Enhancing Communication and Collaboration using Social Media

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Facebook

- 2016:
  - 1.65 billion users access the site each month
  - 1.5 billion users use mobile version
  - 300 million photos uploads per day
  - 5 new profiles each second
  - Market value of 350 US$ billion, 6th in the US
  - Impressive growth rate

Need for communication

- Virtual teams

- Groupware

- Videoconferencing

- Intranets and employee portals

Virtual teams

FIGURE 5.2

Members of highly specialized virtual teams are often not colocated.
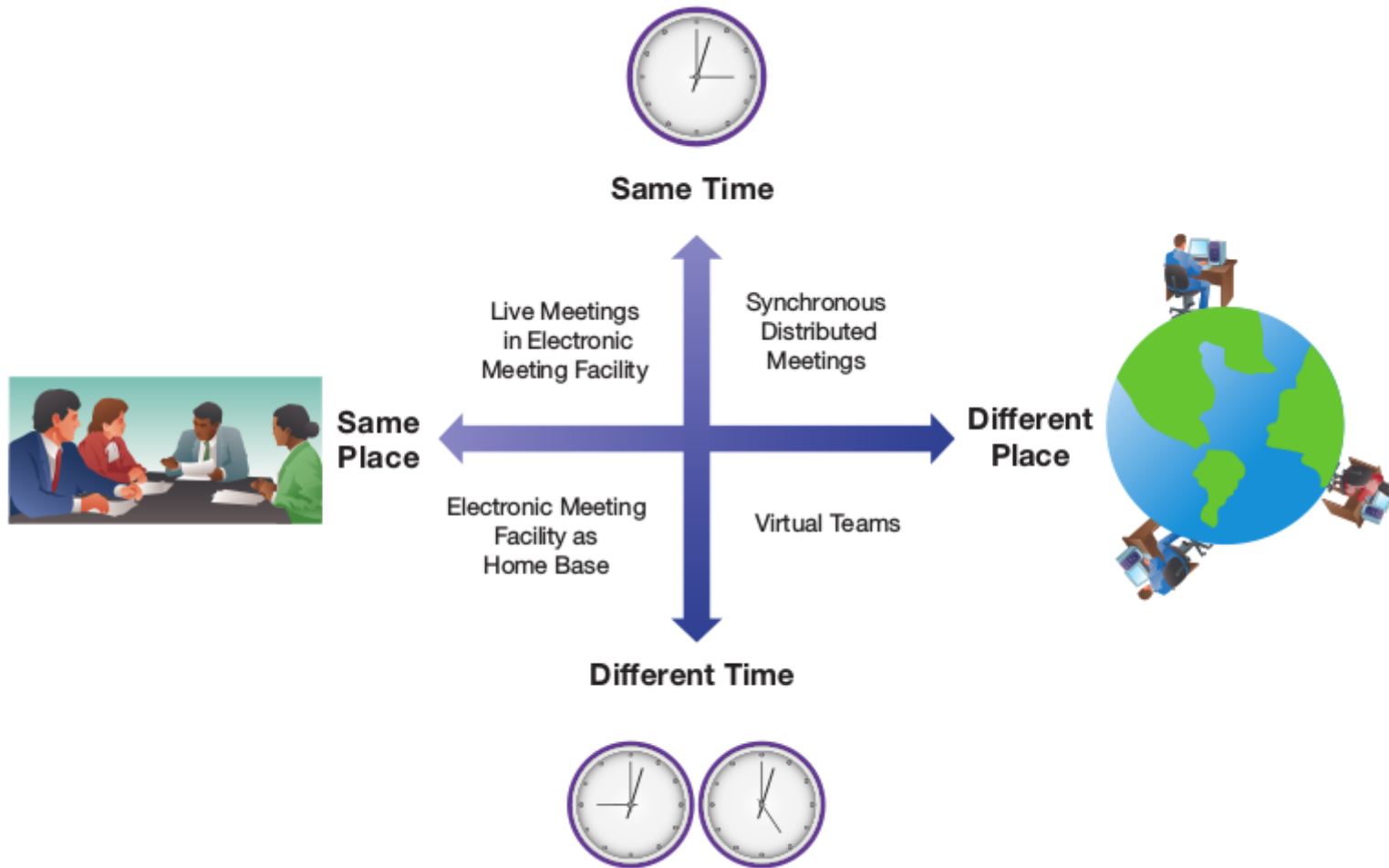Source: Toria/Shutterstock.

Groupware

Same Time

Live Meetings in Electronic Meeting Facility

Synchronous Distributed Meetings

Same Place

Different Place

Electronic Meeting Facility as Home Base

Virtual Teams

Different Time

FIGURE 5.3

Groupware supports various modes of group interaction.

Groupware

TABLE 5.1 Categories of Collaboration Tools

Category	Description	Instances	Examples
Electronic communication tools	Tools allowing users to convey verbal and written information and send files, documents, or other content	Fax, e-mail, voice mail, blogs, wikis, static websites	MS Outlook, Blogger, Wikipedia
Electronic conferencing tools	Tools allowing information sharing and rich interactions between users	Internet forums, instant messaging, application sharing, videoconferencing	Apple FaceTime, Skype, Google Hangouts, WebEx
Collaboration management tools	Tools used to facilitate virtual or collocated meetings and manage group activities	Electronic calendars, knowledge management systems, intranets, online document systems	Google Docs, MS Office Online, MS SharePoint

Videoconferencing

FIGURE 5.5

An electronic meeting system utilizes networked computers and sophisticated software to support various group tasks.

Source: Konstantinos Kokkinis/ Shutterstock.

Intranets

- Real-time access to enterprise information
- Enterprise search
- Collaboration
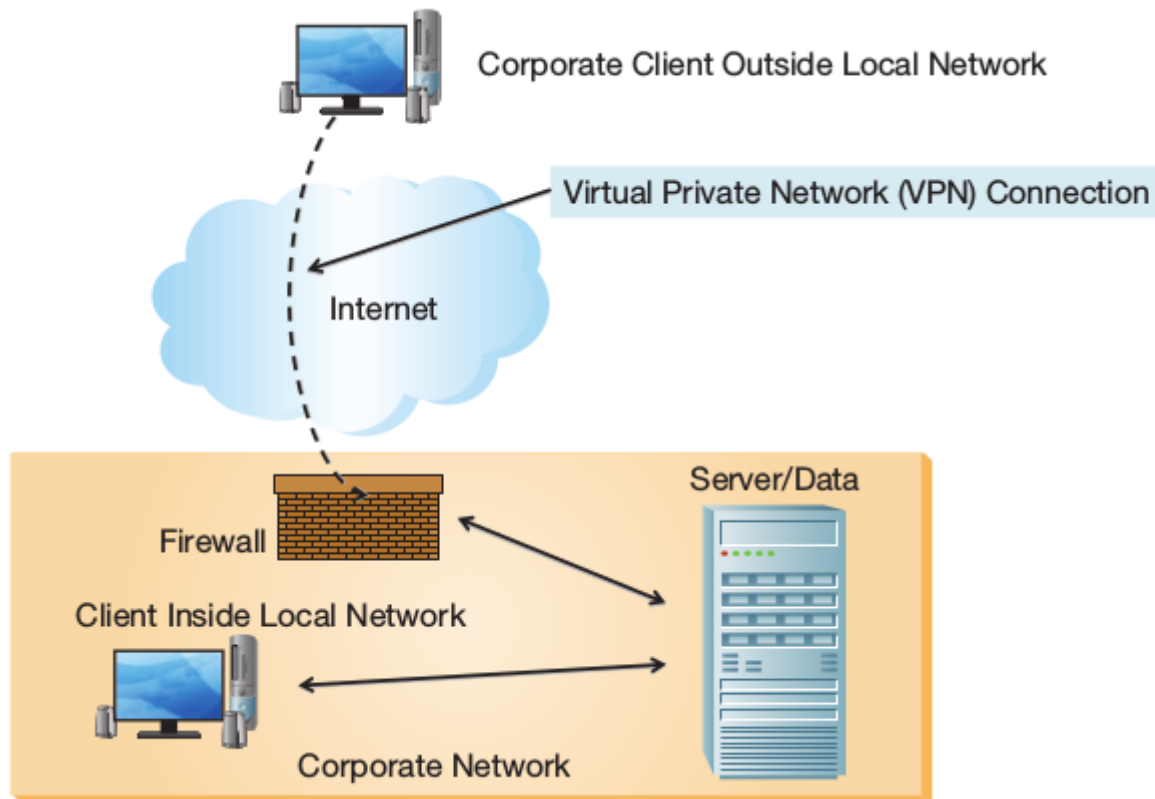- Employee portals

Intranets

Corporate Client Outside Local Network

Virtual Private Network (VPN) Connection

Internet

Firewall

Client Inside Local Network

Server/Data

Corporate Network

FIGURE 5.6

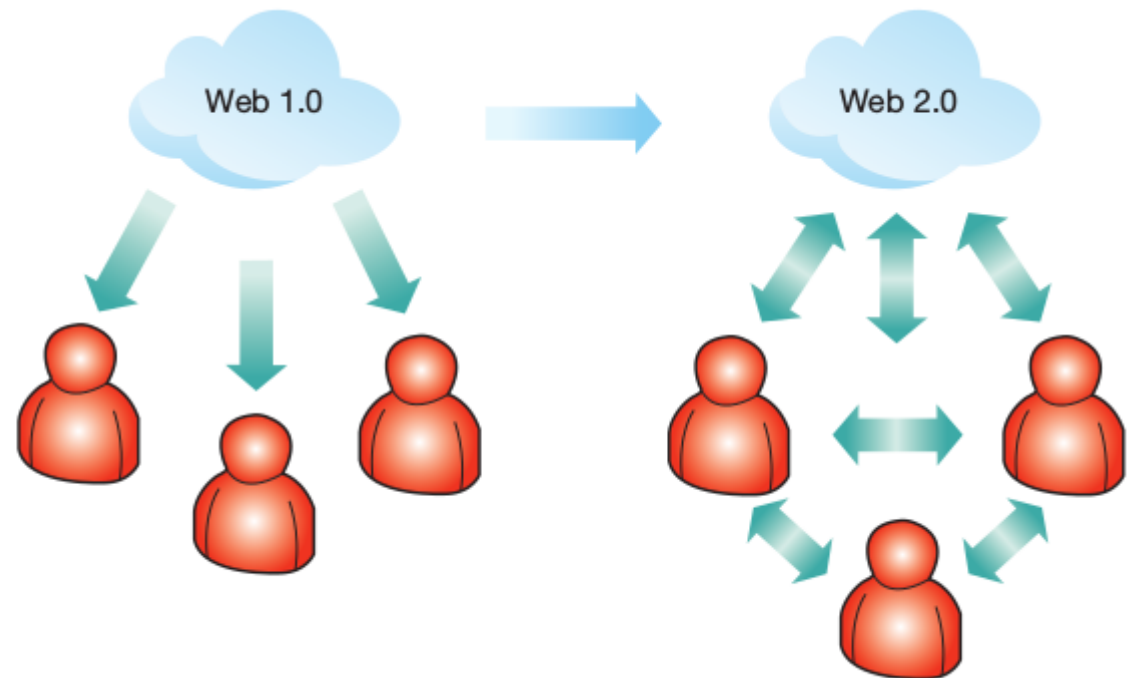Typical intranet system architecture.

The evolving web

- Web capabilities

- Social interactions

- Workspace

- Future Web3.0

The evolving web

FIGURE 5.7

Web 2.0 applications shift a web user's role from a passive consumer of content to its creator.
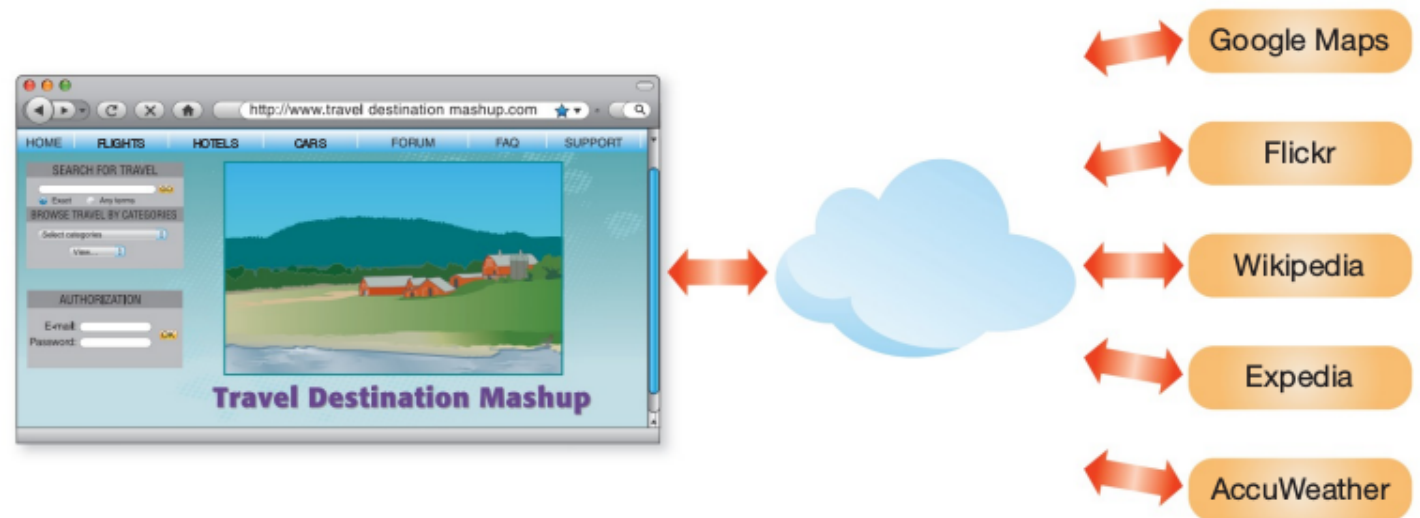
The evolving web

- Combining tools and technologies (mashups)

FIGURE 5.8

A mashup is a new application (or website) that uses data from one or more service providers.
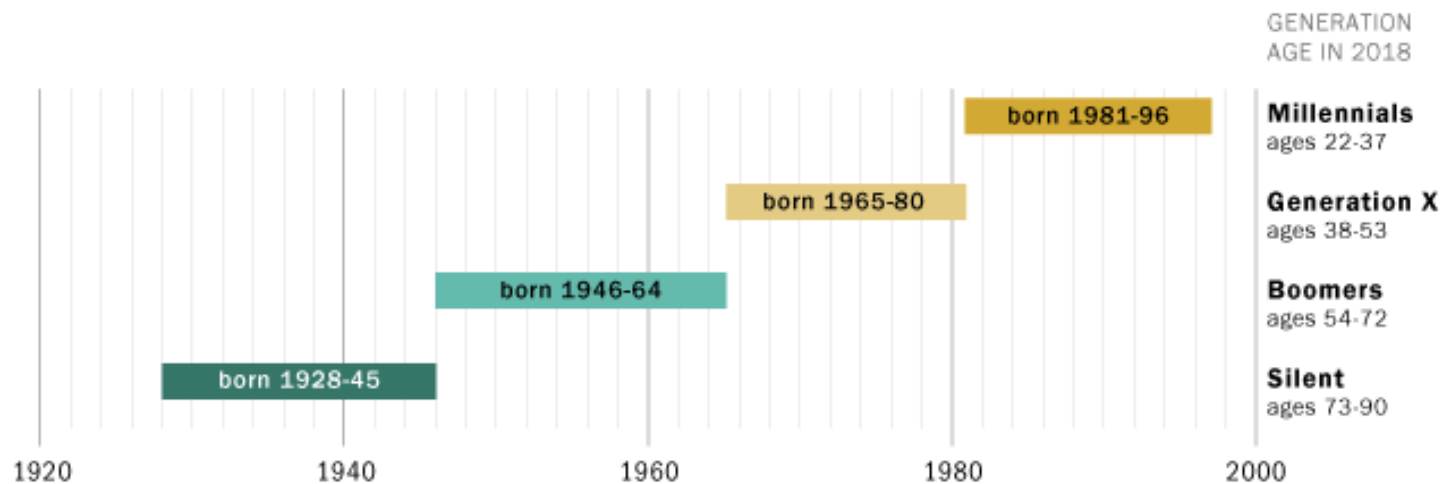
Social interactions

TABLE 5.2 Shifting Perspectives from Web 1.0 to Web 2.0

Web 1.0	Web 2.0
Me	Me and you
Consume content	Consume and create content
Connect ideas	Connect ideas and people
Search	Receive and give recommendations to friends and others
Find	Share
Techies rule	Users rule
Organizations	Individuals

Source: Based on Sessums (2009).

The evolving workplace

- Corporate culture that embraces trends of the digital world

GENERATION
AGE IN 2018

born 1981-96 — **Millennials** ages 22-37

born 1965-80 — **Generation X** ages 38-53

born 1946-64 — **Boomers** ages 54-72

born 1928-45 — **Silent** ages 73-90

1920   1940   1960   1980   2000

Source: http://www.pewresearch.org/topics/millennials/

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Future Web 3.0

- It is happening already

- Mobile centric

- Contextual web

  – Immense amount of content dependent on the contextual factors: location, time, social activities, ...

- We do not know yet...

Social media and the enterprise

- Communication
- Cooperation
- Collaboration
- Connection

Enhancing communication

- Blogs

- Microblogging

- Instant messaging

Enhancing cooperation

- Media sharing

- Tagging

- Geotagging

- Social bookmarking

- Social cataloging

Enhancing cooperation

FIGURE 5.11

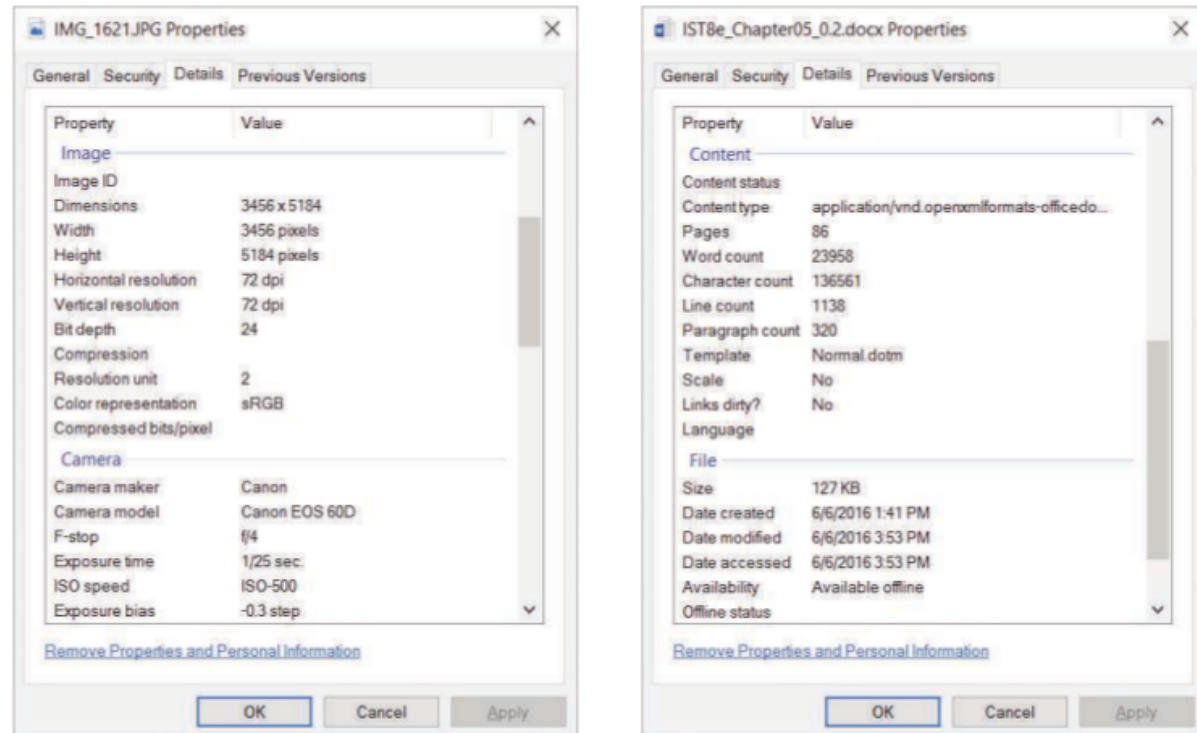A student listens to a podcast on iTunes U.

Source: Courtesy of Christoph Schneider.

Metadata

FIGURE 5.12

Metadata about a photo and a Word document.

Source: Windows 10, Microsoft Corporation.

Tagging

FIGURE 5.13

A tag cloud representing words and concepts that are key to social media.
Source: Vlue/Shutterstock.

Enhancing collaboration

- Cloud based collaboration tools
- Content management systems
- Collective intelligence
- Human based computing (Crowdsourcing)
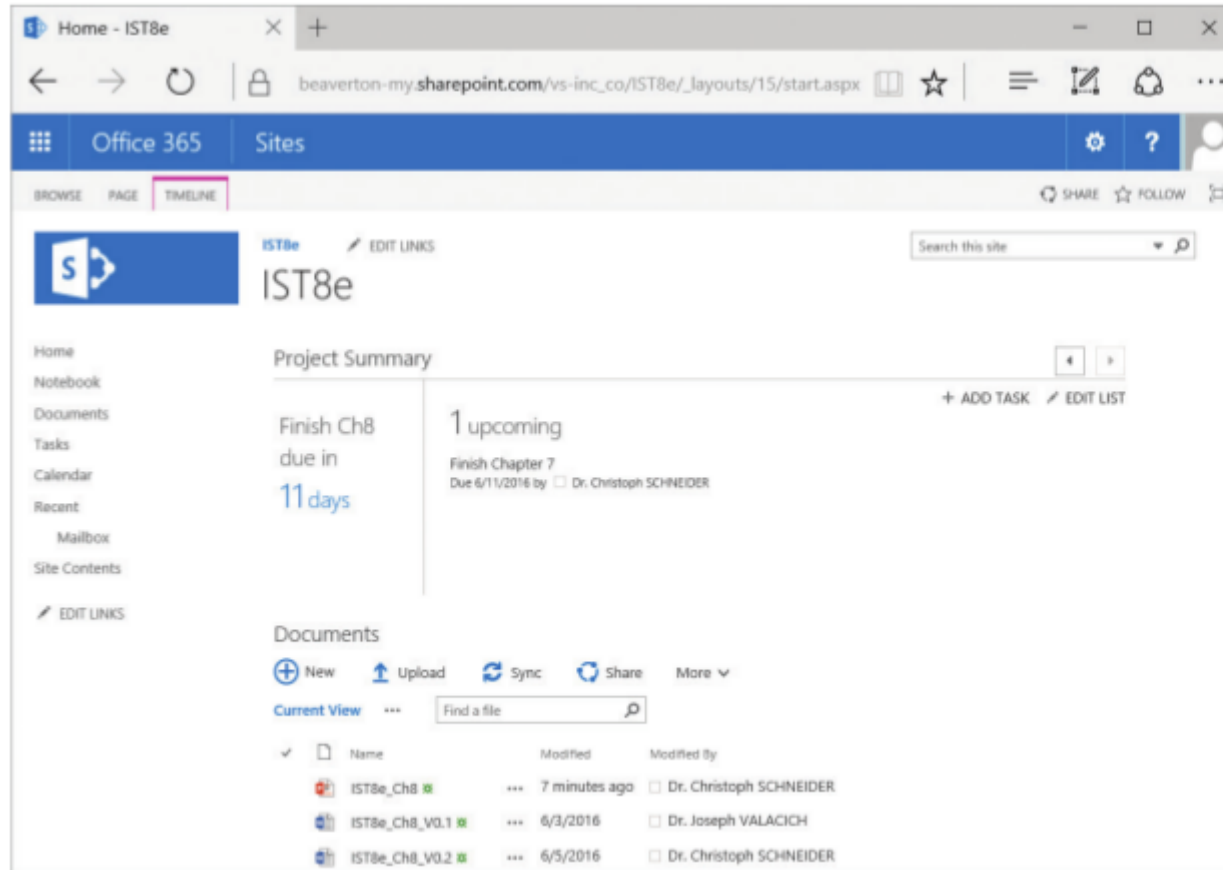
Cloud based collaboration tools

FIGURE 5.15

The Microsoft SharePoint content management system can assist in project collaboration.

Source: SharePoint 2016, Windows 10, Microsoft Corporation.

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Cloud based collaborations

TABLE 5.3 Benefits and Risks of Cloud-Based Collaboration Tools

Domain	Benefit	Risk
Information technology	Reduced costs and risks when using preexisting, easily deployed, and low-cost web-based tools (versus in-house developed tools).	Loss of control regarding data and service quality (data and tools will likely reside on the provider's server).
Organization	Tools are easy to use, facilitating widespread adoption throughout an organization.	Little or no documentation, training, or support for system complexities or problems.
Competition	More efficient and effective than e-mail, FTP, or legacy collaboration tools, potentially speeding up product development cycles and enabling quick responses to competitors' actions.	Security and compliance policies are often difficult to enforce, which may increase the possibility of exposing sensitive corporate data; increased threat of industrial espionage.
Upgrade cycles	No need to purchase software upgrades.	Tools and features in the collaboration environment can change without notice, potentially causing problems with users and corporate IT strategy.

Cloud based collaborations

TABLE 5.4 Web-Based Collaboration Tools

Type	Names
Spreadsheets	Google Drive, Zoho Sheet, Microsoft Excel Online
Word processors	ThinkFree, Zoho Writer, Google Drive, Microsoft Word Online
Presentation	Google Drive, Zoho Show, Microsoft PowerPoint Online, Prezi
Office suites	Zoho, Google Apps, Microsoft Office Online
Project management	Trac, Redmine, eGroupWare, Collabtive
Notes/task management	Evernote, Wunderlist, Microsoft OneNote Online
Cloud storage/sharing	Dropbox, Google Drive, Microsoft OneDrive, SugarSync, iCloud

Content management systems

FIGURE 5.16

The ability to create, edit, or delete content, view prior versions, revert any changes, and discuss about content and suggested changes are key to the creation of high-quality content by a community.

Collective intelligence

- **Distributed** group of people
- **Range of** available **information** and **expertise**
- **Outperforming** individual **experts**
- Concept of **peer production**

Crowdsourcing

Extract items from a shopping receipt
Requester: TRE co.
Reward: $0.02

Categorize user reviews
Requester: XLS co.
Reward: $0.02

Transcribe media to text
Requester: XY co.
Reward: $0.10

Fix transcription errors
Requester: ABC co.
Reward: $0.05

Translate from English to Chinese
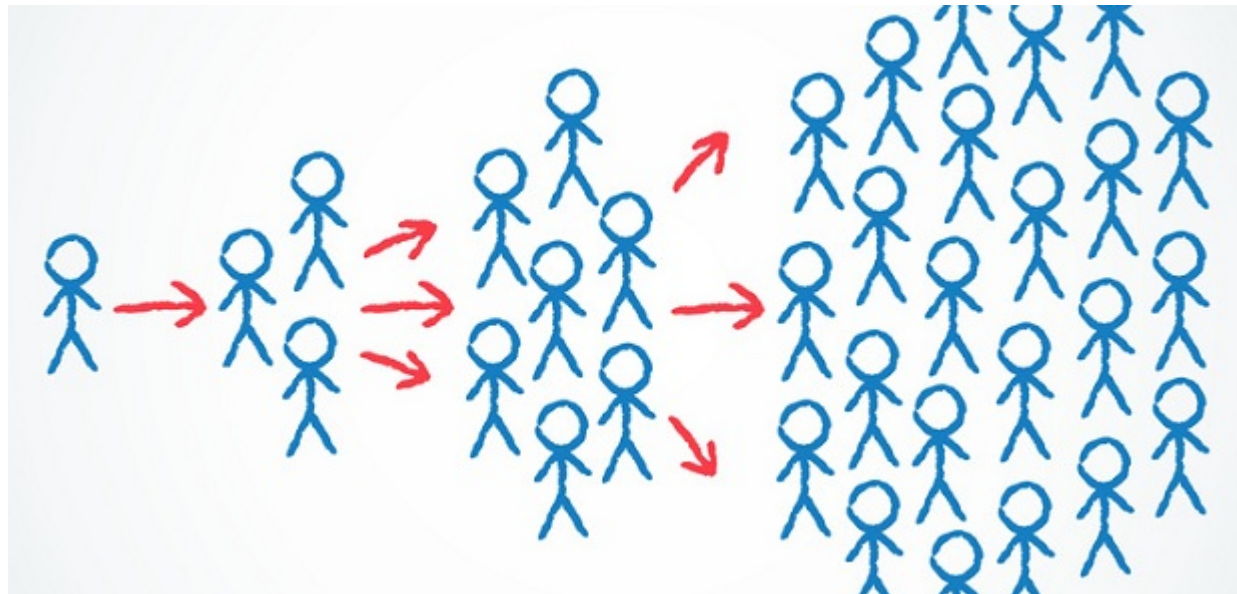Requester: VS, Inc.
Reward: $0.03

FIGURE 5.17

Anyone can earn money on micro-task marketplaces by solving small, well-defined tasks.

Enhancing connection

- Social networking

- Viral marketing

Source: https://www.digitalvidya.com

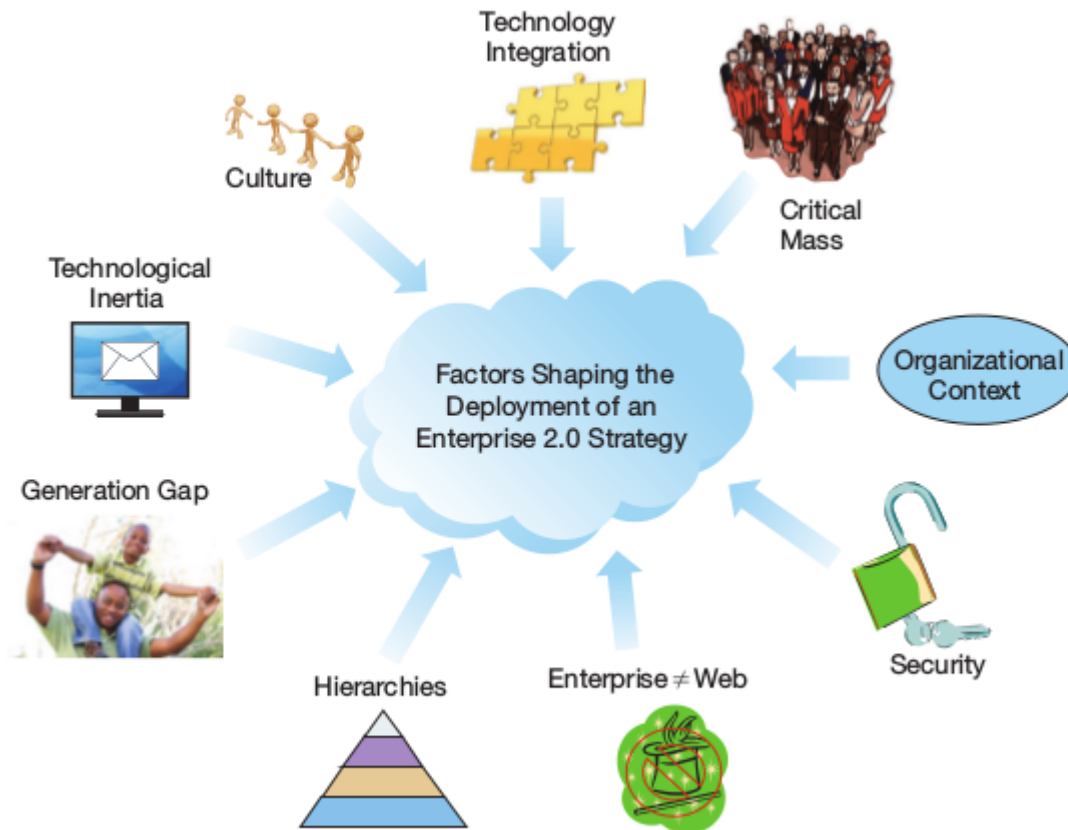# Managing social media applications

FIGURE 5.19

Various factors have to be taken into account when using social media applications within an organization.

Source: Andy Dean Photography/ Shutterstock.

Downsides and risks

- Online product reviews

- Microblogging

- Social networks

- Bad vibes going viral

- Lessons learned

- Societal impacts

Key Points

- Organizational needs for communication and collaboration

- Social media and evolving web

- Managing enterprise oriented social media

References/ Acknowledgments

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