

Week 4 Review

- e-Commerce and m-Commerce
- Forms of e-Commerce
- e-Commerce and m-Commerce applications
- e-Commerce and m-Commerce Technology Infrastructure



Management Information System (MINSYST)

Week Five



Objectives

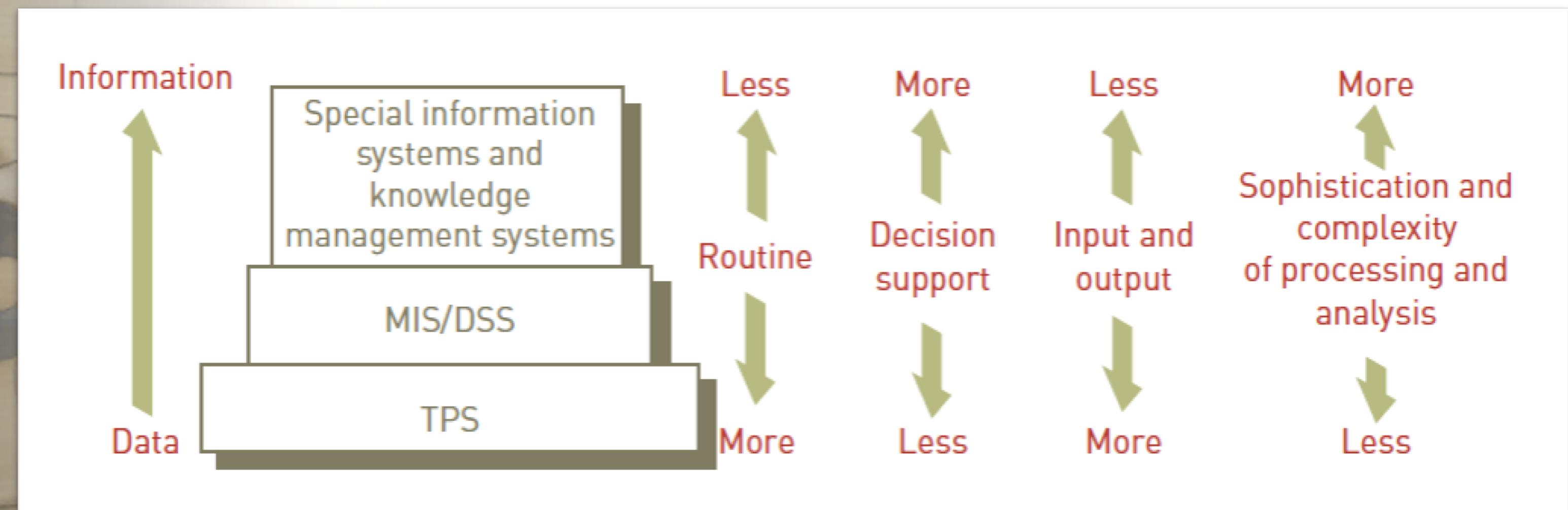
- Identify the basic activities and business objectives common to transaction processing systems
- Identify the functions and benefits of enterprise resource planning and supply chain management systems
- Define the stages of decision making



Transaction Processing Systems

- Transaction processing systems (TPSs):
 - Capture and process detailed data
 - Include order entry, inventory control, payroll, accounts payable, accounts receivable, general ledger, etc.
 - Provide employees with data

Transaction Processing Systems



Reference:

Reynolds, G. (2014). *Information Systems Principles*. Philippine Edition. Cengage Learning Asia Pte.



Traditional Processing Methods & Objectives

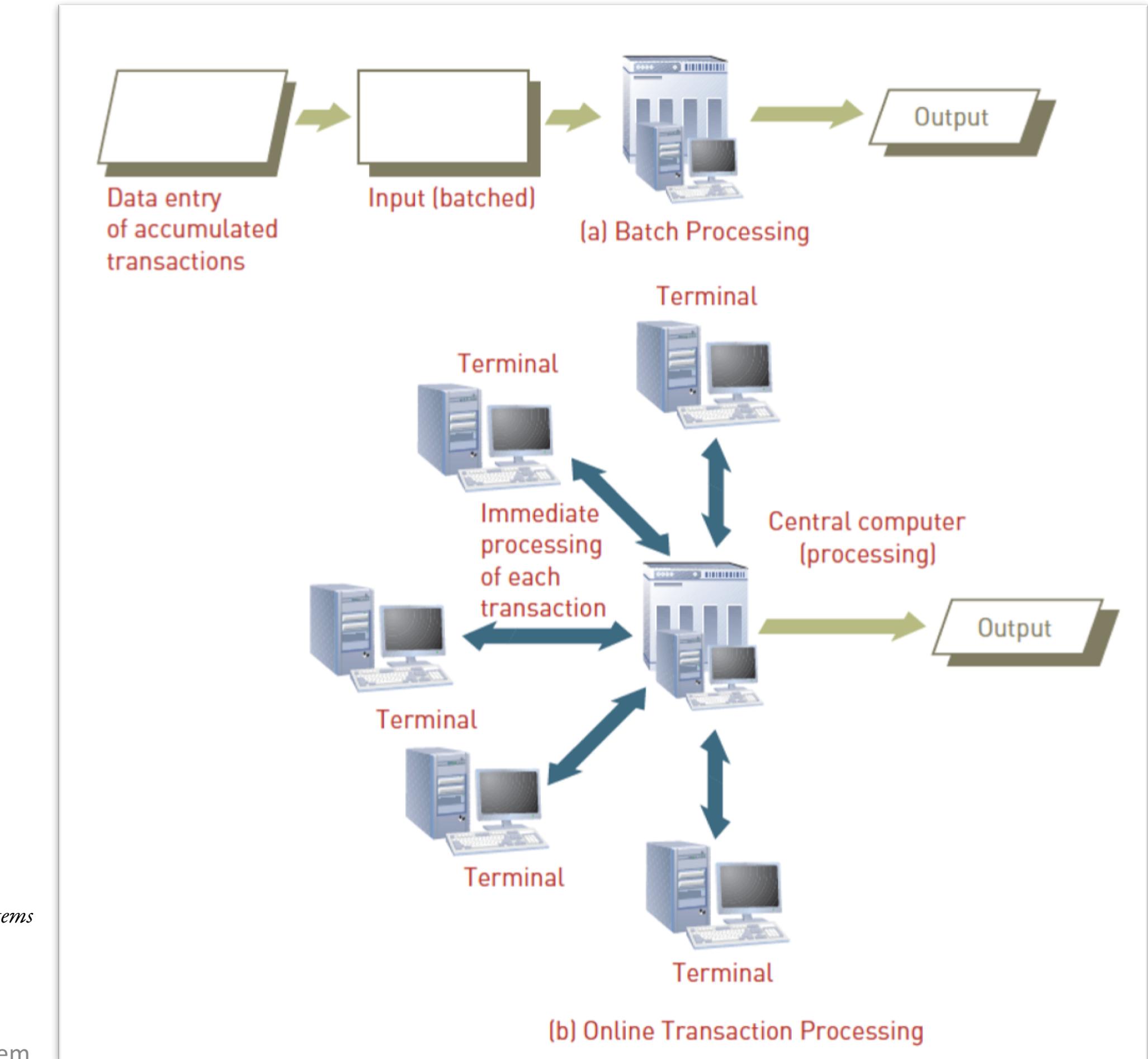
- Batch processing system:
 - Data processing in which business transactions are accumulated over a period of time and prepared for processing as a single unit or batch

Transaction Processing Systems

- Online transaction processing (OLTP):
 - Data processing in which each transaction is processed immediately
 - Helps companies provide faster, more efficient service

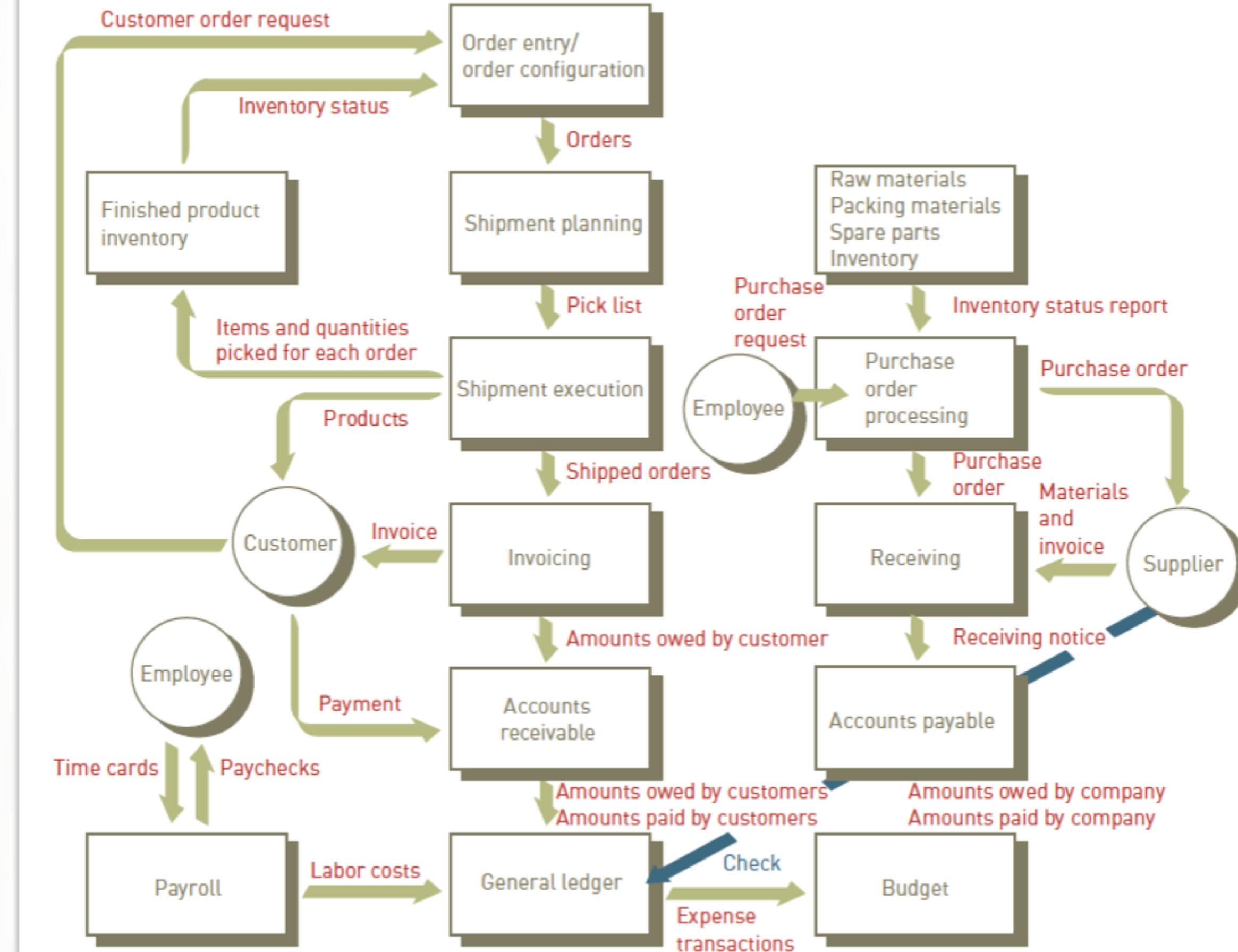
Batch versus Online Processing

Reference:
Reynolds, G. (2014). *Information Systems Principles*. Philippine Edition.
Cengage Learning Asia Pte.



Integration of TPSs

Reference:
Reynolds, G. (2014). *Information Systems Principles*. Philippine Edition.
Cengage Learning Asia Pte.





Transaction Processing Systems

- Objectives
 - Process data generated by and about transactions
 - Maintain a high degree of accuracy and integrity
 - Avoid processing fraudulent transactions



Transaction Processing Systems

- Objectives
 - Produce timely user responses and reports
 - Increase labor efficiency
 - Help improve customer service and/or loyalty

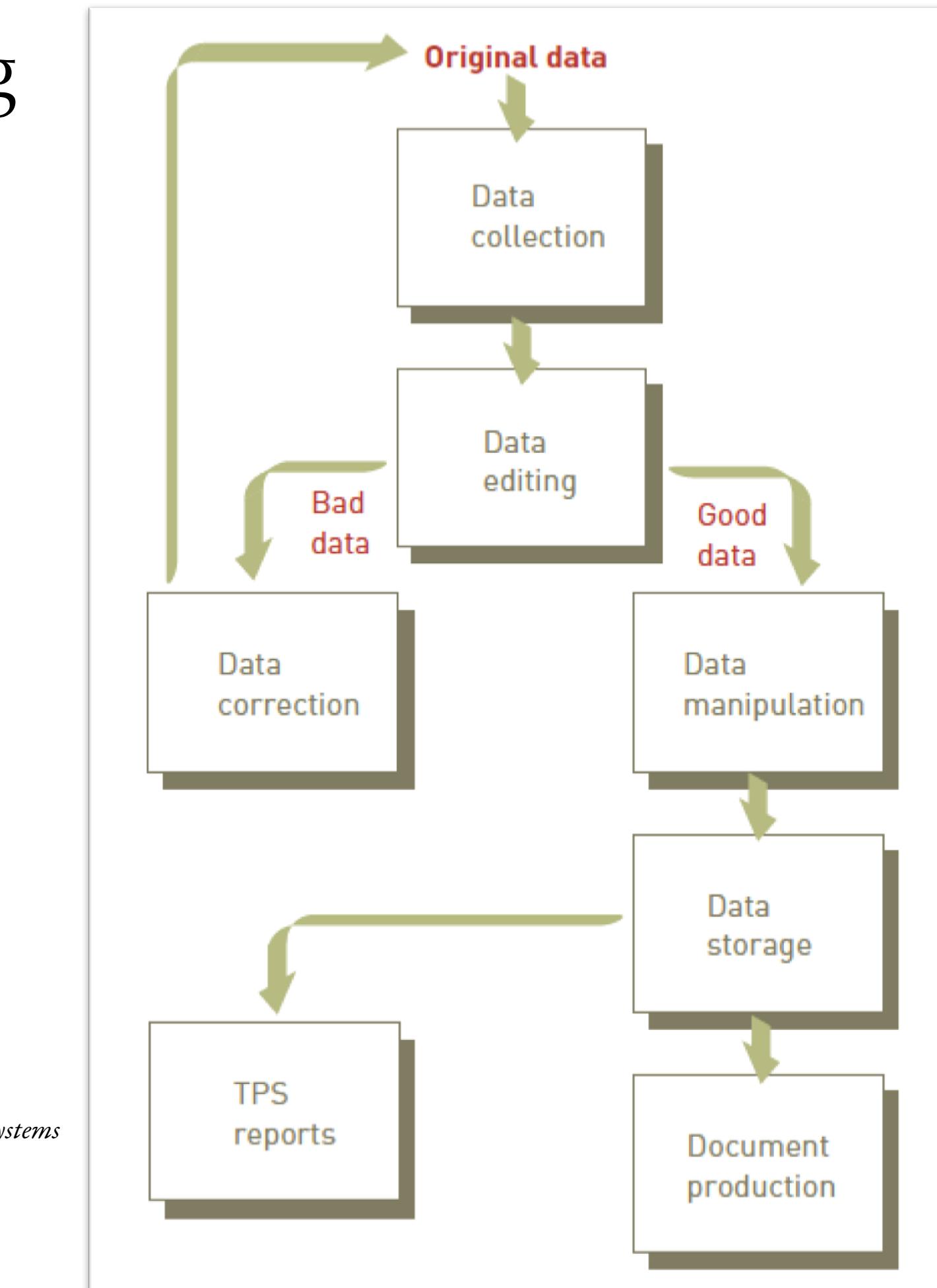
Transaction Processing Activities

- TPSs:
 - Capture and process data that describes fundamental business transactions
 - Update databases
 - Produce a variety of reports
- Transaction processing cycle



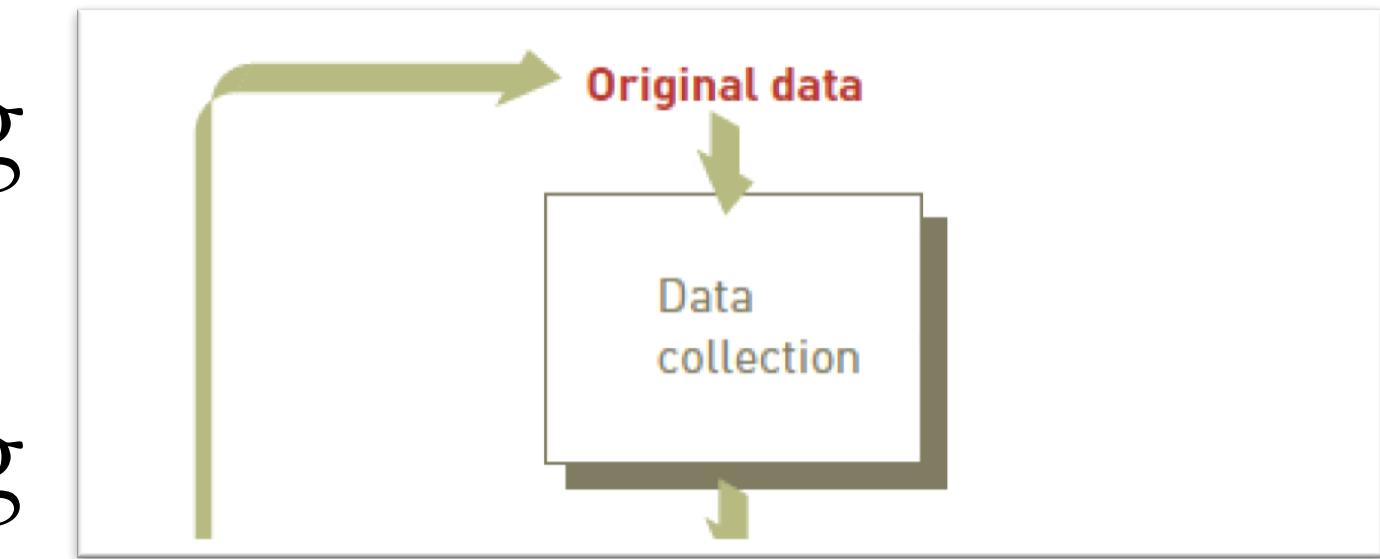
Data Processing Activities

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Data Collection

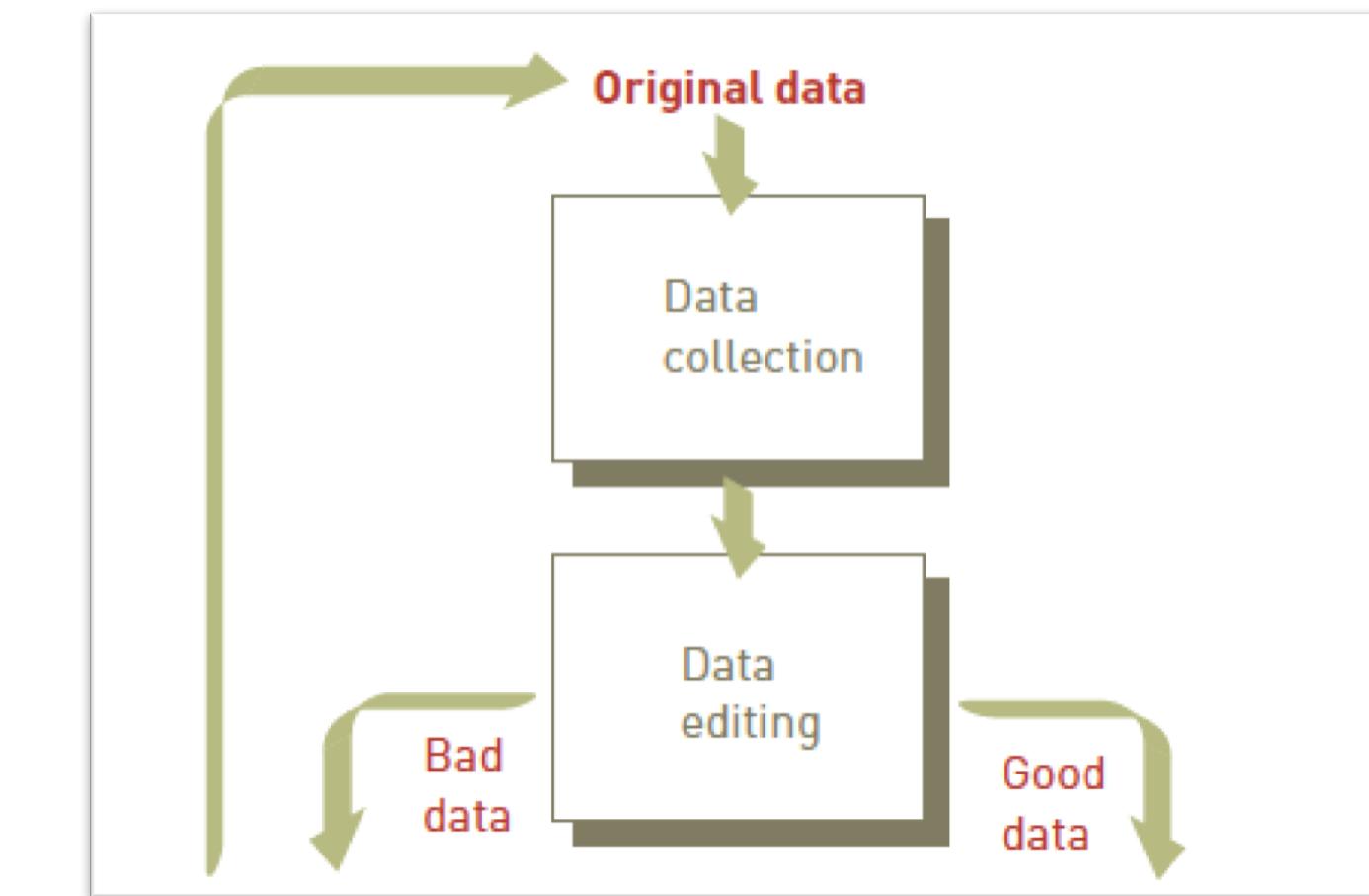
- Capturing and gathering all data necessary to complete the processing of transactions
- Data collection can be:
 - Manual
 - Automated via special input devices



Reference:
Reynolds, G. (2014). *Information Systems Principles*. Philippine Edition.
Cengage Learning Asia Pte.

Data Editing

- Checking data for validity and completeness to detect any problems
 - Quantity and cost data must be numeric
 - Names must be alphabetic



Reference:
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Cengage Learning Asia Pte.

Data Correction

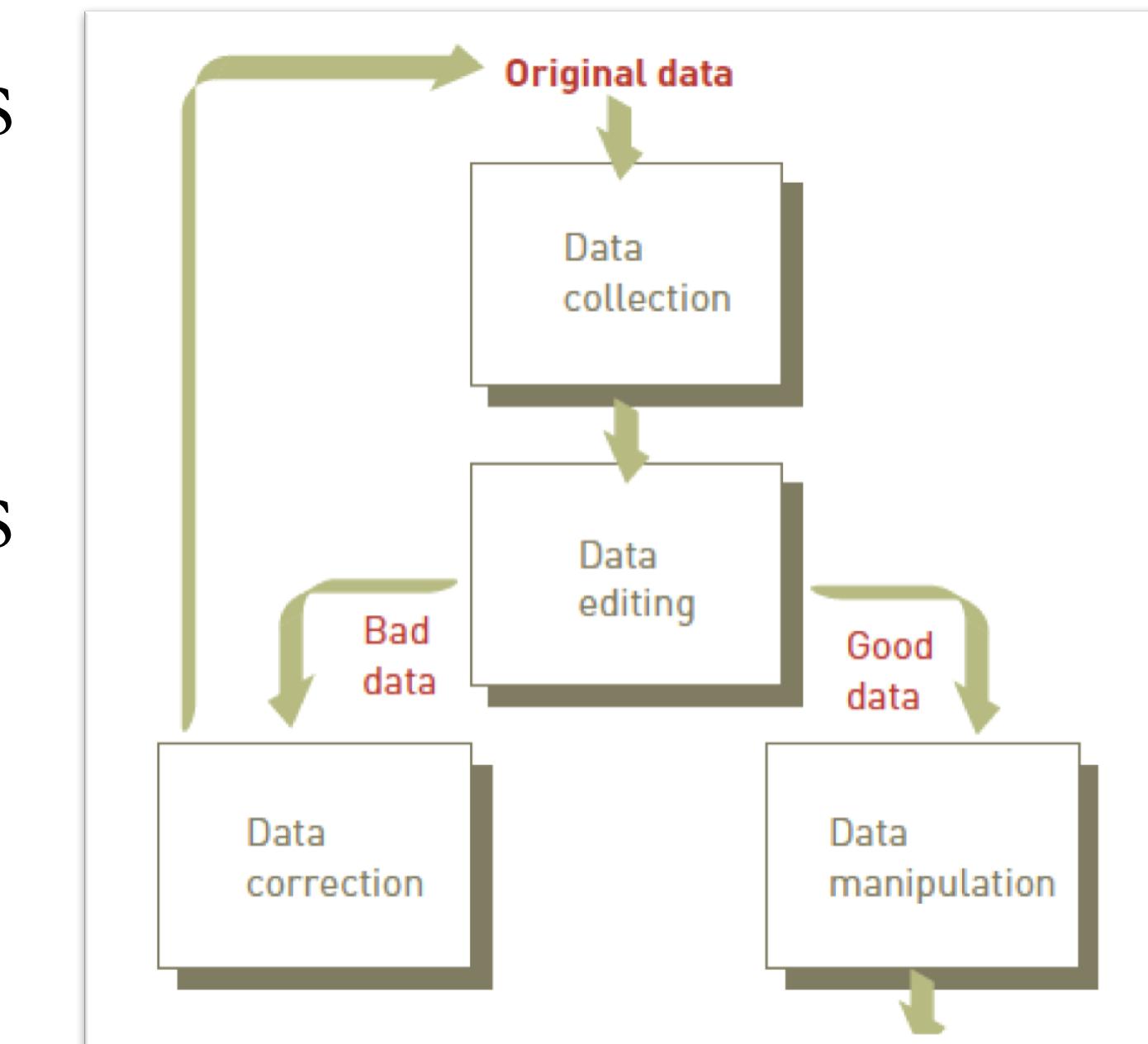
- Reentering data that was not typed or scanned properly
- Error messages must specify the problem so proper corrections can be made



Reference:
Reynolds, G. (2014). *Information Systems Principles*. Philippine Edition.
Cengage Learning Asia Pte.

Data Manipulation

- Performing calculations and other data transformations related to business transactions
 - Classify data
 - Sort data into categories
 - Perform calculations
 - Summarize results
 - Store data for further processing

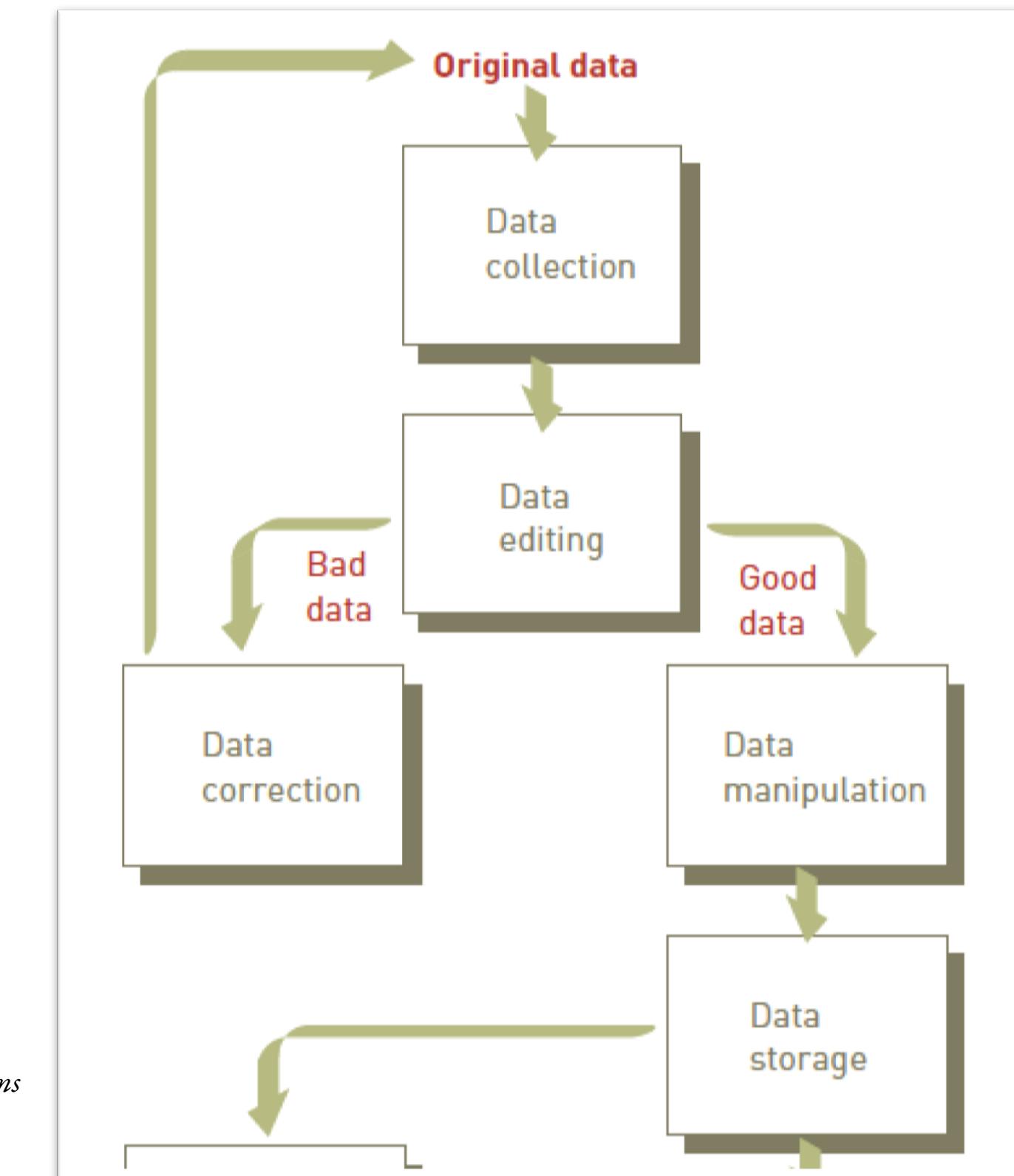


Reference:
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Data Storage

- Updating one or more databases with new transactions
- After being updated, this data can be further processed and manipulated by other systems

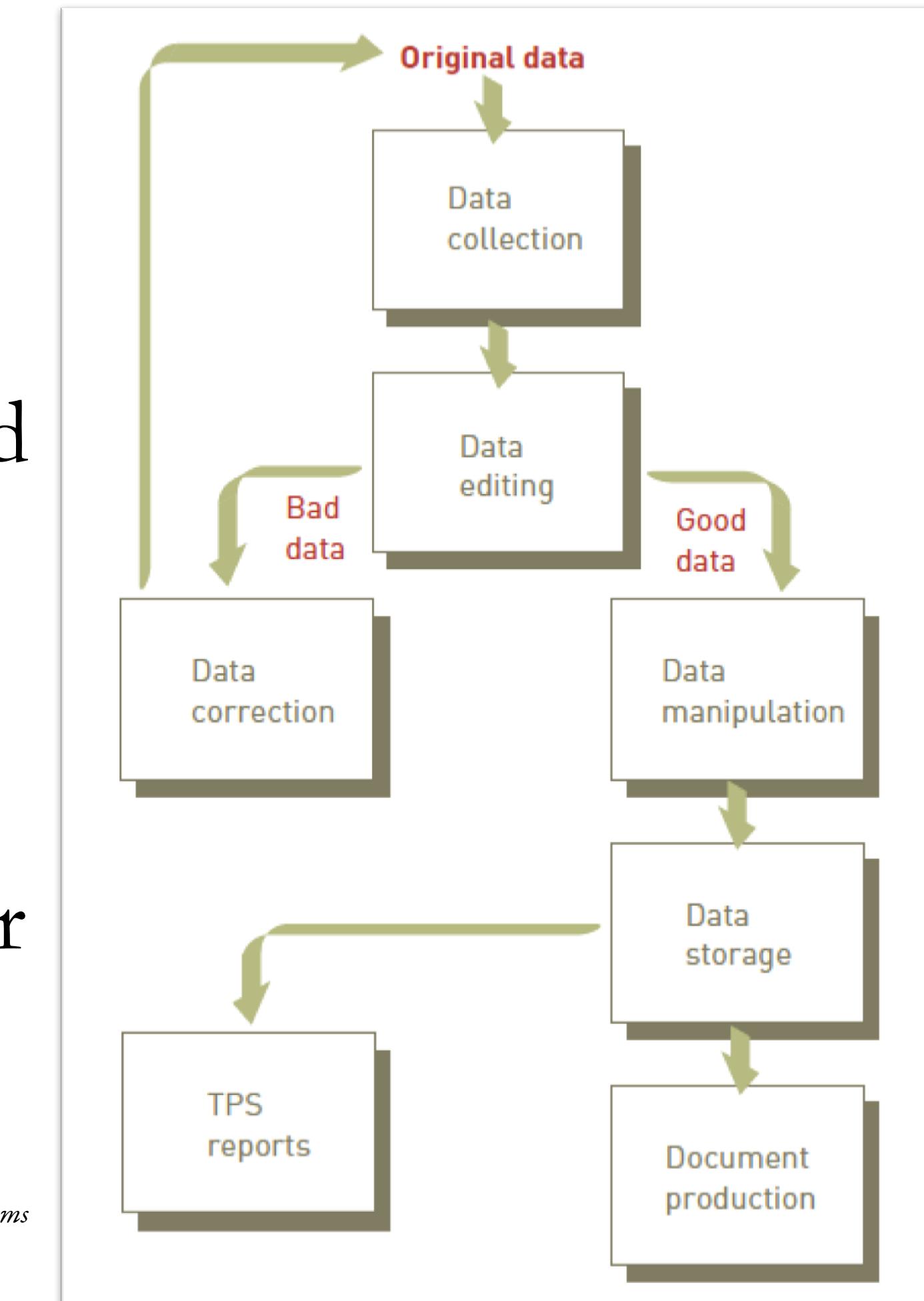
Reference:
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Document Production

- Generating output records, documents, and reports:
 - Hard-copy paper reports
 - Displays on computer screens

Reference:
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Cengage Learning Asia Pte.





Traditional Transaction Processing Applications

- A TPS typically includes the following types of systems:
 - Order processing systems
 - Accounting systems
 - Purchasing systems

Transaction Processing Systems For Small and Medium-Size Enterprises (SMEs)

Vendor	Software	Type of TPS Offered	Target Customers
AccuFund	AccuFund	Financial reporting and accounting	Nonprofit, municipal, and government organizations
OpenPro	OpenPro	Complete ERP solution, including financials, supply chain management, e-commerce, customer relationship management, and retail POS system	Manufacturers, distributors, and retailers
Intuit	QuickBooks	Financial reporting and accounting	Manufacturers, professional services, contractors, nonprofits, and retailers
Sage	Timberline	Financial reporting, accounting, and operations	Contractors, real estate developers, and residential builders
Redwing	TurningPoint	Financial reporting and accounting	Professional services, banks, and retailers

Reference:

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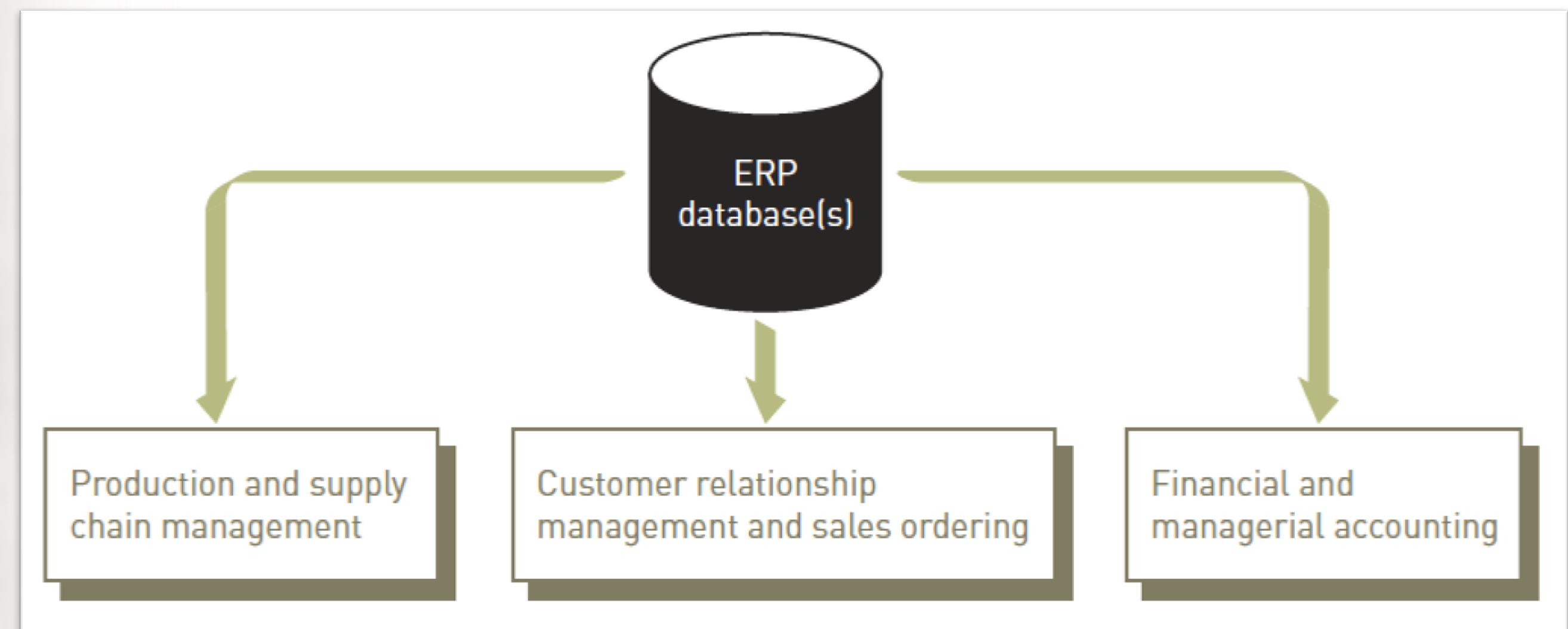


Enterprise Resource Planning

- An enterprise system:
 - Central to the organization
 - Ensures information can be shared across all business functions and all levels of management

Enterprise Resource Planning

- Employs a database of key operational and planning data that can be shared by all



Reference:
Reynolds, G. (2014).
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Overview of ERP

- ERP systems:
 - Evolved from materials requirement planning systems (MRP)
- Large organizations:
 - The first to take on the challenge of implementing ERP



Advantages of ERP

- Improved access to data for operational decision making
- Elimination of costly, inflexible legacy systems
- Improvement of work processes
- Upgrade of technology infrastructure

Challenges to Successful Implementation of ERP

Challenge	Description
Cost and disruption of upgrades	Most companies have other systems that must be integrated with the ERP system, such as financial analysis programs, e-commerce operations, and other applications that communicate with suppliers, customers, distributors, and other business partners. This integration takes even more effort and time.
Difficulty in managing change	Companies often must radically change how they operate to conform to the ERP's work processes. These changes can be so drastic to long-time employees that they depart rather than adapt to the change, leaving the firm short of experienced workers.
Cost and long implementation lead time	The average ERP implementation cost is \$5.5 million with an average project duration just over 14 months.
Management of software customization	The base ERP system may need to be modified to meet mandatory business requirements. This modification can become extremely expensive and further delay implementation.
User frustration with the new system	Effective use of an ERP system requires changes in work processes and in the details of how work gets done. Many users initially balk at these changes and require much training and encouragement.

Reference:

Reynolds, G. (2014). *Information Systems Principles*. Philippine Edition. Cengage Learning Asia Pte.



Tips for Avoiding Common Causes of Failed ERP Implementation

- Assign a full time executive to manage the project
- Appoint an experienced, independent resource to provide project oversight
- Allow sufficient time for transition
- Plan to spend considerable time and money training people



Tips for Avoiding Common Causes of Failed ERP Implementation

- Define metrics to assess project progress
- Keep the scope of the project well-defined
- Be wary of modifying the ERP software to conform to your firm's business practices

Leading ERP Systems

ERP Systems for Large Organizations	ERP Systems for Mid-sized Organizations	ERP Systems for Small Organizations
Microsoft Dynamics	Epicor	ABAS
Oracle	Industrial and Financial Systems	Activant Solutions, Inc.
Oracle eBusiness Suite	Infor	Baan
Oracle JD Edwards	Lawson	Compiere
Oracle Peoplesoft	Plex	Netsuite
SAP	Sage	Syspro

Source: “2011 Guide to ERP Systems and Vendors,” Panorama Consulting Group, 2011.

Reference:

Reynolds, G. (2014). *Information Systems Principles. Philippine Edition.* Cengage Learning Asia Pte.



Supply Chain Management

- A system that includes:
 - Planning, executing, and controlling all activities involved in raw material sourcing and procurement
 - Converting raw materials to finished products
 - Warehousing and delivering finished product to customers



Supply Chain Management

- Process for developing a production plan:
 - Sales forecasting
 - Sales and operations plan (S&OP)
 - Demand management
 - Detailed scheduling
 - Materials requirement planning (MRP)
 - Purchasing
 - Production



Decision Making and Problem Solving

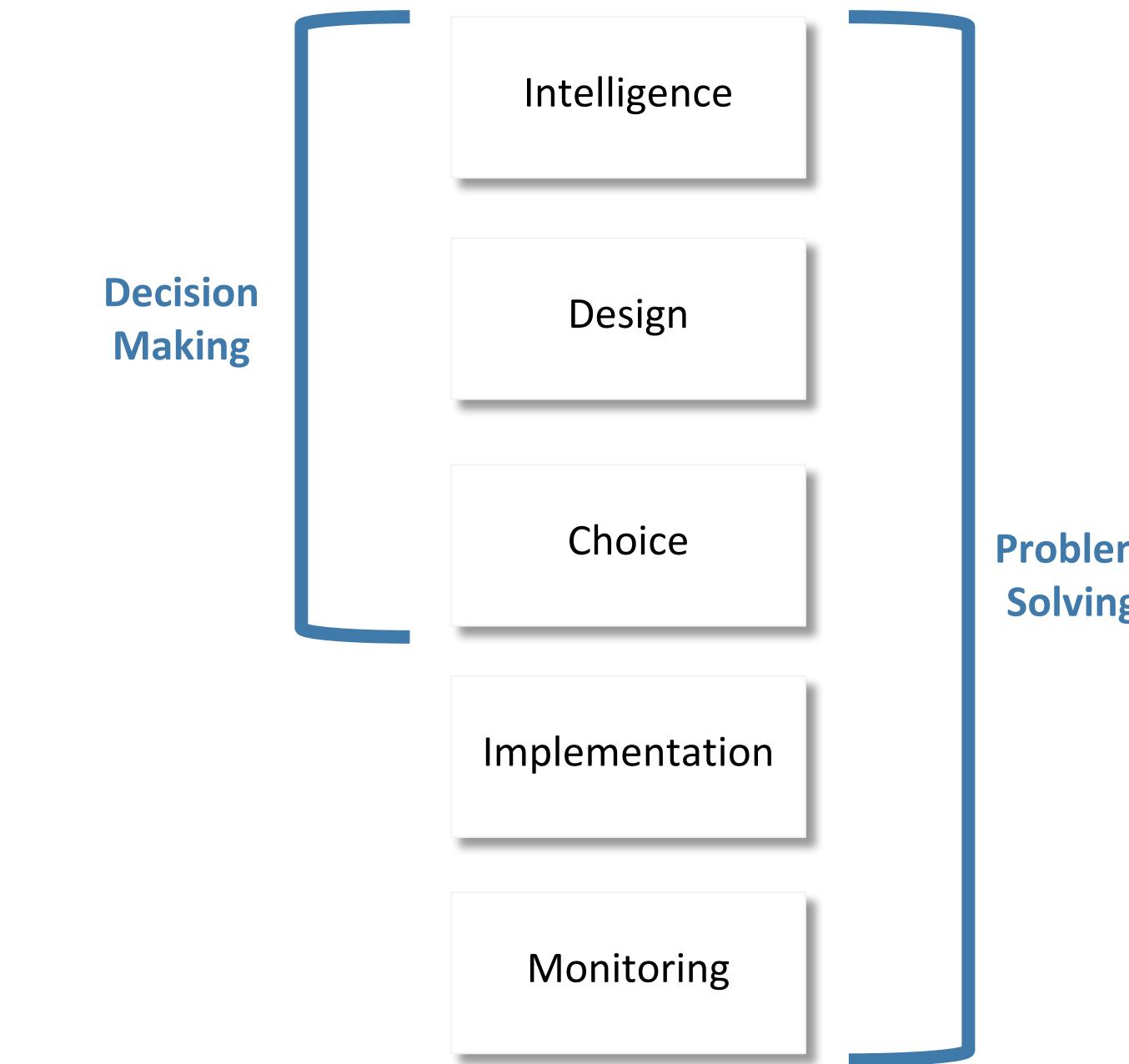
- Every organization needs effective decision making
- Strategic planning and overall goals of the organization set the course for decision making
- ISs assist with problem solving, helping people make better decisions and save lives



Decision Making and Problem Solving

- Decision-making phase:
 - Intelligence stage
 - Design stage
 - Choice stage

Decision Making and Problem Solving



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Decision Making and Problem Solving

- Problem solving
 - Includes and goes beyond decision making
 - Includes implementation and monitoring stage



Decision Making and Problem Solving

- Monitoring stage:
 - Decision makers evaluate the implementation
 - Were anticipated results achieved
 - Is there a need for further modification

Programmed versus Nonprogrammed Decisions

- Programmed decisions:
 - Made using a rule, procedure, or quantitative method
 - Easy to computerize using traditional information systems

Programmed versus Nonprogrammed Decisions

- Nonprogrammed decisions:
 - Decisions that deal with unusual or exceptional situations
 - Not easily quantifiable



Optimization, Satisficing, and Heuristic Approaches

- Optimization model:
 - Finds the best solution, usually the one that will best help the organization meet its goals



Optimization, Satisficing, and Heuristic Approaches

- Satisficing model:
 - Finds a good, but not necessarily the best, problem solution
- Heuristics:
 - Commonly accepted guidelines or procedures that usually find a good solution



Case Study

- Group Work
 - What is the company's business?
 - What are the issues encountered?
 - What was the solution implemented?
 - Was it a successful implementation? Explain.
 - Answer the questions at the end of the case study.