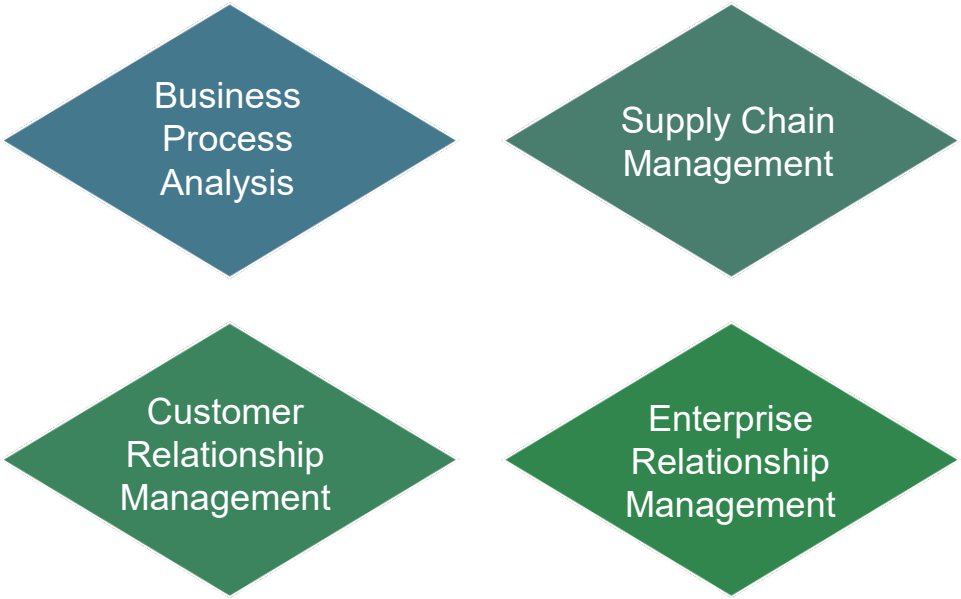
INTEGRATION TOOLS

- Four Strategic Initiatives for Implementing Competitive Advantages



MANAGING BUSINESS PROCESSES 1

Accounting and Finance

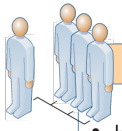
- Creating financial statements
- Paying of Accounts payable
- Collecting of Accounts receivable

Marketing and Sales

- Promoting of discounts
- Communicating marketing campaigns
- Attracting customers
- Processing sales

Operations Management

- Ordering inventory
- Creating production schedules
- Manufacturing goods



Human Resources

- Hiring employees
- Enrolling employees in health care
- Tracking vacation and sick time

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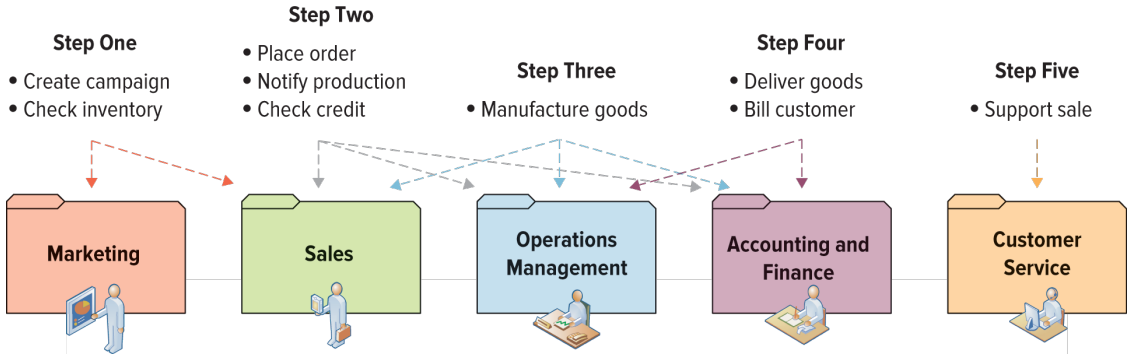
MANAGING BUSINESS PROCESSES 2

- The Order-to-Delivery Process



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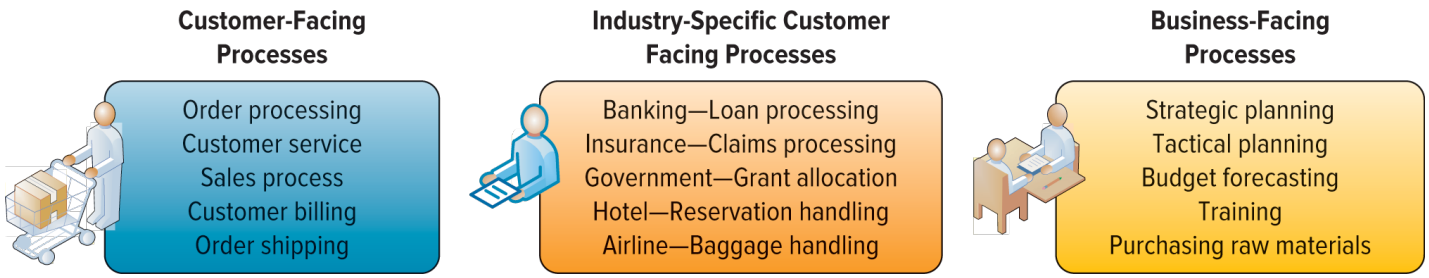
MANAGING BUSINESS PROCESSES 3

- **Customer facing process—** Results in a product or service that is received by an organization's external customer
- **Business facing process—** Invisible to the external customer but essential to the effective management of the business



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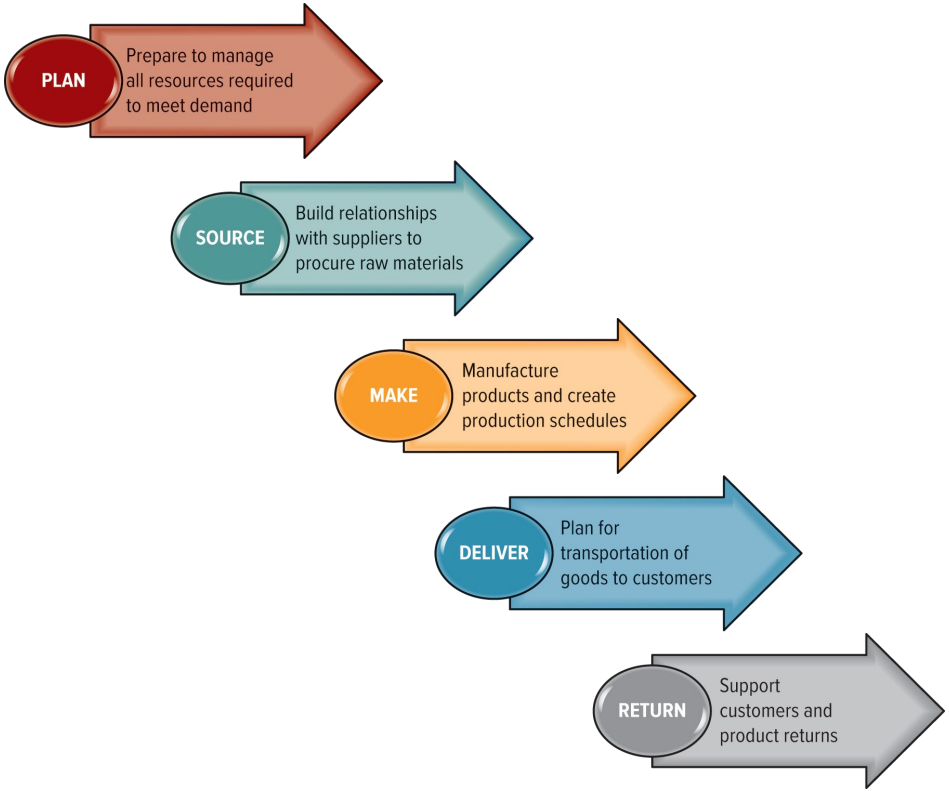
SUPPLY CHAIN MANAGEMENT 1

- Five Basic Supply Chain Activities



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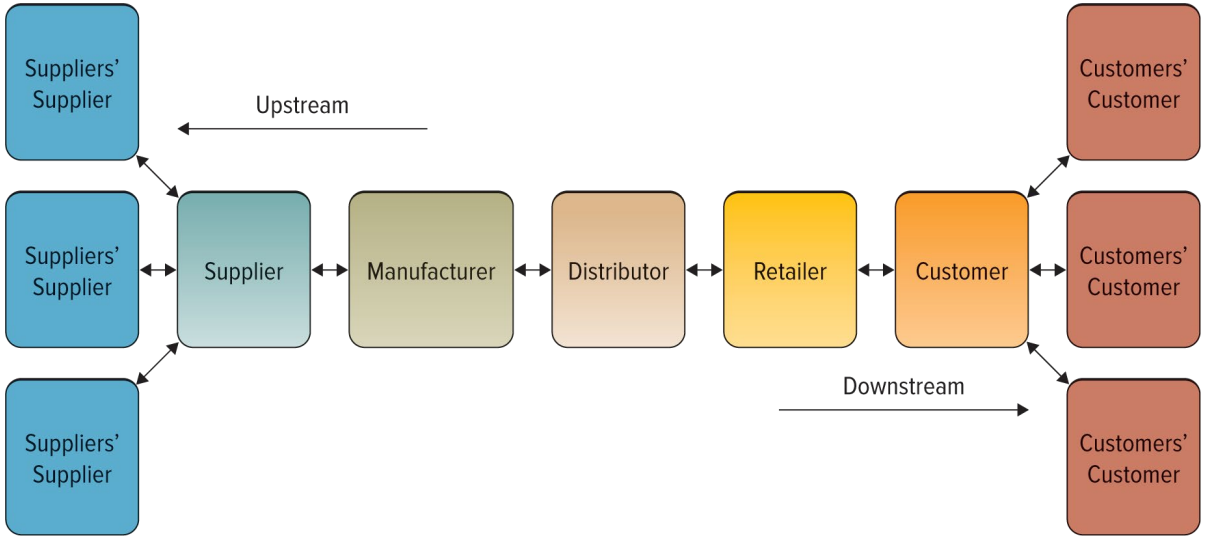
SUPPLY CHAIN MANAGEMENT 2

- **Supply Chain Management (SCM)—**The management of information flows between and among activities in a supply chain to maximize total supply chain effectiveness and profitability



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SUPPLY CHAIN MANAGEMENT 3

- The supply chain has three main links
  1. Materials flow from suppliers and their “upstream” suppliers at all levels
  2. Transformation of materials into semifinished and finished products through the organization’s own production process
  3. Distribution of products to customers and their “downstream” customers at all levels

CUSTOMER RELATIONSHIP MANAGEMENT [1]

- **Customer relationship management (CRM)**—Involves managing all aspects of a customer's relationship with an organization to increase customer loyalty and retention and an organization's profitability

- Many organizations, such as Charles Schwab and Kaiser Permanente, have obtained great success through the implementation of CRM systems

CUSTOMER RELATIONSHIP MANAGEMENT 2

- CRM Key Players

Lead: A person or company that is unknown to your business.

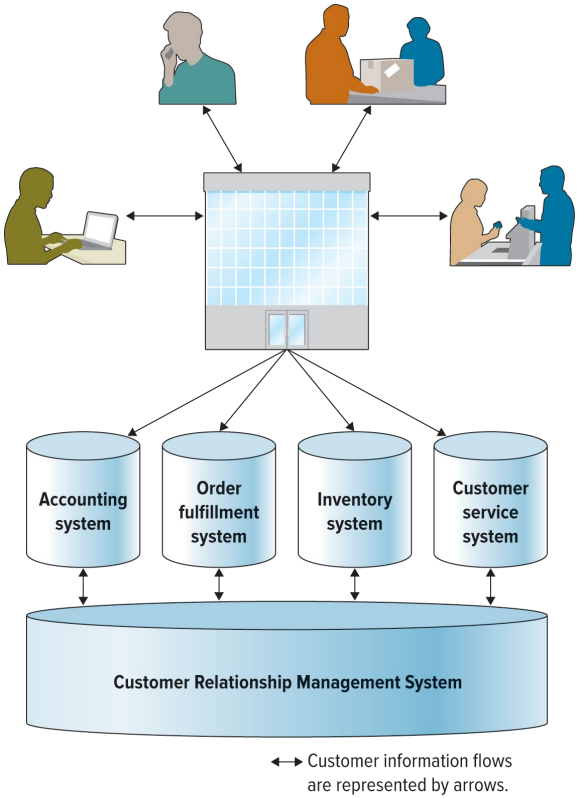
Contact: Specific individual representing the account.

Account: An existing business relationship exists and can include customers, prospects, partners, and competitors.

Sales Opportunity: An opportunity exists for a potential sale of goods or services related to an account or contact.

CUSTOMER RELATIONSHIP MANAGEMENT 3

- Text message, Instant message
- Voice mail, Voice call
- Email letter
- Web order, Phone order
- Meeting
- Customer service call
- Twitter
- Facebook



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ENTERPRISE RESOURCE PLANNING 1

Enterprise resource planning— Integrates all departments and functions throughout an organization into a single IT system (or integrated set of IT systems) so that employees can make enterprisewide decisions by viewing enterprisewide information on all business operations

- **Common data repository**
- **Module software design**

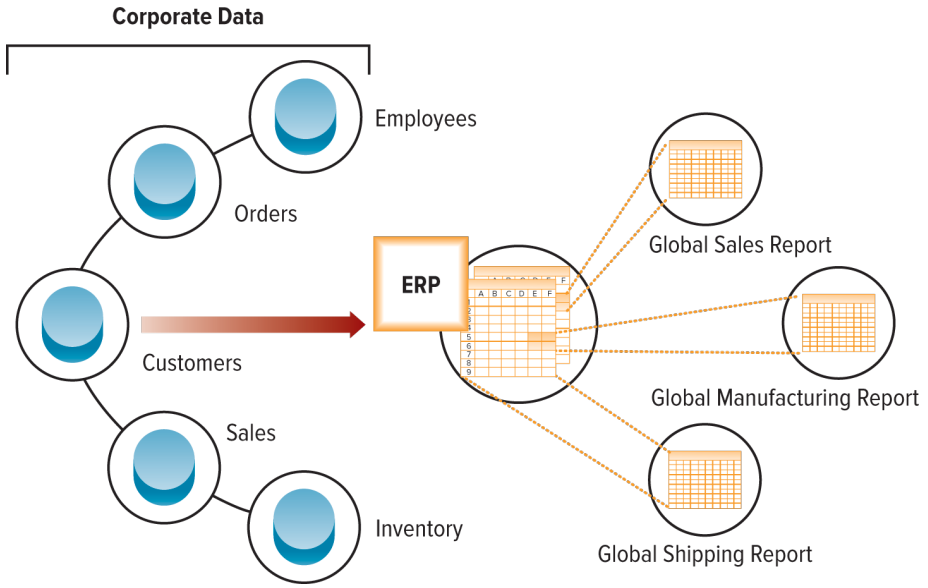
ENTERPRISE RESOURCE PLANNING 2

Reasons ERP systems are powerful tools

- ERP is a logical solution to incompatible applications
- ERP addresses global information sharing and reporting
- ERP avoids the pain and expense of fixing legacy systems

ENTERPRISE RESOURCE PLANNING 3

- ERP systems collect data from across an organization and correlates the data, generating an enterprisewide view



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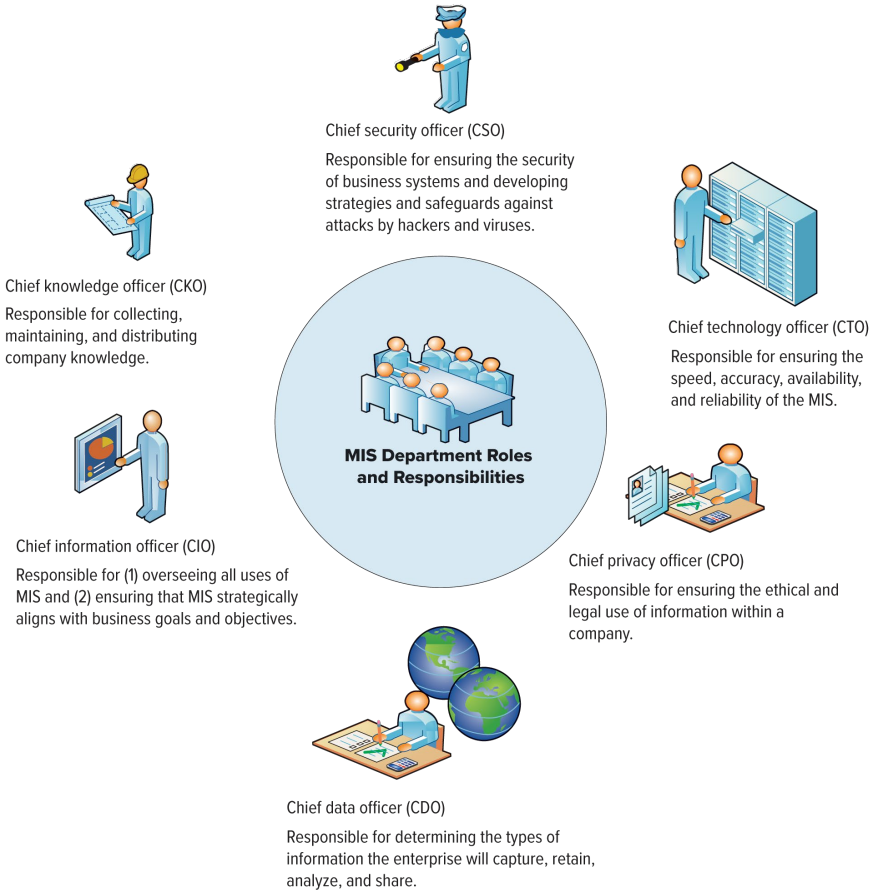
MIS DEPARTMENT: ROLES AND RESPONSIBILITIES 1



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MIS DEPARTMENT: ROLES AND RESPONSIBILITIES 2

Chief information officer (CIO)—Responsible for informing and ensuring the strategic alignment of MIS with business goals and objectives

Chief data officer (CDO)—Responsible for determining the types of information the enterprise will capture, retain, analyze, and share

Chief technology officer (CTO)—Responsible for ensuring the throughput, speed, accuracy, availability, and reliability of information

- Chief security officer (CSO)
- Chief privacy officer (CPO)
- Chief knowledge officer (CKO)

MEASURING ORGANIZATIONAL BUSINESS DECISIONS 1

- **Project—**A temporary activity a company undertakes to create a unique product, service, or result

- **Metrics**—Measurements that evaluate results to determine whether a project is meeting its goals

MEASURING ORGANIZATIONAL BUSINESS DECISIONS 2

Critical success factors (CSF's)—The crucial steps companies perform to achieve their goals and objectives and implement strategies

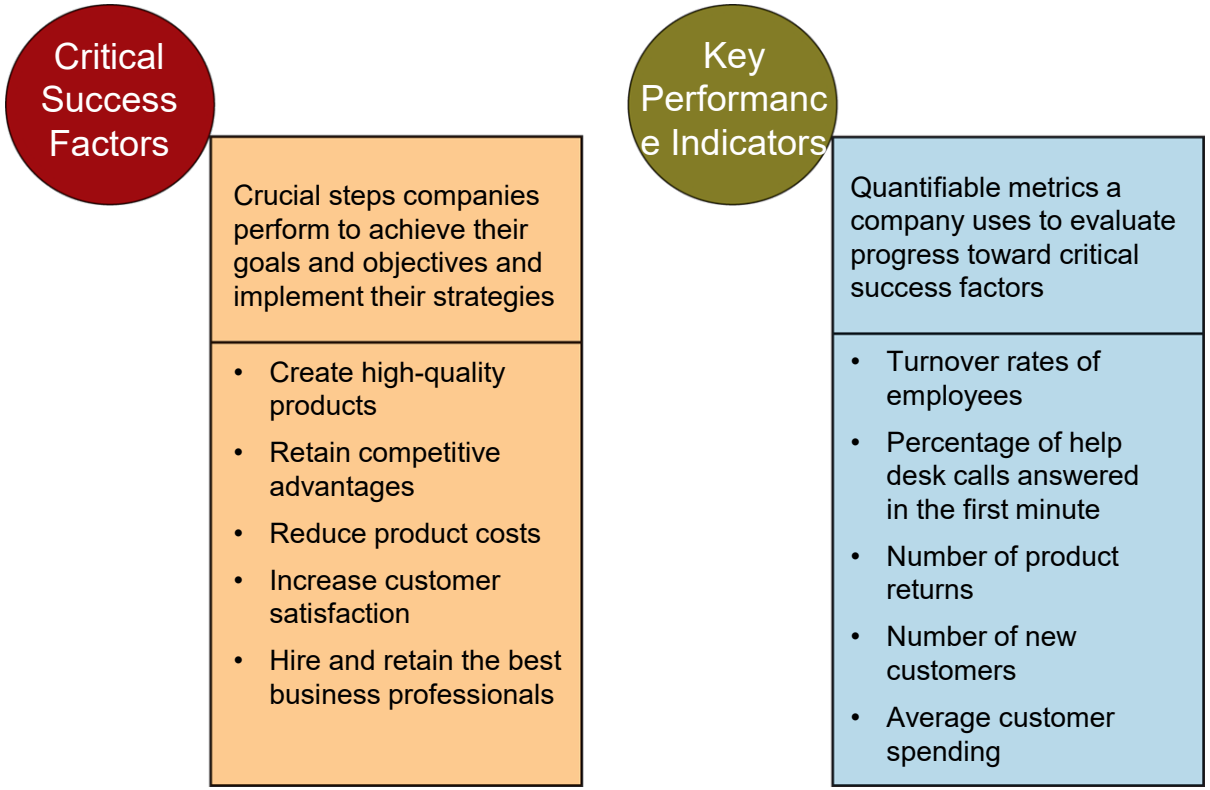
- Create high-quality products
- Retain competitive advantages
- Reduce product costs
- Increase customer satisfaction
- Hire and retain the best professionals

MEASURING ORGANIZATIONAL BUSINESS DECISIONS 3

Key performance indicators (KPI's)—The quantifiable metrics a company uses to evaluate progress toward critical success factors

- Turnover rates of employees
- Number of product returns
- Number of new customers
- Average customer spending

MEASURING ORGANIZATIONAL BUSINESS DECISIONS 4

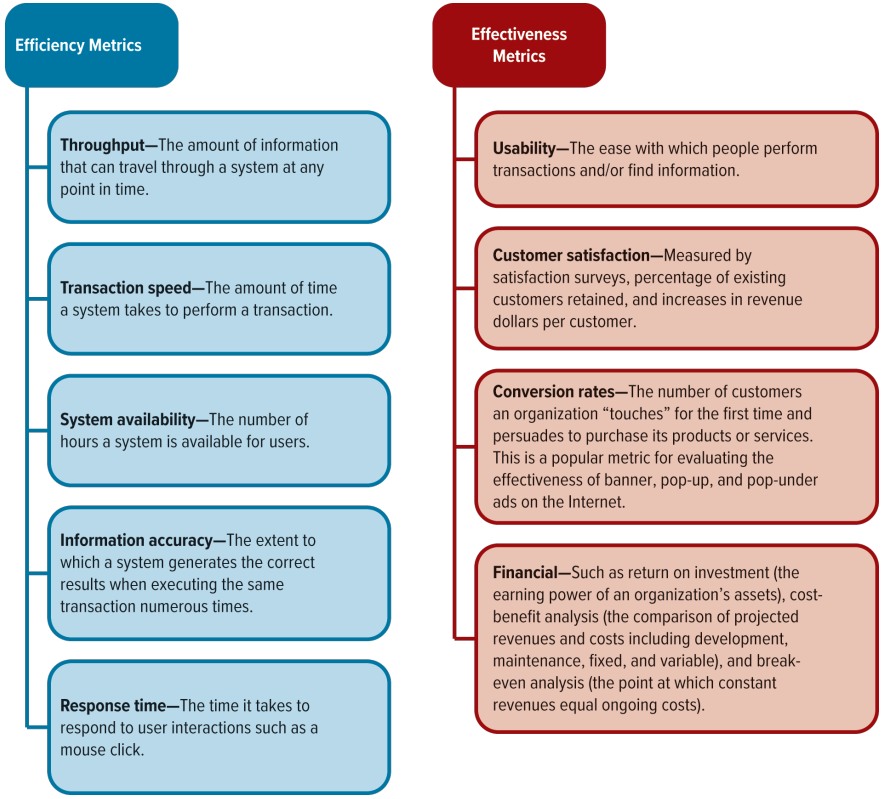


EFFICIENCY AND EFFECTIVENESS METRICS 1

- **Efficiency MIS metrics—**Measure the performance of MIS itself, such as throughput, transaction speed, and system availability

- **Effectiveness MIS metrics—** Measures the impact MIS has on business processes and activities, including customer satisfaction and customer conversation rates

EFFICIENCY AND EFFECTIVENESS METRICS 2



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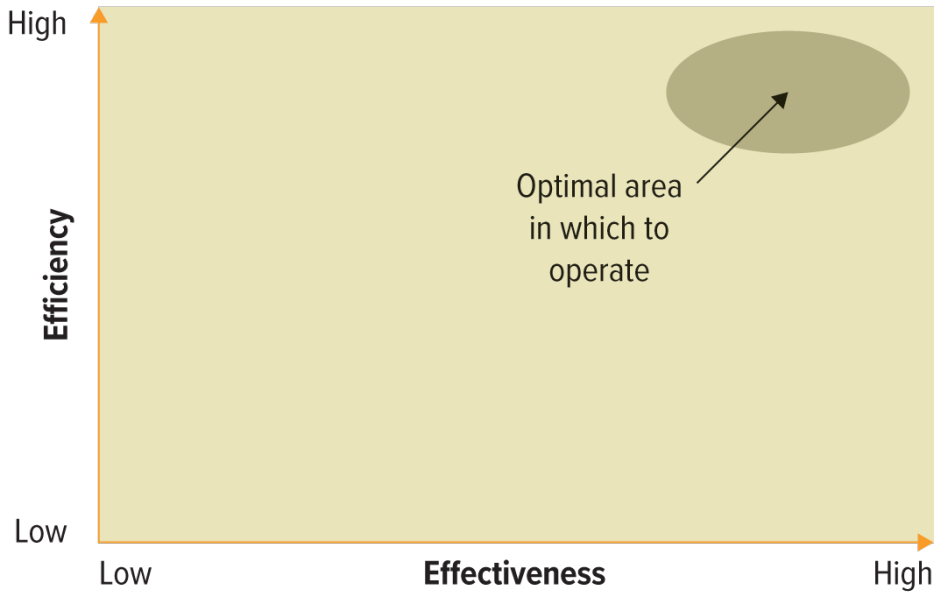
THE INTERRELATIONSHIP BETWEEN EFFICIENCY AND EFFECTIVENESS METRICS 1

- Ideal Operation Occurs in the Upper Right Corner



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THE INTERRELATIONSHIP BETWEEN EFFICIENCY AND EFFECTIVENESS METRICS 2

- **Benchmark—**Baseline values the system seeks to attain

- **Benchmarking—**A process of continuously measuring system results, comparing those results to optimal system performance (benchmark values), and identifying steps and procedures to improve system performance

METRICS FOR STRATEGIC INITIATIVES

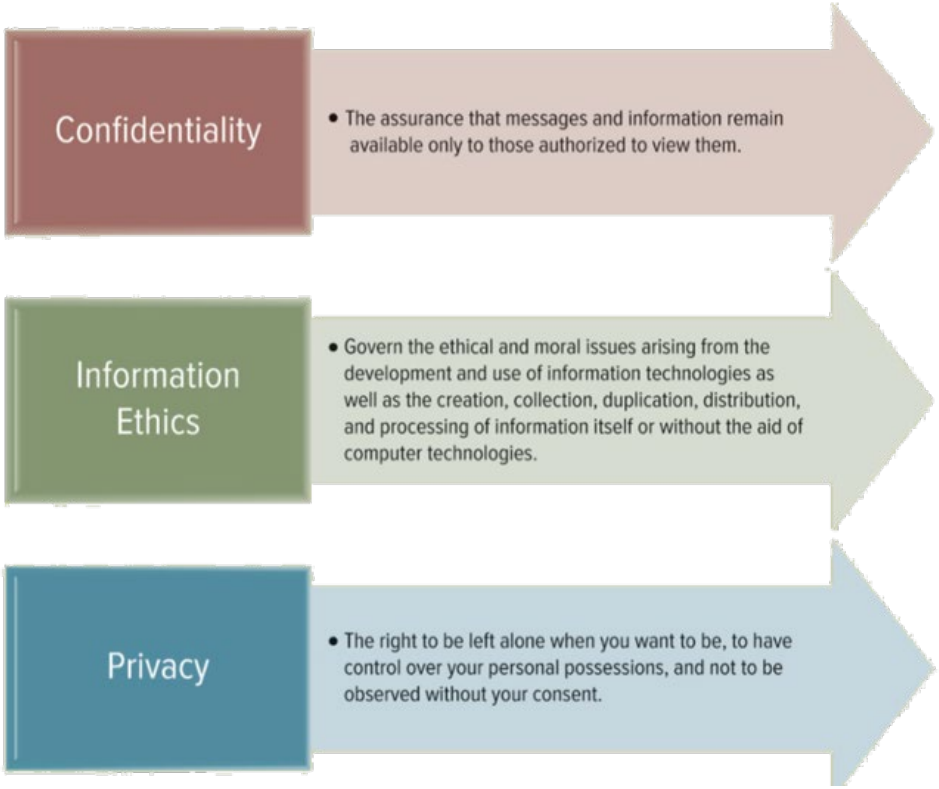
Metrics for measuring and managing strategic initiatives include:

- Website metrics
- Supply chain management (SCM) metrics
- Customer relationship management (CRM) metrics
- Business process reengineering (BPR) metrics
- Enterprise resource planning (ERP) metrics

INFORMATION ETHICS 1

- **Ethics**—The principles and standards that guide our behavior toward other people

INFORMATION ETHICS 2



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INFORMATION ETHICS 3

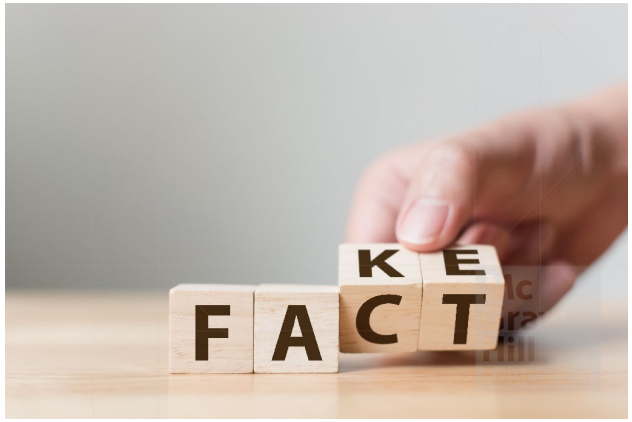
Business issues related to information ethics

- Copyright
- Counterfeit software
- Digital rights management
- Intellectual property
- Patent
- Pirated software

LEGAL VS. ETHICAL 1

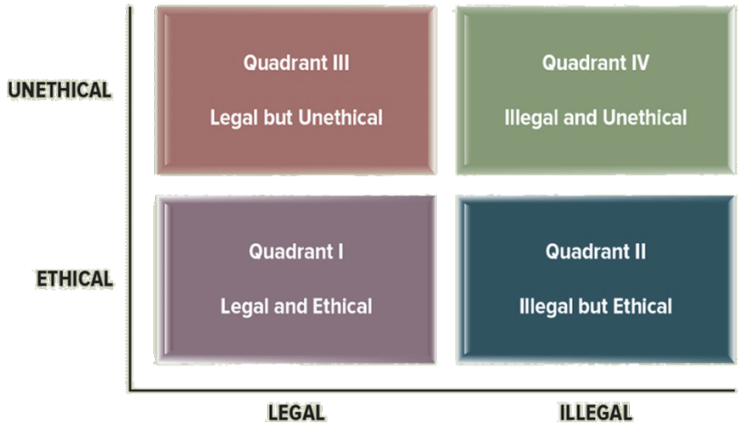
Individuals form the only ethical component of MIS

- Individuals copy, use, and distribute software
- Search organizational databases for sensitive and personal information
- Individuals create and spread viruses
- Individuals hack into computer systems to steal information
- Employees destroy and steal information



LEGAL VS. ETHICAL 2

- Acting ethically and legally are not always the same
- Information does not care how it is used. It will not stop itself from sending spam, viruses, or highly sensitive information



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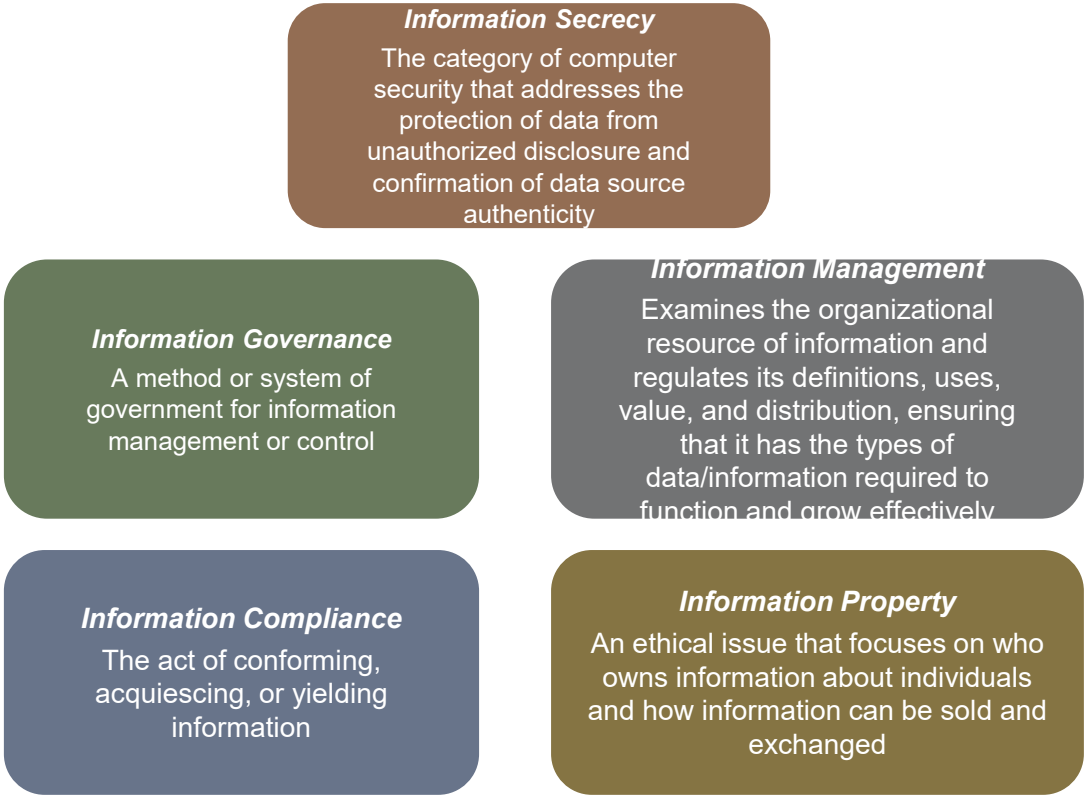
INFORMATION DOES NOT HAVE ETHICS; PEOPLE DO 1

- **Data scraping—**The process of extracting large amounts of data from a website and saving it to a spreadsheet or computer

- **Digital trust—**The measure of consumer, partner, and employee confidence in an organization's ability to protect and secure data and the privacy of individuals

INFORMATION DOES NOT HAVE ETHICS; PEOPLE DO 2



INFORMATION SECURITY

Organizational information is intellectual capital—it must be protected

- **Information security**—The protection of information from accidental or intentional misuse by persons inside or outside an organization
- **Downtime**—Refers to a period of time when a system is unavailable
- **Cybersecurity**—Involves prevention, detection, and response to cyberattacks that can have wide-ranging effects on individuals, organizations, communities, and nations
- **Cyberattacks**—Malicious attempts to access or damage a computer system

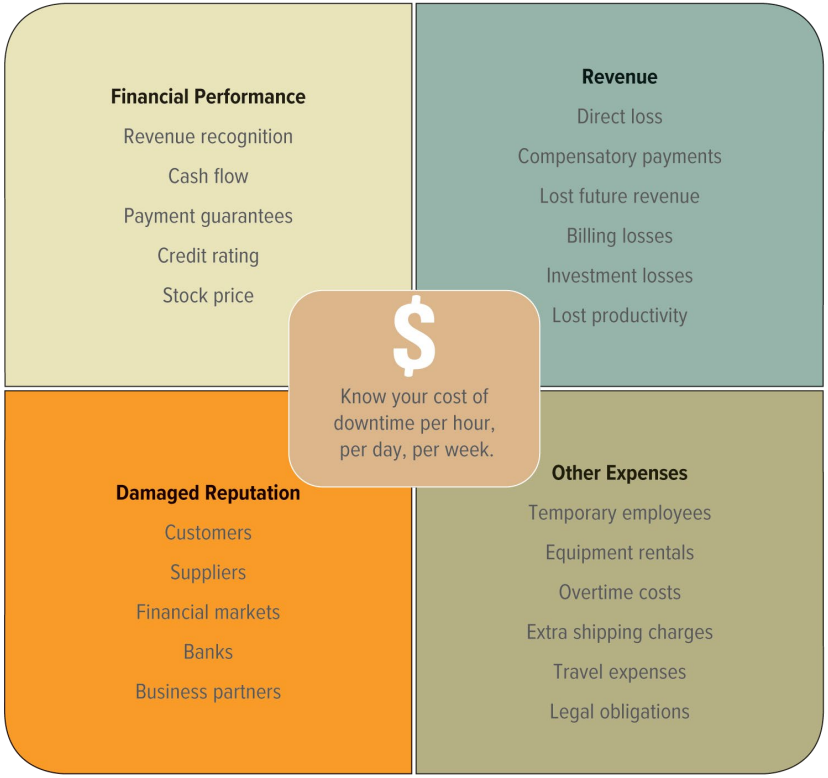
PROTECTING INTELLECTUAL ASSETS 1

- Sources of Unplanned Downtime

Bomb threat	Hacker	Snowstorm
Burst pipe	Hail	Sprinkler malfunction
Chemical spill	Hurricane	Static electricity
Construction	Ice storm	Strike
Corrupted data	Insects	Terrorism
Earthquake	Lightning	Theft
Electrical short	Network failure	Tornado
Epidemic	Plane crash	Train derailment
Equipment failure	Frozen pipe	Smoke damage
Evacuation	Power outage	Vandalism
Explosion	Power surge	Vehicle crash
Fire	Rodents	Virus
Flood	Sabotage	Water damage (various)
Fraud	Shredded data	Wind

PROTECTING INTELLECTUAL ASSETS 2

- How Much Will Downtime Cost Your Business?



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HACKERS: A DANGEROUS THREAT TO BUSINESS 1

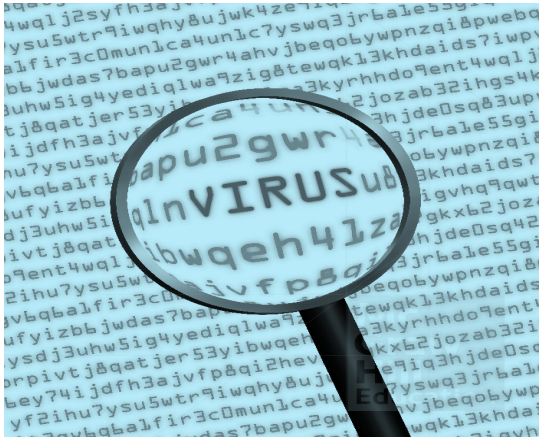
Hacker—Experts in technology who use their knowledge to break into computers and computer networks, either for profit or just motivated by the challenge

- Black-hat hacker
- Cracker
- Cyberterrorist
- Hacktivist
- Script kiddies or script bunnies
- White-hat hacker

HACKERS: A DANGEROUS THREAT TO BUSINESS 2

Virus—Software written with malicious intent to cause annoyance or damage

- Adware
- Malware
- Ransomware
- Scareware
- Spyware
- Worm



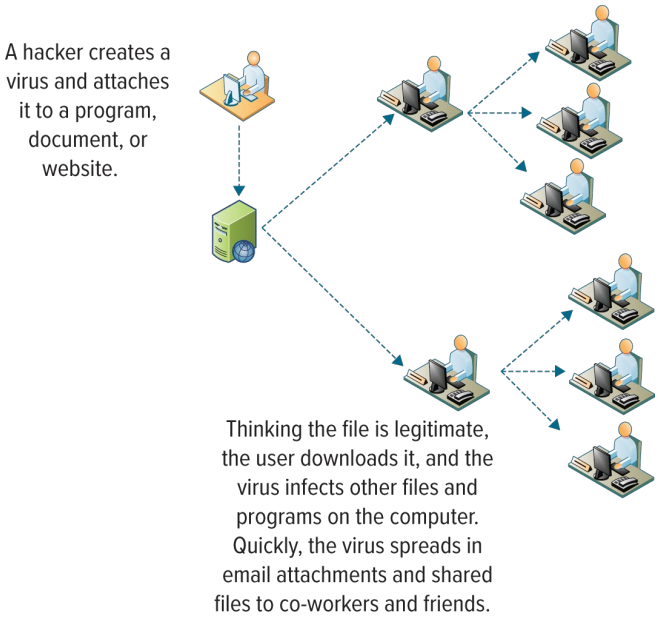
VIRUSES: A DANGEROUS THREAT TO BUSINESS 1

Virus—Software written with malicious intent to cause annoyance or damage

- Backdoor program
- Denial-of-service attack (DoS)
- Distributed denial-of-service attack (DDoS)
- Polymorphic virus
- Trojan-horse virus

VIRUSES: A DANGEROUS THREAT TO BUSINESS 2

How Computer Viruses Spread



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VIRUSES: A DANGEROUS THREAT TO BUSINESS 3

Security threats to ebusiness include

- Elevation of privilege
- Hoaxes
- Malicious code
- Packet tampering
- Sniffer
- Spoofing
- Splogs
- Spyware

BUSINESS PROCESS MODELING [1]

	BUSINESS PROCESS MODEL AND NOTATION (BPMN)
EVENT 	***BPMN event*** Is anything that happens during the course of a business process. An event Is represented by a circle in a business process model. In Figure 2.22, the events include customer requests, time requests, or the end of the process.
ACTIVITY 	***BPMN activity*** is a task in a business process. An activity is any work that Is being performed in a process. An activity is represented by a rounded-corner rectangle in a business process model. In Figure 2.22, the activities include checking availability, picking up the customers, and confirming the booking.
GATEWAY 	***BPMN gateway*** Is used to control the flow of a process. Gateways handle the forking, merging, and joining of paths within a process. Gateways are represented by a diamond shape in a business process model. In Figure 2.22, the gateways include determining availability status or accepting/declining the request.
FLOW 	***BPMN flows*** display the path In which the process flows. Flows are represented by arrows in a business process model. In Figure 2.22, the arrows show the path the customer takes through the taxi cab booking process.

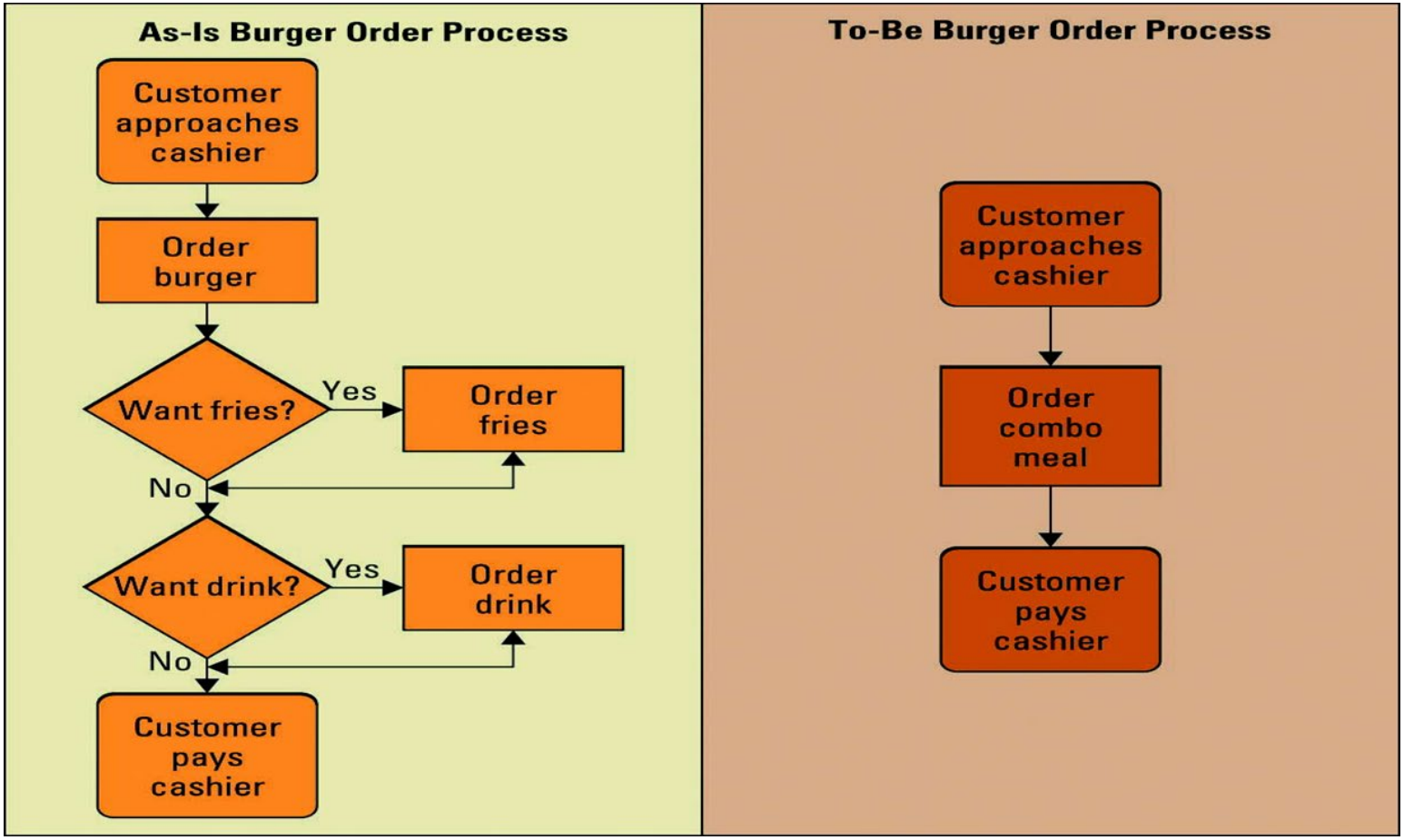
BUSINESS PROCESS MODELING 2

Business process modeling (or **mapping**) - The activity of creating a detailed flow chart or process map of a work process showing its inputs, tasks, and activities, in a structured sequence.

Business process model - A graphic description of a process, showing the sequence of process tasks, which is developed for a specific.

- **As-Is process model.**
- **To-Be process model.**

BUSINESS PROCESS MODELING 3



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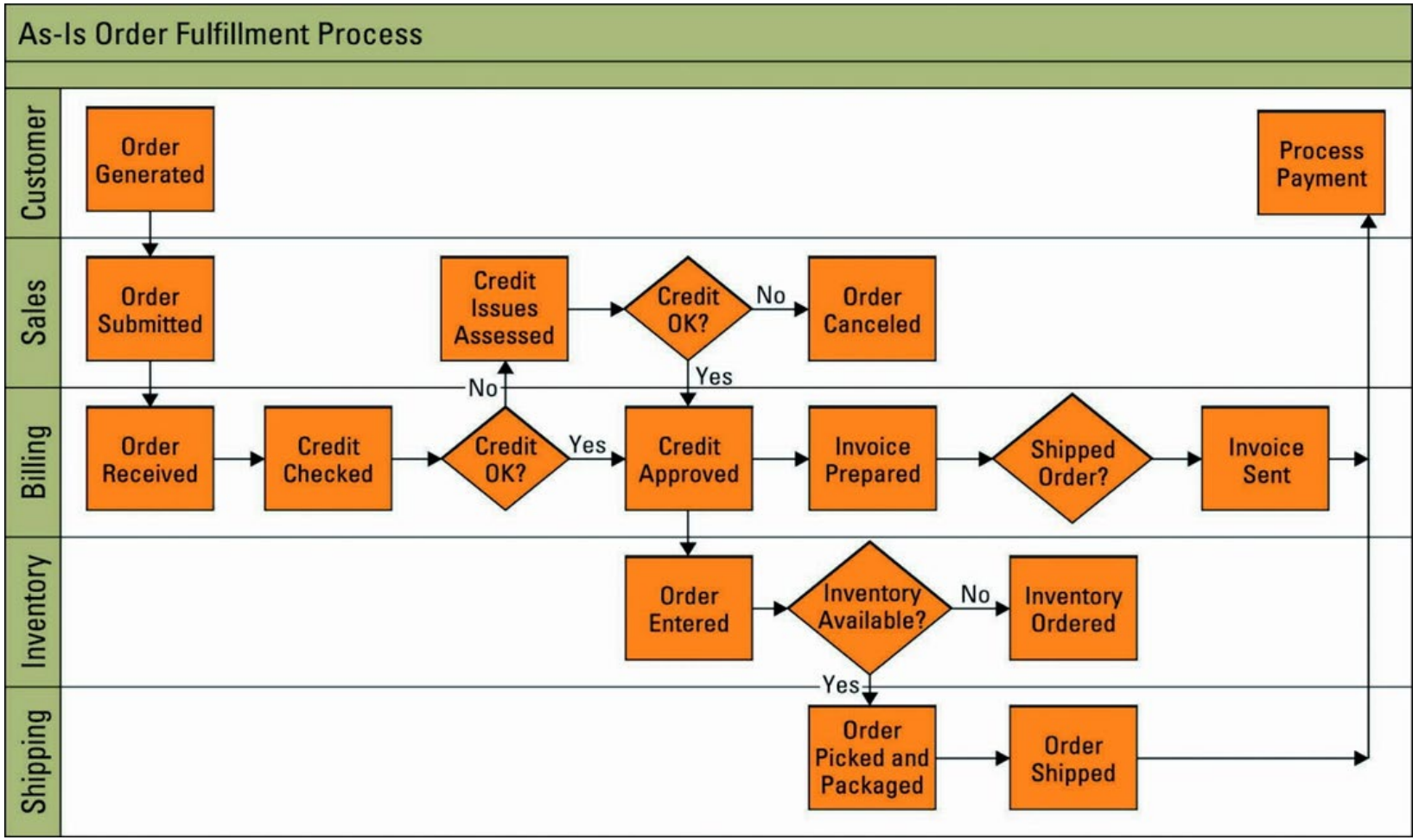
BUSINESS PROCESS MODELING 4



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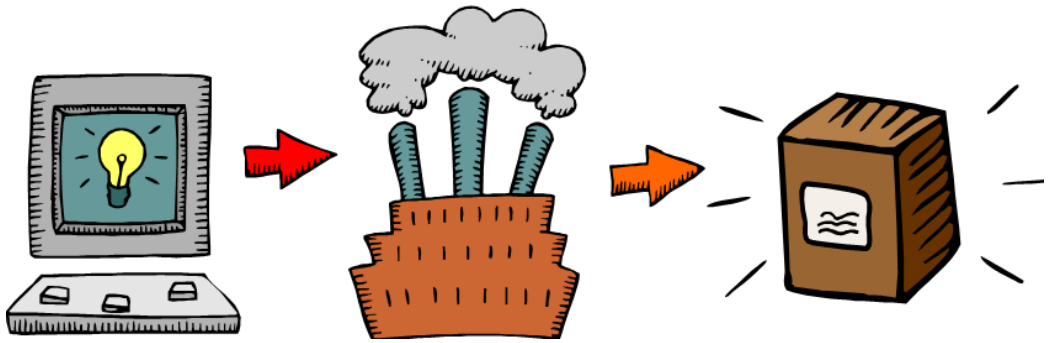
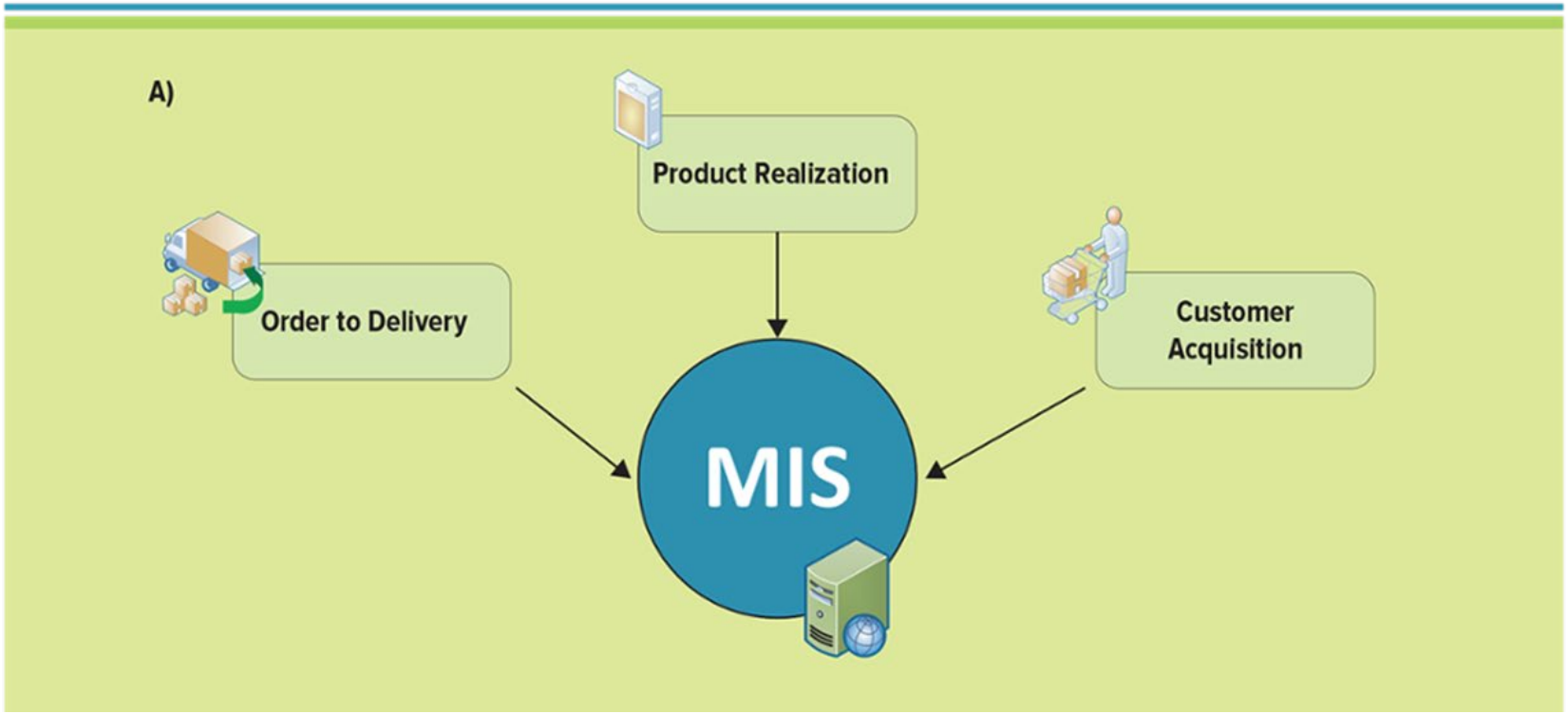
USING MIS TO IMPROVE BUSINESS PROCESSES [1]

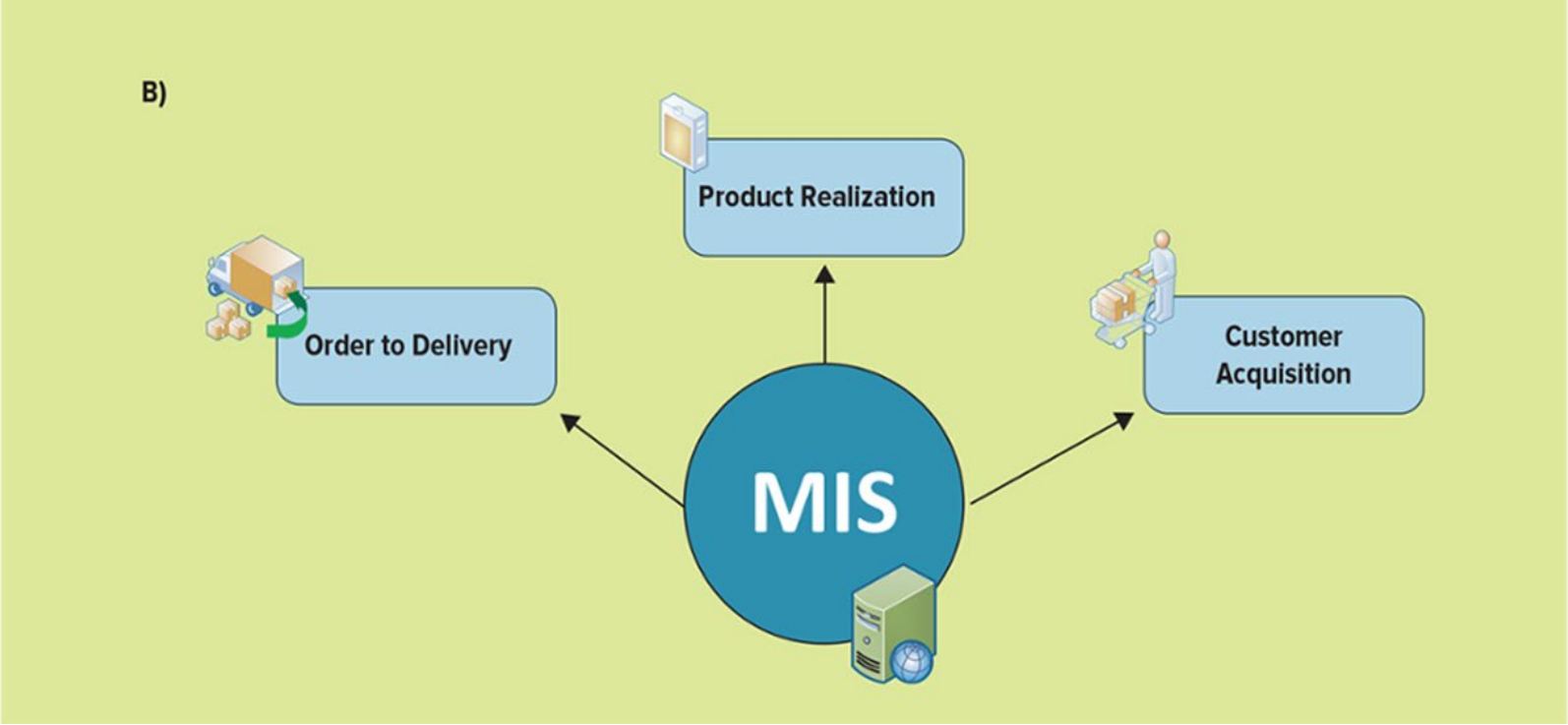
- **Workflow** – Includes the tasks, activities, and responsibilities required to execute each step in a business process.
- **Workflow control systems** - Monitor processes to ensure tasks, activities, and responsibilities are executed as specified.
- **Digitization** - The automation of existing manual and paper-based processes and workflows to a digital format.



USING MIS TO IMPROVE BUSINESS PROCESSES 2

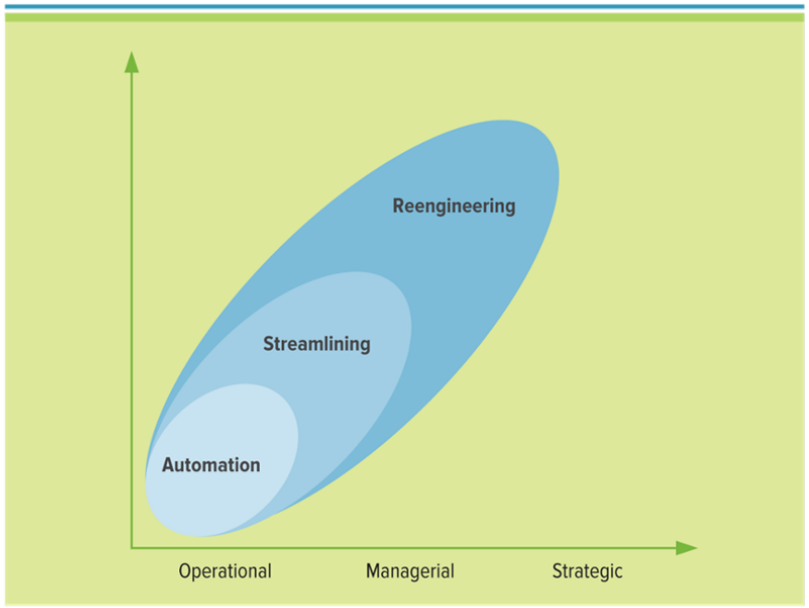


USING MIS TO IMPROVE BUSINESS PROCESSES 3



USING MIS TO IMPROVE BUSINESS PROCESSES

- Types of change an organization can achieve, along with the magnitudes of change and the potential business benefit.



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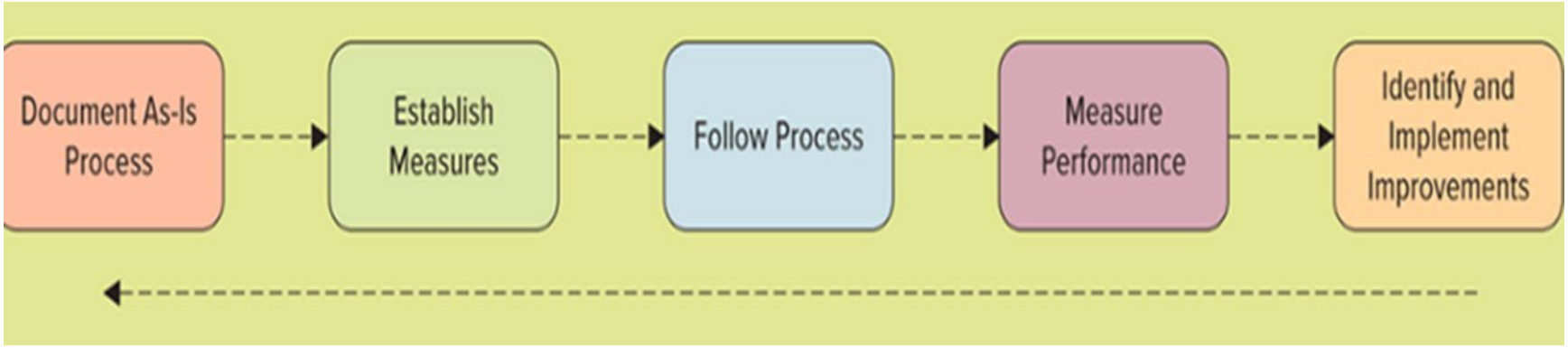
OPERATIONAL BUSINESS PROCESSES - AUTOMATION

- **Operational business processes -** Static, routine, daily business processes such as stocking inventory, checking out customers, or daily opening and closing processes.
- **Operationalized analytics -** Makes analytics part of a business process.

OPERATIONAL BUSINESS PROCESSES – AUTOMATION 1

Steps in Business Process Improvement.



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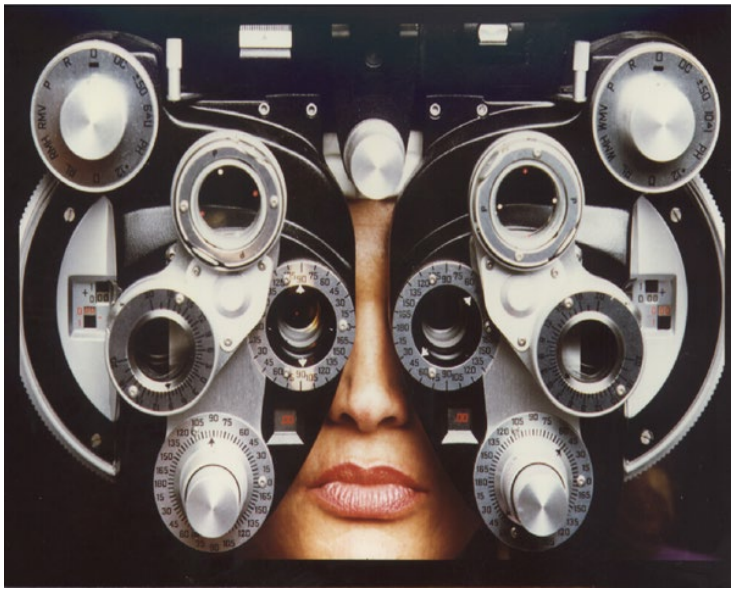
OPERATIONAL BUSINESS PROCESSES – AUTOMATION 2

- **Business process improvement – ** Attempts to understand and measure the current process and make performance improvements accordingly.
- **Automation** – The process of computerizing manual tasks.
- **Robotic process automation -** The use of software with artificial intelligence (AI) and machine learning capabilities to handle high-volume, repeatable tasks that previously required a human to perform.

OPERATIONAL BUSINESS PROCESSES – AUTOMATION 3

- **Machine vision** – The ability of a computer to “see: by digitizing an image, processing the data it contains, and taking some kind of action.
- **Machine vision sensitivity -** The ability of a machine to see in dim light or to detect weak impulses at invisible wavelengths.
- **Machine vision resolution** - The extent to which a machine can differentiate between objects. In general, the better the resolution, the more confined the field of vision.



MANAGERIAL BUSINESS PROCESSES STREAMLINING 4

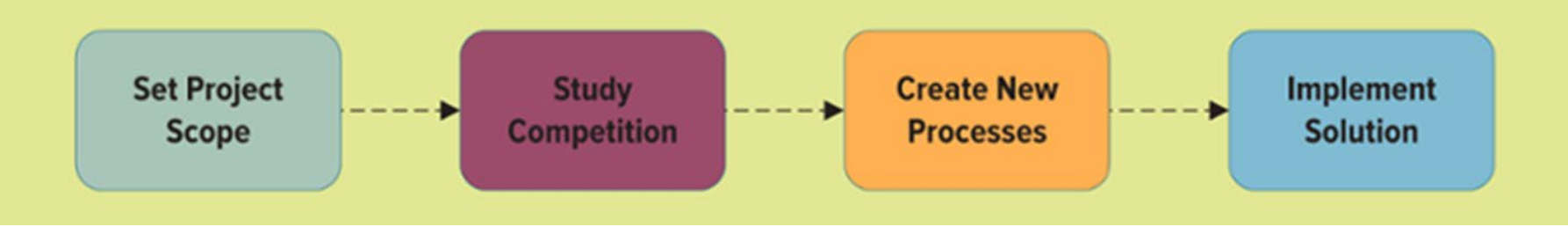
- **Streamlining** – Improves business process efficiencies by simplifying or eliminating unnecessary steps.
- **Bottleneck** – Occur when resources reach full capacity and cannot handle any additional demands.
- **Redundancy** – Occurs when a task or activity is unnecessarily repeated.

STRATEGIC BUSINESS PROCESSES REENGINEERING [1]

- A company can improve the way it travels the road by moving from foot to horse and then horse to car.
- BPR looks at taking a different path, such as an airplane which ignore the road completely.

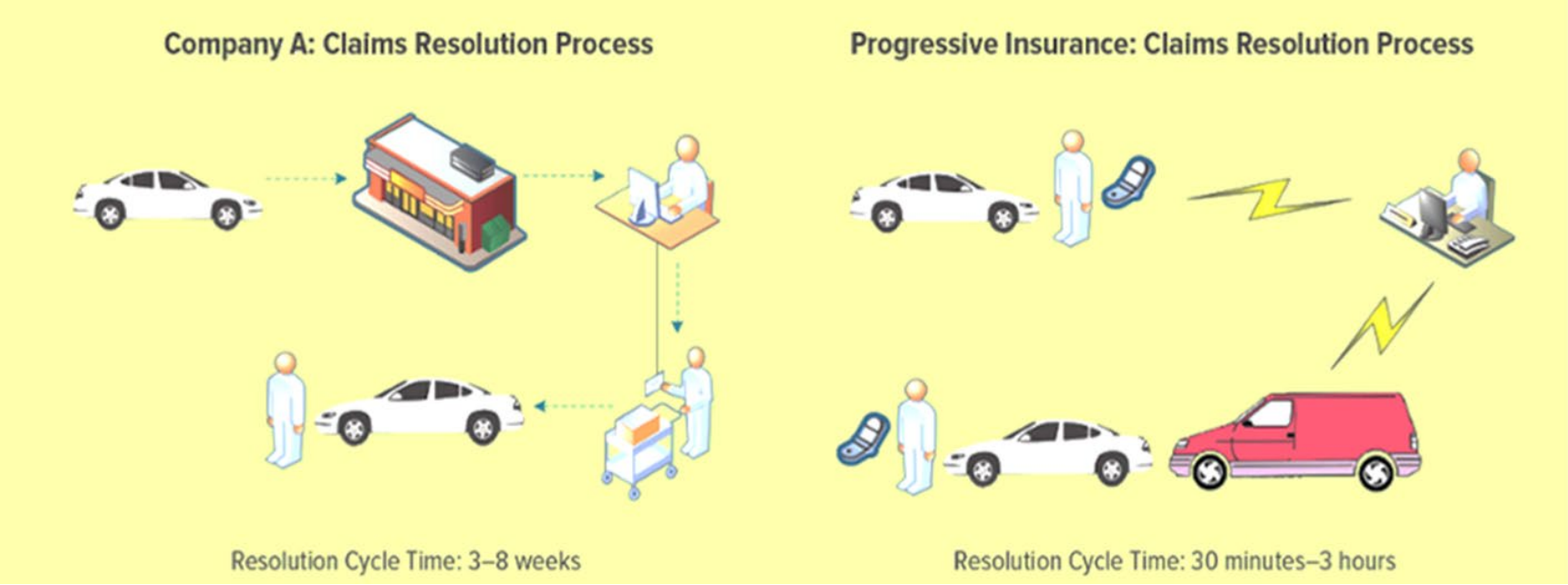
STRATEGIC BUSINESS PROCESSES REENGINEERING 2

- **Business process reengineering (BPR)** - Analysis and redesign of workflow within and between enterprises.



STRATEGIC BUSINESS PROCESSES REENGINEERING 3

Progressive Insurance Mobile Claims Process.



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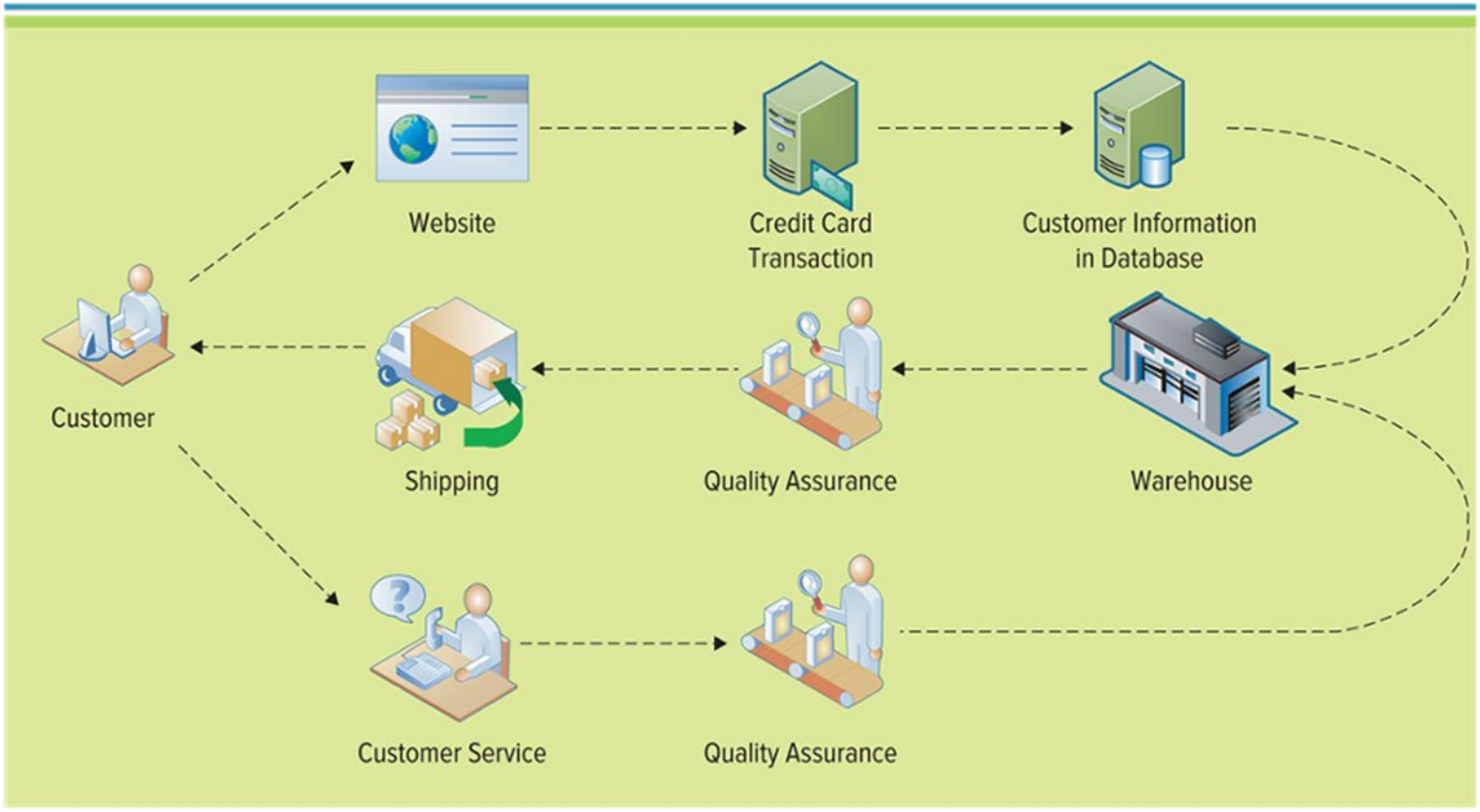
STRATEGIC BUSINESS PROCESSES REENGINEERING 4



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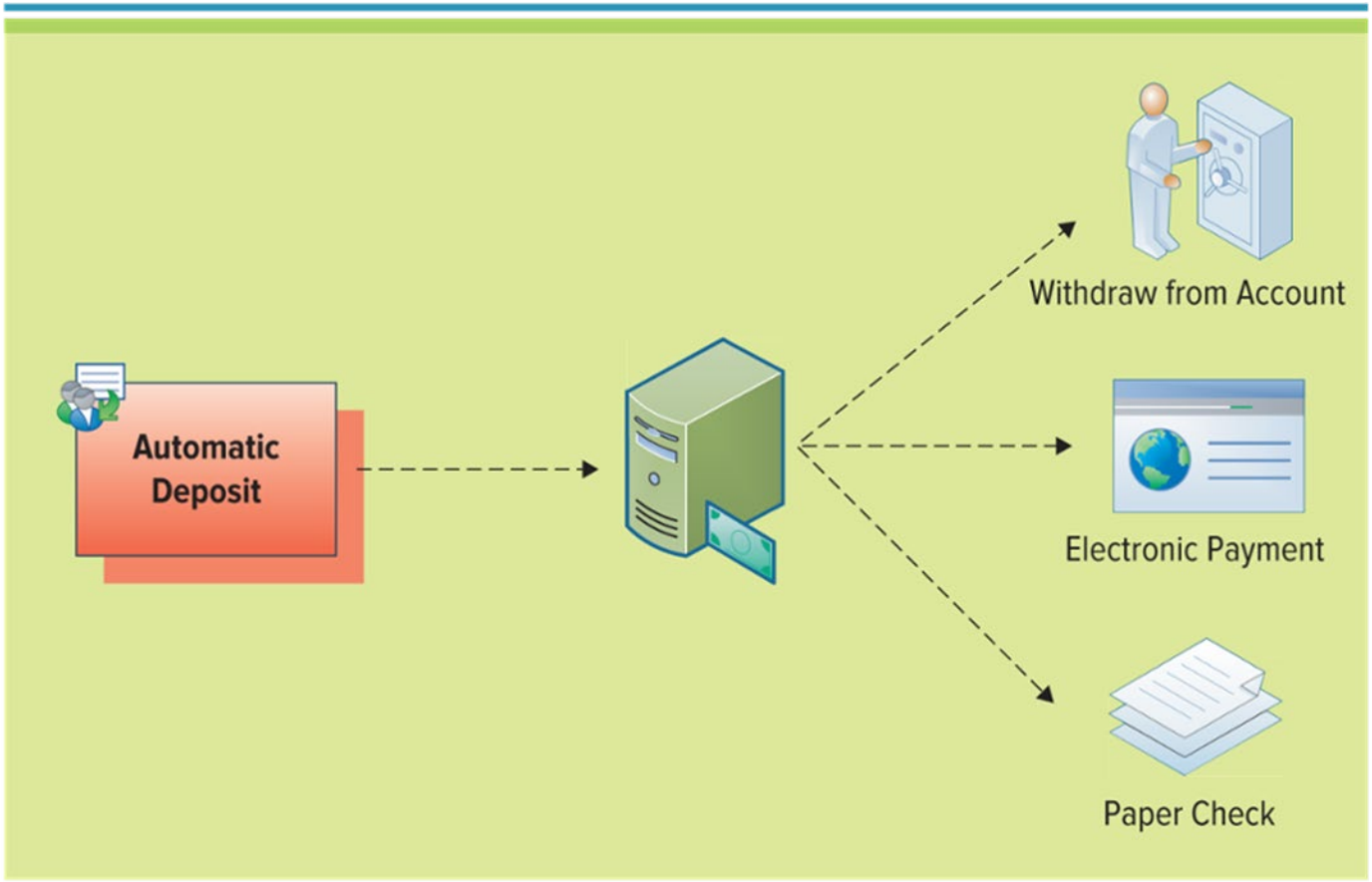
STRATEGIC BUSINESS PROCESSES REENGINEERING 5



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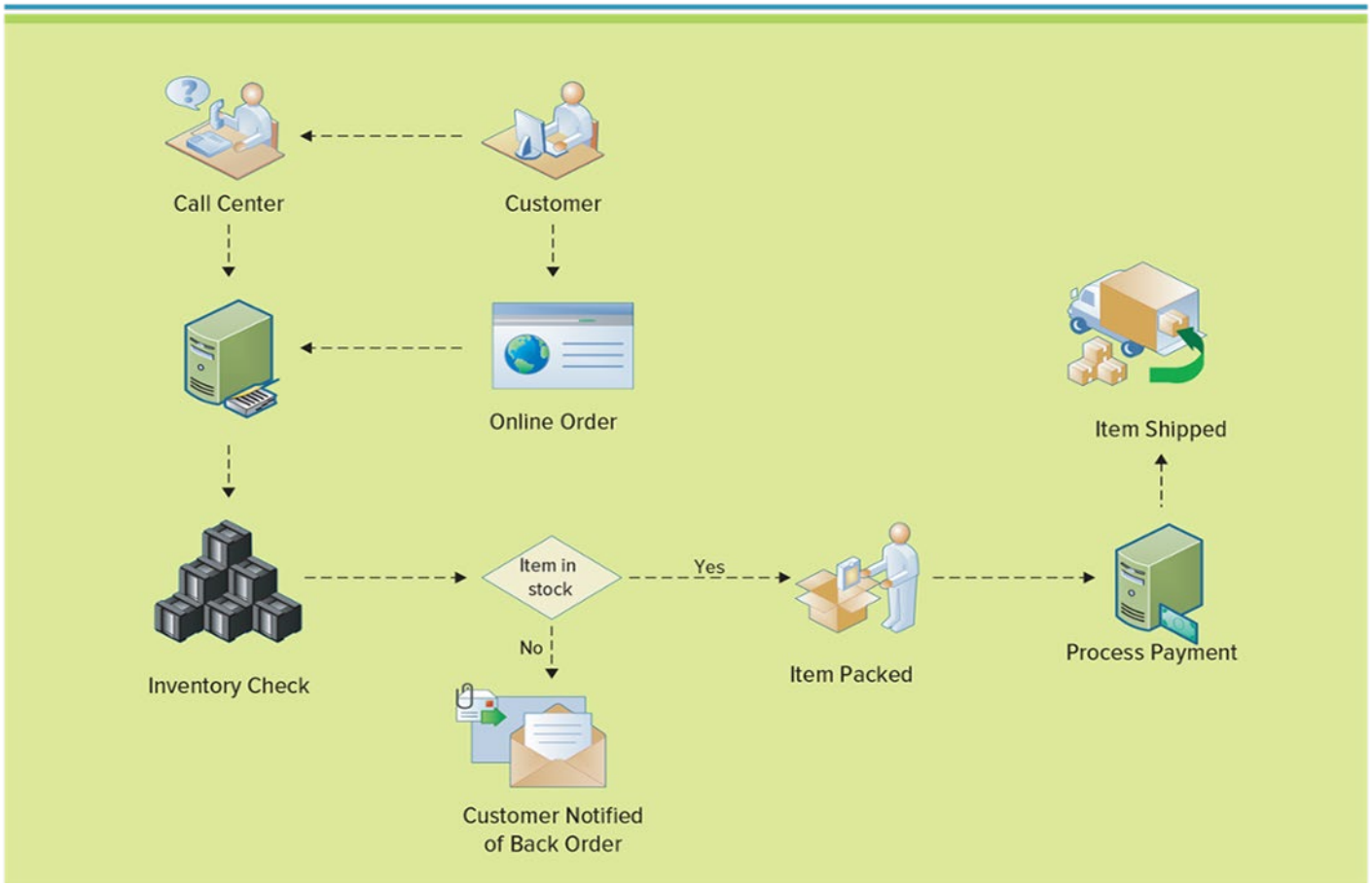
STRATEGIC BUSINESS PROCESSES REENGINEERING 6



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