Social Enterprise and Other Social Commerce Topics

8

Contents

Learning Objectives

Upon completion of this chapter, you will be able to:

1. Understand the concept of the social enterprise and its variants.
2. Describe business-oriented public social networks, their characteristics and benefits.
3. Describe the major social commerce activities that can be conducted within and by enterprises and the characteristics of such private social networks.
4. Describe the commercial applications conducted in virtual worlds.
5. Review the social commerce activities and their relationship with e-entertainment and gaming.
6. Describe social gaming and gamification.
7. Define crowdsourcing and describe its use in social commerce.
8. Describe social collaboration and its benefits.
9. Comment of the future of social commerce.

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OPENING CASE: HOW A PRIVATE ENTERPRISE NETWORK TRANSFORMED CEMEX INTO A SOCIAL BUSINESS

CEMEX (**cemex.com**) is a Mexico-based global building materials company known primarily for its cement and ready-mix concrete. They do business in over 58 countries, throughout the Americas, Europe, Africa, the Middle East, and Asia and maintain trade relationships in approximately 108 nations.

The Problem

The global economic slowdown of 2008–2012, and especially the drastic reduction in construction activities, drove CEMEX to try a host of traditional activities for cost reduction and increased productivity. However, this was not enough. In addition, top management was looking for ways to facilitate innovation. Given the company's global nature, top management realized that they needed to improve the company's internal and external collaboration to foster innovation.

The Solution

Recently, many companies have implemented Enterprise 2.0 platforms that include social media tools as well as mechanisms of social network services. CEMEX decided to follow this trend. The company wanted to fully utilize the institutional knowledge possessed by its thousands of employees worldwide and make it available to others whenever needed.

CEMEX created an internal private social collaboration platform called Shift (**cemex.com/whatisshift**), which facilitates innovation, efficiency, and collaboration by letting employees share information and jointly conduct problem solving. Shift integrates some of the best capabilities of social networks with knowledge management (KM) and collaboration techniques (using IBM Connection and its language translation feature). Shift includes many internal communities; each is composed of people with similar interests.

The Results

The main result was the major change in the way that people worked together. The workforce became more cooperative; employees helped each other, shared more information and knowledge, were more empowered, and were able to be more mobile. This led to better internal collaboration using in-house networking.

Projects started to move more quickly, with faster time to market; therefore, business processes improved. In short, the company successfully leveraged the collective talents and skills of its employees. One internal community, the "Construction for the 21st Century," was challenged to suggest the strategic topics that CEMEX should focus on to remain a leader in the construction industry. The 400 community members of this 21st Century group responded by proposing innovative ideas, tactics, and strategies addressing the challenge. Overall, Shift drew 5,000 users by the end of its first month. By 2013, there were 25,000 users of Shift and over 500 groups. By 2014 the company's stock price increased by over 300%.

For more results and discussion see: **slideshare.net/soccnx/shifting-the-way-we-work-at-cemex**.

Sources: Based on Garcia et al. (2011), Hinchcliffe (2012), and Donston-Miller (2012).

LESSONS LEARNED FROM THE CASE

The CEMEX case illustrates a successful private in-house social network whose major objectives were to foster collaboration among its thousands of employees worldwide and facilitate idea generation via internal crowdsourcing. Using Web 2.0 tools, collaboration became effective and efficient. A major result was idea generation and the evaluation and implementation

of these ideas that facilitated innovation in the company. This chapter presents the major activities that private social networks support within enterprises and the structure and benefits of public business networks. This chapter also presents the issues of virtual worlds, social entertainment, gaming and gamification, crowdsourcing, and social collaboration.

8.1 SOCIAL BUSINESS AND SOCIAL ENTERPRISE

A major forthcoming trend in social commerce is its move to the enterprise level. This trend is related to the concept of social business. Let us define both terms.

Definitions: Social Business and Social Enterprise

The social enterprise concept has several names, definitions and explanations. The concept is sometimes confused with the related concept of social business. Generally, one can distinguish between the two concepts that often are used interchangeably. Let us explain.

Social Business

A **social business** is a name for a commercial for-profit or non-profit organization that is designed to achieve some social goal(s) such as improving human well-being, rather than just make a profit. SocialFirms UK (**socialfirmsuk.co.uk**) provide several other definitions (of what they call *social enterprise*). They cite the following UK government definition: "A social enterprise is a business with primarily social objectives whose surpluses are reinvested for that purpose in the business or in the community, rather than being driven by the need to deliver profit to shareholders and owners" (see details at **socialfirmsuk.co.uk/faq/faq-what-social-enterprise-and-what-types-are-there**). About.com distinguishes between two types of social business: one type that describes companies that "aspire to social purposes more than to profit-making," and a second type that describes companies that "use social media to advance their business objectives." (See **webtrends.about.com/od/web20/a/social-media.htm.**)

The second type is the basis for the *social enterprise*. In summary, we view a *social business* as one that is built mainly around social objective(s), while a *social enterprise* uses social networking to facilitate its commercial objectives.

A major organization dedicated to social business (referring to itself as "social enterprise") is the *Social Enterprise Alliance* (see **se-alliance.org/what-is-social-enterprise**).

Social Employees

The successful social business needs to empower their employees (e.g., using IBM Connections). For how it is done in IBM, AT&T, and other large corporations, see Burgess and Burgess (2013).

The Social Enterprise (Enterprise 2.0)

Social enterprise refers to the use of social media tools and platforms and conducting social networking activities in organizations while its major objectives are either commercial or non-profit activities (e.g., the government). For an overview see Ridley-Duff and Bull (2011).

The concept of the social enterprise has become a buzzword in recent years. For an example see **se-alliance.org/what-is-social-enterprise**. Let us see what it is.

Social enterprise applications are growing rapidly. They appear under different names, mostly as social enterprises and Enterprise 2.0. According to Carr (2012), McKinsey (a management consultant company), predicts that the global revenue from social enterprise activities will reach $1 trillion in several years (two thirds of all social commerce value at that time).

Enterprise applications are conducted inside enterprises, on companies' private social networks or portals. They also are conducted on public social networks, both business-oriented

(e.g., LinkedIn), and general networks, mostly Facebook and Twitter. Major applications are recruitment, collaboration, and problem solving. According to Kern (2012), enterprise social capabilities will facilitate a new type of collaboration, encourage business upgrades, and enable more vendor applications.

According to a 2009 IDC survey (reported by Businesswire 2010), 57% of all U.S. workers in 2010 used social media for business purposes at least once a week. Today that figure is higher. Corporations are rushing to get involved in several innovative ways, as will be described later in this chapter. Business networks are a core component in the social enterprise.

For additional definitions, characteristics, and discussion on social enterprise, see **centreforsocialenterprise.com/what.html**.

More Complex Definitions

In addition to the above definitions, there are some definitions that are more complex, as illustrated next.

The Social Business Forum's Definition

The Social Business Forum defines *social business* as "an organization that has put in place the strategies, technologies and processes to systematically engage all the individuals of its ecosystem (employees, customers, partners, suppliers) to maximize the co-created value" (**2012.socialbusinessforum.com/what-is-social-business**). The Forum also discusses the implications of this definition and its relevance, across and outside organizations. Note that an efficient creation of value using technology is emphasized.

IBM and IDC's Definition

IDC coined the term *social business* to refer to "those organizations that apply emerging technologies like Web 2.0 accompanied by organizational, cultural, and process changes to improve business performance in an increasingly connected global economic environment"(see IBM 2010; IDC 2010). The IBM effort concentrates on improved collaboration. The basic idea is that social customers require organizations to significantly change the way they operate so they can become social businesses. The new structure enables organizations to exploit the opportunities created by the social media environment. IBM is helping organizations become social businesses. (For an example of how this is done, see A Smarter Planet at **ibm.com/smarterplanet/us/en/?ca=v_smarterplanet**.) IBM also has an extensive "social business video library."

Three interesting videos are recommended for a better understanding of the concept:

1. "Social PHD Sandy Carter: How Do You Become a Social Business?"(1:05 minutes) at **youtube.com/watch?v=OZy0dNQbotg**
2. "How Do You Become a Social Business?" (3.27 minutes) at **youtube.com/watch?v=3Hov0l7SvAo**
3. "Social Business at IBM" – An Interview with Luis Suarez, Social Computing Evangelist (8:50 minutes), at (**youtube.com/watch?v=enudW2gHek0&feature=related**)

Notice that our definition of social enterprise is based on the use of social media tools and platforms. A related topic is *business networks*.

Business Networks

A *business network* refers to a group of people with a professional business relationship; for example, the relationships between sellers and buyers, buyers and suppliers, and professionals and their colleagues, such as the 21st Century Community at CEMEX. In this chapter, we use the term *buyers* to refer to agents buying something for a business (e.g., a purchasing agent). Such a network of people can form **business social networks**, which are business-oriented networks that are built on social relationships and can exist offline or online. For example, public places, such as airports or golf courses, provide opportunities to make new face-to-face business contacts if an individual has good social skills. Similarly, the Internet is also proving to be a good place to network and connect. In this book, we address online networks. The most well known network is LinkedIn (**linkedin.com**). For a discussion about business social networks, see Bughin and Chui (2013).

Types of Business Social Networks

There are three major types of business social networks: (a) *public networks*, such as LinkedIn, which are owned and operated by independent companies, and are open to anyone for business networking. The networks connect, for example, sellers and buyers or employers and potential employees; (b) *enterprise private networks*, which operate inside companies, like in CEMEX in the opening case. These usually restrict membership to employees and sometimes to business partners. An example is USAA that has an internal network for employees who can ask for help from their peers; and (c) *company-owned and hosted networks* that are controlled by a company but open to the public, usually for brand-related networking (e.g., Starbucks, Dell Computer).

The Benefits and Limitations of Enterprise Social Networking

Social networking appeals to business users for many reasons. For example, networking makes it easy to find people and discover information about companies, understands the relationships and communication patterns that make a company tick, and creates a common culture across large organizations.

The major reasons an organization becomes a social enterprise are the abilities to:

- Improve collaboration inside the enterprise and with business partners
- Facilitate knowledge management (increase access to specialized knowledge)
- Build better customer and employee relationships
- Facilitate recruiting and employee retention
- Increase business and marketing opportunities (e.g., meet new potential business partners and/or customers)
- Reduce operation, communication, and travel costs
- Increase sales and revenue (e.g., more sales leads)
- Improve customer satisfaction
- Reduce marketing and advertising costs
- Improve employee and organizational performance
- Foster internal and external relationships
- Collect feedback from employees
- Build an effective workforce
- Improve decision-making capabilities including forecasting
- "Spy" on competitors (intelligence gathering)
- Find experts and advice (internally and externally)
- Improve customer service and CRM
- Accelerate innovation and competitive advantage

For details of these and other benefits, see Carr (2012), Bughin and Chui (2013), and Section 8.2.

Enterprises that use social media extensively can reap the benefits found in the previous list and be transformed into social businesses. For details, see **ibm.com/social-business/us/en**.

Obstacles and Limitations

Some limitations, such as security of information and information pollution, slow down the growth of social enterprising. For details, see Forrester Consulting (2010), and **slideshare.net/norwiz/what-is-enterprise-20**.

How Web 2.0 Tools Are Used by Enterprises

Web 2.0 tools are used in different ways by various corporations. Typical uses are: Increasing speed of access to knowledge; reducing communication costs; increasing speed of access to internal exports; decreasing travel costs; increasing employee satisfaction; reducing operational costs; reducing time to market for products/services; and

increasing the number of successful innovations for new products or services.

For statistics about which departments in the enterprise use the technology and what specific social media tools are used, see IDC's Social Business Survey (2011). Some of the uses outside the enterprises include recruitment, advice in problem solving, joint design, collaboration on supply chain issues, and marketing communication. For an example of how Balfour Beatty, a UK-based multinational corporation, is using several Web 2.0 technologies for substantial benefits, see Kelly (2011).

For a comprehensive slide presentation on Enterprise 2.0, see **slideshare.net/norwiz/what-is-enterprise-20**.

SECTION 8.1 REVIEW QUESTIONS

1. Define social business and relate it to the social enterprise.
2. How does IBM define social business?
3. What is a business network?
4. List five reasons why organizations want to become social enterprises.

8.2 BUSINESS-ORIENTED PUBLIC SOCIAL NETWORKING

Social networking activities are conducted in both public and/or private social networking sites. For example, LinkedIn is a business-oriented public network, whereas Facebook is primarily a public social network used for socially-oriented activities. Facebook, however, allows its members to conduct business-oriented activities. "My Starbucks Idea" (**mystarbucksi-dea.force.com**) is an example of a company-hosted social network that is open to the public. In contrast, CEMEX's internal social network, SHIFT (see opening case), is open only to the company's employees and is considered private. In this section, we will concentrate on public social networks.

The following are some examples of business-oriented public social networks.

- **Ryze.** Similar to LinkedIn, Ryze (**ryze.com**), according to its website and About.com, is a business social networking site with a focus on the entrepreneur. Individuals can use Ryze to help build up a personal network and find new jobs, while companies can use Ryze to create a business community. Ryze is especially liked by young professionals, by entrepreneurs, or by business owners who want to create a networking community for their employees (per **webtrends.about.com/od/profiles/fr/what-is-ryze.htm**).
- **Google+.** Google+ ("one Google account for everything"), which began operating in 2011, designated itself as a business-oriented social network. In its fourth year of operation, it has over 1.1 million users. For an overview, see **martinshervington.com/what-is-google-plus**.
- **LinkedIn.** Referred to as the premier business-oriented network, LinkedIn (**linkedin.com**) is known as the most popular network for business, as illustrated in the closing case of this chapter. Also see the infographic at **blog.hootsuite.com/social-network-for-work**.

  LinkedIn shows content and provides customer service in a multitude of languages, including English, Spanish, French, and Tagalog among others, with a plan for considering other languages in the future.

Several other networks similar to LinkedIn are Wealink (**wealink.com**) in China, Rediff (**rediff.com**) in India, International High Potential Network (iHipo) (**ihipo.com**) in Sweden, and Moikrug (My Circle) (**moikrug.ru**) in Russia.

There are many public business-oriented networks that focus on specific industries or types of professional specialties; one example is the Network of Entrepreneurial Women (**network-women.org**).

Entrepreneur Networks

Some business-oriented public networks concentrate on entrepreneurial activities. A few examples are listed next.

Ueland (2011) lists 18 social networks for entrepreneurs, such as PerfectBusiness (**perfectbusiness.com**), and Upspring (**upspring.com**).

- Biznik (**biznik.com**). Biznik is a community of entrepreneurs and small business owners dedicated to helping each other by sharing ideas and knowledge. Their motto is "collaboration beats the competition," (see **biznik.com/articles/collaboration-beats-the-competition**). According to **biznik.com**, their policy is that members must use their real names on the site and Biznik supplements its interactions with face-to-face-meetings.
- **EFactor** (**efactor.com**). The world's largest network of entrepreneurs (over 1 million members in 222 countries across 240 industries) provides members with people, tools, marketing, and expertise to succeed and make real, trustworthy, and lasting connections (2011 data). Members connect with like-minded people and with investors.
- **Startup Nation** (**startupnation.com**). Participants in this community of startup owners and experts are helping people start and operate new businesses. Sharing knowledge and ideas is the main objective.
- **Inspiration Station** (**inspiration.entrepreneur.com**). Inspiration Station is one of the best portals for small businesses and start-ups. It not only has a lot of useful information for business owners, it has a great community for you to take advantage of, and to connect with fellow business owners from around the globe.
- **SunZu** (**sunzu.com**). SunZu is a network for people doing business that lets you meet, share, learn, trade, and grow with other business owners. Joining SunZu gives members access to people, learning opportunities, news, updates, business opportunities, and insights (see **sunzu.com/pages/about-sunzu**).

SECTION 8.2 REVIEW QUESTIONS

1. Distinguish between private and public business-oriented networks.
2. List and briefly describe public business-oriented networks.
3. Define entrepreneur networks and list two examples.

8.3 ENTERPRISE SOCIAL NETWORKS

An increasing number of companies have created their own in-house, enterprise social networks. Some of these networks can be private, developed for use only by their employees, former employees, and business partners. Others are open to the public, although these are mostly used by their customers. Private networks are considered to be secured ("behind the firewall"), and are often referred to as *corporate social networks*. Such networks come in several formats, depending on their purpose, the industry, the country, and so forth. For the evolution of the networked enterprise, see Bughin and Chui (2013).

Taxonomy of Social Enterprise Applications

The following terms are frequently used in enterprise networking. Most will be discussed in this chapter.

1. **Networking and community building.** Conducting networking and community building involving employees, executives, business partners, and customers.
2. **Crowdsourcing.** Gathering ideas, insights, and feedback from crowds

(e.g., employees, customers, and business partners; see Section 8.2). Salesforce Success Community (**success.salesforce.com**) and My Starbucks Idea (**mystarbucksidea.force.com**) are examples.

3. **Social collaboration.** Collaborative work and problem solving using wikis, blogs, instant messaging, collaborative office documents, and other special purpose Web-based collaboration platforms such as Laboranova (**labo-ranova.com**).
4. **Social publishing.** This is the creation of user-generated content in the enterprise, which is accessible to all (e.g., **slideshare.net**, **youtube.com**).
5. **Social views and feedback.** Getting feedback and opinions from the enterprise's internal and external communities on specific issues.

Characteristics of Enterprise Social Networks

Enterprise social networks, like any social network, enable employees to create profiles and interact with one another. By encouraging interactions among members, a company can foster collaboration and teamwork, and increase employee satisfaction. For more benefits see **zdnet.com/blog/hinchcliffe.**

For additional information, see the *International Journal of Social and Humanistic Computing*. For additional tips and sources, see **socialcast.com**.

An Example of a Private Enterprise Network

In the opening case of Chapter 1, we introduced Starbucks' hosted enterprise network. We also described Sony's and iRobot's hosted enterprise social network in Chapter 7. Many other companies also have enterprise networks of all kinds. Here is an example of another private network:

Example: IBM'S Business and Professional Community

The Greater IBM Connection (**ibm.com/ibm/greateribm**) is an internal social networking site that gives IBM employees and former IBMers a rich connection to the people with whom they work, on both a personal and a professional level. The network helps employees make new connections, track current friends and coworkers, and renew contacts with people they have worked with in the past, including retirees. When employees join the network, they get a profile page. They can use the status message field and the free-form "About Me" section on their profile page to let other people at IBM know where they are, what they are doing, and even what they are thinking. In 2014, over 440,000 IBMers were connected to one another using IBM Connections platform.

Employees can also use the network to post photos, create lists, and organize events. If users are hosting an event, they can create an event page on the network and invite people to attend. The page can also be a place to spread the buzz about the event and get people talking about it through the comments feature.

The Greater IBM connection can also come in handy when preparing for conference calls. If users do not know some of the people on the conference call, they can check out the participants' profiles beforehand and find out if they have common interests, either work-related or recreational, or if they have colleagues in common.

In addition to the social goal, the network team created the site to help IBM employees meet the challenge of building professional relationships that are vital to working in large, distributed enterprises. The network can help IBM employees discover people with common interests or the right skills for a project. Learning more about someone – personally and professionally – facilitates making contacts and might entice people to learn about the ongoing projects and activities of other people. This network can also provide valuable insights for managers evaluating employees for promotion.

The IBM network is related to IBM's social business Innovation Projects, cited later in this chapter. It is also related to *IBM's Connections*, the company's social software platform.

How Enterprise Social Networking Helps Employees and Organizations

Enterprise social networking can help employees in one or more of the following ways:

1. **Quick access to knowledge, know-how, and "know-who."** As people list their skills, expertise, and experience, enterprise social networks can help simplify the job of locating people with specified knowledge and skills.
2. **Expansion of social connections and broadening of affiliations.** Enterprise social networks help managers and professionals to know people better by interacting with them in online communities, and by keeping up with their personal information. Such interaction and information about others can decrease the social distance in a company.
3. **Self-branding.** People can become creative in building their profiles the way they want to be known. It helps them promote their personal brand within the corporation.
4. **Referrals, testimonials, and benchmarking.** Enterprise social networks can help employees prepare and display referrals and testimonials about their work and also benchmark them with their colleagues.

Benefits to Organizations

The benefits to organizations, as well as to employees, were presented in Section 8.1. In addition, the benefits to employees can develop into benefits to organizations in the long run.

Support Services for Enterprise Social Networks

Businesses can use a variety of services and vendors to support their social networking. Two examples follow.

Example 1: Socialcast

Socialcast (**socialcast.com**), a VMware company, is an online vendor providing social network platforms that enterprises can deploy to let employees create their profiles and use them to facilitate collaboration and communication with coworkers. In 2014, the company had more than 30,000 customers in 190 countries. The platform connects people to knowledge, ideas, and resources. For details, see **socialcast.com/about**.

Example 2: Socialtext

Socialtext (**socialtext.com**) is a vendor of enterprise social software, providing an integrated suite of Web-based applications including social media tools and platforms. The company also provides Web security services. Businesses can benefit by keeping employees connected to the enterprise strategy and operations. For details, see **socialtext.com/about**.

Yammer: A Collaboration Platform

Yammer, Inc. (**yammer.com**), is a Microsoft company. According to its website, Yammer is a private social network that helps employees collaborate across departments, locations, and business apps in over 200,000 companies (in 2014). Yammer brings together people for conversations, content, and business data in a single location. With Yammer, you can easily stay connected to coworkers and information, collaborate with team members and make an impact at work. It is used for communication and collaboration within organizations, or between organizational members and pre-designated groups.

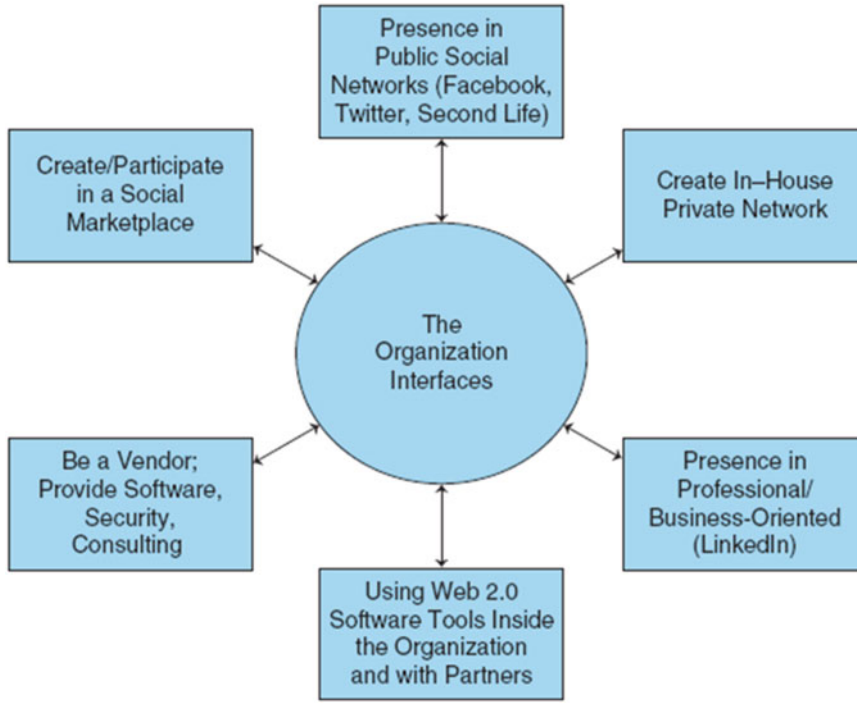

Figure 8.1 The major interfaces with social networking

Key Features (in Early 2014)

Yammer's social networks allow users to (compiled from Blair (2011) and from **about.yammer.com**):

- **Converse using enterprise microblogging.** Start a conversation, read posts, and actively collaborate with coworkers in real time using microblogging.
- **Create profiles.** Report your expertise, work experience, and contact information. You can upload photos, images, and documents. This will help you share information with others, and become easier to find.
- **Manage groups.** Create new groups or join private or public groups, and then discuss issues or collaborate with the group members. (Discover and join groups, invite team members to join and start collaborating.)
- **Conduct secure and private messaging.** Create a private dialog with one or multiple coworkers, similar to what you can do on Facebook. Secure the messages with Yammer's security features.
- **Create external networks.** Create external networks for working with business partners.
- **Create a company directory.** Create a directory of all employees.
- **Archive knowledge.** Archive all online conversations to be fully searchable.
- **Use administrative tools.** Keep the Yammer network running smoothly with a suite of features built to increase managerial control.
- **Employ tagging.** Tag the content and message in the company's network to make content easy to search for and to organize.
- **Integrate applications.** Install third-party applications into Yammer to increase the functionality of the company's network.
- **Deploy mobile capabilities.** Connect to the company's network from anywhere, at any time. Download free iPhone, Blackberry, Android, and Windows Mobile applications.

How Companies Interface with Social Networking

Enterprises can interface with public and/or private social networks in several ways. The major interfaces, which are shown in Figure 8.1, are described next.

- Use existing public social networks, such as Facebook or virtual worlds such as Second Life (**secondlife.com**), to create pages and microcommunities; advertise products or services; and post requests for advice, job openings, and so forth.
- Create an in-house private social network and then use it for communication and collaboration among employees and retirees or with outsiders (e.g., customers, suppliers, designers). Employees can create virtual rooms in their company's social networks where they can deploy applications to share information or to collaborate.
- Conduct business activities in a business-oriented or professional social network (e.g., LinkedIn or Sermo).
- Create services for social networks, such as software development, security, consulting services, and more (e.g., Oracle, IBM, Microsoft).
- Use Web 2.0 software tools, mostly blogs, wikis, workspaces, microblogging (Twitter), and team rooms, and create innovative applications for both internal and external users.
- Create and/or participate in a social marketplace (such as Fotolia; **us.fotolia.com**).

SECTION 8.3 REVIEW QUESTIONS

1. Define enterprise (private) social networks.
2. List the major characteristics of enterprise social networks.
3. Describe the enterprise social network within IBM.
4. List the benefits to organizations.
5. Describe Yammer and identify its connections with social networks.
6. List the different ways that companies interface with social networking.

8.4 SOCIAL COMMERCE: APPLICATIONS IN VIRTUAL WORLDS

Virtual worlds can be effective platforms for online social interactions, community building, conducting business transactions, and facilitating learning and training (e.g., education). As briefly described in Chapter 2, users can navigate and move around in a virtual world using their avatars, which they can also use for communication and other activities. Virtual worlds also may enable trading in virtual goods, and paying for them with virtual money. For the uses of virtual worlds, see **makeuseof.com/tag/what-are-virtual-worlds-what-are-their-uses-makeuseof-explains**. For a list of the major virtual worlds, see **arianeb.com/more3Dworlds.htm**. For using virtual worlds in education, see Angel Learning's 2008 White Paper titled "The Power of Virtual Worlds in Education: A Second Life Primer and Resource for Exploring the Potential of Virtual Worlds to Impact Teaching and Learning" (accessible at **soma.sbcc.edu/Users/Russotti/SL/PowerofVirtual%20WorldsEdu_0708.pdf**).

Businesses can make use of virtual worlds, not just for entertaining their customers and prospects, but also by engaging them in an experience that may be unavailable in the real world. Due to the use of multiple senses in a virtual world, users' experiences can be more fulfilling than in a 2D world, or sometimes even more than in a physical one. For instance, according to a Second Life's website posting (February 2011), Second Life had over 22 million registered user accounts (unique residents) who spent more than 115 million hours a month on the site. As of June 2013, the number of registered users has risen to over 36 million. (See the article and infographic by Reahard (2013) at **massively.joystiq.com/2013/06/20/seco-nd-life-readies-for-10th-anniversary-celebrates-a-million-a**.) Businesses can leverage features and spaces, as illustrated next, to exploit the opportunities in virtual worlds.

The Features of Virtual Worlds

Virtual worlds have a set of properties or features that provide the capabilities to conduct business there.

The Features That Businesses Can Leverage

- **Shared space.** The virtual world provides many users with the ability to participate simultaneously in activities, engage in discussions, and participate in collaborative activities.
- **3-D visualization (graphical user interface).** The virtual world depicts both 2-D and 3-D images.
- **Immediacy.** Interactions usually occur in real time, and users experience the results of their actions immediately.
- **Interactivity.** Participants can create or modify customized content. They may do so in collaboration with others.
- **Persistence.** Activities in virtual worlds are happening whether members are present or not.
- **Socialization and community formation.** A virtual world provides opportunities for socializing with other users and facilitates group formation of different types (e.g., work teams).

IBM, Walmart, Toyota, Sears, Wells Fargo, and other large companies have experimented with virtual worlds for testing new designs, customer service, employee training, and marketing communication.

The Major Spaces in Virtual Worlds

The following are brief descriptions of the major spaces used in virtual worlds:

1. **Social space.** Place where users' avatars (and their owners) can meet, discuss, share information and opinions, and socialize.
2. **Entertainment space.** Place where avatars (and their owners) can play games, watch movies, and attend concerts in a 3-D environment.
3. **Transaction space.** Marketplace where one can conduct business and financial transactions, sell and buy available virtual goods as well as some real goods at a virtual webstore.
4. **Experimental/demonstration space.** Place in the virtual world where real-world environments, products, and services can be simulated for experimentation, demonstration, training, and testing.
5. **Collaboration space.** Place for collaboration, innovation, and new product design and development.
6. **Smart agent space.** Place where software agents can seek information and engage with other agents to fulfil or facilitate transactions for their owners.
7. **Fantasy space.** A dream world where people can do things that are not feasible or not affordable in the real world (e.g., take trip to the moon or an expensive cruise).
8. **Educational Space.** Certain places in the virtual world are dedicated to educational activities such as teaching classes, doing projects, or learning by doing special projects.

One can arrange for the use of one or more of these eight spaces in innovative ways for business, education, medical, political, and other uses. Business applications of virtual worlds are varied and their use depends on the type of business in which a company is engaged, in the organizational objectives, and the target user profiles.

The Major Categories of Virtual World Applications

It is common to classify major applications into 18 categories (adapted from Ciaramitaro 2010; Murugesan 2008; Reeves and Read 2009).

1. **Webstores and online sales.** Companies have set up webstores in virtual worlds to enable customers to have a more immersive experience by trying out products, including clothes, cars, or jewellery before they buy them. This is done in a 3-D virtual salesroom. Potential buyers can also conduct research, dress avatars, and sometimes complete a purchase through links that lead them to a secure trading place. For details, see Second Life's 'Shop: Learn' page at **secondlife.com/shop/learn**.
2. **Front offices or help desks.** Virtual worlds can act as access points for customer service. The help desk is staffed by avatars (see Chapter 2 for avatars at airports). This service is available around the clock.
3. **Advertising and product demonstrations.** Marketers and advertisers can place 8D display ads and banners promoting products or services at various locations in virtual worlds to catch the attention of visitors. Consumers also can view demonstrations by avatars on how to install or assemble products such as washing machines or furniture. There are several advantages for using virtual worlds. Virtual stores allow businesses to reach a variety of demographically diverse customers. Furthermore, some real world constraints may be reduced or eliminated in virtual worlds. In addition, the cost of experimenting with virtual things is minimal and there is no cost of making errors. Restrictions and costs that are found in real world situations are further reduced.
4. **Content creation and distribution.** Virtual worlds can serve as channels for delivering music, games, art, and other forms of interactive content for engaging the participants.
5. **Meetings, seminars, and conferences.** Virtual worlds are being used as venues for individuals to virtually meet, participate, and interact through their avatars. Such interactions can reduce the cost and time of conducting meetings in the real world.
6. **Training.** Another promising use for virtual worlds is interactive and/or collaborative training. Trainees can learn by participating in simulations and role-playing. For example, one hotel chain is using virtual lobbies to train receptionists. Other organizations are developing applications that can help them train staff on how to deal with emergencies such as accidents and natural disasters. Another area where this can be used is military training (e.g., flight and battlefield simulations). For details, see Heiphetz and Woodill (2010).
7. **Education.** Universities are using virtual worlds as a new immersive and interactive platform that is useful for interacting with students, and even for teaching courses.
8. **Recruiting.** A growing number of organizations, including governments and the military, are recruiting employees via virtual worlds. All the activities of recruitment, ranging from providing job details to interviewing candidates, are conducted at the recruiter's virtual office. This mode of recruiting is gaining acceptance by technology-savvy graduates and job seekers.
9. **Tourism promotion.** Government tourist boards and tourist operators are using virtual worlds to promote their tourism destinations by providing tourists with 3-D virtual immersive experiences of real places and activities of interest.
10. **Museums and art galleries.** Many artists and agencies are setting up virtual

museums and galleries to display their creations and to promote sales. They also use virtual worlds to stage musicals and other performances.

11. **Information points.** Virtual worlds are used as sophisticated information kiosks. They can act as extremely powerful, interactive, and dynamic online resources or brochures.
12. **Data visualization and manipulation.** Interactive data visualization and manipulation in the virtual environment is an interesting new application of interest to enterprises and professionals. For instance, the software *Glasshouse* by Green Phosphor (**greenphosphor.com**) allows users to export data from either a spread sheet or database query to a virtual world and presents the user with a 3-D representation of the data in a virtual world environment for the user to explore interactively. A user's avatar can then manipulate the visualization of the data by drilling down into it, re-sorting it, or moving it around to view it from many different angles.
13. **Renting virtual world land and buildings.** One can earn virtual money by selling or renting buildings and lands in strategic locations in virtual worlds and by engaging in the "real estate" business in the virtual world.
14. **Platform for social science research.** Virtual worlds are also a good platform for conducting experimental social science research to observe how people behave or react (through their avatars) in structured and unstructured situations, and for studying customer behavior in virtual worlds.
15. **Market research.** Using virtual worlds as a platform enables companies to test new products by getting feedback from customers. These insights may give companies a competitive edge.
16. **Platform for design.** In order to receive feedback and opinions, many companies show images of virtual things such as parks and structures, furniture, and avatars to potential customers and designers in order to receive feedback and opinions.
17. **Providing CRM to employees and a platform for socialization.** Companies use virtual worlds for providing CRM to employees and/or customers. For example, several companies have created islands in Second Life dedicated to the sole use of their employees or for customer care.
18. **Virtual tradeshows.** Virtual tradeshows (sometimes called *virtual trade fairs*), take place in virtual worlds (see Yu 2010).

The Landscape of Virtual World Commercial Applications

The potential of virtual worlds, particularly when they are integrated with other IT and business systems, is large. A virtual world is particularly attractive to video game players, where sellers can build communities of fans and advertise. Other businesses are using virtual worlds for collaboration, design testing, learning, and relationship building.

Business Applications in Virtual Worlds

The following are examples of applications used in virtual worlds.

Example: Sony's Home for a Virtual Community of Gamers

Sony's Home virtual world (**us.playstation.com/psn/playstation-home**) is a large gathering place and marketplace for owners of PlayStation games. As of 2012, it has attracted about 25 million users worldwide who spend an average of 70 minutes per session (see **digiday.com/publishers/sonys-home-coming-back**). The community of gamers can play hundreds of

games, attend different events, and buy many virtual goods.

Today, many organizations are looking for ways to conduct virtual meetings in Second Life, instead of in the real world.

For a review of other examples of how businesses and organizations are using virtual worlds to make the world greener, refer to *The Green Book: An Enterprise Guide to Virtual Worlds*, published by Association of Virtual Worlds (**associationofvirtualworlds.com**).

Representative Virtual World Applications Around the Globe

Here are a few other representative examples of virtual world applications (some of which have changed over time):

- **Hana City** (**hanacity.com**). Hana Bank of Korea uses a virtual world to educate its future customers, children ages 10 to 15. Its virtual world teaches children about home financing investment options.
- **MeetMe** (**meet-me.jp**). To make your retail shopping experience more exciting, this virtual world takes you shopping (virtually) in Japan.
- **New Belgium Brewing** (**newbelgium.com**). This brewery has added a virtual component to its regular website. In this virtual world, visitors can take an interactive tour of the brewery.
- **Aloft** (**starwoodhotels.com/alofthotels/index.html**). Aloft, the global brand of Starwood hotels and resorts, tested the design of its hotels on Second Life. The company used the feedback collected from more than a million visitors to create its final design for the hotels.

For additional examples and discussion see Reeves and Read (2009) and Knowledge at Wharton.

Trading Virtual Goods and Properties

There are many business opportunities for buying and selling virtual goods. Sales are conducted by using electronic catalogs, classified advertisements, and auctions (e.g., see **usd.auctions.secondlife.com**). Payments are made with virtual money ("Linden dollars") that can be converted to real money. The tax and contract/legal issues are not clear (e.g., see **secondlife.com/corporate/vat.php**). In 2013, the U.S. Government Accountability office released some guidelines and definitions for a virtual economy and currency, (see **cpa2biz.com/Content/media/PRODUCER_CONTENT/Newsletters/Articles_2013/Tax/VirtualEconomy.jsp**).

The major products/services in this category are: land, retail, manufacturing, scripting, fashion, and the adult entertainment industry.

The Major Drivers of Social Commerce in Virtual Worlds

The key factors that drive business applications in virtual worlds are:

- **Resemblance to the real-world environment.** Businesses can use the technology since it can simulate, and even conduct real-world activities (e.g., customer service) more promptly and a low cost (e.g., product design). Additionally, interactions with business partners are easy. It is also a place for attractive advertisements. Users can get a feel of the real world without cost and time constraints (e.g., buy properties, travel).
- **Shopping for virtual goods.** The major shopping activity is in real estate. Users can buy land, develop it, build on it and sell it. Millions of people who cannot afford their dream house (e.g., in developing countries) are satisfied with a virtual house. You can also shop for fascinating goods at Second Life at **secondlife.com/shop**.

- **Attractions for the younger generations.** Today's youth are tomorrow's shoppers. They grew up with computer applications and love games and online entertainment.
- **New means of navigation and discovery.** Virtual worlds enable the creation of visually attractive and unique products that visitors never knew existed.
- **The attributes and capabilities.** These are unique to virtual worlds. First, they are mostly 3D. Second, the worlds are populated with avatars. The virtual worlds are interactive and can be manipulated and changed by users at very low cost.
- **Better online meeting spaces and collaborative platforms.** Virtual worlds provide interesting platforms for collaboration, meetings, discussions, and chatting (e.g., try to chat in 3D at **imvu.com**).
- **Interactive environment for education and training.** Several activities, as shown in Table 8.1, can be used to facilitate training and learning.

Concerns and Limitations of Commercial Activities in Virtual Worlds

Although virtual worlds were expected to become a major platform for commerce, business, and social activities, they have not yet reached this level. Despite their promise, virtual worlds present several challenges and constraints of which developers, businesses, and individual users must be aware. Virtual worlds such as Second Life are not easy to use, and are expensive to build and operate. Software needs to be installed and updated, which for many users is too cumbersome. Additionally, substantial hardware is needed. There are also administrative issues such as legal, taxation, ethics, and reliability. Moreover, there are technology limitations, including reliability and accessibility, security, and some users experience difficulties in learning.

According to **en.wikipedia.org/wiki/Second_Life**, there is considerable fraud and violation of intellectual property in Second Life. Wikipedia provides examples of fraud and suggestions for protection. The Second Life Community also provides suggestions on dealing with abuse and harassment at **community.secondlife.com/**

Table 8.1 The use of virtual worlds to facilitate learning

Activity	Description
Simulation	Users can manipulate different scenarios and see results. Creating a virtual business is a popular activity
Distance learning	A virtual world can be used as a place for working, learning, and/or collaboration. It is also used for team-building, collaborative learning and collaborative problem solving
Class meetings	Learning institutions offer many virtual classes (mostly in Second Life). Students can explore, share, and work with teachers via their avatars
Exploration	The virtual world is a good platform for explorative learning. Learners can explore in a similar way to a real world exploration. The information is communicated by the environment to the user/avatar visually, by text or other media
Visualization	Visualization is a key learning enabler. The 3D virtual world provides an excellent opportunity to use images, videos, etc. to facilitate problem solving
Imaginative scenarios	People create fantasy objects and settings to entertain themselves and others
Information dissemination	Many organizations, governments, and universities provides updated interactive information, which can be used to learn topics such as geography, public administration, hospitality management, and technology

Sources: Based on Daden Ltd. (2010), Murugesan (2008), Terdiman (2008), and **secondlife.com** (accessed April 2014).

t5/tkb/articleprintpage/tkb-id/English_KB@tkb/article-id/283.

Virtual worlds are targets for cybercriminals. For instance, Second Life has been attacked not only by outsiders, but also by groups of residents who created objects that harass other residents, or disrupted or damaged the system. Finally, virtual worlds are full of adult entertainment activities, some of which may not be legal. To protect the users, Second Life has increased security.

For a comprehensive teaching case that demonstrates both the opportunities and challenges in deploying Second Life, see Vitzthum et al. (2011).

For guidelines dealing with the major concerns regarding implementing virtual worlds, see Mahar and Mahar (2009).

SECTION 8.4 REVIEW QUESTIONS

1. List the major features of virtual worlds.
2. List the major spaces of virtual worlds.
3. Select 5 categories of major application of the 18 and describe them in detail.
4. Describe three business applications of virtual worlds in detail.
5. Describe trading of virtual properties.
6. List the major drivers of virtual worlds.
7. What are some of the concerns about the use of virtual worlds?

8.5 SOCIAL ENTERTAINMENT

The rich media capabilities of Web 2.0 technologies; the ability to engage millions of people who congregate in social networks and who are interested in online entertainment; the availability of innovative social media tools; and the creative and collaborative nature of Web 2.0 all facilitate social entertainment (e.g., *Gangnam Style* was YouTube's most watched video in 2012 and 2013). Web 2.0 tools also are aiding in the proliferation of on-demand entertainment. The most well-known entertainment application is streaming music (e.g., iTunes; **apple.com/itunes**). Also popular are Spotify, Pandora, and Google's All Access (**play.google.com/about/music**). The trend today is to stream music on-demand usually for free, which gives listeners the ability to enjoy whatever they want, whenever they want. Jurgensen (2014) provides a comprehensive coverage of digital music today and tomorrow, including information about providers and about players such as The Entery Level. Finally, Facebook and Twitter entered this area. This section describes some of the entertainment-centered social networks, as well as other issues related to entertainment in social commerce. Note that a major issue with such social networks is copyright violations, a topic we discuss in detail in Chapter 15.

Entertainment and Social Networks

A large number of social networks are fully or partially dedicated to entertainment. Well known examples in 2014 are Vimeo, Netflix, and MySpace. MySpace has a licensing agreement with Sony BMG and other large media companies that gives its members free access to streaming videos, music, and other entertainment. The following are representative examples of the use of Web 2.0 applications for entertainment.

Mixi

In Japan, Mixi, Inc. (**mixi.jp**) is a highly visited social networking service even though users must be invited to join. Mixi's goal is to allow users to build friendships with other users who share common interests. As of March 2012, the site had about 27 million members and over 1 million small communities of friends and interests.

Last.fm

Last.fm (**last.fm**) is not just an Internet radio station. It also recommends music to its listeners. Musical profiles are constructed when users listen to a personal music collection with a Last.fm plug-in or when they listen to the Last.fm Internet radio service. As of 2014, regular membership is free; premium membership is $3 per month. The site, which operates in 12 major languages (as of 2013), won the Digital Music Award for Best Music Community Site in 2006.

Pandora

Similar to Last.fm, Pandora (**pandora.com**) is a site for music lovers (see Chapter 3). It mostly acts as a personal radio. The site is based on user-centered

music recommendations. Pandora can create a personalized "radio station" based on a user's search for a particular artist, song, or genre.

Web Series and Streaming Movies

Web series are similar to episodic series on TV (e.g., soap operas). The number of Web series is increasing, and some are already available on DVD. Examples include *Hemlock Grove*, *House of Cards*, and *Johnny Dynamo*. For more about Web series and other examples, see **webserieschannel.com/web-series-101**.

Hulu

Hulu (**hulu.com**) offers advertisement-supported streaming on-demand videos of TV shows and movies from NBC, Fox, Disney (including ABC programs), and other networks and studios. Due to copyright laws, Hulu offers videos only to users in the United States and a few other countries. Hulu provides video in Flash video format. In addition, Hulu offers some TV shows and movies in high definition in a manner similar to Google Sites, Fox Interactive Media, and Yahoo! Sites. Users can manually share videos they like on their Facebook pages by using the "Facebook" button. It is not necessary to connect their Hulu and Facebook accounts to do this. Hulu is one of the most popular Internet video sites (see **nielsen.com/us/en/newswire/2013/binging-is-the-new-viewing-for-over-the-top-streamers.html**). Hulu offers some of its services free, supported by advertising. It also offers Hulu Plus, which includes premium shows and the ability to watch on more devices for a monthly fee of $7.99. This service, however, also features limited advertising. For more about their offerings and difference between Hulu and Hulu Plus, click on the "frequently asked questions" tab at **hulu.com/plus**.

Advertising and subscriptions are the primary social commerce business models for most streaming entertainment sites.

Funny-or-Die and Cracked.com

According to their website, Funny or Die (**funnyordie.com**) is a comedy video website created by actor and comedian Will Ferrell, among others. Unlike other viral video sites, members of Funny or Die are encouraged to vote on videos that they view. If they think the video is funny, viewers cast a vote for "Funny." The video then gets a score of the total percentage of people who voted the video "Funny." If the video receives an 80% or greater "Funny" rating after 100,000 views, it gets an "Immortal" ranking. If the video receives a 20% or less "Funny" rating after 1,000 views, it "dies" and is relegated to the Crypt section of the site.

Cracked.com, another humor website (which includes videos), also uses crowdsourcing to solicit material from the Internet crowd.

Multimedia Presentation and Sharing Sites

Multimedia sharing can be done in several ways, and its purpose is entertainment, advertising, training, and socialization. The following are some representative types of sharing, and companies in each area:

- **Photography and art sharing.** Flickr, Instagram, Picasa, SmugMug, Photobucket
- **Video sharing.** YouTube, Vimeo, Metacafe, Openfilm, Japan's Niconico (**nicovideo.jp**; now available in English as well),
- **Livecasting.** Twitch.tv, Livestream, Skype, Ustream
- **Mobile Social Networks:** Path, Liveme
- **Music and audio sharing.** ccMixter, FreeSound, Last.fm, MySpace, ReverbNation, The Hype Machine (**hypem.com/popular**)
- **Presentation sharing.** SlideSnack, SlideShare, authorSTREAM
- **Media and entertainment platforms.** Kaltura Open Source Video (**corp.kaltura.com/Video-Solutions/Media-and-Entertainment**, Accenture (Media and Entertainment; **accenture.com/us-en/industry/media-entertainment/Pages/media-entertainment-index.aspx**)

- **Virtual worlds.** Second Life, The Sims, Activeworlds, IMVU
- **Game sharing.** Miniclip, Kongregate

Note that many of these have some features of social networks; therefore, they may be referred to as such. In addition, most of these generate revenue from advertising and/or subscriptions, including from mobile devices.

SECTION 8.5 REVIEW QUESTIONS

1. Relate social networks to streaming music.
2. Describe the ways you can watch videos on the Web (streaming videos on-demand).
3. Describe some of the multimedia presentation sites.

8.6 SOCIAL GAMES AND GAMIFICATION

A **social game** is a video multiplayer game played on the Internet, mostly in social networks or in virtual worlds. Gamers can play against computers or against each other. Many social games are "massively" multiplayer online games (known as MMOG or MMO), which are capable of supporting hundreds to many thousands of players simultaneously. MMOG players can compete, collaborate, or just interact with other players around the globe. Many game consoles, including the PSP, PlayStation 8, Xbox 860, Nintendo DSi, and Wii can be played on the Internet. Additionally, mobile devices and smartphones based on such operating systems as Android, iOS, webOS, and Windows Mobile are seeing an increase in the number of MMO available games. Social games are very popular. According to the 2018 State of Online Gaming Report, 44% of worldwide Internet users play online games (see the report and infographic at **auth-83051f68-ec6c-44e0-afe5-bd8902acff57.cdn.spilcloud.com/v1/archives/1384952861.25_State_of_Gaming_2013_US_FINAL.pdf**), which is over 1.2 billion people (see **venturebeat.com/2013/11/25/more-than-1-2-billion-people-are-playing-games**). Although some games require fees for enhanced features, many are free (see Pearce et al. 2009).

Games on Social Networks

A **social network game** is a video game that is played in social networks, and usually involves multiplayers. Social (network) games may have little or nothing to do with how *social* the games are played. However, some games have social elements such as educating the public, gift-giving, and helping other or sharing playing strategies.

For a game to be more social, it should facilitate and encourage engagement and communication about the environment outside the game, run on or integrated with a social network, and use that network to enhance game play between players.

Example: Popular Games on Facebook

Players can choose from several thousands of games on Facebook. Some games are played by 50–150 million people each. The most popular games each attract tens of millions of players. Facebook's list of popular games for February 2014 includes Candy Crush Saga (most popular in 2014), FarmVille, FarmVille 2, CityVille, Bejeweled Blitz, Pet Rescue Saga, Criminal Case, Texas HoldEm Poker, Words with Friends, and Bubble Safari. (See **gamechitah.com/top-games-on-facebook.html**.)

As of September 2013, the major Facebook developers for games are King, Zynga, Social Point, and Pretty Simple. (See **beforeitsnews.com/science-and-technology/2013/10/top-9-facebook-developer-list-games-september-2013-2-2644806.html.**) Note that there is a trend to play more casino type games. To enhance the game experience, some platforms utilize the players' social graphs.

To learn more about social games, go to **museumstuff.com/learn/topics/Social_network_game**.

The Business Aspects of Social Games

To understand the variety of games and their properties and commercial possibilities, we suggest you watch the video "Social Media Games: Worldwide Gamification Is the New Paradigm for Life and Business" at **youtube.com/watch?v=xCWsgBHY_VU**. The video presents opportunities for advertising, marketing, and training, among others. Also, visit the site of Zynga (**zynga.com**), a major vendor in the field. During the 4th quarter of 2013 Zynga had about 298 million visitors. It took Facebook 4.5 years to reach the same level of visitors that Zynga reached in 2.5 years. However, Zynga's revenue was overestimated, causing the stock price to decline drastically. As far as revenues, Facebook games provide very little per person per month income. Electronic Arts, a Zynga competitor, has some games that generate three to five times more per game. Both companies have gone mobile. For example, FarmVille2 for iPad and iPhone are now available. For additional discussion, see Reeves and Read (2009).

Educational Social Games

Games can also be educational as the following examples show. Environmental apps for kids (e.g., for tablets) can be found at **usatoday.com/story/tech/columnist/gudmundsen/2013/09/01/ecology-learning-apps-kids/2700271**. See also **ecogamer.org/environmental-games.**

Example 1: Pollution Reduction Game

The Philippine-made Facebook game called Alter Space aims to educate the people on how to reduce pollution. Specifically, it educates the players about the concepts of carbon footprints and cleaner energy, and how people can help achieve a cleaner world. (Inactive now.)

Example 2: Economic and Finance Game – Empire Avenue

Empire Avenue (**empireavenue.com**) is a social media stock market simulation game where individuals and businesses buy and sell virtual shares from each other. The shares can be of individuals, companies, etc. The share price is based on the shares' trading activity coupled with the players' influence on the major social networks. The trading is done with reward points called *Eaves* and *Vees*. In the game, there are financial data and decision-making capabilities about dividends, number of shares outstanding, and share prices, to name just a few. Empire has many variables within the game. The reward points can also be used as virtual currency to play the Social Market game. Players can interact via popular social networks (e.g., Facebook, Twitter, Instagram) across the Web. The more social the player is, the more virtual currency the player will earn, and the bigger the player's Empire will become. Several major brands are already using this site (e.g., Toyota, AT&T, Audi, and Ford). For details, see Empire Avenue at **businesses-grow.com/2014/01/08/how-empire-avenue-crushed-my-soul**.

Gamers Helped Scientists

For decades, scientists were unable to unfold the chemical chain of an enzyme of an AIDS-like virus. However, according to a September 19, 2011 article in the Balita Filipino News (**balita.com**), researchers at the University of Washington turned Foldit, a "fun for purpose" program created by the university, which transfers scientific problems into competitive computer games.

The gamers were divided into groups and were challenged to compete by using their problem-solving skills to build 3D models of a protein that scientists had been unable to find for years. The players solved the chemical chain problem accurately in just three weeks. (See **balita.com/online-gamers-crack-aids-enzyme-puzzle**.) For more about Foldit ("Solve Puzzles for Science"), see **fold.it/portal**.

Gamification

Some social games are designed so that players will connect with vendors or brands in the game environments. This is only one aspect of **gamification**, which refers to the introduction of gaming

into social networking. Gamification can also be viewed as the introduction of social networking activities into online games. Our interest is in those applications that are related to social commerce and e-commerce. For more definitions and limitations, see the Gamification Wiki (**gamification.org**), and Duggan and Shoup (2013).

Social activities are not new to online gaming. For example, players collectively agree to the rules of the games. Also, gamers need trust between the players. What is new here is the integration of traditional multiplayer games and social networking. Given that so many people play online games, it is not surprising that vendors are encouraging players (e.g., via rewards) to engage in desired behavior (e.g., problem solving or collaboration). Vendors also use games as advertising platforms. For a gamification framework see Chou (2012).

According to a Lithium white paper (2011) and Florentine (2014), companies can use gamification to create winning social customer experiences such as increasing loyalty, building trust, accelerating innovation, providing brand engagement, and increasing relevant knowledge. For how to use gamification to engage employees, see Hein (2013).

For commercial possibilities and strategies of social games and gamification, see Radoff (2011), Dignan (2011), and Zichermann and Linder (2013).

For additional information, you can download the e-book titled "The Essential Social Playbook: 8 Steps to Turn Social into Sales," at **powerreviews.com/assets/new/ebooks/powerreviewsessentialsocialplaybook.pdf** and review Walter (2013).

SECTION 8.6 REVIEW QUESTIONS

1. Describe online games.
2. Describe games in social networks.
3. Discuss the business aspects of social games.
4. What is gamification? Relate it to social commerce.

8.7 CROWDSOURCING FOR PROBLEM SOLVING AND CONTENT CREATION

The essentials of crowdsourcing were described in Chapter 2. Listed there, as a major capability, was the facilitation of problem solving.

Crowdsourcing as a Distributed Problem Solving Enabler

Crowdsourcing actually describes a set of tools, concepts, and methodologies that deal with the process of outsourcing work, including problem solving and idea generation to a *community* of potential solvers known as the 'crowd.'

More than just brainstorming or ideation, crowdsourcing uses proven techniques to focus on the crowd's innovation, creativity, and problem-solving capacity on topics of vital interest to the host organization. An overview of crowdsourcing is provided in Jeff Howe's video titled "Crowdsourcing" (3:20 minutes) at **youtube.com/watch?v=F0-UtNg3ots**, **crowd-sourcing.org**, and in Brabham (2013). Also watch Brabham's video "Crowdsourcing As a Model for Problem Solving" (6.1 minutes) at **youtube.com/watch?v=hLGhKyiJ8Xo.**

Crowdsourcing Models

Howe (2008) has classified applications of crowd-sourcing into the following four categories:

1. **Collective intelligence (or wisdom).** Here, people are solving problems and providing new insights and ideas leading to product, process, or service innovations.
2. **Crowd creation.** Here, people are creating various types of content and sharing it with others (paid or for free). The content may be used for problem solving, advertising, or knowledge accumulation. This can be done by splitting large tasks into small segments (e.g., contributing content to create the Wikipedia).
3. **Crowd voting.** Here, people are giving their opinions and ratings on ideas, products, or services, as well as evaluating and filtering information presented to them. An example would be voting on American Idol.

4. **Crowd support and funding.** Here, people are contributing and supporting endeavors for social causes, which might include volunteering their effort and time, offering donations, and micro-financing.

Chaordix Corp. (**chaordix.com**) classifies crowdsourcing into the following three models:

1. **Secretive.** Individuals submit ideas, and the winner is selected by the company. Ideas are not visible to all participants.
2. **Collaborative.** Individuals submit ideas, the crowd evaluates the ideas, and the crowd picks the winners. Ideas are visible to all participants.
3. **Panel selects.** Individuals submit ideas, the crowd evolves ideas, a panel selects finalists, and the crowd votes for the winner.

A *crowdsortium* is a community of industry practitioners whose mission is to advance the crowdsourcing industry through best practices and education (see **crowdsortium.org**).

Crowdsourcing also has the potential to be a problem-solving mechanism for governments and nonprofit use via community participation. Urban and transit planning are prime areas for crowdsourcing. One project used crowdsourcing to encourage public participation in the planning process for the Salt Lake City transit system (from 2008 to 2009). Another notable application of crowdsourcing to government problem solving is the Peer to Patent Community Patent Review project for the U.S. Patent and Trademark Office, see **peertopatent.org**. (This project opens the patent examination process to public participation.)

Progressive companies and organizations now recognize the value of tapping into the wisdom of the crowd to capture the best answers and the most innovative ideas.

The Process of Crowdsourcing

The process of crowdsourcing, which was described briefly in Chapter 2, differs from application to application depending on the models of the specific problem to be solved and the method used. However, the following steps exist in most enterprise applications, even though the details of the execution differ. The major steps are based on the generic process described in Chapter 2. They are:

1. Identify the task (problem) you want to investigate or accomplish.
2. Select the target crowd.
3. Broadcast the task to the crowd. (Frequently to an unidentified crowd in an open call, as Starbucks and Dell do.)
4. Engage the crowd in accomplishing the task (e.g., idea generation).
5. Collect the user-generated content. (This may include a submission of solutions, voting, new ideas, etc.)
6. Evaluate the quality of submitted material – by the management that initiated the request, by experts, or by the crowd.
7. Accept or reject a solution.
8. Compensate the crowd.

The MIT Guide for Collective Intelligence

Malone et al. (2010) conducted a detailed analysis about the use of what they call **collective intelligence** (**CI**), which is an application of crowdsourcing for problem solving, idea generation, and innovation. The researchers attempted to answer the question: "How can you get the crowds to do what your business needs done?" Their major findings are provided in Malone et al. (2010).

Successfully Deployed Crowdsourcing Systems: Some Representative Examples

The following are some representative examples of implemented crowdsourcing systems.

- **Dell's IdeaStorm** (**ideastorm.com**) enables customers to vote on Dell's product features they prefer, including new ones. Dell is using a technically-oriented crowd, such as the Linux (**linux.org**) community. The crowd submits ideas and sometimes members of the community vote on them.
- **Procter & Gamble's** researchers post their problems at **innocentive.com**, and at **ninesigma.com**, offering cash rewards to problem solvers. P&G uses other crowdsourcing service providers such as **yourencore.com**.
- **Amazon Mechanical Turk** (**mturk.com**) is a marketplace for distributing large scale work that requires human intelligence. It is limited to large tasks that can be divided (known as HITs – human intelligence tasks) and is posted by companies that need assistance. Then, Amazon arranges workers (the "Mechanical Turk Workers"), each of whom is allocated a small subtask, and is paid when the work is completed. For details see **mturk.com**.
- **Facebook** (**facebook.com**) used crowdsourcing to translate its site into more than 65 different languages. The completion of the English to French translated by over 4,000 volunteers only took one day; however, Facebook had to hire a team of professional translators to oversee the whole crowdsourcing process to ensure that the resulting translations were accurate.
- **Goldcorp** (**goldcorp.com**), a Canadian mining company, was unable to find sufficient gold. In 2000, the company initiated an open call to the public, providing geological data and a $575,000 in prizes to participants with the best methods. Using the submitted ideas, the company discovered $3 billion worth of gold.
- **Frito-Lay** (**fritolay.com**) used crowdsourcing for designing a successful annual Super Bowl advertising campaign.
- **Wikipedia** (**wikipedia.org**) is considered by many to be the "granddaddy" of crowdsourcing, and is certainly the world's largest crowdsourcing project.

Tools for Crowdsourcing

To launch crowdsourcing initiatives, businesses and developers can make use of crowdsourcing tools and platforms, such as NineSigma, InnoCentive, YourEncore, yet2, UserVoice, Get Satisfaction, and IdeaScale.

Crowdfunding and Kickstarter

Raising funds from the crowd for different purposes is gaining popularity with several start ups operating in this area. A notable company is Kickstarter. For how they help small businesses see the 2013 video **youtube.com/watch?v=xudOhEYIwyU**.

For tools for crowdfunding, see *2013*CF *Crowdfunding Market* report, or **crowdsourcing.org** and **powerdecisions.com/faq-idea-generation-methods.cfm**.

Hypios: A Marketplace for Crowdsourcing

According to its website, Hypios (**hypios.com**) is a multinational social marketplace with over 950,000 registered experts across the world. As a problem-solving individual or research organization, one can create a profile, make professional contacts, and connect with colleagues (for a fee), peers, and friends. If you are a problem solver and only want to solve problems on Hypios, you choose what information you want to disclose and decide who can see it. In Hypios, users can share activities with their contacts on other social networks. You can develop your own networks or join one of the many networks that already exist on Hypios. Users can meet with people who

share their interests and follow their friends' activities. After seeing what their friends are working on, people can decide to either compete or collaborate with their friends on problem solving. For more information, watch the video titled "Hypios Trailer" (0:46 minutes) at **youtube.com/watch?v=WecFY6LI9Bk**. Problems to be solved are posted on **hypios.com/problems** (citing fees, solutions needed, time frame, etc.) and on their Facebook page (**facebook.com/hypios**). Solvers and solutions are ranked by peers. As a market organizer, Hypios provides a service to solution seekers as it combines intelligent crowdsourcing and expert identification. By applying advanced Semantic Web and machine-learning technologies, Hypios identifies problem solvers based on their publicly available data on the Internet. It then invites these solvers to compete to solve specific research and development (R&D) challenges in their areas of expertise.

Note: Crowdsourcing is used by thousands of volunteers to search disaster areas, such as typhoons in the Philippines and locating the missing MH370 Malaysian jet.

SECTION 8.7 REVIEW QUESTIONS

1. Define crowdsourcing.
2. List the seven crowdsourcing models.
3. List the major steps of the crowdsourcing process.
4. What are the capabilities of Kickstarter and Hypios?

8.8 SOCIAL COLLABORATION (COLLABORATION 2.0)

One of the major applications of Web 2.0 and social media in the enterprise is in the area of collaboration. Some even equate Web 2.0 with enterprise collaboration (e.g., McAfee 2009). Social collaboration is used for many purposes, an important one being product design.

Supporting Social Collaboration

Collaboration in business can be defined as people working with other people toward a common outcome or goal. For a comprehensive overview of collaboration supported by IT, see McCabe et al. (2009). For many images of social collaboration, search Google for: 'Images of social collaboration'.

Social collaboration refers to people's collaboration within and between communities enabled by social media tools and platforms. The processes help people interact and share information to achieve a common goal. It is also known as *Collaboration 2.0*. Collaboration 2.0 is recognized as a major element in social business that can provide considerable benefits (e.g., see examples in IBM Software Group 2011). For implementation of social collaboration, see Carr (2013).

Social Collaboration (Collaboration 2.0)

Collaboration drives business value up by enabling people to work together more efficiently. Wikis and other social software tools can be used effectively by all types and sizes of enterprises for a wide range of tasks and activities. Collaboration helps with solving business problems and uncovering new opportunities, especially with the help of social media tools (see details at Morgan 2012). Collaboration in social networking is done both internally, among employees from different units working in virtual teams, and externally, when working with suppliers, customers, and other business partners. For example, collaboration occurs in forums and other types of groups and by using wikis and blogs. For details on collaboration in social networks, see Coleman and Levine (2008). For the use of Collaboration 2.0 in the enterprise, see Dortch (2012) and Turban et al. (2015).

Social collaboration has several dimensions as illustrated in Figure 8.2.

Some believe that in the future, people will use mostly Web 2.0 tools, rather than e-mail, for collaboration. For a discussion, see **thefutureorganization.com**.

A large number of Web 2.0 tools are used to support social collaboration. The support is given to idea sharing, communication, working together on the same documents, and more. The Web 2.0 tools range from wikis to virtual worlds. For comprehensive coverage, see Coleman and Levine (2008). For the relationship between the

Figure 8.2 The various dimensions of social collaboration

different modes of collaboration and the appropriate tools, see Fauscette (2011).

Dunay (2014) describes in a webinar how to use enterprise social networks for internal collaboration.

The development of tools, philosophies, and procedures of social media support for collaboration allows employees and managers to engage much more fully in the collaboration process. Furthermore, social collaboration has improved the organizational culture.

Social collaboration is supported mainly by:

- Wikis, blogs, and microblogging (e.g., Twitter)
- Virtual worlds (see Heiphetz and Woodill 2010)
- Collaborative communities (forums and discussion groups)
- Early vintage Web 2.0 technologies
- Crowdsourcing
- Other tools (e.g., Yammer)

Most collaboration software vendors are adding Web 2.0 tools to their collaboration suites (e.g., Binfire Inc.).

Using Blogs and Wikis Inside the Enterprise

In Chapter 2, we provided some examples of blogs and wikis used within enterprises. The use of these tools is expanding rapidly. Companies use blogs and wikis for the following activities:

- Project collaboration and communication
- Process and procedure documentation
- FAQs
- E-learning and e-training
- Forums for new ideas
- Corporate-specific dynamic glossary and terminology
- Collaboration with customers

As you can see, most of the activities in the previous list relate to collaboration. For additional

information, see **zdnet.com/blog/hinchcliffe** (several blogs), and Hinchcliffe (2011).

Using Twitter to Support Collaboration

Twitter already is used extensively in the enterprise to support collaboration. For example, Wagner (2009) describes the use of Twitter to facilitate the work of focus groups and other collaborative teams. Twitter is used extensively for interaction with customers and prospects as well as for conducting market research.

The Role of Mobile Commerce in Social Collaboration

As described in Chapter 6, mobile commerce is growing very rapidly. Most enterprise social applications can be done on wireless devices. This is particularly true for communication and collaboration.

Questions and Answers in Social Networks

In a Q&A "answer" function individuals and companies can post questions. For example, in LinkedIn community: go to the Help Forum and use the posting module on your home page to ask your network a question, and the community provides you with answers. You can also ask a question on the 'share box' on the home page. Many other professional networks and their internal groups provide advice and supporting material for helping in decision making. These services can be either paid or for free. For example, according to the medical social network 'Sermo' (**sermo.com**; "Social Media Meets Healthcare"), a large online community exclusive to physicians, "has an app that allows physicians to author and discuss urgent and interesting patient cases from any Web- or mobile-enabled device, and based on market tests, be almost assured feedback from multiple colleagues. Typical questions and responses include requested/suggested diagnoses and treatments with the best insights often resulting from collaboration among the doctors" (see **sermo.com/news/press-releases/54**).

Suites of Tools for Social Collaboration

Several companies offer suites of social collaboration tools, either as stand-alone products or as added tools in existing collaboration suites.

Example 1: IBM Connections

IBM Connections provides tools such as forums, wikis, and blogs, and new capabilities like advanced social analytics, which enable users to expand their network of connections and engagement. For details, see press release "IBM Launches New Software and Social Business Consulting Services" at **ibm.com/press/us/en/pressrelease/32949.wss**.

You can download many free white papers at the IBM Jam Events page (**collaborationjam.com**). According to Hibbard (2010), IBM has 17,000 internal blogs (used by 100,000 people), 53,000 members in SocialBlue (an internal clone of Facebook, called Connections today with over 70,000 members), 300,000 members on LinkedIn (January 2014), and over 500,000 participants in crowdsourcing. IBM also provides the tools needed to support innovation. Today these numbers are larger.

Example 2: Cisco WebEx Meeting Center (Formerly Cisco Quad)

Cisco WebEx, according to Cisco's website, is an enterprise collaboration platform, which is designed for today's workforce, is characterized by social, mobile, visual, and virtual features. WebEx connects people to the information and expertise they need, when they need it. Knowledge and ideas are easily shared across the enterprise, and teams collaborate across geographical and organizational boundaries. For details, see **webex.com/products/web-conferencing/mobile.html**.

WebEx Meetings is a universal app available for the Apple iPad, iPhone and Android phones. For other WebEx social features, see **webex.com/products/web-conferencing/mobile.html**.

Example 3: Laboranova

Under the European Union's Sixth Framework Programme, Laboranova (**laboranova.com**) assists professionals that take part in the management and development of innovations. Laboranova's tools and methodologies assist in the areas of team building, knowledge management, and the evaluation of innovations. It consists of a suite of Web 2.0 tools adopted for social innovation and collaboration. The tools include InnoTube (**laboranova.com/pages/tools/innotube.php?lang=DE**), which operates like a private YouTube for business; and Melodie (**laboranova.com/pages/tools/melodie.php?lang=DE**), which creates visual maps of concepts or idea submitted by its users, so that other users can comment or elaborate on the initial ideas.

For a list of vendors, the tools they use, and the type of collaboration/communication supported in the context of general use cases, see Fauscette (2011). For the benefits of social collaboration, see **web.esna.com/blog/social-collaboration-at-c-level**.

The Future of Social Commerce

In determining justification and strategy of social commerce, we need to look into the future. Many researchers and consultants are speculating on the future (e.g., **slideshare.net/YairCarmel1/e-commerce-trendsesenglish?related=3**). The predictions are diverse, ranging from "SC will dominate EC" to "it is a buzz word and will disappear soon." Given the popularity of Facebook, Twitter, Pinterest, YouTube, social games, social shopping, and social advertising, it is difficult to side with the pessimistic predictions. It looks as if mobile social commerce will be a major area of growth. Also, several of the social shopping and social collaboration models could be very successful. In the enterprise area, there is a trend to have a "social as a service" rather than as an application approach (due to the influence of cloud computing).

Conclusion: IBM's Watson and Social Commerce

There are many opinions on what the future of SC will be. Instead of presenting them, we decided to end this chapter by looking at IBM's Watson supercomputer. In February 2011, IBM's Watson won a *Jeopardy* 8-day tournament against two world champions. This was a great achievement for what IBM calls Social Business and Smart Computing. Aided by intelligent systems such as IBM's Pure Systems, Watson will be able to do much more. According to **research.ibm.com/smarterplanet/us/en/ibm**, Watson may assist people in the following social commerce-related tasks (for a full description see Lawinski 2011).

- **Personal investment advisor.** There is no need to conduct research any longer. All you have to do is to state your investment goals and Watson will make recommendations after checking all the needed input data. Given what goals you have, Watson can figure out what you need, recommending what to buy or sell. Upon your approval, Watson can conclude the deal for you.
- **Language translator.** In EC we sometimes need language translation for introducing websites to people who understand other languages, in order to exploit global opportunities. We need it also for translating a natural human language to a language that a computer can understand. Today's automatic machine translation is not optimal, but it is improving. Computer systems, such as IBM's Watson, have powerful natural language processors that are getting even better with time, and thus provide better machine translation.
- **Customer service.** Providing technical support is critical for success (e.g., see the iRobot case in Chapter 7). Watson's intelligence will enable automatic guides for people who need help, taking them through all the necessary steps. The service will be consistent, top quality, and available in real time.
- **Q&A service.** Watson will provide the best answers to any business, medical, legal, or personal question you have. It can answer any question and subsequent subquestions.

- **Matchmaking.** Watson can match sellers and buyers, products and markets, job seekers and job offers, partners to bartering, P2P lending participants or any other match you can think of. For example, Watson will be able to find you a partner who will fit your stated goals. IBM's Watson is related to IBM's Smarter plant activities (see **ibm.com/smarterplanet/us/en/ibmwatson/implement-watson.html**).

SECTION 8.8 REVIEW QUESTIONS

1. Define social collaboration.
2. List and describe the major benefits of social collaboration briefly.
3. List social collaboration tools.
4. What are the major points related to the future of social commerce?

MANAGERIAL ISSUES

1. **What are some of the ethical issues that may be involved in deploying social commerce?** Social commerce can lead to several ethical issues such as privacy and accountability. In addition, mistakes can cause harm to users as well as to the company. Another important ethical issue is human judgment, which is frequently a key factor in social commerce. Human judgment may be subjective or corrupt, and therefore, it may lead to unethical consequences. Companies should provide an ethical code for system builders and users. There are ethical issues related to the implementation of idea generation and other problem solving–related considerations. Some actions performed in a simulated virtual world can be unethical, or even illegal. One issue to consider is whether an organization should employ productivity-saving devices that are not ethical. Another ethical issue is the use of knowledge extracted from people in crowdsourcing. A further related issue is whether a company should compensate an employee when others use knowledge that he or she contributed. This issue is related to the motivation issue. It also is related to privacy. Should people be informed as to who contributed certain knowledge?
2. **How should we deal with social commerce risks?** There are several possible risks in implementing social commerce, depending on the applications. For example, to protect the security of the SC open source system, you need to consult your internal security experts and you may need some outside legal advice. There is also the risk of information pollution and biased or falsified user generated content. You may also need to use a consultant for large projects to examine and evaluate the associated risks. Weighing the benefits of social media against security and other potential risks is a major strategy issue (see Tucci 2010).
3. **Should we move to be a social business?** It depends on the estimated costs and benefits. Also, it is possible to introduce some, but not all, features of social enterprise. For example, using crowdsourcing, like CEMEX did by itself, can be very beneficial. Social collaboration may be cost-effective as well.
4. **What about a private, in-house social network?** Such a venture may bring many benefits and it can be combined with internal activities of crowdsourcing, as well as with social collaboration with business partners. Most successful in-house networks are used for idea generation, internal collaboration, recruitment, and public relations.
5. **Is it beneficial to engage in virtual worlds?** It depends on what you want to do there. See if any of your competitors in the virtual world. There are lots of opportunities (see the list of 18, Section 8.4). But, the success is questionable. This is not the place for SMEs. One needs a great deal of imagination and technical expertise.
6. **Shall we try gamification?** In most cases it is wise to wait and see the results of other companies. The deployment requires skilled employees. In certain applications the reward can be large. But in most cases we are not sure at this time. As one says: "Try it, you make like it."

SUMMARY

1. **The social enterprise.** Conducting social networking activities in the enterprise can result in substantial benefits. Two types of business

social networks exist, public and private. The private network is company owned; it may have restricted access, or it may be open to the public. The public network (e.g., LinkedIn) is used mainly for recruiting, connections, collaboration, and marketing communication. The private, in-house social enterprise uses Collaboration 2.0, social CRM, social marketing media, and more. You can even "spy" on your competitors (see **entre-preneur.com/article/229350**). All this translates to improved relationships with employees, customers, and business partners. Significant cost reduction, productivity increase, and competitive advantage can be achieved as well.

2. **Business-oriented public social networks.** Following the successful examples of LinkedIn and Xing, many public business-oriented networks were created. Notable networks are Viadeo (**us.viadeo.com/en**) and Google+. Applications vary from recruiting to market research and advertising. Most notable is f-commerce. One major activity in public networks is external collaboration. Several entrepreneurship networks also exist.
3. **Major enterprise social commerce activities.** Currently, collaboration and communication, as well as community building, are the major activities. In addition, problem solving via idea generation and finding expertise are becoming more and more important. Related to this is knowledge creation and management. Companies recruit, train, and conduct other HRM activities in enterprise networks. Several companies also use the enterprise social network for interactions with customers, suppliers, and other business partners.
4. **Commercial application of virtual worlds.** The major P2P commercial activity is trading or renting virtual goods. Companies conduct virtual meetings, training sessions, test designs, advertise, provide customer service (e.g., receptionists, call centers), recruit, organize trade shows, do market research, provide commercial games, and more.
5. **Social commerce, entertainment, and gaming.** Rich media, user-created content, and groups and subgroups with common interests have opened many possibilities for a second generation of online entertainment. Add to this the wireless revolution and the increased capabilities in mobile devices to support Web 2.0 tools and social networking activities, and you will discover a new and exciting world of online entertainment ranging from music and videos to comedy.
6. **Social gaming and gamification.** Many Internet-based games include some social activities. Players collectively agree to the rules and act as community members. Companies such as King and Zynga create the games which are played on Facebook and other social networks. This is one aspect of gamification. Another aspect is the introduction of social media into games.
7. **Crowdsourcing and social networking.** Crowdsourcing in the enterprise is used mostly for idea generation, voting, and problem identification. Content creation and updating projects, such as volunteers translating the Facebook website to French and German, falls into this category. Crowdfunding is an application for raising funds.
8. **Social collaboration.** Many see social collaboration (Collaboration 2.0) as the major activity that social media supports. Activities supported range from joint design to problem solving.
9. **The future of social commerce.** The general consensus is social commerce will grow rapidly; but some disagree. A major boost to social commerce is IBM's innovations (particularly the Watson Computer and Smarter Commerce).

KEY TERMS

Business social networks
Collective intelligence (CI)
Gamification
Social business
Social collaboration (Collaboration 2.0)
Social enterprise
Social Internet game
Social network game

DISCUSSION QUESTIONS

1. How do public business-oriented networks and private enterprise social networks differ?
2. Discuss the role of crowdsourcing in idea generation and in other enterprise activities.
3. Corporate social networking: Booster or time-waster? What are the pitfalls of enterprise social networking? Discuss.
4. How can crowdsourcing reduce risks to merchants?
5. What are some of the risks companies may face if they decide to use public social networks?
6. Review the features of Socialtext (**socialtext.com**). Discuss how you would make use of this platform in a small enterprise in retail, manufacturing, or financial services.
7. What real value do virtual worlds present to commercial users and businesses?
8. Read Smith (2012) and discuss how social collaboration can support talent management.
9. Discuss the social aspects of crowdsourcing and virtual worlds.
10. How can gamification be used in business?
11. Compare and contrast social collaboration and crowdsourcing.

TOPICS FOR CLASS DISCUSSION AND DEBATES

1. Debate: Should a crowd have professional knowledge of the task it has been given or not?
2. Some claim that using social collaboration may be slow and ineffective. Others disagree. Debate the issue.
3. Idea generation by the employees or customers using crowdsourcing is becoming popular. However, some say it is only an electronic suggestion box. Others disagree. Discuss.
4. What are the potential major legal issues that business applications in virtual worlds might encounter? Refer to online resources, including **socialgameslaw.com**.
5. Despite the attributes of virtual worlds, the technology has neither become popular nor is it being used widely. (Compare its use for example, with Facebook, Twitter, blogs, or wikis.) What aspects hinder their adoption? What are the critical success factors? Discuss.
6. Debate: Should companies build in-house social networks for external activities (e.g., marketing, CRM) or use existing public social networks?
7. Debate: Can knowledge be socialized?
8. Examine the Grand Theft Auto game. Why the game is so popular? Are there any social elements there?
9. Why does one needs a special entrepreneur network? What features make it effective?
10. What are some of the risks companies may face if they decide to use public social networks?
11. Review the features of Socialtext (**socialtext.com**). Discuss how you would make use of this platform in a small enterprise in (a) retail, (b) manufacturing, and (c) financial services.
12. Would you use **monster.com** or **linkedin.com** for recruiting top managers, or would you rather use a traditional agency? Why?
13. Crowdfunding is becoming very popular. Find recent information about its success. What are some of the implementation challenges?

INTERNET EXERCISES

1. Enter **xing.com** and **linkedin.com** and compare their functionalities (capabilities). Also, enter **youtube.com/watch?v=pBAghmYMG0M** and view the video "Ryze Business Networking Tutorial" (7:20 minutes). Compare Ryze's capabilities with those of LinkedIn.com. Write a report.
2. Enter **pandora.com**. Find out how you can create and share music with friends.
3. Enter **secondlife.com** and find the commercial activities of the following avatars: Fizik Baskerville, Craig Altman, Shaun Altman,

Flipper Peregrine, and Anshe Chung. Briefly describe, what they represent. Relate this to social commerce.

4. Enter **arianeb.com/more3Dworlds.htm**. View several worlds, and make a list of unique properties. Discuss the capabilities of virtual worlds.
5. Enter **innocentive.com**. Describe how this site works. List their major products and services. Identify benefits and challenges.
6. Enter **hulu.com/plus**. Why is it an online entertainment service? What are the benefits to viewers? Compare this site to **starz.com**.
7. Enter **gaiaonline.com** and find all socially oriented activities. Write a report.
8. Enter the **gillin.com/blog** and find information related to enterprise applications of social commerce technologies. Write a report.
9. Enter **brazencareerist.com/company** check the services Brazen provides. Compare services to the virtual event hosted at **expos2.com**.
10. Compare what **jobserve.com** and **aspiremediagroup.net** offer regarding solutions for recruitment. Differentiate services to employees from services to employers. Write a report.
11. Identify a difficult business problem. Post the problem on **linkedin.com**, and **answers.com**. Summarize the results or offers you received to solve the problem.
12. Enter **huddle.com** and take the interactive demo. (Registration required.) Also, view the video on the main page. Write a report on social collaboration activities.

TEAM ASSIGNMENTS AND PROJECTS

1. **Assignment for the Opening Case**
   Read the opening case and answer the following questions:
   (a) Describe the drivers of Shift at CEMEX.
   (b) Describe its major benefits.
   (c) Relate the case to Collaboration 2.0 and to crowdsourcing.
   (d) Enter Garcia et al. (2011) and view the supporting videos. Prepare a summary of one video.
2. The crowdsourcing model works with designers, like this: (1) A company outlines an area for which they need a design. (2) The company turns the design outline into a competition (e.g., among experts, among amateurs, or between amateur and professional designers). (3) A winner is selected by management, consultants, or by the crowd. This is done at little cost.
   (a) If this model becomes widespread, how will it affect the design industry?
   (b) What is the purpose of the competition?
   (c) Some believe that amateurs can do the best job. Others disagree. Find information and discuss.
   (d) Compare this situation to the Polyvore model. Discuss.
3. Some consider gamification to be a major social commerce technology of the future. Enter **badgeville.com/wiki/External_Resources.** Find additional resources. Also check Yu-Kaichou's framework at **yukaichou.com/gamification-examples/octalysis-complete-gamification-framework/#.UuzK8vldWSo**. Write a report on the existing and potential applications of gamification in e-commerce and social commerce.
4. All students register as members at LinkedIn.
   (a) Each team member joins two LinkedIn groups and observes their activities.
   (b) All join the EC group: (**group-digest@LinkedIn.com**). Follow some of the discussions there. Have a joint class presentation on the value of groups at LinkedIn.
5. Check the competition in the area of streaming music services (e.g., check Spotify, Amazon, Apple, Google, etc.). Write a report.
6. The crowdsourcing model works with designers as described in Team Assignment #2. Now, think about the future of the graphic design industry in general. What will be the fate of large design firms that are competing for the business of high-profile clients when the clients are now paying tiny, one-time fees to amateur designers? Is using crowdsourcing in your business (or a business you are familiar with) a viable model?

7. Yammer, Huddle, Chatter, and Jive Software are cloud-based social networking services. They are considered very useful, replacing traditional enterprise tools. Investigate the issue and write a report.

CLOSING CASE: EC APPLICATION: LINKEDIN: THE PREMIER PUBLIC BUSINESS-ORIENTED SOCIAL NETWORK

Let us look at LinkedIn (**linkedin.com**), the world's largest professional network. LinkedIn is a global business-oriented social networking site (has offered in 23 languages), used mainly for professional networking. By December 2013, it had about 259 million registered users spanning 200 countries and territories. By the end of 2013 there were 2.1 million different groups, each with a special interest. LinkedIn can be used to find jobs, people, potential clients, service providers, subject experts, and other business opportunities. The company became profitable in 2010 with revenue approaching $2.2 billion in 2014. The company filed for an initial public offering in January 2011, and its stock is one of the best performing on the stock market. A major objective of LinkedIn is to allow registered users to maintain a list of professional contacts (see **en.wikipedia.org/wiki/LinkedIn**), i.e., people with whom they have a relationship. The people in each person's network are called *connections*. Users can invite anyone, whether he or she is a LinkedIn user or not, to become a connection. When people join LinkedIn, they create a profile that summarizes their professional accomplishments. This profile makes it easier to be found by recruiters, former colleagues, and others. Members can also meet new people and find opportunitiesfor collaboration and marketing (see **brw.com.au/p/business/million_members_places_counting_Igi7nirJjn6NfV7KexTv0H**).

LinkedIn is based on the concept of "degrees of connections." A *contact network* consists of a user's direct connections (called first degree connections), people connected to their first-degree connections (called second degree connections), and people connected to the second-degree connections (called third degree connections). Degree "icons" appear next to a contact's name. For more about degrees, see "Six Degrees of Separation – LinkedIn Style" at **thedigitalfa.com/d-brucejohnston/six-degrees-of-separation-linkedin-style**. The contact network makes it possible for a professional to gain an introduction, through a mutual, trusted contact, to someone he or she wishes to know. LinkedIn's administrators themselves are also members and have hundreds of connections each (see Elad 2014 and **linkedin.com**).

The "gated-access approach," where contact with any professional requires either a preexisting relationship or the intervention of a mutual contact, is intended to build trust among the site's users.

The searchable LinkedIn groups feature allows users to establish new business relationships by joining alumni, industry, professional, or other relevant groups. As of February 2014, it has approximately 2.1 million groups in its directory.

LinkedIn is especially useful in helping job seekers and employers find one another. According to Ahmad (2014), 94% of all U.S. recruiters use LinkedIn to examine potential candidates. Job seekers can list their résumés, search for open positions, check companies' profiles, and even review the profiles of the hiring managers. Applicants can also discover connections with existing contacts (people) who can introduce them to a specific hiring manager. They can even see who has viewed their profiles. For details see **linkedin.com/company/linkedin/careers** and **linkedin.com/directory/job.**

Companies can use the site to post available jobs and find and recruit employees, especially those who may not actively be searching for a new position.

Smart Ways to Use Linkedin

LinkedIn is known mostly as a platform for recruitment, job searches, and making connections. However, there are many opportunities in

the network for marketing, advertising, sales, and more. Members can ask others to write recommendations (endorsements) for them. For a list of opportunities, see **linkedintelligence.com/smart-ways-to-use-linkedin**.

In lieu of LinkedIn Answers that was discontinued in 2013, a new service is available, per **help.linkedin.com/app/answers/detail/a_id/35227**.

In mid-2008, LinkedIn launched LinkedIn DirectAds (renamed "Ads" in 2011). Ads, which is their version of Google's AdWords, is a self-service, text-based advertising product that allows advertisers to reach a targeted professional audience of their choosing (see their FAQ's at **help.linkedin.com/app/answers/detail/a_id/1015**). For a comparison between DirectAds and AdWords, see **shoutex.com/linkedin-directads-google-adwords-ppc-1** and **shoutex.com/linkedin-directads-vs-google-adwords-2**.

According to Ahmad (2014), LinkedIn has 3 times higher 'visitor-to-lead' conversion rate than Facebook and Twitter.

In 2008, LinkedIn joined forces with the financial news channel CNBC. The deal integrates LinkedIn's community and networking functionality into CNBC.com, allowing users to share and discuss financial and other news with their professional contacts. Communitygenerated content from LinkedIn, such as survey and poll results, are broadcast on CNBC, and CNBC provides LinkedIn with programming, articles, blogs, financial data, and video content. Because of this connection, CNBC is able to draw insights from LinkedIn's global user base to generate new types of business content for CNBC to broadcast. In 2014, LinkedIn could provide job matching to positions available, by using a computer algorithm that determines potential employee's fitness to potential jobs.

LinkedIn can also be used for several other marketing strategies such as creating special groups to promote interest in events, purchasing paid media space, and seeing what your competitors are doing (e.g., see Schaffer 2011 and **linkedin.com/about-us**). Note that about 75% of LinkedIn members are located outside the United States. For example, most users are in Brazil, India, the United Kingdom, and France. Over 1.5 million teachers are on LinkedIn and use the site for educational purposes.

As previously mentioned, LinkedIn is a public company. It was an instant success, as the share price almost tripled the first day of trading. In contrast, shares of Monster, a major online recruiting company, plunged more than 60% during 2011, mainly due to investors' fear that LinkedIn would take business away from Monster.

LinkedIn constantly adds capabilities to its site. For example, in 2014, the company launched features that help increase local relevance.

Mobile Applications

A mobile version of LinkedIn, launched in February 2008, offers access to most features in the site by using mobile devices. The mobile service is supported in many languages, including Chinese, English, French, German, Japanese, and Spanish (for mobile devices and supported languages, see **help.linkedin.com/app/answers/detail/a_id/999**). A recent application is the ability to apply for jobs from smartphones and tablets.

Some Resources for Linkedin

The following are some useful resources on LinkedIn: **blog.linkedin.com**, **mylinkedinpowerforum.com**, and **linkedin.com/search**.

For LinkedIn success stories, see Elad (2014), Schaffer (2011), and **cbsnews.com/news/linkedin-5-job-search-success-stories**

Sources: Based upon Elad (2014), Schaffer (2011), Gowel (2012), Ahmad (2014), **en.wikipedia.org/wiki/LinkedIn**, and **linkedin.com** (both accessed July 2015).

Questions

1. Enter **linkedin.com** and explore the site. Why do you think the site is so successful?
2. What features are related to recruiting and job search?

3. Conduct an investigation to find the company's revenue sources. Prepare a list.
4. Several companies have attempted to clone LinkedIn with little success. Why do you think LinkedIn is dominating?
5. Join the group called "eMarketing Association Network" on LinkedIn (free; it is a private group so you must request to join) and observe their group's activities regarding social media and commerce for one week. Write a report.

ONLINE FILES
available at **affordable-ecommerce-textbook.com/turban**

No online files are available for this chapter.

COMPREHENSIVE EDUCATIONAL WEBSITES

gamification.co/gabe-zichermann: A large collection of news, knowledge, videos and more.
crowdsortium.org: A crowdsourcing community with many resources.
darmano.typepad.com: In David Armano's personal blog, logic and emotion exist at the intersection of business, design, and the social Web.
ft.com/reports/the-connected-business: How businesses of all sizes use IT and IT services.
15inno.com/2012/08/09/oicrowdexamples 40 examples of open innovation and crowdsourcing for innovation.
what-is-crowdsourcing.com: An open source platform for sharing views and opinions on crowdsourcing.
c21org.typepad.com: Trends, thought leaders, and workable models for the 21st century organization.
jvwresearch.org: *Journal of Virtual Worlds Research*.
mashable.com: A comprehensive social media resource center.
socialtext.com/solutions/resources.php: Socialtext is an endless source of products/services.
socialbrite.org/sharing-center/glossary: A social media glossary.

GLOSSARY

Business social network A network that is built on social relationships, and can exist offline or online. Business social networking can take place in traditional corporate physical environments.
Collective intelligence (CI) An application of crowdsourcing for problem solving, idea generation, and innovation.
Gamification The introduction of gaming into social networking. Gamification can also be viewed as the introduction of social networking activities into online games.
Social business Is a name for a profit or nonprofit organization that is designed to achieve some social goal(s) rather than just make profit.
Social collaboration People's collaboration within and between communities enabled by social media tools and platforms.
Social enterprise The use of social media tools and platforms and conducting social networking in organizations while the major objectives are either commercial or nonprofit activities (e.g., the government).
Social Internet game A video multiplayer game played on the Internet, mostly in social networks or virtual worlds.
Social network game A video game that is played in social networks, and usually involves multiplayers.

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