

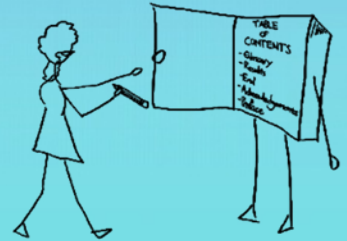
Chapter 1

Setting the Stage: Technology and the Modern Enterprise



Learning Objectives

- Appreciate how in recent years, technology has helped bring about radical changes across industries and throughout societies
- Name firms across hardware, software, and Internet businesses that were founded by people in their twenties (or younger)



Learning Objectives

- Appreciate the degree to which technology has permeated every management discipline
- See that tech careers are varied, richly rewarding, and poised for continued growth
- Understand the structure of this text, the issues and examples that will be introduced, and why they are important

Tech's Tectonic Shift: Radically Changing Business Landscapes

- Billions of people have access to computing and telecommunications
- Google and Facebook have changed the way firms advertise and people communicate
- Open source software has lowered computing costs



Tech's Tectonic Shift: Radically Changing Business Landscapes

- Sophisticated, high-powered computing is turning into a utility via:
 - Cloud computing
 - Software as a service
- New technologies have also:
 - Fueled globalization
 - Redefined concepts of software and computing
 - Crushed costs
 - Fueled data-driven decision making
 - Raised privacy and security concerns

It's Your Revolution

- Many of the world's most successful technology firms were created by young people
 - Bill Gates was an undergraduate when he left college to found Microsoft
 - Michael Dell was a sophomore when he began building computers at the University of Texas
 - Mark Zuckerberg founded Facebook as a nineteen-year-old college sophomore

It's Your Revolution

- Tony Hsieh of LinkExchange and Zappos
- Jerry Yang and David Filo of Yahoo!
- Steve Chen and Chad Hurley of YouTube
- Steve Jobs of Apple
- Jeff Bezos of Amazon
- Catherine Cook of MyYearbook
- Shawn Fanning of Napster
- Linus Torvalds – Linux operating system
- Sergey Brin and Larry Page of Google

Geek Up—Tech Is Everywhere and You'll Need It to Thrive

- There isn't a single modern managerial discipline that isn't being deeply and profoundly impacted by tech
- Tech skills are becoming more important for jobs everywhere



Finance

- The tech industry continually sprouts new businesses
 - Suited to IPO markets
- Tech firms are actively involved in mergers and acquisitions (M&A)
- Finance careers also involve:
 - Lending to tech firms
 - Evaluating the role of technology in firms in an investment portfolio
- Technology-based trading platforms

Table 1.2 - 2011 Tech Deals by Sector

Sector	Deals	Value (millions)
Software	93	\$40,770
IT Services	51	\$19,286
Internet	71	\$22,896
Hardware	53	\$17,101
Semiconductor	40	\$25,059

Source: "US Technology M&A Insights 2012," *PwC*, March 2012.

Accounting

- The reliability of any audit is inherently tied to the reliability of the underlying technology
- Increased regulation has strengthened the link between accounting and tech
 - Sarbanes-Oxley Act
- Major accounting firms have spawned tech-focused consulting practices

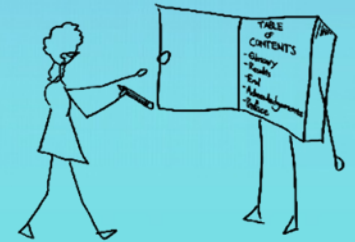
Marketing

- Firms are shifting spending from traditional media to the Web because of its ability to:
 - Track customers
 - Analyze campaign results
 - Modify tactics



Marketing

- Firms are using social media to:
 - Generate sales
 - Improve their reputations
 - Better serve customers
 - Innovate

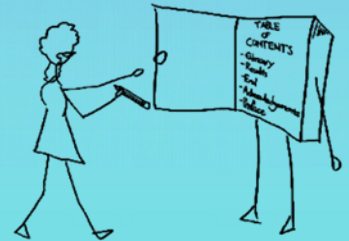


Marketing

- Central components of the new marketing toolkit include:
 - Search engine marketing (SEM)
 - Search engine optimization (SEO)
 - Customer relationship management (CRM)
 - Personalization systems
 - Managing the balance between gathering data and respecting consumer privacy

Operations

- Tech-centric operations include:
 - Quality programs
 - Process redesign
 - Supply chain management
 - Factory automation
 - Service operations



Human Resources

- Knowledge management systems are morphing into social media technologies
- Technology is used for employee training, screening, and evaluation
- Recruiting has moved online
 - Grounded in information systems that scour databases for specific skill sets
 - Job seekers are writing resumes with key words in mind
- Professional social networks have put added pressure on employee satisfaction and retention

The Law

- Activity has increased in the areas of intellectual property, patents, piracy, and privacy
- Firms need legal teams with the skills to:
 - Determine whether a firm can legally do what it plans
 - Uncover licensing fees if patents stand in the way
 - Help them protect proprietary methods and content
 - Help enforce claims in the home country and abroad

Information Systems Careers

- Programmers
- Experts in user-interface design, process design, and strategy
- Consulting and field engineering
- Chief information officer
- Chief technology officer
- “C-level” specialties in emerging areas
 - Chief information security officer (CISO)
 - Chief privacy officer (CPO)



Your Future

- Study business and technology to develop critical-thinking skills
 - To help in the evaluation of new, emerging technologies
- Those not trained to evaluate and make decisions risk irrelevance, marginalization, and failure

