target age group
- Geographic location of users
- Language
- Interest area; for example, music, photography, gaming, travel
- Social vs. professional networking
- Interface; for example, profile page, micro blog, virtual world

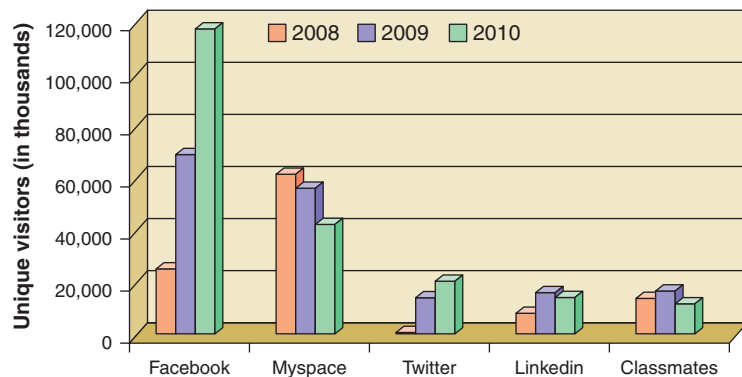


Figure 8.10 Unique visitors to U.S. social networks, 2008–2010. (Source: The Nielsen Company, 2010).



Figure 8.11 Facebook has a simple interface that people of all ages find easy to use.
(© PSL Images/Alamy)

Facebook Becomes Leading SNS. Facebook is the largest social networking service in the world, with more than 500 million active users. Facebook was launched in 2004 by a former Harvard student, Mark Zuckerberg. Photos, groups, events, marketplace, posted items, and notes are the basic applications already installed in Facebook. Apart from these basic applications, users can develop their own apps or add any of the millions of Facebook-available apps that have been developed by other users. In addition, Facebook owns two special features called “news feed” and “mini-feed” that allow users to track the movement of friends in their social circles. For example, when a person changes his or her profile, updates are broadcast to others who subscribe to the feed. Facebook also launched an application called “People You May Know” that helps new users connect with their old friends (Vander Veer, 2008).

When Zuckerberg first created Facebook, he had very strong social ambitions aimed at helping people connect to others on the Web. Facebook was initially an online social space for college students. It started by connecting students to all others at the same school. In 2006, Facebook expanded to anyone 13 years or older with a valid e-mail address (see Figure 8.11). The lack of privacy controls (i.e., tools that restrict who sees your profile) has been the biggest reason why many businesspeople resisted joining Facebook.

In 2008, Facebook introduced new controls that allow users to set different levels of access to information about themselves for each of their groups, such as family, friends from school, and friends from work. For example, close friends might see your cell phone number, music favorites, e-mail address, and so forth, while other friends might see only the basics of your résumé (Abram and Pearlman, 2008). More recently, however, Facebook has made changes in its privacy policies, often igniting a wave of complaints from users. This highlights an ongoing tension between the corporate goals of Facebook, which depend on a high level of access to user data, and the desire of individual users to control access to their personal information.

Facebook has expanded to the rest of the world with the help of its foreign language members: Engineers first collected thousands of English words and phrases throughout the site and invited members to translate those bits of text into another language. Members then rate translations until a consensus is reached. The Spanish version was done by about 1,500 volunteers in less than a month. The German version was done by 2,000 volunteers in less than two weeks. In early March 2008, Facebook invited French members to help out. They did the translations in a few days. Today Facebook exists in over 70 different languages, and approximately 70 percent of its members are outside of the United States (Facebook, 2010).

A primary reason that Facebook wants to expand is the *network effect*: More users mean more value. In April 2010, Mark Zuckerberg announced that Facebook would begin a new initiative called the **open graph**. Facebook wants to connect all the different relationships that exist on the Internet. It proposes to do this by linking other Web sites to Facebook. Programmers at external Web sites are being encouraged to include a Facebook “like” button on their Web sites. That way, when Facebook members visit the Web site, they can click the “like” button and their relationship with that Web site will be reflected back on their Facebook page for friends to see.

Facebook will also encourage other Web sites to allow people to use their Facebook username and password to sign in or create accounts. For instance, if you are a Facebook member and you visit *Pandora.com* (a music service) or *Yelp.com* (a local directory service), you can just sign into the sites using your Facebook access information. Facebook will then share your profile information with those sites. This new initiative is exciting for its potential to enhance the social richness and ease of use of the Internet. On the other hand, there are very serious privacy and security concerns.

And Now, for Something Different: Second Life. Second Life is a social network service unlike most others. What makes it unique is that it uses a 3-D virtual world



Figure 8.12 Residents on Second Life use avatars to navigate the virtual world. While most avatars are humanoid in form, they can actually take on any shape. (© Friedrich Stark/Alamy)

interface in which users, called *residents*, are represented by **avatars**, or cyberbodies that they create (see Figure 8.12).

Residents on Second Life, developed by Linden Research in 2003, communicate with others in the virtual world through chat or voice communications. Residents can create and trade things they make in Second Life, including virtual clothes, art, vehicles, houses, and other architectural structures. They can also earn money by providing services such as instruction in a foreign language or serving as a DJ in a virtual club. This has led to the evolution of a Second Life economy with its own currency, the Linden dollar (L\$). While most of the economic activity remains in the Second Life world, there are news reports of a few entrepreneurs who have made considerable sums of real money. Residents who make a lot of Linden dollars can exchange them at a rate of about 250 L\$ for every U.S. dollar.

Real-world businesses use the virtual world, too. For example, IBM uses it as a location for meetings, training, and recruitment. American Apparel was the first major retailer to set up shop in Second Life. Starwood Hotels used Second Life as a relatively low-cost market research experiment in which avatars visit Starwood's virtual Aloft hotel. The endeavor created publicity for the company, and feedback on the design of the hotel was solicited from visiting avatars. This information was used in the creation of the first real-world Aloft hotel, which opened in 2008 (Carr, 2007). Starwood subsequently donated its Second Life property to a not-for-profit educational organization.

Will Second Life eventually replace Facebook and other 2-D SNS platforms? Probably not, in spite of its impressive interface. While Second Life is visually compelling, it requires users to master a much larger range of controls and technology to become fully functional. Its aesthetic similarity to video games may cause some to underestimate its potential for more serious applications. Also, avatars interact in real time, so users need to be online at the same time as their friends and acquaintances in order to interact. That said, there are some niche applications that show promise. Using speakers and microphones, groups of people can conduct meetings in Second Life. Teachers can interact with their students in Second Life. How would you like it if your professor held office hours on a virtual beach? Linden Labs has revamped the special browser that residents use to participate in the virtual world and is actively promoting its use for interesting business applications, but it is unlikely to achieve the same level of attention as Facebook in its present form. We believe, however, that Second Life will continue to provide benefit as a fascinating niche player in the overall SNS marketplace.



Figure 8.13 Twitter is a microblogging SNS that limits users to messages of 140 characters or less. (© 2020WEB/Alamy)

Twitter: Microblogging. Twitter is a social networking site where users send short messages called tweets of 140 characters or less to their network of *followers* (see Figure 8.13). Started in 2006, Twitter is now among the top 15 Web sites in terms of traffic.

Like Facebook, it has experienced tremendous growth over the last few years as businesses and individual users discover ways of using the **microblogging** site to meet their needs. Twitter is used by athletes and other celebrities as a way of maintaining frequent contact with their fan base and by businesses and bloggers as a way of directing traffic to updates on Web sites.

Breaking news is distributed through Twitter networks by major news organizations and private citizens who witness events first-hand. Twitter has become an integral part of many social media campaigns directed to consumers. Even though sending and receiving tweets is like instant messaging, the site allows individuals to broadcast messages to very large groups of followers. In turn, followers can reply to tweets or interact with each other, which add a strong social element to the service.

Basic Twitter service is simple and efficient, but many third-party apps have been developed to enhance the service, and some are considered essential tools in the life of the power Twitter user:

- **TweetDeck** is an advanced, split-screen Twitter interface that allows users to view messages streaming from followers, people being followed, and people the user might wish to follow. It also makes it easy to quickly reply to incoming tweets, increasing the frequency of Twitter conversations.
- **Twitpic** allows users to add photos to their tweets.
- **Twitterfeed** automatically tweets posts published on a blog using RSS technology.
- **Twitterholic** is a service that ranks users by number of followers, friends, and updates.

Private SNS Services. Many business and professional organizations have found it desirable to create their own focused social networking services. Several companies offer platforms for just this purpose. One of the most popular is **Ning.com**. Until recently, you could create a private social network service on Ning for free. However, in May 2010, Ning announced that it was phasing out its free service by converting its networks to premium (paid) service or eliminating them. There are, however, several other free, premium, and open-source alternatives to Ning.

There are many reasons why organizations create private social networks. Companies that wish to better understand their customers can create social networks that will attract individuals from their target market. This gives them the ability to monitor or listen to customers and identify important issues that their customers are discussing. Businesses can also develop social networks for internal use, limiting access to employees.

Not-for-profit organizations can build communities for donors or users interested in particular causes. Li and Bernoff warn, however, that building a private social networking service is not an easy undertaking and requires considerable resources, even when the SNS platform is “free.” Organizations are cautioned not to enter into the project lightly and to carefully plan their strategy and resource allocations prior to launch. Building a community with all of its social and relationship implications, only to abruptly terminate it because of resource limitations, is likely to be a public relations disaster. For companies that execute this approach properly, however, the private social network can yield numerous benefits in terms of marketing information and fruitful customer relationships.

Social networking services are perhaps the most social applications of Web 2.0. It is expected that growth and innovation in this sector will continue as individual users and business organizations discover its power for building networks and relationships. We expect that Facebook will continue to dominate the field but that smaller SNSs will stake out strong positions in niche markets using traditional market segmentation strategies—focusing on the needs of specific geographic, cultural, age, or special-interest segments.

IT at Work 8.2

Addressing Social Media Privacy Concerns

Privacy rights are too easily abused. Governments and industry associations are trying to control these abuses through legislation and professional standards, but they frequently fail to provide adequate protection. One of the most effective deterrents is fear of backlash from abuses that become public and cause outrage. So it is important to identify privacy issues that pertain to social media and specifically social networking services. Examples of privacy violations are:

- Posting pictures of people on social networking sites without their permission
- Tricking people into disclosing credit or bank account information or investing in “work at home” scams
- Sharing information about members with advertisers without the members’ knowledge or consent
- Disclosing an employer’s proprietary information or trade secrets on social networking sites
- Posting information on social networking sites that could compromise people’s safety or make them targets for blackmail

Taking Control of Your Privacy. The most important thing that users can do to protect themselves is to understand that they’re responsible for protecting their own information. The basic solution is common sense. Unfortunately, most social networking sites create the illusion of privacy and control. This can sometimes lull even the most vigilant users into making mistakes. Sites like Facebook, MySpace, and others make us feel like our information is only going to be seen by those we’ve allowed to become

part of our network. Wrong. Listed below are commonsense guidelines:

- Don’t post private data. Nothing, absolutely nothing, you put on a social networking site is private. You should avoid posting personal information, including full birth date, home address, phone number, and so on. This information is used for identity theft.
- Be smart about who you allow to become part of your network. It is not uncommon for teenagers to “friend” hundreds of individuals on their Facebook accounts. With this many contacts, there is no way to protect profile or other information.
- Don’t rely on current privacy policies. Social networking sites change their privacy policies regularly. Many have accused Facebook of doing this specifically to wear down user vigilance with regard to maintaining desired privacy settings. Regularly review your social network service privacy policies. Set your privacy settings at the level offering maximum protection—operating as if you have no privacy whatsoever.
- Minimize your use of applications, games, and third-party programs on social networking sites until you have carefully investigated them. They can expose you to malicious programs or viruses. Do not automatically click on links that look like they were sent to you by members of your network.

Discussion Questions: Which of these guidelines is the easiest to follow? Which is the toughest? Explain why.

Review Questions

1. What are the major differences between social networking services and other online communities?
2. What is the basic difference between the social graph and Berners-Lee’s concept of the giant global graph?
3. Explain Facebook’s open graph initiative and how it plans to expand its influence across the World Wide Web.
4. What are some potential ways that business organizations can take advantage of Second Life’s unique virtual world interface?
5. Why would a business want to create a private SNS? What are some of the challenges associated with doing this?

8.3 Enterprise 2.0 Tools

The term **Enterprise 2.0** is being used increasingly to refer to Web 2.0 technologies used for some business or organizational purpose. According to Harvard professor Andrew McAfee (2008), Enterprise 2.0 applications are valuable because they don’t **impose anything on users, give them free environments to work in, and let structure emerge over time.** The goal is to promote increased collaboration and knowledge exchange among employees, consultants, and company partners. McAfee is among a growing number of IT experts who advocate using the Web 2.0 applications to either supplement or replace the closed intranet platforms that are widely used by business organizations today.

According to Cecil Dijoux (2009), Enterprise 2.0 is likely to lead to changes in organizational culture the same way that Web 2.0 is creating fundamental changes in the broader culture. Dijoux claims that organizations will need to communicate with their employees using a conversation rather than a broadcast model. Important ideas are more likely to come from the bottom up (the workforce) than from managers at the top. Managers won't be able to rely as much on their job title to maintain respect. They'll have to earn it on the enterprise social network. Other benefits include greater transparency in the organization, increased agility and simplicity, creation of a sharing culture, and the emergence of more efficient and effective organizational structures.

BUSINESS USE OF WEB 2.0 TECHNOLOGIES

How are businesses using these new technologies? According to a recent report (Network Solutions, 2010), social media use in the small business sector doubled from 12 to 24 percent in 2009. Another study shows that approximately 18 percent of Fortune 500 companies have public-facing blogs (Barnes and Mattson, 2009).

Recruiting and Professional Networking. According to Econsultancy, a company that compiles social media statistics, over 80% of companies used LinkedIn as their primary recruiting tool (Hird, 2009). Social networking among business professionals has exploded over the last few years. Begun in 2003, LinkedIn is the largest professional networking service, with over 65 million users across the globe as of 2010 (see Figure 8.14). Most users join LinkedIn for free, but many who wish to use all the benefits and tools of the site upgrade to a premium account by paying a subscription fee. LinkedIn allows users to create profiles that include their résumés, professional affiliations, educational history, and so on. Members can also update their status to let others in their network know what they are doing. LinkedIn allows people to post endorsements of others, which provides a way for sharing testimonials. Users expand their networks by either directly asking to connect with others or through referrals and introductions from people in their existing network. Savvy recruiters use the popular professional networking site in a number of ways, as described in *IT at Work 8.3*.

IT at Work 8.3

Recruiters Use Professional Networking Sites

Susan Heathfield, a Human Resources (HR) expert at *About.com*, maintains that it is no longer sufficient to post job openings on *monster.com*, *Careerbuilder.com*, and *Craigslist.com*. Job postings on these large sites often generate hundreds of applications from unqualified candidates. This can be overwhelming for recruiters and very inefficient. Instead, many have turned to professional networking sites like LinkedIn. In a blog post, Heathfield identified a number of specific ways that businesses can use on LinkedIn to increase the effectiveness of their recruiting:

- Identify potential candidates among your existing network of professionals.
- Ask your network to identify or recommend candidates for a position.
- Evaluate potential employees based on references and referrals from your existing network.
- Actively search for candidates among LinkedIn users using keywords or qualifications from their profiles.
- Ask current employees to search among their LinkedIn Networks for potential candidates.

- For a fee, you can post job openings on LinkedIn.
- Request introductions to potential candidates through your existing network of professionals.
- Use Inmail (the internal LinkedIn e-mail system) to contact potentially qualified individuals.

It is clear that recruiters have come to embrace LinkedIn as an effective and cost-efficient way of generating qualified candidates. As LinkedIn's global presence grows, this will provide an important benefit to companies that need to fill positions internationally.

Sources: Compiled from humanresources.about.com/od/recruiting/a/recruit_linked.htm and LinkedIn.com.

Discussion Questions: Why have *monster.com*, *Careerbuilder.com*, and *Craigslist.com* lost their effectiveness? Why have HR departments turned to professional networking sites like LinkedIn? What other online resources can help employers find professional workers?



Figure 8.14 LinkedIn is used as the primary recruiting tool by 80 percent of companies.
(© Alex Segre/Alamy)

Just as recruiting strategies are changing, job-hunting strategies will change as well. Job hunters will need to master various social media tools in order to make contact with and establish relationships with potential employers. LinkedIn provides a way for candidates to gain visibility by expanding their network, joining LinkedIn groups, building their reputations by participating in Q&A discussions, generating testimonials (called *referrals* on LinkedIn), and integrating these activities with other social media tools. Other professional networking sites that can be used for recruiting include Plaxo, Ecademy, Jobfox, and Jobster.

Marketing, Promotion, and Sales. Many companies believe that social media has great potential to boost marketing and sales efforts. They see social media as the new way to communicate with current and potential customers. Throughout this chapter, we have cited several examples of how companies use social media technology to build and enhance customer relationships. Companies use blogs to disseminate information about their products, and they work hard to influence the attitudes and opinions of those who are writing blogs about them. Business organizations are finding ways to have a presence on popular SNS sites like Facebook and MySpace so that they can engage their customers.

YouTube has become a popular way for companies to promote themselves using viral videos. The BlendTec YouTube video is an excellent example, discussed in *IT at Work 8.4*. The company monitors blogs and discussion boards in order to listen to its customers and even participates in these discussions in order to build meaningful relationships. Companies find that promoting through social media is more effective and often less expensive than traditional advertising efforts. However, the field is so new that companies are learning how to apply ISM strategies through trial and effort, and they sometimes struggle to measure the effectiveness of their efforts.

Internal Collaboration and Communication. Most large and medium-sized companies utilize an intranet for internal collaboration and communication. An **intranet** is a network that utilizes Web-based technology, but its access is restricted to authorized users, typically employees. Company employees access the intranet with usernames and passwords. Businesses exercise a good deal of control over how and what happens on their intranets. According to Toby Ward (2010), most intranets are based on Web 1.0 technology and appear “flat” when compared to modern Web 2.0 capabilities. The other feature lacking in many intranets is a social element.

Russell Pearson (2010) and James Bennett (2009) believe that intranets will need to evolve with the behavior of “social” employees who join companies and expect to be able to communicate as professionals in the same ways they have communicated prior to joining the workforce. This means that intranets may need to evolve to allow file sharing, blogging, social tagging or bookmarking, wikis, and so on. In addition, management will need to balance their innate desire for control with the

IT at Work 8.4

Blenders Achieve Online Popularity with ISM

Let's say you have a product that costs substantially more than that of any of your competitors, but your advertising budget is tight. Sound like a recipe for business failure? Not if you are the makers of BlendTec, a high-end brand of kitchen blenders. This company has leveraged a limited marketing budget using an Integrated Social Media (ISM) strategy and in the process established a huge fan base.

BlendTec has achieved enormous success with a series of YouTube videos featuring CEO Tom Dickson using his durable blenders to destroy everything from marbles and hockey pucks to an Apple iPhone. The videos are short and fun to watch but effectively illustrate the durability and strength of BlendTec's products. What started out as an inside joke at the company has become an Internet sensation. BlendTec hosts its own channel on YouTube, with over 50 different "Will it Blend?" segments.

Blendtec Goes Viral. The company had almost zero name recognition prior to its viral campaign, but it now has one of the most-watched collections of videos on YouTube. Most of the videos on the BlendTec channel have been viewed hundreds of thousands of times, and several have been seen by millions. The most popular video, which had over 8 million views, features the blended destruction of an Apple iPhone. A more recent entry features the demolition of an Apple iPad and was viewed over 6 million times in a single month.

ISM Strategy. While the YouTube videos are the most visible part of BlendTec's social media efforts, the company utilizes an ISM strategy with a variety of tactics. The most popular videos are also featured on BlendTec's company Web page. Viewers at this site help BlendTec spread the word by sharing videos with their social network by clicking on buttons for Facebook or Twitter. They can even subscribe to the site using RSS technology. The "Will It Blog" is used to provide information about products and upcoming videos. BlendTec regularly updates its followers with new videos and blog posts using Twitter. The company's Facebook page has over 34,000 fans who comment on the videos and request, sometimes plead, for certain objects to be blended in future videos. According to Dickenson, company sales have increased fivefold since the viral campaign was launched. That's a lot of enthusiasm for something as simple as a blender!

Sources: Compiled from: Helm (2006), Dilworth (2007).

Discussion Question: Read Dan Ackerman Greenberg's tips on how to make a video go viral (techcrunch.com/2007/11/22/the-secret-strategies-behind-many-viral-videos/), then visit the BlendTec Web site. How many of Greenberg's strategies are employed by the blender company?

more important goal of enhancing communication with and among the workforce. Consequently, a new set of management skills will need to be developed.

As you read earlier, managers will need to learn how to use social technology to engage in conversations with employees, listen to their ideas, and motivate them toward mutually beneficial goals. Sending out a paper memo from headquarters or even a mass e-mail and expecting a desired response from company employees will be increasingly ineffective.

Supply Chain Management 2.0. Supply chain management (SCM) refers to the set of activities that support the production and distribution of goods and services to end users. Activities that are typically associated with SCM include acquisition of raw materials, production processes and scheduling, inventory control, logistics, and coordination of channel members—wholesalers, distributors, and retailers. Supply chains are, by nature, social entities. They involve a number of people and organizations that must work together in order to create and deliver goods and services to consumers.

SCM 2.0 simply involves the use of social media tools to increase the effectiveness of this communication and enhance the acquisition of information necessary to make optimal decisions. Consider how enterprise social network systems could aid in the identification of new suppliers or buyers. Channel members can use blogs to share ideas about best practices and mashup apps to coordinate inventory levels throughout the channel and aid in transportation and shipping decisions. Any tool that increases the ability of channel partners to communicate, coordinate, and solidify relationships will make a business more competitive.

Just as social media is changing things about the social world we live in, it is also changing how businesses behave and operate.

Review Questions

1. How does a social networking service like LinkedIn fundamentally differ from Facebook or MySpace?
2. Identify some specific ways in which managers or leaders of organizations will need to change in response to the opportunities and challenges presented by social media.
3. Explain why social media tools are likely to make supply chains more efficient and productive in the future.
4. What are some specific ways in which workers will rely on social media tools to be more productive in their professions?

8.4 Social Media Objectives and Metrics

Management depends on data-driven measurements, or metrics. Businesses are constantly evaluating the efficiency and effectiveness of their activities. As part of the strategic planning process, companies identify goals, objectives, strategies, and tactics. In this way, they identify and focus on those activities that lead to revenue and profits and reduce their emphasis on activities that don't support company goals.

WHY MEASURE SOCIAL MEDIA?

While standard **metrics** exist for many traditional business activities, the field of social media and the related issue of **social media metrics** are so new that there are few standard ways of evaluating social media activities. We identify key methods of measuring the effectiveness of social media efforts but acknowledge that there are many variations on what we describe.

DASHBOARDS AND SCORE CARDS

As you have read since Chapter 1, managers keep informed by using performance **dashboards or balanced score cards** to summarize the effectiveness of activities and progress toward goals. These graphic representations show how well a company is performing on key metrics. In many cases, information technology is used to continuously feed data into dashboards or scorecards so that managers have access to real-time information. This has a significant advantage over using monthly or quarterly reports for assessing progress toward goals and helps to increase organizational responsiveness to a variety of situations. When automated, the scorecard or dashboard is an example of a mashup, a Web 2.0 application that pulls data from multiple sources and displays it in one location.

But what should a management team track in terms of social media in its dashboard or score card? In the next section, we discuss metrics that organizations find meaningful and effective.

TYPES OF SOCIAL MEDIA OBJECTIVES

Literally hundreds of metrics exist to track how people respond to social media. The list in Table 8.6 is just a sample of the many factors that can be tracked. New companies are springing up every day to offer tools for tracking social media activity. Companies are attracted into this market (think in terms of Porter's five-forces model) because businesses need to know if their social media efforts are effective and worth the expense. There are many different kinds of metrics because social media can be used to do so many things. Therefore, the question of what kind of information a company tracks depends on what it is trying to accomplish with its social media efforts. For instance, if a company wants to increase traffic to its Web page, then it would start tracking the number of visitors who arrive at its Web site from a tweet, the company's Facebook fan page, and all other sources.

On the other hand, if a company wants to learn how customers feel about its products, it would track the number of positive vs. negative blog posts and videos about the company, its products, services, senior management, or business practices.

TABLE 8.6 Examples of Social Media Metrics**Activity Metrics**

- Pageviews
- Unique number of visitors
- Posts
- Comments and trackbacks
- Time spent on site
- Contributors
- Frequency: of visits, posts, comments

Survey Metrics

- Satisfaction
- Quality and speed of issue resolution
- Content relevance

ROI Measurements

- Sales and marketing
 - Cost per number of prospects
 - Number of leads per period
 - Cost of leads
 - Conversion of leads to customers
 - Customer lifetime value (CLV)
- Product development
 - Number of new product ideas
 - Idea to development initiation cycle time
- HR
 - Hiring and training costs
 - Employee attrition
 - Time to hire

Individual Metrics (for members) NEW

- Number of friends met online that users have met offline
- Number of friends met online that member has subsequently collaborated with

General Internet Tracking (outside of enterprise-sponsored communities)

- Net promoter score (*netpromoter.com*)
- Number of mentions (tracked via Web or blog search engines)

Source: Adapted from Happe (2008).

Traditionally, business organizations developed media objectives around various models called **response hierarchies**. A common response hierarchy includes the following stages: awareness, knowledge, liking, preference, and purchase. Using this model, advertisers set measurable objectives for each stage. For instance, a company might set an objective. Examples are:

- Achieve 45 percent brand awareness in our primary market within the first quarter.
- Increase the conversion rate from preference to purchase by 2 percent over the next six months.

Once these objectives are set, advertisers use marketing research to track their progress toward reaching the objectives and can evaluate the success of their promotional activities.

Businesses could apply response hierarchy models to the area of social media. However, response hierarchy models are based on an advertising or broadcast approach to communication and fail to capture the full potential of the social media environment. The real potential of social media goes far beyond sending messages

that influence people. Interactive social media can be used to collect information as well as send it. It can be used to reduce costs associated with customer service. It can be used to gather intelligence on competitors and much more. Because there are so many applications, companies need to be very clear about what they want to accomplish with their social media efforts; this in turn will drive what information they track to assess the effectiveness of their actions.

At this point, it seems that there are primarily four basic approaches to social media metrics: *tool-based metrics*, *tactical metrics*, *strategic metrics*, and *ROI metrics*. The four approaches are not mutually exclusive. It is common for some specific metrics to be used in each of the four approaches. The difference between each approach is how a business defines its objectives, or what it is trying to accomplish, as explained next.

Tool-Based Metrics. Metrics are driven by objectives. The metrics a company uses are determined by what the company is trying to achieve. In some cases, a company will define its objectives based on a specific Web 2.0 tool. **Tool-based metrics** are designed to identify information about a specific applications. For instance, a company might want to determine if it should advertise on a popular blog or sponsor the creation and distribution of a useful widget application. Companies that use Twitter might track the number of followers; number of times other people mention the company in tweets; number of times people forward messages, called retweets. A 2009 report by the Interactive Advertising Bureau (IAB) specified definitions for three widely used Web 2.0 tools: blog metrics, social network metrics, and widget metrics. Advertisers view these tools as channels for reaching consumers and are therefore interested in both the volume of traffic related to a particular tool as well as the nature of the interaction or “conversations” occurring because of the tool. Examples of specific metrics identified by the IAB for these tools are listed in Table 8.7.

Tactical Metrics. Another way for organizations to define their objectives for social media is by tactical objectives. For instance, a company may express its tactical objectives as follows:

- Increase traffic to our Web site by 10 percent
- Increase requests for product information via our Web site by 15 percent

Blog Metrics	Social Network Service Metrics	Widget Metrics
<ul style="list-style-type: none"> • Number of conversation-relevant posts on the site • Number of links to conversation-relevant posts on the site • Earliest post date for conversation-relevant posts • Latest post date for conversation-relevant posts • Duration between earliest and last post date for conversation-relevant posts • Mean-time between conversation-relevant posts 	<ul style="list-style-type: none"> • Unique visitors • Cost per unique visitor • Page views • Return visits • Proportion of visitors who interact with an ad or application. • Time spent on site • Activity metrics related to: <ul style="list-style-type: none"> • Contest/sweeps entries • Coupons downloaded/redeemed • Uploads (e.g., images, videos) • Messages sent (e.g., bulletins, updates, e-mails, alerts) • Invites sent • Newsfeed items posted • Comments posted 	<ul style="list-style-type: none"> • Number of application installations • Number of active users • Audience profile—user demographics from self-reported profile information • Unique user reach • Percentage of users who have installed application among the total social media audience • Growth of users within a specific time frame • Influence—average number of friends among users who have installed application.

Source: Adapted from Social Media Ad Metrics Definitions, Interactive Advertising Bureau (2009).

- Increase the number of people who create a user account on our Web site by 12 percent
- Increase the number of people who download our informational brochure by 25 percent

Based on these tactical objectives, companies can develop specific actions that support the objectives and then monitor progress. For instance, in order to increase traffic to the Web site, a company might start its own blog, identify and communicate with people who blog about the company or industry, or begin a Twitter campaign. It

IT at Work 8.5

Haley Marketing Group Enhances SEO Through Social Media

Haley Marketing Group is a marketing services company based in western New York and started in 1996 whose mission is to help companies in the staffing services industry develop long-term, profitable relationships with their customers. According to Haley's president, David Searns, "In the early days, direct mail was our main communication vehicle for nurturing relationships. That evolved into e-mail marketing. But today, social media allows us and our clients to create, maintain and enhance relationships in ways that were never possible before."

Haley Marketing Group makes strategic use of social media. Everything it does online is part of an integrated plan to accomplish specific business objectives. Chief operating officer (COO) Victoria Kenward notes, "While we are a marketing company, we don't have an unlimited marketing budget. Like our clients, we need to maximize the impact of every dollar we spend to promote the company. That's why we don't do anything unless we have a very clear objective, and we track everything to make sure that we're getting the return we need on our efforts."

SEO and Social Media. Like many other businesses, Haley Marketing is interested in making sure the company ranks at the top when prospective clients use search engines like Google to identify companies in its industry. **Search engine optimization (SEO)** involves a number of strategies to influence how search engines categorize, rank, and list Web pages when people do searches. Google, among others, is particularly influenced by the amount of traffic that flows to a Web site. More traffic means a higher ranking on search results.

Increasing Web Traffic via SEO and Social Media. Haley Marketing Group relies on inbound marketing techniques for sales leads. Historically, direct mail and e-mail marketing had provided a sufficient quantity of well-qualified sales leads, but in recent years, the response from these lists declined. The volume of sales leads being produced was insufficient to meet corporate goals.

The Solution: Integrated Social Media. The heart of Haley Marketing's strategy is the creation and distribution of content. The company Web site was reengineered in 2008 to be a platform for educational resources and information on Haley Marketing's services. In 2009, the site was augmented with landing pages offering free webinars, free e-book downloads, and other complimentary resources. In addition, the company produces a monthly e-mail newsletter, called *The Idea Club*, and Searns and all other employees are required to contribute a minimum of two blog posts a

month to the *Ask Haley Blog*, which offers marketing tips and advice for staffing industry professionals.

According to Searns, "the greatest challenge we face is getting our target audience to become aware of, and engage with, the content we offer." To drive Web traffic, the company employs a variety of channels, including five monthly e-mail communications to an opt-in list of staffing professionals, consistent promotion via social networks, search engine optimization, and online PR.

In terms of integrated social media, Searns, Kenward, and most of the company employees maintain an active presence on LinkedIn, a professional social networking service that has become the primary recruiting tool for many companies. When new content is created or events are scheduled, company employees use their LinkedIn status, LinkedIn events calendar, and LinkedIn groups to notify associates.

The company also maintains a Facebook page. Whenever new content is added to the *Ask Haley Blog*, the corporate Facebook page is automatically updated, and those individuals who have "liked" Haley Marketing are notified about the new content.

Haley Marketing also uses multiple Twitter accounts as another means of driving traffic to its site. Updates from the *Ask Haley* blog are automatically fed to the Twitter accounts of several employees, and the Twitter feeds are then fed to LinkedIn.

Members of Haley Marketing's network that want to subscribe to the blog can do so using an RSS feed button positioned next to each post. Readers also help promote the *Ask Haley Blog* by sharing links with their Facebook, LinkedIn, or Twitter networks simply by clicking on a small button next to the post.

Performance Improvements. Traffic to the Haley Marketing Group Web site has increased by 344% in the 18-month period that the company has employed its ISM strategy. Unique visitors to the site have increased 504 percent, and page views have increased by 105 percent. Most importantly, the volume of traffic from search engines has steadily increased from about 300 per month to over 1,500.

Source: Gregory R. Wood's personal interviews with David Searns and Victoria Kenward, 2010.

Discussion Questions: Research the issue of search engine optimization (SEO) online. What additional steps can a company like Haley Marketing Group take to increase rankings on popular search engines?

can then track traffic to the Web site, noting changes in total volume as well as identifying where the traffic is coming from. Using **tactical metrics** of this nature, the company can determine the relative impact that each of these specific social media activities is having on its objective.

Strategic Metrics. Various authors have attempted to identify higher-level objectives that more fully capture the potential of social media than what is described by focusing on a specific Web 2.0 tool or tactical objectives. In their influential book on social media strategies, Li and Bernoff (2008) identify five strategic objectives that companies can pursue using social media.

- **Listening:** Learn about your customers by paying attention to what they are saying online to one another or directly to you.
- **Talking:** Communicate with your customers by engaging in conversations.
- **Energizing:** Encourage current customers and fans to spread the word through ratings, reviews, and other positive “buzz.”
- **Support:** Help customers solve problems by providing information and online resources like user forums, knowledge bases, and other tools.
- **Embracing:** Invite customers to generate ideas for new products and services.

Organizations that seek to optimize their performance in each of these areas will identify and implement social media tactics as well as track related metrics to evaluate progress toward goals. For instance, companies that use crowdsourcing to generate new product ideas might count the number of ideas submitted, the number of people who vote on the ideas, the number of positive vs. negative comments made about each idea, and so on. Companies that want to strategically “listen” to their markets might measure the number of “conversations,” identify who is “talking,” identify what people are saying, and so on.

A number of **social media monitoring services** have sprung up in recent years to provide this kind of data to business organizations, including Radian 6, Visible Technologies, Buzzlogic, and Cymfony. Most of these services use IT to track online content and then feed summary statistics into dashboards that can be used by their clients. However, smaller companies can use a variety of cost-free approaches to monitoring. *Moreover.com* and Yahoo track aggregated news about companies and industries. Technorati specifically tracks social media sites. Services such as Google Blog Search, Comments, and Blogpulse all offer ways to follow activity in the blogosphere. Once companies decide on the strategies they want to follow, they must identify information related to those strategies and then use a monitoring service to track the metrics.

ROI Metrics. Finally, many experts in the field of social media metrics emphasize the importance of what they call **social media ROI** (return on investment). This approach attempts to monetize the return on the cost of implementing social media strategies. This concept has inherent appeal because it addresses the need of the business organization to engage in activities that will contribute to its revenue goals. The ROI concept inspires considerable debate, however. Some maintain that the qualitative contributions of social media (e.g., relationships, conversations, trust, etc.) cannot be meaningfully expressed in monetary or quantitative terms. However, despite the potential difficulty associated with capturing all contributions of social media to a company’s bottom line, the attempt must be made. Unless a reasonable link can be established between the costs associated with social media and a company’s financial performance, some executives are unlikely to support social media initiatives, particularly in a depressed economy.

Sometimes the calculation of ROI for social media is easy. For instance, if an online retailer can increase traffic to its Web site by publishing a blog, then the company can track how many of these customers ultimately make a purchase after reading the blog. That data can be used to determine the blog’s contribution to sales revenue. If a company notices an 18 percent drop in calls to its customer service line

after implementing an online support forum, the reduction in call center expense can be readily calculated. Companies that see their sales leads increase because of their presence on a social network can estimate the resulting sales volume by applying their *yield rate* to this new set of inquiries (e.g., 1,000 new leads times a 7 percent yield rate equals 70 new customers). If a company knows how much each new customer is worth, then it can estimate the total revenue produced by its presence on the social network. Each of these is an example of a quantitative or **hard ROI metric**.

Other times, the link between important social media activity and a firm's financial performance is less direct. For instance, what is the relationship between an increase in the number of positive blog postings about a company's product and sales of the product? What is the relationship between the number of users who download a widget application sponsored by the company and company sales performance? To answer questions like these, it is necessary to make assumptions about consumer behavior or to make assumptions about the conversion rate of customers as they pass through stages—similar to the response hierarchy models discussed at the beginning of this section. For instance, a company that wishes to increase awareness for its brand or product may sponsor the distribution of a popular desktop widget or create a viral video for YouTube. While the company can track the number of people who use the widget or view the video, it would need to make some assumptions about the conversion rate, or the number of people who ultimately purchase something from the company as a result of these initiatives.

Considerable work remains to be done in the area of ROI metrics. However, we believe that companies will be most likely to adopt social media strategies when there is a clear link to their financial performance. As managers become comfortable with their capabilities and experience success in this area, they become less risk averse to engaging in social media activities to support strategic goals even when the link to revenues or costs is difficult to measure.

Review Questions

1. Why should companies use metrics to track social media activity?
2. List examples of tool-based metrics. What questions can an organization answer with this kind of information?
3. List social media strategies that businesses might pursue. What kind of information could they collect to see if they are being effective with social media?
4. Why do businesses find ROI metrics to be so compelling?
5. Why are ROI metrics for social media sometimes difficult to use or identify?

8.5 The Future of Social Media

If there's one thing that history has taught us, it's that the future is hard to predict. It might seem silly to try to predict what the future Internet will look like when it's clear that so many people are having trouble trying to understand all the implications of the Internet we have now. However, forward-thinking businesses and individuals are beginning to plan for the next evolution, which is being called **Web 3.0**. In an attempt to predict what the future Web will look like, Sramana Mitra (2007) has approached the question differently from others, who focus on specific apps or technologies that may emerge as part of the future Internet. Instead, she proposes a model that describes the characteristics of Web 3.0 from the user's perspective. According to Mitra (2007), the future Web will be defined as:

$$\text{Web 3.0} = (4C + P + VS)$$

where

- 3C = Content, Commerce, Community
- 4th C = Context
- P = Personalization
- VS = Vertical Search

The current Web is disjointed, requiring us to visit different Web sites to get content, engage in commerce, and interact with our network of relationships (community). The future Web will use context, personalization, and vertical search to make the 3Cs—content, commerce, and community—more relevant.

- **Context** defines the intent of the user; for example, trying to purchase music, find a job, or share memories with friends and family.
- **Personalization** refers to the user's personal characteristics that impact how relevant the 3C's are to the individual.
- **Vertical search** refers to a search strategy that focuses on finding information in a particular content area, such as travel, finance, legal, and medical.

Future Web sites, therefore, will maximize user experience by increasing performance on the factors outlined in this model.

SEMANTIC WEB

Tim Berners-Lee, creator of the technology that made the World Wide Web possible, is the director of the **World Wide Web Consortium (W3C)**. This group is working on programming standards designed to make it possible for data, information, and knowledge to be shared even more widely across the Internet. In effect, it hopes to turn the Internet into one large database (or rather, a collection of databases) that we can access for wide-ranging purposes. The W3C is developing standards for a **metadata** language, or ways of describing data so that it can be used by a wide variety of applications. Much of the world's data is stored in files structured so that they can only be read by the programs that created them. With metadata, the information in these files can be tagged with information describing the nature of the data, where it came from, or how it's arranged. That way it can be read and used by a wide variety of applications.

It is helpful to think about the **Semantic Web** against the background of earlier Internet function. According to Jim Hendler and Tim Berners-Lee (2010), leading developers of the Semantic Web:

The Internet allowed programmers to create programs that could communicate without having to concern themselves with the network of cables that the communication had to flow over. The web allows programmers and users to work with a set of interconnected documents without concerning themselves with details of the computers that store and exchange those documents. The Semantic Web raises this to the next level, allowing programmers and users to make reference to real-world objects—whether people, chemicals, agreements, stars or whatever else—without concerning themselves with the underlying documents in which these things, abstract and concrete, are described.

THE LANGUAGE(S) OF WEB 3.0

The early Web was built using **Hypertext Markup Language (HTML)**. As noted earlier, Web 2.0 was made possible, in part, by the development of languages like XML and JavaScript. The Semantic Web utilizes additional languages that have been developed by the W3C. These include **RDF (Resource Description Framework)**, **OWL**, and **SPARQL**. RDF is a language used to represent information about resources on the Internet. It will describe these resources using metadata **URIs (uniform resource identifiers)** like “title,” “author,” “copyright and license information.” It is one of the features that allow data to be used by multiple applications.

SPARQL is a Protocol and RDF Query Language. As the name implies, it is used to write programs that can retrieve and manipulate data stored in RDF format. OWL is the W3C Web Ontology Language used to categorize and accurately identify the nature of things found on the Internet. These three languages, used together, will enhance the context element of the Web, producing more fruitful and accurate information searches. Work continues by the W3C with input by programmers and the broader Internet community to improve the power and functionality of these languages.

In addition to these new programming languages, we expect to see a rise in the use of **Application Programming Interfaces (APIs)**. An API is essentially a tool that allows programs to talk to or interact with one another. This makes it possible for one program to get information from another program. For instance, a popular API in current use is the Google Maps API (code.google.com/apis/maps/), which allows programmers to embed Google Maps into their own Web site applications. While many Web sites make use of APIs currently, this trend is expected to accelerate as more and more data becomes structured through the use of RDF and other Semantic Web programming tools (Iskold, 2007).

ARTIFICIAL INTELLIGENCE

Some people believe that the future Internet will be an intelligent Web. The application of **artificial intelligence (AI)** to our Internet experience could make things even more efficient and effective. Over time, our computers could learn about us, our interests, our information needs, our friends, and so on. This would create searches that produced more relevant information and tools for improving decision making and problem solving. To put it simply, the Semantic Web will vastly increase the amount of information that is available—so much so that human users are likely to be overwhelmed and unable to find relevant information that meets their specific needs. AI provides a potential solution, using rule-based systems to specify the context of an information search. The development of AI technologies will be a significant element in the potential success of the Semantic Web (Hendler and Berners-Lee, 2010).

AI may even change the way we interface with the Internet. Imagine a Web browser that can engage in conversation and ask questions to clarify the tasks we ask it to perform. The stage is being set for exactly this kind of experience. Visit alicebot.org/logo-info.html and click the “Chat with A.L.I.C.E.” link for an example.

MOBILITY

We have already seen tremendous expansion in the kinds of equipment used to access the Internet. It is expected that this phenomenon will continue as Web browsers are built into smart phones, PDAs, e-readers, and other wireless devices. Many expect that the demand to stay connected to social networking services through wireless devices will increase. As smartphones, e-readers, and electronic pads and tablets move into the mainstream, Web programmers will increasingly be compelled to create sites that display nicely on small screens (see Figure 8.15). A number of mobile social networking services are emerging such as foursquare.com and gowalla.com. You read about several of these trends in Chapter 7.

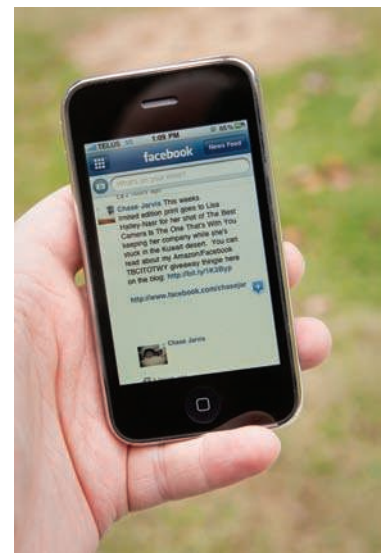


Figure 8.15 Experts predict that demand for access to social networking services will drive the development of new technology for smartphones and other wireless devices.

(© TheProductGuy/Alamy)

Closed Data Sources. Obviously, the key to an information-rich Web is information. However, not everyone is particularly interested in having their data made available to anyone who wants it. You can probably think of many of situations in which data should be protected to prevent intrusions on privacy, to maintain public safety, and to protect national security. For many businesses, information is a key to their competitive position in the marketplace. The last thing they want to do is give away something of value and get nothing in return.

So what information should be made public? What should be kept private? The truth is that technology will be used to determine who has access to different kinds of information. W3C is working to develop such standards. Once companies are convinced that they can reliably restrict access of their data to an audience that they determine, they will be more likely to tag the data so that it can be accessed using Web 3.0 technologies by authorized users.

Incompatible Data Structures and Format. While the W3C is working to develop standards for tagging information with metadata labels, we must remember that across the Web, data exists in many different forms and structures. It is a formidable undertaking to layer all data files with information that makes it possible to be read by everyone. It remains to be seen how long it will be until most commonly used information is appropriately tagged to be used by Web 3.0 applications. While we sometimes talk about Web 3.0 as a future evolution, in fact, the new Web is already here—it just hasn't gotten very far yet.

Web developers are already hard at work applying Web 3.0 technologies. Companies like Evri, Kngine, and Lexxe have already created search engines based on Web 3.0 technologies. However, it won't be until much more data has been tagged and categorized that we'll begin to experience the power of these new search engine capabilities.

Interoperability Across Mobile Equipment, Web Sites, and Software. As the number of devices used to access online content proliferates, it makes it very difficult for Web programmers to keep up multiple versions of their site that work well in each format. This creates what some call a *fractured Web*, where each device can only access a portion of the available online content because of incompatibility.

Lack of Net Neutrality. Currently, most Internet content flows freely through networks maintained by large telecom companies. While these companies charge us for access to the Internet, they are not allowed to control the content that flows through the networks. This maintains a level playing field, guaranteeing that all Web content is equally accessible. If big telecom companies get their way, however, in the future they will be able to charge organizations for access to a "fast lane" on the Internet. This means that larger companies like Facebook, Microsoft, and Google will be able to pay to have their information delivered more quickly to your browser, while smaller companies and individuals with blogs and Web sites would be relegated to a relatively slow data pipe.

This might reduce the power of individuals and smaller, innovative companies, changing the democratic and social nature of the Internet. Opponents of net neutrality argue that they have spent billions on creating the infrastructure for high-speed Internet and should be able to manage it without interference from the government. They call concerns that smaller players will be pushed aside unrealistic and alarmist. Some even suggest that heavy-handed government regulation will slow the innovation of new and exciting online services. For an online debate of this topic, see the *Opposing Views* Web site: opposingviews.com/questions/should-the-government-regulate-net-neutrality.

Review Questions

1. Independent of any specific technology, what three capabilities does Sramana Mitra predict will become enhanced in Web 3.0?
2. What is the purpose of metadata labels used to tag data files?
3. What is the Semantic Web? How is it different from Web 2.0?
4. How might artificial intelligence play a role in the evolution of the future Web?
5. What are some of the barriers or challenges to be overcome in creating Web 3.0?

Key Terms

AJAX (Asynchronous JavaScript and XML) 225	mashup 224	social media monitoring services 243
Application Programming Interface (API) 246	metadata 245	social media ROI metrics 243
artificial intelligence (AI) 246	metrics 239	social network 219
avatar 233	microblogging 234	social network analysis (SNA) 229
balanced score card 239	net neutrality 000	social networking service (SNS) 223
blog 223	newsgroups 228	SPARQL (Protocol and RDF Query Language) 245
blogosphere 223	online communities 219	tactical metrics 243
content marketing 223	open graph 232	tag 225
context 245	OWL (Web Ontology Language) 245	tag cloud 225
crowdsourcing 230	personalization 245	tool-based metrics 241
CSS (Cascading Style Sheets) 226	podcast 224	trackback 223
dashboard 239	Really Simple Syndication (RSS) 224	URI (uniform resource identifier) 245
Enterprise 2.0 235	Resource Description Framework (RDF) 245	Usenet 228
enterprise social network 219	response hierarchies 240	vertical search 245
giant global graph 229	RSS reader 224	virtual community 228
groundswell 227	SCM 2.0 238	Web 2.0 219
hard ROI metrics 244	Semantic Web 229	widget 224
HTML (Hypertext Markup Language) 226	sharing site 224	wiki 223
Integrated Social Media (ISM) 227	Search engine optimization (SEO) 242	World Wide Web Consortium (W3C) 245
intranet 237	social bookmarking 225	XML (Extendable Markup Language) 225
JavaScript 226	social graph 229	
	social media 225	
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Chapter Highlights and Insights

(Numbers refer to Learning Objectives)

- 1 Web 2.0 consists of several tools that allow for enhanced social interaction on the Web.
- 1 The new social Web is changing the way people communicate, their behavior, and their expectations for how business organizations will interact with them.
- 1 Typical Web 2.0 applications include blogs, wikis, social networking services, sharing sites, RSS, widgets, mashups, and social bookmarking.
- 2 Online communities predate the World Wide Web and can take a variety of forms.
- 2 The social graph describes how we are all connected to one another through relationships. The giant global graph describes connections between people and/or documents and pages online.
- 2 Social networking services are the dominant form of online community today and include companies like Facebook, Qzone, Orkut, and Habbo.
- 3 Enterprise 2.0 refers to the use of Web 2.0 technologies for business use.
- 3 The use of social media tools by businesses is likely to change the behaviors of employees and the way that managers lead their organizations.
- 3 Businesses are using social media tools in human resources, marketing and sales, supply chain management, internal collaboration and communication, and other areas.
- 4 Businesses use metrics to evaluate the efficiency and effectiveness of their social media efforts.
- 4 Social media metrics fall into four categories: tool metrics, tactical metrics, strategic metrics, and ROI metrics.
- 5 Technology is being created to make information search on the Web more effective. The future Internet is frequently referred to as the Semantic Web.
- 5 The Semantic Web will make use of new languages such as RDF, OWL, and SPARQL. In addition, the use of Application Programming Interfaces (APIs) are expected to increase.
- 5 A number of obstacles to Web evolution exist, including closed data sources, incompatible data structures, interoperability across equipment and software, and so on.

Questions for Discussion

1. Explain some of the fundamental differences between Web 1.0 and Web 2.0.
2. Compare the methods that companies used to communicate with their customers using the broadcast model vs. ways that companies can have conversations with their customers using Web 2.0 tools.
3. Describe why it is increasingly difficult to neatly categorize Web sites as purely blogs, social network services, sharing sites, wikis, and so on.
4. Is there really any meaningful difference between Web 2.0 and Enterprise 2.0?
5. How will the Social Web and individual user expectations for communication shape the workplace of the future? What are some specific ways in which managers or business leaders will have to adjust to this new environment?
6. Describe the fundamental changes that need to take place before the Semantic Web concept becomes widespread.
7. What role might artificial intelligence play in the Semantic Web? How will AI tools be helpful in the future?
8. How will concern for individual privacy affect the growth and expansion of social networking services and other Social Web applications?

Exercises and Projects

1. Using online sources, research Facebook's open graph initiative. Make a list of pros and cons regarding these changes from the viewpoint of a Facebook user.
2. Visit youtube.com/user/SearchStories and watch some Google Search Stories made by others. Then, using the tools on the site, make one of your own. Have fun and be creative. Share with your class.
3. If you are a member of Facebook and have over 100 "friends," use the social graph application to map out your Facebook network. See if you can identify any patterns or groupings that occur.
4. Using Google's blog search tool, identify some active blogs on a topic of interest to you. Leave comments in the response section (if available). See if the blog author or other readers reply.
5. Set up an account on two different RSS readers and use them to subscribe to some blogs that are of interest to you. Prepare a report or presentation comparing the strengths and weaknesses of each application.
6. Prepare a report on the economic activity that takes place on Second Life. Describe how people make money in the virtual world and identify the opportunities and challenges associated with making a living in Second Life.

Group Assignments and Projects

1. It seems like everyone is on Facebook, but there are other popular social networking services. Divide the class into teams of four or five students. Have each team create accounts on a lesser known SNS. For a period of one week, team members should interact on the new SNS and prepare a brief presentation on their experience. Be sure to discuss ways in which the alternative SNS is better or worse than Facebook.
2. Form a team of four or five people willing to set up accounts on Second Life, the virtual world SNS. Spend a week learning to control your avatar and interacting with your team members in the virtual world. Prepare a report or presentation on your experiences.
3. Have each team identify a topic on Wikipedia that it feels could be updated or enhanced with additional information. Conduct research using credible sources and carefully make editorial changes to the Wikipedia page. Report back to the class on your experience.
4. Using online sources, have two teams research each side of the net neutrality debate. In class, each team should make a 5- to 10-minute presentation to support its position. At the end of the presentations, allow the rest of the class to ask questions. Conduct a vote to see which team made the most convincing argument.
5. Have each member of your team identify a social media monitoring service and explore the kind of information that companies like these can collect. Working together, prepare a report outlining the kind of data that is available to companies that want to know if their social media activities are effective.

Internet Exercises

1. Set up an account on *Twitter.com*. Also, download Tweetdeck, a useful interface for Twitter. Identify and "follow" people who seem to be sending messages that are of interest to you. Prepare a report on your experiences. Evaluate Twitter as a tool for social networking.
2. Visit the LinkedIn page for college graduates: grads.linkedin.com/. Using the information on this page, create a LinkedIn account and begin building your professional network. Search the Internet for additional tips on using LinkedIn to find jobs and prepare a brief report on your findings.
3. Using a search engine, find four examples of mashup applications. Prepare a report describing each one. If possible, identify the Web site(s) the data is pulled from to create the application.

4. Create an account on *delicious.com*, the social bookmarking site. Actively use it to tag and categorize Web pages that you want to remember for future viewing. Use the search engine on delicious to find pages that other users have tagged. Compare the effectiveness of your searches to similar searches using Google and Yahoo.
5. Using a search engine, identify a list of Web 3.0 companies. Prepare a brief report that describes three or four of these firms and specifically identify the characteristics or capabilities that associate them with the new Semantic Web described in the chapter.

BUSINESS CASE

Crowdsourcing at Starbucks: Embracing Customers



Since the first Starbucks opened in 1971, the Seattle-based company has grown into an international powerhouse with 15,000 stores in 50 countries. The typical Starbucks store serves drip-brew coffee, espresso, and other hot and cold drinks. Stores also carry a variety of sandwiches, salads, and pastries. The company prides itself on creating store environments that are not only hip, but inviting, encouraging people to come together for meetings, socializing, to work or relax (see Figure 8.16).



Figure 8.16 Starbucks is popular for its gourmet coffee drinks and the social environments it creates in its stores. (Niall McDiarmid/Alamy)

In 2008, the company started *mystarbucksidea.com*, a social media site designed to solicit ideas and feedback from its customers. The site was built around four key themes:

- **Sharing:** Community members can post their ideas for Starbucks products, services, community contributions, or changes in operations.
- **Voting:** Anyone can create an electronic suggestion box. One of the things that makes *mystarbucksidea.com* special is that members can vote on the ideas. This helps the company prioritize ideas that are most likely to be attractive to its customers.
- **Discussing:** In addition to voting, members can provide feedback by commenting on the ideas of others. Designated

“idea partners” (company employees) participate in these discussions, answer questions, and provide insights.

- **Seeing:** Community members can track an idea’s progress toward implementation. A running tally of the votes (thumbs up or thumbs down) is displayed next to each entry. Next, ideas are tagged by the company with one of four status icons: “under review”, “reviewed”, “in the works”, and “launched.” This feedback helps demonstrate responsiveness.

Over 85,000 ideas have been submitted to the company through its crowdsourcing site since the launch. The company’s social media initiative was rewarded in 2008 by Forrester Research with a Groundswell Award, recognizing it as an excellent example of using social media to embrace customers.

However, the company’s approach to tapping into customer wants and desires hasn’t impressed everyone. John Moore (2010) questions how many of the ideas the company says its customers generated really came from the community, suggesting that most of the implemented ideas were already under consideration by the company. The biggest concern seems to be about credibility. Some critics say the overwhelmingly positive tone of the message postings and the relative lack of negativity suggests the possibility of censorship. That runs against the cultural norms of the social Web. Others suggest that if Starbucks was really interested in engaging people, it would be taken more seriously by participating in conversations at existing Web sites where people talk about the company (see *starbucks-gossip.typepad.com/*).

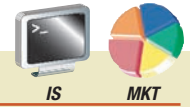
Sources: Compiled from Board of Innovation (2009), Foley (2010), Suesz (2008), Moore (2010), Forrester Research (2008), Carroll (2008).

Questions

1. Visit *mystarbucksidea.com* and look around the site. What is your overall impression? Do you think the company is sincere in its approach to identifying new products and services?
2. What are the key elements of Starbucks’ crowdsourcing site? How are they more than just an electronic suggestions box?
3. What are the chief concerns voiced by critics of *mystarbucksidea.com*? Do you think they are valid?
4. All things considered, do you think Starbucks took the right approach in using social media to engage its customers?

NONPROFIT CASE

TechSoup Global and NetSquared: Helping Those Who Help Others



If you were to step back and look at most charitable and not-for-profit organizations (NPOs), one thing you'd notice is that almost all of them try, in some way, to make a positive contribution to the local, national or global community. The key word here is *community*. That means they are social entities and have a high probability of benefiting from the latest social media trends taking place on the Internet. Unfortunately, many people attracted to working or volunteering for NPOs lack expertise with the latest technology.

Using the Social Nature of the Web

That's where NetSquared and its parent organization, TechSoup Global, come in. Started under the name "CompuMentor" in 1987, these organizations help NPOs and nongovernmental organizations (NGOs) utilize the social nature of the Web to increase their impact and promote positive social change. Their goals are to train and assist NPOs and NGOs to use social media to:

- Improve/increase advocacy efforts
- Find new supporters (around the globe)
- Reengage the supporters
- Have greater influence on national and global policy
- Get more and better press
- Increase value for NPO supporters (opportunities to be creative/engage/things to do)
- Reinvent the possibilities of collaboration on a global scale
- Build more and better partnerships
- Help millions of NPO and NGO constituents to become more active and accomplish more through their NPO and NGO Internet communities.

First and foremost, they demonstrate to other organizations how to use social media by actively using Web 2.0 tools themselves. Their Web sites are communities, offering opportunities for representatives of NPO/NGO organizations to communicate, collaborate, and interact around the topics of IT and social media use. They maintain active blogs and encourage dialogue and exchange. Both organizations maintain Facebook pages with a combined audience of over 3,000 fans. They use the social network service to promote new blog posts, events, and relevant third-party information. Twitter is also a key tool, used to promote webinars and new Web site content as well as engage in conversations with followers.

Perhaps one of the most innovative things they've done is to create a virtual community on Second Life called "Nonprofit Commons." Nonprofit Commons is actually a

collection of four virtual locations on the 3-D social network service. One of the basic goals of this initiative is simply to help NPO community members learn the basics of getting around and exploring how NPOs can use the virtual world to accomplish their goals. Meetings, training sessions, networking, and informal discussion all take place in the Nonprofit Commons.

NetSquared is particularly focused on social media use and encourages broad-based collaboration among its 20,000 registered users. In 2004, NetSquared organized a Challenge Program designed to identify, define, and accelerate innovative projects. Using social media tools to implement a crowdsourcing strategy, the community proposes worthwhile projects, selects the ones with most potential, provides feedback to project teams, and provides ongoing support until the projects are completed. This collaborative, community-based approach is now being used by other organizations that recognize the value of collective response to community problems.

Implementing these social media practices has yielded impressive results for TechSoup Global and NetSquared. The organizations interact with over 400,000 individuals worldwide, who in turn are committed to improving their communities. Their community reaches people in over 190 countries, and they collaborate with over 35 major technology providers such as Microsoft, Adobe, Cisco Systems, and Intuit to provide product donations and support to charitable and community organizations around the world. They estimate that their combined contributions to the NPO/NGO sector saved these organizations as much as 1.5 billion dollars in 2010.

Sources: TechSoup Global Annual Report (2010), Guthrie (2009).

Questions

1. Why is social media a particularly attractive alternative to traditional communication methods for NPOs?
2. Describe the different "audiences" NPOs might try to reach using social media.
3. Many NPOs, NGOs, and government agencies serve the poor and disadvantaged, many of whom have limited access to the Internet. Identify some ways that social media might still be an important tool for these groups.
4. How has Netsquared leveraged the unique features of Second Life? What benefits does this approach offer to traditional ways of accomplishing the same thing?
5. How might these organizations utilize social media metrics to evaluate the effectiveness of their efforts?

ANALYSIS USING SPREADSHEETS

Estimating the ROI of Social Media



Notes

For this analysis, go to the Student Web site to download the file. An image of that file is used to explain the scenario and required analysis.

Refer to the *Analysis Using Spreadsheets* exercise in Chapter 1. The Chapter 1 analysis exercise stated that the results of the analysis will be combined with the costs of the campaigns (when those costs become known) to determine the value of these IT strategies. Now that those costs are known. In this analysis, you are asked to include the social media campaign costs to calculate the estimated ROI.

Recall that customer attrition rate is the rate at which a company loses customers. Customer retention rate is the percent of customers that stay with the company. Mathematically, customer attrition rate = 100% – customer retention rate.

Scenario

InterMobile-2020 Company has asked you to prepare an additional analysis on the spreadsheet to estimate the ROI of the four social media investments.

The cost of each campaign is shown in Figure 8.17. The estimated average profit per retained customer is \$10. The total value of the campaigns is represented as:

IMPROVEMENT = increase in number of retained customers • \$10

The investment cost is the sum of the four campaign costs.

INVESTMENT COST = \$2,000,000 (see Figure 8.17)

InterMobile-2020 Company

Number of customers, January 2011	1,500,000
Controllable Customer Attrition Rate (average rate per quarter) [CCAR]	6%

IT-based Strategies to Reduce the Controllable Customer Attrition Rate (CCAR)	Percent Reduction in CCAR
#1 - Launch campaign using 2D tags	1.25%
#2 - Create campaign on Facebook	0.50%
#3 - Launch viral marketing campaign	0.75%
#4 - Develop an iPhone app	1.50%
Total Reduction in CCAR	4.00%

ROI Calculation

Average Profit per Customer	\$ 10
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Estimated Cost of the Campaign or App
\$ 700,000
\$ 425,000
\$ 525,000
\$ 350,000

Total Investment \$ 2,000,000

	2012			
	Q1	Q2	Q3	Q4
Expected Loss of Customers, no Strategy (6% CCAR)	90,000	84,600	79,524	74,753
Number of Customers Remaining at End of Quarter	1,410,000	1,325,400	1,245,876	1,171,123

Expected Loss of Customers, Using All 4 Marketing Campaigns (2% CCAR)	30,000			
Number of Customers Remaining at End of Quarter	1,470,000			

IMPROVEMENTS DUE TO IT-BASED CAMPAIGNS — INCREASED # OF RETAINED CUSTOMERS

Improvement in # of Customers Retained Due to Campaigns (Difference Between the Q4 Numbers)	
Average Profit per Customer	\$ 10
TOTAL VALUE OF CAMPAIGNS [improvement • \$10]	\$ -
ROI = (Total Value of Campaigns – Total Investment)/Total Investment * 100% =	

Figure 8.17 ROI spreadsheet for Chapter 8.

The general formula for ROI is:

$$\text{ROI} = (\text{IMPROVEMENT} - \text{INVESTMENT COST}) / \text{INVESTMENT COST} \cdot 100\%$$

A positive ROI indicates that the investment in the campaigns makes a positive contribution to profits.

Analysis

You may want to refer to your completed spreadsheet from Chapter 1 or start the analysis using the spreadsheet on the

textbook's Web site. Perform the calculations to estimate the ROI. Figure 8.17 illustrates that spreadsheet and the highlighted cells requiring formulas to calculate the ROI.

Based on the results of your ROI analysis, what do you recommend?

Resources on the Book's Web Site



More resources and study tools are located on the Student Web Site and on WileyPLUS. You'll find additional chapter materials and useful Web links. In addition, self-quizzes that provide individualized feedback are available for each chapter.

Cases for Chapter 8 are available at wiley.com/college/turban:

- 8.1 ZOPA, Prosper, and P2P Lending: Will They Disrupt Banking?
- 8.2 Friendster, Will It Survive?
- 8.3 YouTube and Company—A Whole New World

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