

# E-business fundamentals glossary

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## Accessibility

The segment targeted must be able to be reached and served adequately by the firm's promotion and distribution system.

## Address Resolution Protocol (ARP)

Internet protocol (IP) used in IPv4 to map an IP address to a media access control (MAC) address. A MAC is a 48-bit code for layer 2 networking maintained by the Institute of Electrical and Electronics Engineers (IEEE) and hardwired into network adapters. Also called Ethernet address.

## Advanced Research Projects Agency Network (ARPANET)

The forerunner of the Internet that was a pioneering long-haul network. It served as the testbed for many areas of inter-network technology development and testing and acted as the central backbone during the development of the Internet.

## Advanced ship notice (ASN)

An electronic data interchange (EDI) transaction that identifies the contents of a container that is en route from a supplier to a customer.

## Affiliate

Companies that sell other manufacturers' or retailers' (sponsoring merchants') products on their Web sites. Users select a product at the affiliate Web site, but the sale is actually transacted at the sponsoring merchant's Web site.

## Aggregator

Enables buyers to select among goods and services from various vendors within a market by collecting information from the vendors' Web sites and then making this information available through its own Web site. The consumer only has to visit the aggregator's Web site, not all the individual vendor sites.

## Algorithms

A clearly defined procedure for performing a complex process by carrying out a series of finite steps that lead to a specific result. Algorithms can be written in any computer language.

## Analog

Used primarily for broadcast and phone transmission, although these media are moving towards digital transmission today. Telephone transmissions are completed by turning voice vibrations into sound wave vibrations.

## Applet

A small program that runs within an application. Applets are commonly used to make otherwise static World Wide Web pages more interactive.

## Application

The term is sometimes used in place of "application program," "software," or "program," which are used to process data for the user. Applications also refer to specific areas where computers are applied.

**Application architecture (AA)**

Describes the layout of an application's deployment. This generally includes partitioned application logic and deployment to application server engines. They rely less on specific tool or language technology and more on standardized middleware options, communication protocols, data gateways, and platform infrastructures.

**Application development (AD)**

A process that includes the following steps:

1. Identifying a need
2. Defining the requirements
3. Planning the overall application structure or architecture
4. Developing the code or programming instructions
5. Monitoring progress
6. Testing results

**Application integration**

The process of a) keeping redundant copies of data (in independently designed applications) consistent, and/or b) enabling end-users to access data and functionality from independently designed applications on a single user interface.

**Application layer**

The top of the seven-layer Open Systems Interconnection (OSI) model, generally regarded as offering an interface to, and largely defined by, the network user.

**Application service provider (ASP)**

An organization that hosts software applications on its own servers within its own facilities. Customers access the application via private lines or the Internet. Also called a commercial service provider.

**Architecture**

The overall design of a computing system and the logical and physical interrelationships between its components. The architecture specifies the hardware, software, access methods, and protocols used throughout the system.

**Auction**

An electronic market, which can exist in both a business-to-business and business-to-consumer context. Sellers offer products or services to buyers through a Web site with a structured process for price setting and fulfillment.

**Authentication service**

A mechanism for the secure authentication of the identity of network clients by servers and vice versa, without presuming the operating system integrity of either.

**Authorization**

Occurs when the merchant, its merchant bank, and the customer's card-issuing bank work together to verify that the electronic payment should be permitted given the customer's credit limit or the amount in the customer's bank account.

**Automated clearinghouse (ACH)**

An electronic funds transfer system governed by operating rules that provide clearance of electronic payments with participating financial institutions.

**Available to promise**

The uncommitted portion of a company's inventory or planned production. This figure is frequently calculated from the master production schedule and is maintained as a tool for order promising.

**B****Back-office (back-end)**

The business processes and operational functions that happen internally or through the supply chain. These functions often include inventory management, order processing and tracking, shipping and receiving, purchasing and distribution.

**Bandwidth**

The amount of information that can be effectively pushed through a particular communications pipe at a given time. It is typically measured in bits per second.

**Banner ad**

A graphic image used on Web sites to advertise a product. Banner ads are typically rectangles of a standard height and width that the user can click on for further information.

**Biometrics**

A method of identification or authentication that measures a unique physical or behavioral biological characteristic such as a fingerprint, face, voice, or iris of the eye.

**Bit**

The minimum unit of binary information as stored in a computer system. A bit can have only two states, on or off, which are commonly called ones (1) and zeros (0). The combination of ones and zeros determines which information is entered into and processed by the computer.

**Bits per second (BPS)**

The basic unit of measurement for serial data transmission capacity. Represented as Kbps, or kilobit/s, for thousands of bits per second; Mbps, or megabit/s, for millions of bits per second; Gbps, or gigabit/s, for billions of bits per second; Tbps, or terabit/s, for trillions of bits per second.

**BPR analytical techniques**

Mathematical, graphical, logical, and managerial algorithms for describing and modeling business processes, information systems, or management decision-making systems.

**BPR methodology**

An integrated set of management policies and project management procedures for analyzing existing business processes and systems, designing new processes and systems, testing and managing the implementation process.

**BPR tools**

Combinations of techniques and software products that allow electronic capture, analysis, testing, simulation, reconfiguration, and persistent memory of business and systems models.

**Branding**

A trademark or distinctive name identifying a product or a manufacturer.

**Bricks and clicks**

Traditional companies that create a virtual counterpart of their brick and mortar business are sometimes referred to as hybrids.

**Bricks and mortars**

A traditional company with non-Web channels (a physical building) as the sales outlet for its products or services.

**Broadband**

The diameter of the pipe through which information passes. Broad bandwidth technology will allow complex information to be transmitted to users, such as real-time sound and video.

**Brochureware site**

Establishes an Internet presence with basic features such as company information, directions, hours of operation, and product information. It does not allow transactions or interactivity. Considered to be Level 1 on the CRM continuum.

**Browser**

A software program used to locate and display information on an intranet, extranet or the Internet. Browsers are most often used to access Web pages and most display graphics, photographs, text, and multimedia information.

**Bulletin board system (BBS)**

An information systems communications initiative for sharing information and experience via a dial-up message center.

**Business driver**

The business or industry needs or changes which are the driving force behind making changes within an organization.

**Business intelligence (BI)**

User-led (versus computer-led) process of exploring data, data relationships, and trends to improve business decision-making. Insights derived from BI's inquiry and analysis techniques are critical to enterprise-wide strategic planning efforts. BI technology is divided into interactive query tools, reporting tools, decision support systems, and executive information systems.

**Business process**

An event-driven, end-to-end processing path that starts with an internal or external request and ends with a result for the customer. Business processes are often cross-departmental and can be enterprise wide.

**Business process architect**

One who focuses on the structure and organization of various business processes. Also, examines how the business process can be improved.

**Business process re-engineering (BPR)**

The fundamental analysis and radical redesign of business practices and management systems, job definitions, organizational systems, and beliefs and behaviors to achieve dramatic performance improvements throughout the organization. BPR uses objective, quantitative methods and tools to complete these transformations.

**Business unit**

A single business or collection of businesses within a company that, in theory, could stand-alone from the company. A business unit has its own competitors in the marketplace and a manager who is responsible for running the business unit.

**Business-to-business**

The business model where transactions and interactions are primarily conducted from one business to another. Using electronic means to conduct business, each organization is generally set up through a contractual agreement. Transactions are conducted through Web authorization and control (WAC) for delivery of confidential information, order processing and tracking, and other internal processes available for each partner.

**Business-to-consumer**

The business model where electronic transactions and interactions are conducted from a business to its consumer. This commerce may include formal and informal relationships.

**Business-to-employee**

Sometimes referred to as employee self-service; it is offered through intraweb portals (e.g., an HR portal).

**Business-to-government**

The business model where electronic transactions and interactions are conducted from a business to the government and vice versa. It may include transactions that involve funding, policies and laws, and other governmental business transactions.

**Buy side**

Processes enabling companies to purchase products. Includes requisitioning, product catalogues, approvals, user identification, purchase order creation, payment processing, and integration with other systems.

**C****Cache**

A temporary storage area for instructions and data near a computer's central processing unit (CPU), usually implemented in high-speed memory. It replicates information from main memory or storage in a way that facilitates quicker access, using fewer resources than the original source.

**Capacity planning**

The function of establishing, measuring, and adjusting limits for the amount of Internet traffic that can be accommodated at any one time. E-business sites need to plan for unpredictable spikes in usage and traffic.

**Certificate (certification) authority (CA)**

Either internal or third-party entities that affirm or electronically vouch for an individual's identity. They are used to vouch for the identity of a device, such as a Web server, a network router, or an application. The certificate is backed by a profile stored in a database that is referenced to retrieve a public key or to check attributes such as permissions and roles.

**Change management**

Automated support for development, rollout, and maintenance of system components (i.e., intelligent regeneration, package versioning, state control, library control, configuration management, turnover management, and distributed impact sensitivity reporting).

**Channel**

1. In data communications, a one-way path along which signals can be sent between two or more points.
2. In telecommunications, a transmission path (one-or two-way) between two or more points provided by a common carrier.
3. In business terminology, a channel refers to the route by which a company's products or services are delivered to the marketplace or end-user. A channel can be referred to as a marketing, sales, or a distribution channel.

**Channel master**

The application used by trading partners that resides within a single company. An example would be a shared service provider that allows its partners to use an internal application to accomplish a business process.

**Clearance**

The routing of the payment information from the merchant bank to the card-issuing bank at the end of the business day.

**Click through**

Occurs when an Internet user clicks the mouse to link through an ad's text or graphics in order to access the message of the ad or the ad's Web site.

**Clickstream tools**

Tools that watch the pages a site visitor browses and keeps track of time spent at the particular location.

**Client**

A system or a program that requests the activity of one or more other systems or programs, called servers, to accomplish specific tasks. In a client/server environment, the workstation is usually the client.

**Client/server (C/S)**

The splitting of an application into tasks performed on separate computing devices — a programmable workstation such as a personal computer (PC) and a server. The PC (the client) does some of its own processing, while the server typically stores information and software. The two sides are connected by a local-area network (LAN) or wide-area network (WAN).

**Client/server architecture**

The division of an application into separate processes capable of operating on separate central processing units (CPUs) connected over a network.

**Collaboration technologies**

Computer-mediated groupware that increases the productivity or functionality of person-to-person processes.

**Collaborative extranet**

Occurs when all trading partners agree to use the same application functionality. This type is normally used for collaborative applications such as the development of products.

**Collaborative commerce (C-Commerce)**

Electronically enabled business interactions among an enterprise's internal personnel, suppliers, business partners, and customers throughout a given trading community.

**Collaborative filtering**

A marketing technique that automatically provides a consumer with a list of additional items similar to the current purchase.

**Common gateway interface (CGI)**

A data-passing specification used when a Web server must send or receive data from an application such as a database. A CGI script passes the request from the Web server to a database, gets the output, and returns it to the Web client.

**Communication**

Transmission of information between points of transmission and reception, without alteration of sequence or structure of the content.

**Communication protocol**

The exchange of a special sequence of control characters between a computer and a remote terminal to establish synchronous communications.

**Community**

A constantly changing group of people collaborating and sharing their ideas over an electronic network (e.g., the Internet). Communities optimize their collective power by affiliation around a common interest. Information can be shared via bulletin boards, chat rooms, list servers, etc.

**Concurrency**

A measure of the number of users engaged in transactions at the same time. This information is critical for capacity planning.



**Confidentiality**

Protection of data from unauthorized viewing.

**Configuration management**

A function that enables impact/dependency analysis of application components.

**Connect**

To join to or by means of a communications circuit.

**Connectivity**

In IT terms, it refers to the ability to connect to or communicate with another computer or computer system. In e-business the term often refers to connecting to the Internet, or the ability to connect to a Web site.

**Consumer-to-consumer**

A business model where consumers have the capability to conduct electronic transactions with other consumers. This often includes online auction or trading sites.

**Content provider**

An enterprise with information-based products. It also includes services to access and manage the content.

**Cookie**

A permanent code placed in a file on a client computer's hard disk by a server that the client has visited. The code uniquely identifies the client. When the PC user returns, they are automatically entered into the site without relogging in.

**Customer**

One that purchases a commodity or service. Many organizations are changing their focus towards the customer and attempting to best meet and satisfy their needs.

**Customer analysis**

An analysis of customer data by using historic records of customer behavior to build estimates of future behavior such as loyalty, responsiveness, and profitability.

**Customer management systems**

An application or set of applications used by marketing professionals to design multi-channel marketing campaigns and track the effect of those campaigns by customer segment over time.

**Customer profile**

A definition of the customer in terms of the various market segmentation variables. E-businesses must be able to identify each customer's preferences, behaviors, and demographics.

**Customer relationship management (CRM)**

An enterprise-wide business strategy designed to optimize profitability, revenue, and customer needs satisfaction. To accomplish this the enterprise must organize operations around customer segments, fostering customer satisfying behaviors and linking processes from customers back through suppliers.

**Customer service and support (CSS)**

Systems such as help desks and sales and marketing systems that provide front-line support with back-end linkage for interaction with customers (e.g., tracking, resolution and escalation). A CSS

tracking system tracks and reports inquiries resolved during the initial contact and those that require follow-up.

**Customer-centric**

The business strategy of CRM that clearly places the customer at the heart of an enterprise's strategy. Firms that employ this strategy will not only enable themselves to provide greater value to customers but will be able to serve these customers faster and more accurately than any competitor.

**Customization**

Occurs when a site permits choices among static categories. It involves features to allow Web visitors to select how certain pages are displayed. The user, not the Web site's content creator, is in control of the content.

**D****Data integrity**

A performance measure based on the rate of undetected errors.

**Data mart**

A decentralized subset of data found in a data warehouse that is designed to support the unique business unit requirements of a specific decision support system.

**Data mining**

The process of identifying patterns from typically large amounts of business data and extracting useful information. It can be performed by people, intelligent agents, or other machine-based learning and analysis techniques. Data mining is often applied to data stored on a data warehouse.

**Data synchronization**

A form of embedded middleware that allows applications to update data on two systems so that the data sets are identical. These services can run via a variety of different transports but typically require some application-specific knowledge of the context and notion of the data being synchronized.

**Data warehouse**

A central computer repository that stores all (or significant portions of) the data collected by an enterprise's multiple business systems. Data from online transaction processing applications and other sources is selectively collected, extracted, sorted, and cleaned. Then it is stored in a data warehouse, which is usually housed in an enterprise mainframe server.

**Database administrator (DBA)**

The person responsible for managing data, namely data set placement, database performance, and data recovery and integrity at a physical level.

**Database management system (DBMS)**

A software package that enables end users or application programmers to share data. It provides a systematic method of creating, updating, retrieving, and storing information in a database (DB). DBMSs are generally also responsible for data integrity, data access control, and automated rollback, restart, and recovery.

**Decision support systems**

A system designed to support strategic (versus operating) decisions. Decision support systems allow the computer rather than the user to make decisions. The system tends to be user-friendly and emphasize ad hoc query, reporting, and analysis capabilities. This is in contrast to online transaction processing, which focuses on low-cost, fast-response, and predictably structured applications.

**Demand planning**

Order and market information flows upstream continuously from the point of sale, while information on product availability and inventory levels flow downstream.

**Digital**

The generation, storing, processing, and transmission of all electronic data (e.g., words, numbers, even voices) in one of two states represented as 0s and 1s. Computers only understand and read digital data.

**Digital certificate**

An electronic document that is issued by a certificate authority to verify a public key for a company.

**Digital money**

Electronic money used on the Internet.

**Digital signature**

String of bits that identifies the originator of a message or transaction and is the result of the application of the originator's private key to a one-way hash of the (encrypted) message file. Also provides message integrity.

**Directory services**

Middleware that locates the correct and full network address for a mail addressee from a partial name or address. A directory service provides a naming service and extends the capabilities to include intelligent searching and location of resources in the directory structure.

**Disintermediation**

The elimination of the middleman in the channel to market. The term has been used to focus on the theoretical advantages of purchasing directly from companies on the Web, such as convenience, cost savings, and fast turnaround time.

**Domain**

1. A group of nodes on a network forming an administrative entity.
2. On the Internet, a part of the naming hierarchy that refers to groupings of networks based on organization type or geography.

**Domain name**

A unique identifier for an Internet site. Consists of at least two (but sometimes more) parts separated by periods (e.g., <http://www.anyname.com>).

**Domain Name System (or Service) (DNS)**

Name resolution software that lets users locate computers on a UNIX network or the Internet (TCP/IP network) by domain name. The DNS root name servers maintain a database of domain names (host names) and their corresponding IP addresses and are responsible for one or more top-level domain names, e.g., com or edu.

**Dot-com**

A company that was started with the intent of doing business over the Internet. Also referred to as a virtual company.

**Dynamic HTML**

HTML that supports real-time personalization of Web page content.

## E

### **E-Business**

Involves any Internet-enabled business activity that transforms internal and external relationships to create new value and exploit market opportunities driven by new rules of the connected economy.

### **E-Commerce (EC)**

The use of communication technologies to transmit business information and transact business. Taking an order over the telephone is a simple form of EC. Internet commerce is also EC but is only one of several advanced forms of EC that use technology, integrated applications, and business processes to link enterprises.

### **E-Commerce Modeling Language (ECML)**

An open standard, rather than a programming language, that will function with any security protocol (e.g., SSL or SET) and support any type of consumer payment card. It was developed through collaboration with the credit card companies.

### **Electronic benefits transfer (EBT)**

The electronic delivery of government benefits to recipients by means of a special debit card issued to the recipient.

### **Electronic bill presentment/payment (EBPP)**

The electronic capability for companies to post bills online and allow their customers to pay the bill electronically.

### **Electronic data interchange (EDI)**

The electronic exchange of trading documents (e.g., invoices and orders) to enable e-commerce. Originally conducted only through value-added networks, EDI is gradually moving to the Internet.

### **Electronic funds transfer (EFT)**

The electronic exchange of information between financial institutions, which results in debits and credits.

### **Electronic wallet**

A place that holds digital money that has been purchased, or credit card information along with a digital certificate, that identifies the consumer as the authorized cardholder.

### **E-Mail**

Any communication service that permits the electronic transmission and storage of messages, (generally text or graphics), and attached or enclosed files.

### **E-Market maker**

Intermediaries that develop a business-to-business e-marketplace of buyers and sellers within an industry, geographic region, or affinity group.

### **E-Marketplace**

A Web site that enables buyers to select from many suppliers. The purpose is to put the buyer in control and provide decision support tools that enable a buyer to make the most informed decision.

**Enabling technologies**

Technologies or systems that enable an organization to become an e-business.

**Encryption**

The process of systematically encoding a bit stream before transmission so that an unauthorized party cannot decipher it.

**Enterprise resource planning (ERP)**

The integration of financial, manufacturing, and distribution functionality to balance and optimize the enterprise.

**E-Service**

Internet-based customer service. It is seen as a way to reduce the volume of calls to call centers and collect all customer inquiries and complaints into one streamlined place.

**E-Tailer**

Retail organization that provides their customers with a virtual shopping experience as close to an in-store visit as possible.

**E-Team**

A team of people who are involved with the planning, development, and implementation of an e-business initiative.

**Ethernet**

A baseband local-area network (LAN) developed by Xerox and supported by Intel, Digital Equipment, and Hewlett-Packard. It has a bus topology with carrier sense multiple access with collision detection (CSMA/CD) access control.

**Executive information systems (EIS)**

Application system designed for use by the corporate executive. The EIS acts as a usable interface to a database of company information. It automates high-level analysis and reporting and typically has a user-friendly graphical interface.

**Extensible markup language (XML)**

A metalanguage that provides a flexible way to create common information formats and share both the format and the data on the Web.

**Extranet**

A collaborative, Internet-based network to link an enterprise with its suppliers, customers or other external business partners and to facilitate intercompany relationships. Extranets use Internet-derived applications and technology to become the secured extensions of internal business processes to external business partners.

**F****Fat client**

In the client/server environment, it is the client that performs the bulk of the data processing operations. This data is then stored on the server.

**Fault tolerance**

Refers to the ability of the system to continue non-stop when a failure occurs. In the event one component fails, another takes over without a disruption in performance.

**File Transfer Protocol (FTP)**

A Transmission Control Protocol/Internet Protocol (TCP/IP) standard used to log on to a network, list directories, and copy files. It provides authentication of the user and lets users transfer files, list directories, delete and rename files on the foreign host, and perform wild-card transfers.

**Financial products Markup Language (FpML)**

A schema for a specific type of financial instrument in the financial services industry.

**Firewall**

An application or an entire computer that controls access to the network and monitors the flow of network traffic. A firewall can screen and keep out unwanted network traffic and ward off outside intrusion into a private network, which is particularly important when connected to the Internet.

**Front-office (front-end)**

The business interactions that take place with the customer or an external body. It includes such functions as marketing, sales, product support, and order taking.

**Fully Qualified Domain Name (FQDN)**

The address of a network connection that identifies the owner of that address in a hierarchical format (e.g., [www.whitehouse.gov](http://www.whitehouse.gov)).

**G****Gateway**

Software that can interpret and translate different protocols from two distinct networks.

**Government-to-consumer**

A business model where the government interacts directly with the consumer through electronic means. This includes such areas as tax, social services, and government funding.

**Graphical user interface (GUI)**

A graphics-based operating system interface that uses icons, menus, and a mouse to manage interaction with the system. Application program conformance with a single user interface style is the primary determinant of ease of learning and use, and thus, of application effectiveness and user productivity.



## H

### **Horizontal portal**

A business-to-business site that sells goods and services across many different industries.

### **Hybrid business**

A brick-and-mortar business that has responded to Internet threats by creating a Web front-end with links to back-end systems. It is also a dot com that is creating traditional infrastructure, such as a warehouse and logistics system, to meet customer expectations.

### **Hypertext**

Text (or graphics) with hidden coding (created with HTML). When you point and click on the hypertext it brings up a new Web page (or other objects such as graphics or sound files).

### **Hypertext linking**

Links in a Web page that let users jump from page to page, whether the pages are stored on the same server or on servers around the world. Sometimes referred to simply as hyperlinks.

### **HyperText Markup Language (HTML)**

A document-formatting language derived from the Standard Generalized Markup Language (SGML), predominately used to create World Wide Web pages. The user's browser interprets HTML commands and formats the page layout, fonts, and graphics on the screen. One of the more powerful features of HTML is its ability to create hyperlinks. Dynamic HTML supports real-time personalization of Web page content.

### **HyperText Transport Protocol (HTTP)**

The communications protocol used to connect to servers on the World Wide Web. It functions by establishing a connection with a Web server and transmitting HTML pages to the client browser. Addresses of Web sites begin with an http:// prefix.

### **HyperText Transport Protocol Secure (HTTPS)**

The protocol for accessing a secure Web server. Using HTTPS in the URL instead of HTTP directs the message to a secure port number rather than the universal default Web port.

**I****Image understanding**

Systems that analyze captured, still video images and extract their content (e.g., color, texture, shape) for indexing or other action. Image understanding is used for content-based retrieval of image archives.

**Individual consumerism**

A demand for customized delivery of products and services that match the value definition of each unique customer served, not the homogeneous requirements of a generalized or mass market.

**Infomediary**

An information provider that gathers content from several sources and functions as a data aggregator for a target audience to access via a Web site.

**Infrastructure**

From a business perspective, the infrastructure is a shared resource, the state of which bounds the adaptability and change capacity of the enterprise. From a technology perspective, it is the enterprise wide technology used to support the e-business environment and includes the hardware, software, physical plant, communications platforms, network systems, and database architecture.

**Infrastructure architect**

One whose role is to examine and manage the architecture (including the design and structure) of the organization's IT infrastructure and how that relates to the rest of the organization.

**Infrastructure management (IM)**

The integration of an enterprise's IT infrastructure into the larger physical infrastructure, which includes facilities and shared services.

**Integration hubs**

An emerging form of super-processware; rather than a new technology, they are a way of architecting an integration solution. They provide real-time transformation, translation, and routing of messages across multiple enterprises. They support multiple data formats (including EDI formats and XML) and multidimensional views of the data.

**Integration testing**

Putting together software and/or hardware components and testing to see that they work together until a whole integrated system is assembled.

**Integrity**

Protection of data from unauthorized modification.

**Intellectual assets**

Intangible assets including employees' knowledge; data and information about processes, experts, products, customers, and competitors; brand names and image; and intellectual property, such as patented, trademarked, or copyrighted materials and regulatory licenses.

**Intermediary**

A participant in the marketing or distribution channel used by companies to get their products to the ultimate customer. Traditional intermediaries are wholesalers, distributors, brokers, and agents.

**International Telecommunications Union (ITU)**

The ITU is an international organization founded in 1865 and headquartered in Geneva that sets communications standards. The ITU is comprised of over 150 member countries. (See [www.itu.ch](http://www.itu.ch).)

**Internet**

A loose confederation of independent yet interconnected networks that use the Transmission Control Protocol/Internet Protocol (TCP/IP) protocols for communications. The Internet evolved from research done during the 1960s on a network called the ARPANet. It provides universal connectivity and three levels of network services: connectionless packet delivery, full-duplex stream delivery, and application-level services (mainly electronic mail/e-mail).

**Internet commerce**

A subset of e-commerce, where transactions occur only over the Internet. It is only one of several advanced forms that use technology, integrated applications, and business processes to align enterprises. Sometimes called Web commerce.

**Internet Control Message Protocol (ICMP)**

A route management protocol that is part of the Internet Protocol (IP) suite, handling error and control messages.

**Internet Group Management Protocol (IGMP)**

IGMP is used for IP multicast, which is a communication between a single sender and multiple receivers on a network. IGMP is used to exchange membership status data between IP routers that support multicasting and members of multicast groups.

**Internet Protocol (IP)**

A protocol that tracks the address of nodes, routes outgoing messages, and recognizes incoming messages.

**Internet service provider (ISP)**

A company that provides Internet access to its customers. Access to the Internet can be provided either via modem or by direct connection, which offers far higher speeds. Internet service providers are different from online services, although these services sometimes also provide access to the Internet.

**Interoperability**

The ability of one system to communicate or work with another.

**Interstitial ad**

An advertisement on a Web site that is more like a TV commercial. Interstitial ads display in a separate window as a Web page is downloading.

**Intranet**

A network internal to an enterprise that uses the same methodology and techniques as the Internet. It is not necessarily connected to the Internet and is commonly secured from using

firewalls. Intranets are often used in an organization's local-area networks (LANs) or wide-area networks (WANs).

**IP Security (IPSec)**

A working group of the Internet Engineering Task Force (IETF) that is developing a security standard for Internet Protocol (IP). Also, the security standard developed by a workgroup of the Internet Engineering Task Force (IETF). It defines protocols for authentication, privacy, and data integrity based on encryption and X.509 digital certificates.

**J****Java**

A programming language based on C and developed by Sun Microsystems that extends and complements the basic capabilities of Hypertext Markup Language (HTML). Java has become a viable alternative to other programming languages with the rapid growth of the Internet, as it has the potential to work on an unlimited number of computing devices and operating systems.

**Joint application development (JAD)**

A collaborative process for designing and developing software while ensuring high levels of functional quality, since it requires participation of the prospective end user. It is especially effective in developing graphical user interface (GUI) requirements.

**Joint capacity planning**

Collaboration on medium- to long-term material and capacity issues so that the supply chain can gear up or cut back large or long-lasting fluctuations in customer demand.

**Just-in-time (JIT)**

A method of controlling and reducing direct and work-in-process inventory by having suppliers deliver material "just-in-time" to manufacturing.

**K****Key**

A password or table needed to decipher encoded data. An encryption key is a string of digits that when used with a cryptographic algorithm produces ciphertext.

**Knowledge management (KM)**

A business process that formalizes management and leverage of a firm's intellectual assets. KM is an enterprise discipline that promotes a collaborative and integrative approach to the creation, capture, organization, access, and use of information assets, including the tacit, uncaptured knowledge of people.

## L

### **Layer 2 Tunneling Protocol (L2TP)**

A tunneling protocol that combines the features of PPTP and the ability to send private IP address traffic across a public IP network (the Internet).

### **Legacy systems and applications**

An information system that may be based on outdated technologies but is critical to day-to-day operations. When updating to a new system, the legacy information must be recaptured or stored in a way that it can be accessed in the future.

### **List servers**

Low-technology tools that manage databases of user e-mail accounts and automate the sending of messages to specified user groups.

### **Load testing**

Putting together software and/or hardware components and testing their capacity and the amount and degree of simultaneous input the system can manage.

### **Local-area network (LAN)**

Communications network that connects users within a defined area. A LAN is generally within a building and is managed and owned by the enterprise. The shorter distances within a building allow higher speed communications at a lower cost than in WANs.

### **Localization**

Conforming to end-user expectations in such areas as language, expected data formats, and cultural issues.

### **Logistics**

The systems and processes dealing with the procurement, maintenance, and transportation of products.

### **Lowband**

Lowband technology is the technology that enables wireless Internet connectivity, such as devices like hand-held computers, personal data assistants, and cell phones, but doesn't support complex forms of information.

**M****Margins**

The minimum return that an enterprise may earn and still pay for itself.

**Market**

All the buyers and potential buyers of a product who profess some level of interest in a specific product or service.

**Market globalization**

The concept where an e-business enterprise's market can be considered global based on the expansion of the Internet.

**Market of One**

Continuous customization of the content, services, and interactions with a customer to deliver exactly what he or she needs and to create the sense that he or she is an individual market.

**Marketing velocity**

The concept where time is a critical factor in the development, exposure, and measurement of marketing efforts. It focuses on getting to the customer before the competitors.

**Mass customization**

A cross between mass production and craft customization.

**Meta ad**

A banner ad that appears on the results page of a search engine and is related to the subject of the search.

**Meta tag**

A construct placed in the HTML header of a Web page, providing information that is not visible to browsers. The most common meta tags (and those most relevant to search engines) are keywords and descriptions that relate to the domain name, including misspellings or alternate names a user might type to connect to the Web page's URL.

**Meta-aggregator**

Vertical aggregators that act as brokers for the sale/purchase of goods/services (the role these entities play in e-business, opening traditionally closed markets, such as travel services, to direct consumer participation, stimulating comparison shopping, driving down prices, lowering costs for consumers/suppliers, and increasing choices

**Metadata**

Data that describes other data in dictionaries and repositories. The term may also refer to any file or database that holds information about another database's structure, attributes, processing, or changes.

**Metalanguage**

A language to define languages or applications.

**Metrics**

A standard unit of measurement for which performance of the organization is measured against.



**Middleware**

The network-aware system software — layered between an application, the operating system and the network transport layers — whose purpose is to facilitate some aspect of cooperative processing. Examples of cooperative middleware include directory services, message-passing mechanisms, distributed TP monitors, object request brokers (ORBs), remote procedure call (RPC) services, and database gateways.

**N****Narrowband**

That portion of bandwidth speed that is typically defined as 64 kbps. It is often referred to as the voice channel.

**Net-enabled**

The ability to conduct business over the Internet. Net-enabled technologies and processes allow a company to become an e-business.

**Network**

Any number of computers (e.g., PCs and servers) and devices (e.g., printers and modems) joined together by a physical communications link. In the corporate context, networks allow information to be passed between computers, irrespective of where those computers are located.

**Network access point (NAP)**

The points from which Internet service providers (ISPs) drop down their lines and establish peering arrangements to provide Internet connectivity to their customers.

**Network access technology**

The technology used to provide access to the network.

**Network address translation (NAT)**

Hides from view the IP addresses of client stations in an internal network by presenting one IP address to the outside world. The NAT also executes the address translation back and forth.

**Network bandwidth**

The amount or volume of information that can be pushed through the network at any particular time.

**Network File System (NFS)**

A method of sharing files across a computer network. Pioneered by Sun Microsystems, it is now a *de facto* standard in the Unix environment. NFS is built on Transmission Control Protocol/Internet Protocol (TCP/IP) and Ethernet.

**Networking (See also network)**

The linking of a number of devices, such as computers, workstations and printers, into a network (system) for the purpose of sharing resources.

**Nonrepudiation**

Proof that a message has been sent and received. This is extremely important in banking networks where financial transactions must be verifiably completed, and in legal networks where signed contracts are transmitted.

**O****Object**

The unit of information interchange in third-generation (3GL) office systems. An object contains both content and semantics describing how the content is to be interpreted or operated on. A network object is any entity in a network (e.g., a node, printer, or file server). Software objects may be files or pieces of data.

**One-to-one marketing**

Enterprises who treat individual customers as market segments of one. Enterprises practicing one-to-one marketing will capture market share, improve customer retention and satisfaction, and increase revenue.

**Online analytical processing (OLAP)**

Decision support software that allows the user to quickly analyze information that has been summarized into multidimensional views and hierarchies.

**Online transaction processing systems (OLTP)**

Computer processing that is designed to facilitate transaction-oriented applications. Unlike traditional batch data processing, which processes data only at specific times, transaction processing enables people using interactive terminals or PCs to query or update a database so that changes are reflected instantly.

**Open database architectures**

Technology infrastructure with database information that is public as opposed to proprietary. This includes officially approved standards as well as privately designed architectures, the specifications of which are made public by their designers.

**Open profile standard (OPS)**

A framework with built-in privacy safeguards for the trustworthy exchange of profile information between consenting individuals and Web sites.

**Open system**

One whose interfaces conform to formal, multilateral, generally available industry standards.

**Opportunity management system (OMS)**

A system that helps field sales organizations and call centers track and manage revenue-generating selling activities. By modeling the key steps in the sales process, the OMS can measure the progress of sales opportunities, guide sales approaches (e.g., demonstrating the product, or creating a contract), promote team selling across multiple sales channels, and generate accurate forecasts.

**Order fulfilment**

The process where management or ownership of inventory is transferred from the customer to the supplier.

**Original equipment manufacturer (OEM)**

The manufacturer of a device that another vendor resells as part of a system.

## P

### **Packet(s)**

Information that travels over the Internet is divided into compact pieces called packets. A packet is an information block identified by a label at Layer 3 of the OSI model. It is a collection of bits that contains both control information and data, and is the basic unit of transmission in a packet-switched network. Control information is carried in the packet, along with the data, to provide for such functions as addressing sequence, flow control, and error control at each of several protocol levels. A packet can be of fixed or variable length, but generally has a specified maximum length. The way that data is divided up and reassembled is specified by the Internet Protocol. User information can be sent in streams using the Transmission Control Protocol (TCP/IP) or as a series of packets using the User Datagram Protocol (UDP).

### **Packet filter**

Blocks traffic based on IP address and/or port numbers. Also referred to as a screening router.

### **Password**

A word or code used to serve as a security measure against unauthorized access to data. It is normally managed by the operating system or DBMS. However, the computer can only verify the legitimacy of the password, not the legitimacy of the user.

### **Payment gateway**

A computer that is affiliated with a financial institution where merchants execute transactions by communicating with them. Payment gateways also need software that can carry out SET procedures.

### **Personal digital assistants (PDA)**

Commonly known as palm computing devices, which provide real-time access to an array of information such as e-mail, voicemail and the Internet.

### **Personalization**

Refers to the ability of an e-business to present a site visitor with specific information based on his or her identity or behavior. Dynamic HTML supports real-time personalization of Web page content.

### **Platform**

An individual hardware or software architecture or operating system.

### **Point-to-point tunneling protocol (PPTP)**

A protocol that establishes tunnels through an initiation at one location and a termination at another location in the shared network.

### **Portability**

The ability for an application to be moved from one platform to another in order to accommodate growth.

### **Portals**

A high-traffic, broadly appealing Web site with a wide range of content, services, and vendor links. It acts as a value-added middleman by selecting the content sources and assembling them together in a simple-to-navigate (and customize) interface for presentation to the end user. Portals typically include services such as e-mail, community, and chat.

**Post office protocol (POP3)**

An access path for browser-enabled users to communicate with “mail to” requests from Hypertext Markup Language (HTML).

**Privacy**

The level of protection an organization provides for personal data that consumers supply when they use a Web site, register at a Web site, or buy from a Web site.

**Private Communications Technology (PCT)**

A protocol developed by Microsoft that provides secure transactions over the World Wide Web.

**Private key**

A key that is only known to the recipient that is used to encrypt and decrypt the messages. Also called a secret key.

**Processware**

Systems that add inter-enterprise process management and off-the-shelf interfaces to message brokers (which provide translation, transformation, flow control, message warehouse, integration, and other functions). The resulting integration framework allows event-driven, message-oriented, machine-to-machine communication across heterogeneous environments.

**Product life-cycle**

A concept that draws an analogy between the span of a human life and that of a product suggesting that, typically, a product's life consists of four stages—introductory, growth, maturity, and decline. The concept is used as a tool to formulate marketing strategies appropriate to each of the stages.

**Programming language/structured query language (PL/SQL)**

One of the two deliverables of Oracle Systems' Transaction Processing Option (TPO). It is a 3GL-level extension of Structured Query Language (SQL) that groups SQL statements for transmission across the tools/database management system (DBMS) interface or across a network. PL/SQL must be used to take advantage of the Oracle version 6 performance enhancements.

**Project management**

Approach used to manage work with the constraints of time, cost, and performance targets.

**Project manager**

The individual responsible for the day-to-day management of the project.

**Project team**

Those who report to the project manager and play a role in the life of the project.

**Protocol**

A set of procedures in telecommunication connections that the terminals or nodes use to send signals back and forth. Transmission Control Protocol/Internet Protocol (TCP/IP) is the standard protocol for the Internet and related networks such as intranets and extranets. Networks and systems cannot communicate unless they use the same protocol or make use of a gateway.

**Proxy server**

A relay between two networks that interrupts the physical connection between the two.

**Public key**

A key that is known to all parties in a transaction.

**Public key cryptography standard (PKCS)**

A standard method of encryption that uses both a private and public key. Messages encoded with either key can be decoded by the other. Also called a symmetric key cryptography.

**Public key encryption**

Cryptography that uses a protected private key and a mathematically connected, openly shared public key. The public key enables the encrypted document, file, e-mail, or data stream to be deciphered. What one key encrypts, the other decrypts.

**Public key infrastructure (PKI)**

The software and/or hardware components necessary to manage and enable the effective use of public key encryption technology, particularly on a large scale.

**Pull technology**

Involves a user specifically asking for something by performing a search; requesting an existing report, video, or other data type; or requesting that a vendor send an online newsletter or update to a favorite bookmark.

**Push technology**

A data distribution technology in which selected data is automatically delivered into a user's computer at prescribed intervals or based on some event.

**Q****Quality of service (QoS)**

The ability to define a level of performance in a data communications system. In e-business, QoS governs access as the site reaches or exceeds capacity and sets priorities for user sessions.

**R****Rapid application development (RAD)**

An application development (AD) approach that includes small teams (typically two to six people) using joint application development (JAD) and iterative-prototyping techniques to construct interactive systems of low to medium complexity within a time frame of 60 to 120 days.

**Redundancy**

The design of a system, which eliminates a single point of failure by providing integrated backup functionality.

**Redundant array independent drives (RAID)**

An industry fault tolerance standard.

**Relationship optimization**

Systems that maximize the customer's value to the organization by providing a rules-based link between customer understanding and customer interaction.

**Request for comments (RFC)**

Format in which TCP/IP standards are published. Also provides insight into and describes the workings of the IETF organization.

**Return on investment (ROI)**

Financial gain expressed as a percentage of funds invested to generate that gain.

**Robustness**

A term to capture the concepts of over-engineering, high-availability and survivability of the IT infrastructure.

**Rules-based systems**

A system to build user profiles, but also incorporate business rules driven by the site owner.

## S

### **Sales force automation (SFA)**

A process that takes routine sales activities within an organization and integrates them into a comprehensive software package. When SFA is included in an overall corporate Enterprise Resource Planning (ERP) system, it combines sales functions with planning, marketing, and manufacturing and customer service activities.

### **Scalability**

The measure of a system's ability to increase or decrease in performance and cost in response to changes in application and system processing demands.

### **Screen resolution**

The number of pixels (dots) across and down the screen.

### **Search engine**

A very large, searchable index of the World Wide Web that is automatically updated by spiders or Webcrawlers and housed on a central server connected to the Internet.

### **Secure electronic transaction (SET)**

A multiparty protocol that secures online communication between all parties in a payment card transaction. It encrypts access to sensitive credit card information throughout the card-processing network, thus reducing potential points of exposure to online theft from the buyer or merchant.

### **Secure sockets layer (SSL)**

An Internet security standard from Netscape Communications, used for its browser and server software.

### **Security**

A cryptographic protocol that secures bi-directional communication channels over the Internet. SSL connections are initiated through a Web browser and are signified by the URL prefix *https*.

### **Sell side**

Processes for companies to sell their products, including catalogues, transaction processors, payment processors, and supply chain management methods and tools.

### **Server**

1. A system or a program that receives requests from one or more client systems or programs to perform activities that allow the client to accomplish certain tasks.
2. Can refer to a physical computer, but more commonly to any machine that serves applications or information on the World Wide Web.

### **Servlet**

A form of server-based Java that operates in conjunction with a Web server and offers an alternative to using Common Gateway Interface (CGI) and server application programming interfaces (SAPIs) to communicate with Web server processes. In addition, servlets are independent of a given type of Web server, as the most prominent Web servers support servlets.

### **Settlement**

Occurs when the actual funds are transferred from the card-issuing bank to the merchant bank.



**Simple Mail Transfer Protocol (SMTP)**

The standard e-mail protocol on the Internet. It is a TCP/IP protocol that defines the message format and the message transfer agent (MTA), which stores and forwards the mail. SMTP was originally designed for only ASCII text, but MIME and other encoding methods enable program and multimedia files to be attached to e-mail messages. SMTP servers route SMTP messages throughout the Internet to a mail server, such as POP3, which provides a message store for incoming mail.

**Site sponsorship**

The logos and/or other information about the sponsors that are displayed prominently on the Web site.

**Smart card**

A plastic card that contains a microprocessor and/or a memory chip. The microprocessor card has the ability to add, delete, and manipulate information on the card. A memory chip card, such as a phone card, can only add information.

**Sockets**

Specifies the end points of a two-way communications channel that connects two processes together so they can exchange information.

**Software**

Any computer instructions or data that can be stored electronically. This data is stored on devices called hardware. The two categories of software are systems software and application software.

**Spam**

Usenet messages flooded to many newsgroups indiscriminately. The term is also loosely applied to junk mail.

**Standards**

Specifications or styles that are widely accepted by users and adopted by several vendors. Standards are critical to the compatibility of hardware, software, and everything in between. Industry standards enable the essential elements of a computer and related infrastructure to work together.

**Stateful inspection**

Tracks the transaction in order to verify that the destination of an inbound packet matches the source of a previous outbound request. Stateful inspection can effectively examine multiple layers of the protocol stack, including the data if required, and block transmission at any layer or depth.

**Storefront**

A traditional business (e.g., a retail store or other commercial business with physical real estate) that the customer interacts with to order and receive goods and services.

**Streaming media**

A technique for transferring digital content such that it can be processed and viewed as a steady and continuous stream of data.

**Structured query language (SQL)**

A relational data language that provides a consistent, English keyword-oriented set of facilities for query, data definition, data manipulation, and data control. It is a programmed interface to relational database management systems (RDBMSs).

**Suppliers**

Individuals or organizations from which businesses purchase the goods and services they require to operate.

**Supply chain execution (SCE)**

A framework of intelligent execution-oriented applications that enables the efficient management of resources, which ensures delivery of goods, services, and information across enterprise boundaries to meet customer-specific demand.

**Supply chain management (SCM)**

The process of optimizing delivery of goods, services, and information from supplier to customer.

**Supply chain planning (SCP)**

A software suite focused on the process of coordinating assets to optimize the delivery of goods, services, and information from supplier to customer, balancing supply and demand.

**T****Technology-enabled content (TEC)**

The integration of content with information technology to create value-added information that directly supports a business process. Examples of TEC in the workplace include desktop broadcasting and competitive intelligence.

**Technology-enabled marketing (TEM)**

Automating aspects of the marketing process, which allows enterprises to improve the measurement and evaluation of their activities. The ultimate goal of technology-enabled marketing is to allocate marketing resources to the activities, channels, and media with the best potential return and impact on profitable customer relationships.

**Technology-enabled relationship management (TERM)**

The concept of forming one enterprise-wide view of the customer across all customer contact channels (i.e., sales, marketing, and customer service and support). It is a complex area, requiring complex solutions to problems of integration, data flow, data access, and marketing strategy. A critical component is the database that serves as the customer information repository.

**Technology-enabled selling (TES)**

Automating aspects of the selling process, which allows enterprises to improve their interactions with the consumer on the front-end. It improves the overall selling process enterprise-wide.

**Telnet**

The Internet standard protocol for remote terminal connection. It allows a user at one site to interact with a remote device or system that expects terminal-mode traffic.

**Thin client**

In the client/server environment, it is designed so that the bulk of the application logic (software) and data processing are performed on the server.

**Trading hub/exchange**

Intermediaries that may be in specific industries and markets or across markets, that broker sale of goods and services between buyers and suppliers, such as business-to-business or consumer-to-consumer business.

**Trading partners**

Include all businesses within an enterprise's supply chain, from the raw material supplier to the end customer.

**Transmission Control Protocol/Internet Protocol (TCP/IP)**

A set or suite (sometimes called a stack) of protocols covering the network and transport layers of the seven-layer Open Systems Interconnection (OSI) network model. Information that travels over the Internet gets divided into compact pieces called packets. TCP/IP specifies how the data are to be divided and reassembled.

**Transport layer security (TLS)**

A security protocol from the IETF that is a hybrid of SSL and other protocols. TLS may become a major security standard on the Internet, possibly superseding SSL.

**Trigger-point planning**

An e-business planning model that defines a set of events or trigger points in a project plan. Once the triggers are met, the next event on the project plan can begin.

**Trivial file transfer protocol**

A protocol used for basic file transfers, as well as booting systems that communicate with the Transmission Control Protocol/Internet Protocol (TCP/IP) suite using the TFTP boot protocol.

## U

### **Uniform resource locator (URL)**

The character string that identifies an Internet document's exact name and location, in the form *http://* allowed by a domain name or IP address.

### **Unix**

An operating system originally designed by Bell Laboratories, Unix has proven to be adaptable to a variety of platforms. It is the dominant operating system for critical applications, servers, and high-end workstations because of its scalability and support of complex processing.

### **Usability**

Refers to the ease of learning and using a user interface.

### **User Datagram Protocol (UDP)**

A protocol within the Transmission Control Protocol/Internet Protocol (TCP/IP) suite technology that enables an application to send a message to one of several applications running in a destination machine.

### **User forums**

Used by customers to contribute reviews of products and services that they've purchased. Prospective customers of those goods and services can then read what others have to say about the products and make a more informed buying decision.

### **User interface (UI)**

Refers to a combination of menus, screen design, keyboard commands, command language, online help, and other input devices that creates the way a user interacts with a borrower and Web page.

**V****Value-added network (VAN)**

A private telecommunication line established between trading partners solely to transact business. Traditional EDI is transacted through VANs.

**Verification**

Positive identification and authorization of a particular communication, identification, authentication, and integrity must be accomplished before a message can be trusted completely.

**Vertical portal**

A business-to-business Web site that sells goods and services up and down the supply chain in a given industry.

**Virtual company**

A company that was started with the intention of doing business over the Internet. Virtual companies have outsourced the physical processes and administrative attributes of traditional business and expanded and combined intellectual activities (e.g., problem solving) with standard business processes such as marketing.

**Virtual private network (VPN)**

A system that delivers information and communications between businesses and trading partners over a shared public network infrastructure in a secure manner.

**W****Web**

Commonly used abbreviation for World Wide Web.

**Web authorization control (WAC)**

Used for delivery of sensitive price, contract and content information for each partner; catalogues that provide custom views based on access control and parametric search for serious business buyers; and order entry functions.

**Web browser**

A client, system, or program for use in accessing the World Wide Web on the Internet.

**Web hosting**

The storage of data on a server for later access. In e-business, refers to a service provided by a third party that hosts and maintains a company's Web site.

**Web server**

Web pages or Web sites are hosted on a Web server, which is a central location or computer that enables a remote "client" (system or program) to access the page or site content.

**Web site**

A collection of files accessed through a Web address, covering a particular theme or subject, and managed by a particular person or organization. Its opening page is called a home page. Web sites typically use the Hypertext Markup Language (HTML) to format and present information and to provide navigational facilities that make it easy for the user to move within the site and around the Web.

**Webcrawler**

A piece of software (also called a spider) designed to follow hyperlinks to their completion and to return to previously visited Internet addresses.

**Wide-area network (WAN)**

Communications network that connects computing devices over a broad geographical area such as a region, state, or country. WANs use phone lines or dedicated communication lines. Transmission speeds are typically slower than those of LANs.

**Wireless application protocol (WAP)**

Specifies two essential elements of wireless communication—an end-to-end application protocol and an application environment based on a browser.

**World Wide Web (WWW)**

A hypertext-based global information system developed at the European Laboratory for Particle Physics (CERN) in Geneva. It is a subset of the Internet, technically defined as the community on the Internet where all documents and resources are formatted using Hypertext Markup Language (HTML).

**X****X.400**

An OSI and International Telecommunications Union (ITU) standard messaging protocol that allows electronic mail to move between different mail systems.

**X.509**

The certificate authority standard administered by the International Telecommunications Union (ITU). The X.509 Certificate is an (ITU) standards-based file format binding a user or device to a public key

**Zero latency**

A business process concept where redundant processes are eliminated and human tasks are automated or streamlined to reduce latency throughout the supply chain to the customer.