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## Glossary

- 3D printing** A manufacturing process that creates products directly from digital models, by placing many layers one over the top of others.
- Access control** A defense mechanism that determines who (person, program, or machine) can legitimately use the organization's computing resources (which resources, when, and how).
- Ad views** The number of times users call up a page that has a banner on it during a specific period, known as *impressions* or *page views*.
- Address Verification System (AVS)** System that detects fraud by comparing the address provided by the buyer at check-out with the address on file.
- Affiliated marketing** A type of "performance-based marketing" used mainly as a revenue source for the referring organization and as a marketing tool for the sellers.
- Affiliate network** A network created as a marketplace where publishers (affiliates) and merchant affiliate programs can collaborate.
- Amazon Alexa** Cloud-based intelligent personal voice assistant product that can answer questions and provide information.
- Amazon Echo** Hand-free intelligent wireless speakers that are controlled by voice and works with Alexa.
- Application controls** Controls that guard applications.
- Artificial intelligence (AI)** A behavior by a machine that, if performed by a human being, would be called intelligent.
- Augmented reality** "A live, copy, view of a physical, real-world environment whose elements are *augmented* (or supplemented) by computer-generated sensory input such as sound, video, graphics, or GPS data" (see [en.wikipedia.org/wiki/Augmented\\_reality](https://en.wikipedia.org/wiki/Augmented_reality)).
- Authentication** A process to verify (assure) the real identity of an EC entity, which could be an individual, software agent, computer program, or EC website.
- Authorization** The provision of permission to an authenticated person to access systems and perform certain operations in those specific systems or in a specific case the first phase of processing a credit card transaction that determines whether a buyer's card is valid (e.g., not expired) and whether the customer has sufficient credit or funds in his or her account.
- Availability** The assurance that access to any relevant data, information websites, or other EC services and their use is available in real time, whenever and wherever needed.
- Back end** Where activities that are related to order aggregation and fulfillment, inventory management, purchasing from suppliers, accounting and finance, insurance, payment processing, packaging, and delivery.
- Banking Trojan** Malicious software programmed to create damage when users visit certain online banking or e-commerce sites.
- Banner** A display that is used for advertising on a Web page (words, logos, etc. embedded in the page).
- Bartering** The exchange of goods and services.
- Bartering exchange** A marketplace where an intermediary arranges barter transactions.
- Behavioral targeting** Targeting that uses consumer browsing behavior information to design personalized ads that may influence consumers better than mass advertising does.
- Biometric** One of an individual's unique physical or behavioral trait that can be used to authenticate an individual precisely (e.g., fingerprints).
- Biometric authentication** A technology that measures and analyzes the identity of people based on measurable biological or behavioral characteristics or physiological signals.
- Biometric systems** A system that can *identify* a previously registered person by searching through a database for a possible *match* based on the person's observed physical, biological, or behavioral traits, or the system can *verify* a person's identity by matching an individual's measured biometric traits against a previously stored version.

- Bitcoin address** An alphanumeric string that identifies the recipient of a Bitcoin transaction.
- Bitcoin private key** Key that is a randomly generated number between 1 and  $2^{\wedge}$  that is used by the key's owner to initiate and digitally sign transactions and used by the network to verify those transactions.
- Blockchain** The Bitcoin public ledger containing a complete list of all transactions since the first Bitcoin was issued.
- Botnet** Malicious software that criminals distribute, usually to infect a large number of computers.
- Brick-and-mortar (old economy) organizations** Purely physical organizations (corporations) doing business offline.
- Brick-and-mortar retailer** A retailer that conducts business exclusively in the physical world.
- Business continuity plan** A plan that keeps the business running after a disaster occurs. Each function in the business should have a valid recovery capability plan.
- Business ethics (corporate or enterprise ethics)** A code of values, behaviors, and rules, written or unwritten, for conducting business. These ethics dictate the operations of organizations.
- Business impact analysis (BIA)** An analysis of the impact of losing the functionality of an EC activity (e.g., e-procurement, e-ordering) to an organization.
- Business model** A description of how an organization intends to generate revenue through its business operations.
- Business-oriented social network** A social network whose primary objective is to facilitate business.
- 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.
- Business-to-business (B2B)** All transactions take place between and among organizations.
- Business-to-business e-commerce (B2B EC)** Transactions between businesses conducted electronically over the Internet, extranets, intranets, or private networks.
- Business-to-consumer (B2C)** Retail transactions of products or services from businesses to individual shoppers.
- Business-to-employees (B2E)** The delivery of services, information, or products from organizations to their employees.
- Buy-side e-marketplace** Where a company purchases from many potential suppliers; this type of purchasing is considered to be *many-to-one*, and it is a B2B activity. These marketplaces are often owned by large buyers that invite sellers to browse and offer to fulfill orders.
- Card verification number (CVN)** Method for detecting fraud by matching the three-digit verification number printed on the signature strip on the back of the credit card (or the four-digit number on the front of the card, such as American Express cards) with the number stored by the cardholder's issuing bank.
- Certificate authorities (CAs)** Independent agencies that issue digital certificates or SSL certificates, which are electronic files that uniquely identify individuals and websites and enable encrypted communication.
- Channel conflict** Refers to the case in which online sales damage the well-being of existing channel partner.
- Chatbot** An intelligent computerized system that enables written on voice chatting in a natural language.
- CIA security triad (CIA triad)** A point of reference used to identify problem areas and evaluate the information security of an organization that includes *confidentiality*, *integrity*, and *availability*.
- Ciphertext** An encrypted plaintext.
- Click (ad click)** A count made each time a visitor clicks on an advertising banner to access the advertiser's website.
- Click-and-mortar (click-and-brick) organizations** Organizations that conduct some e-commerce activities, usually as an additional marketing channel.
- Click-and-mortar retailer** A combination of both the traditional retailer and an online store.
- Clickstream behavior** A pattern of customer movements on the Internet, which can be seen in their transaction logs.
- Clickstream data** Data that describe which websites users visit, in what order, and the time spent on each. This is done by tracking the succession of "clicks" each visitor makes.
- Click-through rate/ratio (CTR)** The percentage of visitors who are exposed to a banner ad and click on it.
- Collaborative commerce (c-commerce)** Electronic support for business collaboration. It enables companies to collaboratively plan, design, develop, manage, and research products, services, and innovative business processes, including EC applications.
- Collaborative filtering** A method that attempts to predict what products or services are of interest to new customers without asking or viewing their previous records.
- Collaboration hub (c-hub)** The central point of interaction and of a company's supply chain. A single e-hub can host multiple *collaboration spaces* in which trading partners trade, collaborate, communicate, and share information.
- Communal shopping (collaborative shopping)** A method of shopping where shoppers enlist friends and other people they trust to advise them on what products to shop for.
- Company-centric EC** One-to-many and many-to-one markets where one company does either all the selling (*sell-side market*) or all the buying (*buy-side market*).

- Computer Fraud and Abuse Act (CFAA)** Act passed in 1984 and amended several times and is an important milestone in EC legislation. Initially, the scope and intent of CFAA was to protect government computers and financial industry computers from criminal theft by outsiders. In 1986, the CFAA was amended to include stiffer penalties for violations, but it still only protected computers used by the federal government or financial institutions.
- Confidentiality** The assurance of data secrecy and privacy. Namely, the data are disclosed only to authorized people.
- Consortium trading exchange (CTE)** An exchange formed and operated by a group of major companies in one industry. They can be suppliers, buyers, or both.
- Consumer-to-business (C2B)** People use the Internet to sell products or services to individuals and organizations. Alternatively, individuals use C2B to bid on products or services.
- Consumer-to-consumer (C2C)** E-commerce category in which individual consumers sell to or buy from other consumers.
- Consumer-to-consumer (C2C) EC** Electronic transactions completed between and among individuals.
- Contact card** A smart card that is activated when it is inserted into a smart card reader.
- Contactless (proximity) card** A smart card that only has to be within a certain proximity of a smart card reader to process a transaction.
- Convertible virtual currency** A virtual currency that has an equivalent value in real currency or acts as a substitute for real currency.
- Context-aware computing** A technology that is capable in predicting people's needs and providing fulfillment options (sometimes even before a request by the end user is made).
- Conversion rate** The percentage of clickers who actually make a purchase.
- Cookie** A data file that, without the knowledge of users, is placed on their computer hard drives.
- Copyright** An exclusive legal right of an author or creator of intellectual property to publish, sell, license, distribute, or use such work in any desired way.
- Copyright infringement** The use of a work without permission or contracting for payment of a royalty.
- Corporate portal** A gateway for customers, employees, and partners to reach corporate information and to communicate with the company.
- Cost-benefit analysis** A comparison of the costs of each project against its benefits.
- Cost-plus** A pricing strategy that determines the expenses associated with producing a product (production cost) by adding up all the costs involved—materials, labor, rent, overhead, and so forth—and adding an additional amount to generate a profit margin (a percentage markup).
- CPM (cost per mille, i.e., thousand impressions)** The fee an advertiser pays for each 1000 times a page with a banner ad is shown.
- Cracker** A malicious hacker who may be more damaging than a hacker.
- Cross-border e-commerce** Online purchases involving buyers and merchants or sellers who are in different countries.
- Crowdsourcing** Utilizing crowds to collectively execute tasks such as solving problems, innovating, or getting large projects done by dividing the work among many people.
- Customer relationship management (CRM)** A customer service approach that focuses on building long-term and sustainable customer relationships that adds value for both the customers and the merchants.
- Cyberbullying** "Bullying that takes place using electronic technology. Electronic technology includes devices and equipment such as cell phones, computers and tablets as well as communication tools including social media sites, text messages, chat, and websites." (per [stopbullying.gov](http://stopbullying.gov))
- Cybercrime** Intentional crimes carried out on the Internet.
- Cybercriminal** A person who intentionally carries out crimes over the Internet.
- Darknet** A separate Internet that can be accessed via the regular Internet and a connection to the TOR network (TOR is a network of VPNs that allows privacy and security on the Internet). The darknet has restricted access to trusted people ("friends") by using nonstandard protocols (IP addresses are not listed). Darknet allows anonymous surfing.
- Data breach** A security incident in which data are obtained illegally and then published or processed.
- Denial-of-service (DoS) attack** "A malicious attempt to make a server or network resource unavailable to users, usually by temporarily interrupting or suspending the services of a host connected to the Internet." (Incapsula, Inc.)
- Desktop purchasing** Purchasing done by employees without the approval of supervisors and without the involvement of a procurement department.
- Desktop search** The search of a user's own computer files. The search is done by looking through all the information that is available on the user's PC.

- Detection measures** Methods that help find security breaches in computer systems. Usually, this means to find out whether intruders are attempting (or have attempted) to break into the EC system, whether they were successful, whether they are still damaging the system, and what damage they may have done.
- Deterrent methods** Countermeasures that make criminals abandon their idea of attacking a specific system (e.g., a possible deterrent is a realistic expectation of being caught and punished).
- Digital currency** A generic term that refers to the digital representation of either e-money or virtual currency.
- Digital currency exchanges** Services that allow customers to trade digital currencies for conventional fiat money (e.g., US dollars) or for different digital currencies.
- Digital disruption** Electronic technologies including e-commerce may have a disruptive impact on industries, companies, business models, economies, and people. These impacts can be very positive to some and negative to others.
- Digital divide** The gap that has emerged between those who have and those who do not have the ability to engage in e-commerce.
- Digital economy** An economy that is based on online transactions, mostly e-commerce. Also called the *Internet economy*.
- Digital enterprise** A new business model that uses IT to gain competitive advantage by increasing employee productivity, by improving efficiency and effectiveness of business processes, and by better interactivity between vendors and customers.
- Digital products** Goods that can be transformed to digital format.
- Digital rights management (DRM)** A system of protecting the copyrights of data circulated over the Internet or digital media. These arrangements are technology-based protection measures (via encryption or using watermarks).
- Digital signatures** The electronic equivalent of personal signatures on paper. They are difficult to forge since they authenticate the identity of the sender that uses the public key.
- Direct marketing** Describes marketing that takes place without physical stores. Selling takes place directly from manufacturer to customer.
- Direct materials** Materials used in making products, such as steel in a car or paper in a book.
- Discount rate** The main fee that a merchant pays for offering credit card payments.
- Disintermediation** Elimination of intermediaries between sellers and buyers because they offer only services that can be fully automated (usually in a supply chain).
- Distance learning** Education conducted from home or other places, anytime.
- Double auction** An auction in which multiple buyers and their bidding prices are matched with multiple sellers and their asking prices, considering the quantities on both sides.
- Driverless cars** Robot-driven cars, self-driving cars, and autonomous cars.
- Drones** Unmanned vehicles that can navigate autonomously. They can be remotely controlled.
- Dropshipping** An EC model where an e-tailer sells a product and then buys it from a supplier who packs and sends the product to the buyer.
- Dynamic pricing** Prices that are not fixed but that are allowed to fluctuate and are determined by supply and demand.
- E-bartering (electronic bartering)** Bartering conducted online, usually in a bartering exchange.
- E-business** A broader definition of EC, not just the buying and selling of goods and services, but conducting all kinds of business online such as servicing customers, collaborating with business partners, delivering e-learning, and conducting electronic transactions within an organization.
- E-collaboration** The use of digital technologies among people for accomplishing a common task.
- E-commerce (EC) risk** The likelihood that a negative outcome will occur in the course of developing and operating an e-commerce initiative.
- E-distributor** An entity that basically aggregates product information from many manufacturers, sometimes thousands of them, in the e-distributor's catalog.
- E-government** The use of information technology in general, and e-commerce in particular, to improve the delivery of government services and activities in the public sector, such as providing citizens and organizations with more convenient access to government information and services and providing effective delivery of public services to engage citizens and businesses partners, as well as improving the performance of government employees. Also when a government agency buys or provides goods, services, or information from or to businesses (G2B) or from or to individual citizens (G2C). Governments can deal also with other governments (G2G).
- E-grocer** A grocer that takes orders online and provides deliveries on a daily or other regular schedule or within a very short period of time, sometimes within an hour.
- E-health** The transfer of health resources and healthcare by electronic means.

- E-learning** The online delivery of educational materials and methods using information technologies, for the purposes of learning, teaching, training, or gaining knowledge at any time and at many different locations.
- E-mail marketing** The use of e-mail for sending commercial messages to users.
- E-mail advertising** Ads are attached to e-mails.
- E-mall (online mall)** An online shopping center where many online stores present their catalogs.
- E-marketplace** An electronic space where sellers and buyers meet and conduct different types of transactions.
- E-procurement (electronic procurement)** The online purchase of supplies, materials, energy, work, and services. It can be done via the Internet or via a private network such as EDI.
- E-tailers** Sellers who conduct retail business online.
- E-tailing** Online retailing, usually B2C.
- EC security strategy** Multiple layers of defense that include several methods. This defense aims to deter, prevent, and detect unauthorized entry into an organization's computer and information systems.
- Electronic auction (e-auction)** An auction conducted online.
- Electronic book (e-book)** A book in digital format that can be read on a computer screen, including mobile devices (e.g., a tablet, iPhone) or on a dedicated device known as an *e-reader*.
- Electronic catalog (e-catalog)** The presentation of product information in electronic form, the backbone of most e-selling sites.
- Electronic commerce (EC)** Using the Internet and intranets to purchase, sell, transport, or trade data, goods, or services.
- Electronic discovery (e-discovery)** The process of finding any type of electronic data (e.g., text, images, videos) by using computerized systems.
- Electronic market (e-marketplace)** An online location where buyers and sellers conduct commercial transactions such as selling goods, services, or information.
- Electronic money** Abbreviated as e-money, it is a digital representation of fiat currency used for purposes of electronic transfer.
- Electronic (online) banking or e-banking** Conducting banking activities online.
- Electronic Product Environmental Assessment Tool (EPEAT)** A comprehensive global rating system for greener electronics based on a range of environmental performance criteria.
- Electronic retailing (e-tailing)** Retailing conducted over the Internet.
- Electronic shopping cart** Software that allows customers to accumulate items they wish to buy before they arrange payment and check out.
- Electronic signature** "The electronic equivalent of a handwritten signature" (per [pcmag.com/encyclopedia/term/42500/electronic-signature](http://pcmag.com/encyclopedia/term/42500/electronic-signature)).
- E-mail spam** Occurs when almost identical messages are e-mailed to many recipients (sometimes millions of unsolicited e-mails).
- Encryption** The process of encoding data into a form (called a *ciphertext*) that will be difficult, expensive, or time-consuming for an unauthorized person to understand.
- Encryption algorithm** The set of procedures or mathematical algorithms used to encrypt or decrypt a message.
- Enterprise 2.0** "The use of social software platforms within companies or between companies and their partners or customers."
- Enterprise mobility** The people and technology (e.g., devices and networks) that enable mobile computing applications within the enterprise.
- Enterprise search** The search for information *within* the files and databases of an organization.
- Ethics** A set of moral principles or rules of how people are expected to conduct themselves.
- Event shopping** The B2C model in which sales are designed to meet the needs of special events (e.g., a wedding, Black Friday). This model may be combined with group purchasing (to lower the customers' cost).
- Exchanges (trading communities or trading exchanges)** Many-to-many e-marketplaces where many buyers and many sellers meet electronically to trade with one another.
- Expert systems (knowledge-based systems)** A computer program that uses a stored knowledge to solve problem or provide advice in specified areas.
- Exposure** An instance of being exposed to attackers that exploits vulnerability.
- Extranet** A network that uses Internet technology to link intranets of several organizations in a secure manner.
- Fair use** The limited use of copyrighted material, without paying a fee or royalty, for certain purposes (e.g., reviews, commentaries, teaching).

- Fiat currency** The coin and paper money of a country that is designated as legal tender.
- Firewalls** Barriers between an internal trusted network (or a PC) and the untrustworthy Internet. Technically, it is composed of hardware and a software package that separates a private computer network (e.g., your LAN) from a public network (the Internet).
- Forward auction** An auction where a seller entertains bids from multiple buyers.
- Fraud** Any business activity that uses deceitful practices or devices to deprive another of property or other rights.
- Front end** The place where customers interact with a marketplace. The major components of the front end can include the seller's portal, electronic catalogs, a shopping cart, a search engine, an auction engine, a payment gateway, and all other activities related to placing orders.
- Gamification** The introduction of gaming into social networking or other platforms (like B2B training). Gamification can also be viewed as the introduction of social networking activities into online games.
- General controls** Controls designed to protect all system applications.
- Geographical information system (GIS)** A computer-based system that captures, stores, analyzes, and displays geographically related data.
- Geolocation** The ability of finding the location of a mobile Web-connected user.
- Global positioning system (GPS)** A US government satellite-based system that provides users with positioning, navigation, and timing.
- Government 2.0** The employment of social media tools, new business models, and embracing social networks and user participation, government agencies can raise the effectiveness of their online activities to meet users' needs at a reasonable cost.
- Government-to-business (G2B)** E-government category that works both ways: government-to-business and business-to-government. Thus, G2B refers to activities where the government sells products to businesses or provides businesses with services and vice versa.
- Government-to-citizens (G2C)** E-government category that includes all the interactions between a government and its citizens that take place electronically.
- Government-to-employees (G2E)** E-government category that includes activities between the government and their employees.
- Government-to-government (G2G)** E-government category that includes EC activities between different units of governments, including those within one governmental body. Many of these are aimed at improving the effectiveness and the efficiency of the government operation.
- Green computing** The eco-friendly use of computing resources.
- Green IT** The efforts to improve the use of EC (and IT) by minimizing damage to the environment and at the same time saving money.
- Group purchasing** Orders from several buyers are aggregated so that better prices due to larger quantities purchased can be negotiated.
- Hacker** Someone who gains unauthorized access to a computer system.
- Hit** A request for data from a Web page or file.
- Horizontal marketplaces** Markets in which trading is in a service or a product that is used in many types of industries. Examples are office supplies, PCs, or travel services.
- Identity theft** Wrongfully obtaining and using the identity of another person in some way to commit crimes that involve fraud or deception (e.g., for economic gain).
- Indirect materials** Items, such as office supplies or light bulbs, which support operation and production.
- Information assurance (IA)** The performance of activities (steps) to protect information systems and their processes against all risks. The assurance includes all tools and defense methods.
- Information security** Measures taken to protect information systems and their processes against all risks.
- Insourcing** In-house development of applications.
- Integrity** The assurance that data are accurate and that they cannot be altered.
- Intellectual property (IP)** Property that derives from the creative work of an individual, such as literary or artistic work.
- Intellectual property law** Area of the law concerned with the regulation of thinking-related products, including creativity, that are protected by patents, copyrights, trademarks, and trade secret law.
- Intelligent agents** Autonomous, small computer program that acts upon changing environment as directed by stored knowledge.
- Intelligent personal assistants** An application that uses AI to understand spoken natural languages. Users can receive complex assistance and advice from them.

- Interactive marketing** A marketing concept that enables marketers and advertisers to interact directly with customers.
- Interactive video** A technique used to mix user interaction with videos.
- Interactive voice response (IVR)** A voice support application system that enables users to interact by telephone (of any kind) with a computerized system to request and receive information.
- Interchange rate** The fees charged by the issuing bank for handling authorization and settlement requests.
- Intermediary** A third party that operates between sellers and buyers.
- Internet censorship** Restrictions on what can be seen, published, or accessed on the Internet.
- Internet of Things** An ecosystem composed of interconnected objects with microprocessors via the Internet.
- Internet Radio** Audio content transmitted live via the Internet.
- Internet trolls** Community members who publish online offensive, disruptive, or troublemaking content.
- Internet TV** The delivery of TV content via the Internet by video streaming technologies.
- Intrabusiness EC** E-commerce category that refers to EC transactions among various organizational departments and individuals.
- Intranet** An internal corporate or government network that uses Internet tools, such as Web browsers and Internet protocols.
- Intrusion detection system (IDS)** A device composed of software and/or hardware designed to monitor the activities of computer networks and computer systems in order to detect and define unauthorized and malicious attempts to access, manipulate, and/or disable these networks and systems.
- Key (key value)** The secret piece used with the algorithm to encrypt (or decrypt) the message.
- Key performance indicator (KPI)** A quantifiable measurement that is considered a critical success factor of a company, department, or project.
- Keystroke logging (keylogging)** The process of using a device or software program that tracks and records the activity of a user in real time (without the user's knowledge or consent) by the keyboard keys they press.
- Knowledge management (KM)** The process of capturing or creating knowledge, storing and protecting it, updating it constantly, disseminating it, and using it whenever necessary.
- Landing page** The page a viewer is directed to after having clicked on a link. In online marketing, this page is used to convert the person from a viewer to a buyer.
- Learning management system (LMS)** Software applications for managing e-training and e-learning programs including content, scheduling, delivery tips, and so forth.
- Live banners** Ads where the content can be created or modified at the time the ads pop up instead of being preprogrammed like banner ads.
- Localization** The transformation and adaptation of Web content media products and advertising materials to fit the Web environment of a certain region or country.
- Location-based commerce (l-commerce, LBS)** A system that can find the location of people (or objects) and provide with relevant services.
- M-learning (mobile learning)** Refers to e-learning or other forms of education using mobile devices.
- Machine learning** Teaching computers to learn from examples and large amount of data.
- Macro virus (macro worm)** A malware code that is attached to a data file rather than to an executable program (e.g., a Word file).
- Maintenance, repair, and operation (MRO)** Indirect materials used in activities that support production.
- Malware (malicious software)** A generic term for malicious software.
- Mass customization** Producing large number of customized products.
- Maverick buying** A buying situation that occurs when a buyer makes unplanned purchases of items needed quickly, resulting in buying at non-pre-negotiated, and usually higher, prices.
- Merge-in-transit** Logistics model in which components for a product may come from two (or more) different physical locations and are shipped directly to the customer's location.
- Micropayments (e-micropayments)** Small online payments, usually under \$10.
- Mobile advertising (m-advertising)** "Advertising tailored to and delivered through wireless mobile devices such as smartphones (e.g. Blackberry, iPhone, Android, etc.), feature phones (e.g. lower-end mobile phones capable of accessing mobile content), and media tablets (e.g. iPad, Samsung Galaxy Tablet, etc.)" (IAB 2016).
- Mobile app** A software application developed specifically for use on small, wireless computing devices, such as smartphones and tablets, rather than desktop or laptop computers.
- Mobile banking (m-banking)** A term used to describe the conducting of banking activities via a mobile device (mostly by texting or via mobile website).
- Mobile commerce (m-commerce, m-business)** Conducting e-commerce by using mobile devices and wireless networks.

- Mobile (digital) wallet** Proximity payments that are debited to a mobile phone account as a monthly fee or to a debit card account. The technology enables payments as well as processing loyalty programs and performing target promotions all in one mobile device.
- Mobile enterprise** Mobile applications conducted by enterprises to improve the operations of the employees, facilities, and relevant supply chains, within the enterprise and with its business partners.
- Mobile entertainment** Any entertainment delivered on mobile devices over wireless networks or that interacts with mobile service providers.
- Mobile government (m-government)** The implementation of e-government applications using wireless platforms.
- Mobile marketing** The use of mobile devices and wireless infrastructure as a means of marketing and advertising.
- Mobile market research** A method of collecting data through mobile devices including mobile phones, smartphones, and tablets.
- Mobile payment** Payment transactions initiated or confirmed using a person's mobile device, usually a smartphone.
- Mobile portal** A portal accessible via a mobile device.
- Mobile social networking** Social networking where members converse and connect with one another using any mobile device.
- Mobile worker** Any employee who is away from his or her primary work space at least 10 h a week (or 25% of the time).
- Multichannel business model** The model or strategy of selling both online and offline.
- Multimedia messaging service (MMS)** The new type of wireless messaging, delivering rich media content, such as video, images, and audio to mobile devices. MMS is an extension of SMS (no extra charge with an SMS "bundle"). It allows for longer messages than with SMS.
- Name-your-own-price model** Auction model in which a would-be buyer specifies the price (and other terms) he or she is willing to pay to any willing and able seller. It is a C2B model that was pioneered by Priceline.com.
- Natural language processing** Technology that allowed people to communicate with a computer in their native language.
- Net neutrality** A network design principle stating that basic protocols of the Internet should enable users to utilize the Web without being discriminated against by Internet service providers.
- Nonconvertible virtual currency** A virtual currency used in a specific virtual world or domain that cannot (theoretically) be exchanged for fiat currency.
- Nonrepudiation** The assurance that online customers or trading partners cannot falsely deny (repudiate) their purchase, transaction, sale, or other obligations.
- On-demand delivery service** An express delivery option.
- Online intermediary** A third-party entity that brokers the transactions between the buyer and seller and can be either a virtual or a click-and-mortar intermediary.
- Opt-in** The principle that consumers must approve, in advance, what they are willing to see. That is, information sharing should not occur unless customers affirmatively allow or request it.
- Opt-out** A method that gives consumers the choice to refuse to share information about themselves or to avoid receiving unsolicited information.
- Order fulfillment** All the operations a company undertakes from the time it receives an order to the time the items are delivered to the customers, including all related customer services.
- Outsourcing** The process of contracting (farming out) the company's products, services, or work to another organization that is willing and able to do the job.
- Page hijacking** Illegally copying website content so that a user can be misdirected to a different website.
- Patent** "An exclusive right to a particular invention. Patents are granted by states or governments to the creator of an invention, or to someone who has been designated by them to accept the rights over the invention. The holder of the patent has sole rights over the invention for a specified period of time" (per Fedcirc.us).
- Pay per click (PPC)** A popular Internet advertising payment formula where advertisers pay sites only when someone clicks on their ad.
- Payment cards** Electronic cards that contain payment-related data. They include credit cards, charge cards, and debit cards.
- Payment service providers (PSPs)** Are third-party companies that provide services to merchants so they can accept all kinds of electronic payments.
- Penetration test (pen test)** A method of assessing the vulnerability of a computer system, which is done by allowing experts to act as malicious attackers.
- Penny auction** A new type of forward auction in which participants must pay a small nonrefundable fee each time they place a bid (usually in small increments above the previous bid). When time expires, the last participant to have placed a bid wins the item and also pays the final bid price.

- Permission advertising** Advertising (marketing) strategy in which customers agree to accept advertising and marketing materials (known as *opt-in*).
- Person-to-Person (P2P)** Sometimes called consumer-to-consumer (C2C) EC, refers to electronic transactions conducted between and among individuals.
- Personal robot (also personal assistant, virtual personal assistant)** This assistant is designed to live with its owner(s). The personal robot, according to vendors, is able to recognize your face, know your mood, understand what you say, know what you really mean, and much more. It learns and gets smarter everyday.
- Personalization** The matching of advertising content and vendors' services with customers based on their preferences and individual needs.
- Personalized banners** Banners that are tailored to meet the need of target customers.
- Pervasive computing** Computing capabilities that are embedded in the environment but typically are not mobile.
- Pharming** A scam where malicious code installed on a computer is used to redirect victims to bogus websites without the victims' knowledge or consent.
- Phishing** A fraudulent process of attempting to acquire sensitive information by masquerading as a trustworthy entity.
- Plaintext** A human-readable text or message.
- Platform for Privacy Preferences Project (P3P)** A protocol for privacy protection on the Web developed by the W3 organization (W3C).
- Pop-up ad** An ad that appears due to the automatic launching of a new browser window when a visitor accesses or leaves a website and when a delay occurs, also known as *ad spawning*.
- Pop-up banner** Banners that appear in a separate window when its affiliated Web page is activated.
- Prevention measures** Ways to help stop unauthorized people from accessing the EC system (e.g., by using authentication devices and firewalls or by using *intrusion prevention* which is, according to TechTarget, "a preemptive approach to network security used to identify potential threats and respond to them swiftly").
- Private key** A key that only its owner knows.
- Private shopping club** Enables members to shop at discount, frequently for short periods of time (just few days).
- Procurement management** The process of planning, organizing, and coordinating of all the activities pertaining to the purchasing of the goods and services needed by an organization.
- Project champion** The person who ensures that the team is ready to move forward and understands its responsibilities. The project champion is responsible for activities such as identifying the project's objectives, prioritizing phases, allocating resources to ensure completion of the project, and so forth.
- Public e-marketplaces** Third-party exchanges open to all interested parties (sellers and buyers).
- Public key** A key that is known to all.
- Public (asymmetric) key encryption** An encryption method that uses two keys: public key and private key.
- Public key infrastructure (PKI)** A comprehensive framework for securing data flow and information exchange that overcomes some of the shortcomings of the one-key system.
- Radio-frequency identification (RFID)** A short-range radio-frequency communication technology for wirelessly identifying and tracking tags attached to objects.
- Random banners** Banner ads that appear randomly, not as a result of some action by the user.
- Ransomware** A method of attack where the attacker encrypts files so the victim cannot open them unless they pay a ransom.
- Real-time location systems** Systems that track and identify the location of people or objects in real time.
- Reintermediation** The new intermediation that provides valuable help services.
- Request for quote (RFQ)** A form or document used as an "invitation" to take part in a reverse auction.
- Reverse auction** The auction process in which many sellers (suppliers) compete to fulfill orders requested by one buyer.
- Reverse auction (bidding or tendering system)** Auction in which the buyer places an item for bid (tender) on a request for quote (RFQ) system; potential suppliers bid on the job, with the price reducing sequentially; and the lowest bid wins, primarily a B2B or G2B mechanism.
- RFID Technology** Use of radio frequency (RF) to identify tagged objects.
- Risk** The probability that a vulnerability will be known and exploited.
- Robo advisors** Virtual personal assistants that contain knowledge so they can advise people in several fields, mostly in finance and investment.
- Robot** Electromechanical device that is programmed to perform manual and/or mental work done by people.
- Search advertising** Placing online ads on Web pages that show results from querying a search engine.

- Search engine** A computer program that can access databases of Internet resources, search for specific information or keywords, and report the results.
- Search engine optimization (SEO)** A process that improves the position of a company or brands on the result page displayed by a search engine. Ideally, the results should be in the top five on the first page of the results.
- Search engine spam** The technology that enables the creation of spam sites.
- Sell-side e-marketplace** A place where a company sells either standard or customized products to individuals (B2C) or to businesses (B2B); this type of selling is considered to be one-to-many.
- Semantic Web** A group of methods that focuses on machines (in contrast with Web 2.0 that focuses on people), trying to enable machines to understand the semantics (i.e., the meaning) of information using natural language understanding tools.
- Settlement** Involves the transfer of money from the buyer's account to the merchant's.
- Sharing economy** An economic system constructed around the concept of sharing goods and services among the participating people.
- Shopbot** Robots that help in online shopping by collecting shopping information (search) and conducting price and capability comparisons.
- Shopping portals** Gateways to webstores and e-malls.
- Shopping robots (shopping agents or shopbots)** Search engines that look for the lowest prices or for other search criteria.
- Short message service (SMS)** A service that supports the transmittal of short text messages (up to 140–160 characters) between wireless devices.
- Siri** Virtual intelligent personal assistant. Similar to Alexa.
- Smart card** A plastic payment card that contains data in an embedded microchip.
- Smart card reader** A read/write device that acts as a mediator between the card and the host system that stores application data and processes transactions.
- Smart cities** Cities where digital technologies and EC facilitate public services and transportation and improve people's life.
- Smart grid** An electricity network managed by utilizing digital technology.
- Smart homes** Homes where all the appliances, security, entertainment, etc. are interconnected (frequently wireless) and are controlled centrally (e.g., via smartphone's apps).
- Smartphone** A mobile phone with Internet access and PC-like functionality.
- Smartwatch** A computerized wrist watch with functionality that is enhanced beyond timekeeping. Today, smartwatches are wearable computers. Many run mobile apps, using a mobile operating system.
- Social business** "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" (Social Business Forum).
- Social collaboration (Collaboration 2.0)** People's collaboration within and between communities enabled by social media tools and platforms.
- Social commerce (SC)** Refers to the process where people, individually or in groups, interact and share information and knowledge while in social networks or when pursuing social goals.
- Social computing** Computing systems that involve social interactions and behavior.
- Social customers** Customers who usually are members in social networks, do social shopping, and understand their shopper's rights and how to use them to their advantage.
- Social customer relationship management (SCRM, CRM 2.0)** The delivery of CRM by using social media tools and platforms.
- Social (digital) customers** Members of social networks who share opinions about products, services, and vendors, do online social shopping, and understand their rights and how to use the wisdom and power of social communities to their benefit.
- Social engineering** A type of nontechnical attack that uses some ruse to trick users into revealing information or performing an action that compromises a computer or network.
- 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 game** A video multiplayer game played on the Internet, mostly in social networks or virtual worlds.
- Social learning** Learning, training, and knowledge sharing in social networks and/or facilitated by social software tools.
- Social marketplace** A marketplace that uses social media tools and platforms and acts as an online intermediary between buyers and sellers.

- Social media** Involves user-generated online text, image, audio, and video content that are delivered via Web 2.0 platforms and tools. The media is used primarily for social interactions and conversations such as to share opinions, experiences, insights, and perceptions and to collaborate, all online.
- Social media marketing (SMM)** The application of marketing communication and other marketing tools using social media.
- Social network** A social entity composed of nodes (which are generally individuals, groups, or organizations) that are connected by links such as hobbies, friendship, or profession. The structures are often very complex.
- Social network game** A video game that is played in social networks and usually involves multiplayer.
- Social networking** The execution of any Web 2.0 activity, such as blogging or having a presence in a social network. It also includes all activities conducted in social networks.
- Social networking service (SNS)** A service that builds online communities by providing an online space for people to build free homepages and that provides basic communication and support tools for conducting different activities in the social network.
- Social shopping (sales 2.0)** Online shopping with social media tools and platforms. It is about sharing shopping experiences with friends. Social shopping is the combination of social media and e-commerce.
- Social TV** An emerging social media technology that enables several TV viewers who are in different locations to interactively share experiences such as discussions, reviews, and recommendations while watching the same show simultaneously.
- Spam** The electronic equivalent of junk mail.
- Spam site** Pages that trick search engines into offering biased search results so that the ranking of certain pages is inflated.
- Spear phishing** A variant of phishing that targets victims with e-mails purporting to be from colleagues, or family members, or friends.
- Speech (voice) understanding** Computer system that understands natural language spoken by people.
- Splog** Blogs created by spammers solely for advertising.
- Spyware** Tracking software that is installed by criminals or advertisers, without the user's consent, in order to gather information about the user and direct it to advertisers or other third parties.
- Standard of due care** The minimum and customary practice that a company is reasonably expected to take to protect the company and its resources from possible risks.
- Static banner** Banners that stay on a Web page regularly.
- Stored-value card** A card where a monetary value is prepaid and can be loaded on the card once or several times.
- Strategy** A comprehensive framework for expressing the manner in which a business plans to achieve its mission, what goals are needed to support it, and what plans and policies will be needed to accomplish these goals.
- Strategy assessment** The continuous performance monitoring, comparison of actual to desired performance, and evaluation of the progress toward the organization's goals, resulting in corrective actions and, if necessary, in strategy reformulation.
- Strategy formulation** The development of specific strategies and tactics to exploit opportunities and manage threats in the business environment in light of corporate strengths and weaknesses.
- Strategy implementation** The "How do we do it?" phase that includes tactics, plans, schedules, deployment strategies, resource allocation, and project management.
- Strategy initiation** The initial phase of strategic planning in which the organization is setting its vision, goals, and objectives. Looking at its environment, strategy initiation includes an assessment of a company's strengths and weaknesses, examining the external factors that may affect the business.
- Supply chain segmentation** Alignment of customer demands in different channels with supplies.
- Symmetric (private) key encryption** A scheme in which the same key is used to encrypt and decrypt the plaintext.
- Telecommuting** Working at home using a PC, tablet, smartphone, and the Internet.
- Tendering (bidding) system** System through which large organizational buyers make large-volume or large-value purchases (also known as a *reverse auction*).
- Third-party logistics suppliers (3PL)** External, rather than in-house, providers of logistics services.
- Trojan horse** A program that seems to be harmless or even looks useful but actually contains a hidden malicious code.
- Turing test** A test of a computer's capability to mimic equivalent human behaviors.
- Ubiquitous computing (ubicom)** Computing capabilities embedded into a relevant system, usually not visible, which may be mobile or stationary.
- Underground Internet economy** E-markets for stolen information made up of thousands of websites that sell credit card numbers, social security numbers, e-mail addresses, bank account numbers, social network IDs, passwords, and much more.
- User profile** Customer preferences, behaviors, and demographics.

- Value proposition** Refers to the benefits, including the intangible ones that a company hopes to derive from using its business model.
- Vendor-managed inventory (VMI)** A process in which retailers make their suppliers responsible for monitoring the inventory of each item they supply and determining when to order each item.
- Vertical marketplaces** Markets for one industry or one industry segment. Examples include marketplaces specializing in electronics, cars, hospital supplies, steel, or chemicals.
- Viral blogging** Viral marketing done by bloggers.
- Viral marketing** Word-of-mouth (WOM) method by which people tell others (frequently their friends) about a product they like (or dislike).
- Viral video** A video that is spread rapidly through the process of online information sharing. This way, people share videos that receive more attention, sometimes drawing millions of viewers in a short time.
- Virtual community** A community where the interaction takes place over a computer network, mainly the Internet.
- Virtual currency** The digital representation of value that can be digitally traded and functions as a medium of exchange, a unit of account, and a store of value but does not have legal status in any jurisdiction.
- Virtual economy** An emerging economy existing in several virtual worlds, where people exchange virtual goods frequently related to an Internet game or to a virtual business.
- Virtual goods** Computer images of real or imaginary goods.
- Virtual private network (VPN)** A network that uses the Internet to transfer information in a secure manner.
- Virtual (pure-play) e-tailers** Companies with direct online sales that do not need physical stores.
- Virtual (pure-play) organizations** Organizations that conduct their business activities solely online.
- Virtual reality** A computer-generated simulation of a real-life environment in which users can be immersed.
- Virtual trade show** Temporary or permanent showplaces where exhibitors present their new products to potential customers.
- Virtual university** Online universities where students take classes from home via the Internet.
- Virus** Programmed software inserted by criminals into a computer to damage the system; running the infected host program activates the virus.
- Voice portal** A portal with audio interfaces that can be accessed by telephone or cell phone.
- Vulnerability** Weakness in software or other mechanisms that threatens the confidentiality, integrity, or availability of an asset (recall the CIA model). It can be directly used by a hacker to gain access to a system or network.
- Vulnerability assessment** A process of identifying and evaluating problem areas that are vulnerable to attack on a computerized system.
- Warehouse management system (WMS)** A software system that helps in managing warehouses.
- Web 2.0** The second generation of Internet-based tools and services that enables users to easily generate content, share media, and communicate and collaborate, in innovative ways.
- Web 3.0** A term used to describe the future of the World Wide Web. It is projected to deliver a new generation of business applications that will see business and social computing converge.
- Web 4.0** The Web generation after Web 3.0. It is still an unknown entity. However, it is envisioned as being based on islands of intelligence and as being ubiquitous.
- Web analytics** “The measurement, collection, analysis, and reporting of Internet data for the purposes of understanding and optimizing Web usage” (per Web Analytics Association).
- Web bugs** Tiny (usually invisible) objects concealed in a Web page or in e-mail messages. Web bugs transmit information about the user and his or her movements to a monitoring site (e.g., to find out if the user has viewed certain content on the Web page).
- Web (information) portal** A single point of access, through a Web browser, to critical business information located inside and outside organizations.
- Web mining** The use of data mining techniques for both Web content and usage in Web documents in order to discover patterns and hidden relationships.
- Webstore (storefront)** A single company’s (or individual seller’s) website where products or services are sold.
- Wireless mobile computing (mobile computing)** A computing solution where computing is done using mobile devices at any place connected to a wireless network.
- Worm** A software code that can replicate itself automatically (as a “standalone”—without any human intervention). Worms use networks to propagate and infect a computer or handheld device and can even spread via instant messages.
- Zombies** Computers infected with malware that are under the control of a spammer, hacker, or other criminals.

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