

National Association for Regulatory Administration
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Everything you need to know about "IT"

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What is "IT"



eBay marketing campaign
"What is it" from 2005.

Information Technology - Computer hardware and software used to collect, store, access and transmit electronic data.

Information Technology

- **Hardware** - The physical equipment used to collect, store, access and transmit electronic data. (For example: Desktop, Laptop, Tablet PC, PDA, Printer, Scanner, Camera, Projector, Mouse, Keyboard, Modem, etc.)
- **Software** - Programs used to direct the operation of computer hardware. (For example: MS-Word, MS-Excel, MS-PowerPoint, MS-Outlook, Adobe Acrobat, Windows XP, SansWrite, etc.)
- **Media** – An object, such as a disk or CD, on which computer software and data are stored. (For example: Floppy Disk, CD ROM, DVD, Data Cartridge, etc.)
- **Information System** – The universe of technology in which an organization's information is stored.

IT Core Disciplines

- **Collect Data**
 - Focus on Accuracy and Efficiency
 - Usage of Proper Computer Hardware and Software is Critical
 - Point at which Most Data Errors Occur
- **Store Data**
 - Focus on Capacity
 - Backups and Disaster Recovery are Critical
 - Errors and Problems are Most Costly
- **Access Data**
 - Focus on Speed and Performance
 - Usage of Current Computer Hardware and Software is Critical
 - Speed and Performance Issues Cause Productivity Loss
- **Transmit Data**
 - Focus on Security
 - Firewall, Encryption and Anti-virus are Critical
 - Security Breaches are Most Damaging

Proper Usage of IT

■ Hardware

Desktop – All work is performed from a single location.

Laptop – Work is performed at multiple locations but from a sitting position.

Tablet PC – Work is performed at multiple locations from both a sitting and standing position.

PDA (Portable Digital Assistant) – Used for limited data entry and data access at multiple locations.

■ Software

Word Processor – Used to enter, store and print narrative data such as letters and memos.

Spreadsheet – Used to enter and analyze numerical data such as budgets, forecasts and financial transactions.

Database – Used to enter, store and retrieve large amounts of data.

Types of Software

- **System** (Operating Systems, Networking, Communications, etc.)

- Licensed – Fees are paid to a software company or a developer for the right to use the software.

- Open Source – Software components are available free of charge, but a developer is typically needed to assemble and support the components.

- **Application** (Word Processor, Spreadsheet, E-mail, etc.)

- PC Based – Software resides and runs locally on a PC. Software may access a database or file server to retrieve data.

- Server Based – Software resides and runs on a server. Access to the software and associated data is limited to a defined area (building, campus, etc.)

- Web Based – Software resides and runs on a server, and is accessed through a web browser. Although access may be limited to a defined area (Intranet), the software is typically accessible via any Internet connection.

Please Note: Application Software is also Licensed or Open Source and is typically based on the System Software.

Basic Terminology

- **Relational Database** – A set of tables with related data.
- **Table** – A grid of fields and records used to store and organize data.
- **Query** – A condition statement used to retrieve data from a database.
- **Client/Server** – A type of software in which specific tasks are assigned to both local and remote computers.
- **SQL** (S-Q-L or see-kwuhl) - Structured Query Language; brand name for Microsoft client/server database software.
- **Oracle** – Brand name for client/server database software.
- **ODBC** – Open Data Base Connectivity
- **PDF** – Portable Document Format
- **FTP** – File Transfer Protocol
- **GIS/GPS** – Geographic Information System/Geographic Positioning System
- **Middleware** – Software used to synchronize data between a client and server.
- **Web Portal** – Web-based software used to enter and access data.
- **Wireless LAN** – “Hot Spot” connection to a network and/or the Internet.
- **Wireless Cellular** – A connection to the Internet using cellular technology.
- **IrDA** – A connection to a device using infrared technology.
- **VPN** – Virtual Private Network
- **Webinar (Web Demo)** – A remote presentation using the Internet.

Best Practices

Information Technology Projects

- **Define and Understand the Terminology** – Acronyms and Jargon are the primary cause of communication issues. (Examples: SQL, QRS, Firewall, CCUBS)
- **Define the Project Team** – Uncertainty regarding roles and responsibilities is the primary cause of delays. (Project Manager, Business Analyst, Subject Matter Expert and Developers)
- **Prioritize Deliverables** – Repetitive processes should be automated first (Applications, Inspections, etc.) Non-repetitive processes are difficult and time consuming to automate (Complaints, Administrative Actions, etc.)
- **Prototype** – Create non-functional visual representation of screens and printouts.
- **Modular Development** – Divide large projects into modules. Each module should have no more than a 6-month development timeline.
- **End-user Testing and Training** – Get end-users involved in development efforts to ensure requirements are met. Provide sufficient training and follow-up training as modules go into production.

Best Practices

Computer Software

- **Evaluate Software** – The most effective way to evaluate software is to load a demo version on your computer. In addition to reviewing screens and printouts, read the on-line documentation.
- **Review Technical Support Policies** – Some software vendors do not offer telephone support. Even if it is “fee-based,” you should have the option to contact the software vendor by telephone.
- **Discuss License Options**
 - Perpetual** – Purchase license once and use it “indefinitely.”
 - Term** – Purchase license annually; typically includes “Software Assurance.”
- **Inquire About Upgrades**
 - Cost** – Most software vendors offer discounts for repeat customers.
 - Frequency** – Most software vendors offer upgrades every 12 to 18 months.
 - Backwards Compatibility** – Newer versions of software should support older files and data.

Best Practices

Computer Hardware

- **Evaluate Hardware** – Request an “Evaluation Unit” from your hardware vendor for 2 – 4 weeks. Use the hardware in a “real-world” environment.
- **Inquire About “Failure Rate Data”** – All hardware manufacturers maintain failure rate data. Most are willing to provide this information on request. Depending upon the application, failure rates of less than 10% are typically acceptable.
- **Discuss Service/Repair Logistics** – Most hardware manufacturers require hardware to be shipped to their facility for service and repairs. Inquire about shipping costs, turn-around time and loaner units.
- **Discuss Warranty Options** – Most hardware manufacturers offer 3-year warranties. Take note of items that are excluded from the 3-year warranty including batteries, print heads, etc. Inquire about extended and no-fault warranties.
- **Avoid “Bells and Whistles”** – Purchase hardware that meets your needs and satisfies the requirements of the software that you intend to use on it. Although features may appear to be included, some are optional and have only been included to increase the price.
- **Purchase Hardware Last** – Most hardware can be purchased and put into production in less than 1 month. It’s important to wait until you have chosen your software and/or completed development to purchase hardware.

The Future

- **Intelligent Licensing Systems**

Compliance Determination – Previously-entered data will be used to assist Regulatory Inspectors with determining compliance (Background Screening, Training, etc).

Provider Alerts – The information system will monitor expiration and due dates. When a date is approaching, the system will automatically e-mail an alert to the provider.

- **Wireless Remote Access** – Regulatory Professionals will have real-time access to necessary data via wireless connections to the Internet.

- **Application Service Provider (ASP)** – Regulatory Professionals will subscribe to software services. The software will be accessed via the Internet using a non-intelligent device.

- **Integrated Information Systems** – Federal, State, Local and Departmental Agencies will have indirect access to each others' information systems. Although the software used by each agency will be specific to the agency, the data will be universal.

Thank you

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