Information

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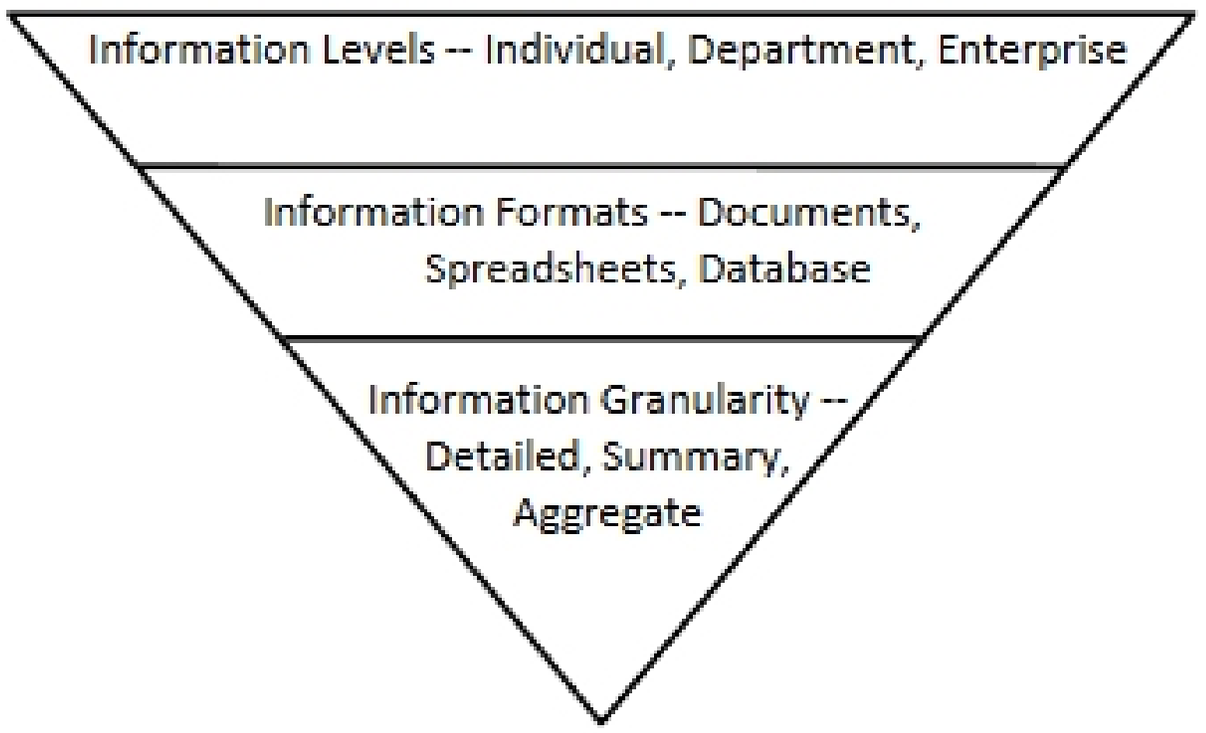
A. Benefits of high quality information
    a. Information is everywhere in an organization
    b. Employees need access to obtain and analyze various data to make decisions
    c. Successful use of information can provide tremendous insight
    d. Levels, formats, and granularities of information



A. Transactional Information
    1. Encompasses all of the information contained within a single business purpose to assist in daily tasks
B. Analytical Information
    1. Encompasses all of the organization information to help in larger decisions

C. Characteristics of Information

Type	Timeliness	Quality	Governance
	How relevant is it	"Shit in, shit out."	How can we verify integrity of info

D. All information is plugged into database
E. Information Timeliness
    1. Aspect of information that depends on situation
    2. Real-time information -- Immediate, up-to-date information
    3. Real-time system -- Provides real-time information in response to requests
F. Information Quality
    1. Business decisions are only as good as the quality of information
    2. Technology can help make bad decisions faster
    3. Characteristics of high-quality info
        a. Accurate
        b. Complete
        c. Consistent
        d. Unique
        e. Timely

G. Sources of low-quality information
    1. Customers intentionally enter inaccurate information to protect their privacy
    2. Different entry standards and formats
    3. Operators enter abbreviated or erroneous information by accident or to save time
    4. Third party and external information contains inconsistencies, inaccuracies, and errors
H. Costs of low-quality information
    1. Potential business consequences
        a. Inability to accurately track customers
        b. Difficulty identifying valuable opportunities
        c. Inability to identify selling opportunities
        d. Marketing to nonexistent customers
        e. Difficult tracking revenue
        f. Inability to build strong relationships
    2. Understanding benefits of good information
        a. Improve chances of good decision
        b. Can directly impact bottom line
I. Storing information in a relational database
    1. Database management systems
        a. Allows users to create, read, update, and delete data in a relational database
    2. Data element
        a. Smallest or most basic unit of information
    3. Data model
        a. Logical data structure that shows relationships between data elements
    4. Metadata
        a. Provides data about data
    5. Data dictionary
        a. Compiles all of the metadata about the data elements in the data model
J. Storing data elements in entities and attributes
    1. Entity
        a. Person, place, thing, transaction, or event about which information is stored
        b. Rows in a table contain entities
    2. Attribute
        a. The data elements associated with an entity
        b. Columns in a table
    3. Record
        a. Collection of related data elements
K. Creating relationships through keys
    1. Primary and foreign keys identify the various entities
        a. Primary key
            i. A field that uniquely identifies a given entity
        b. Foreign key
            i. A primary key of one table that appears as an attribute in another table and acts to provide a logical relationship among the tables.
L. Using a relational database for business advantages
    1. Database advantages from a business perspective include
        a. Increased flexibility
            i. Well-designed database should
                1) Quickly and easily handle changes
                2) Provide users with different views
                3) Have only one physical view
                    a) Deals with the physical storage of information on a storage device
                4) Have multiple logical views
                    a) Deals with how users view and sort info

b. Increased scalability and performance
    i. A database must scale to meet increased demand, while maintaining acceptable performance levels
        1) Scalability -- Refers to how well a system can adapt to increased demands
        2) Performance -- Measures how quickly a system performs a certain process or transaction
c. Reduced information redundancy
d. Increased info quality
    i. Information integrity measures the quality of information
    ii. Integrity constraints are rules that help ensure the quality of information
        1) Business-critical integrity constraint
            a) Helps prevent violation of policies