

ACS-1803

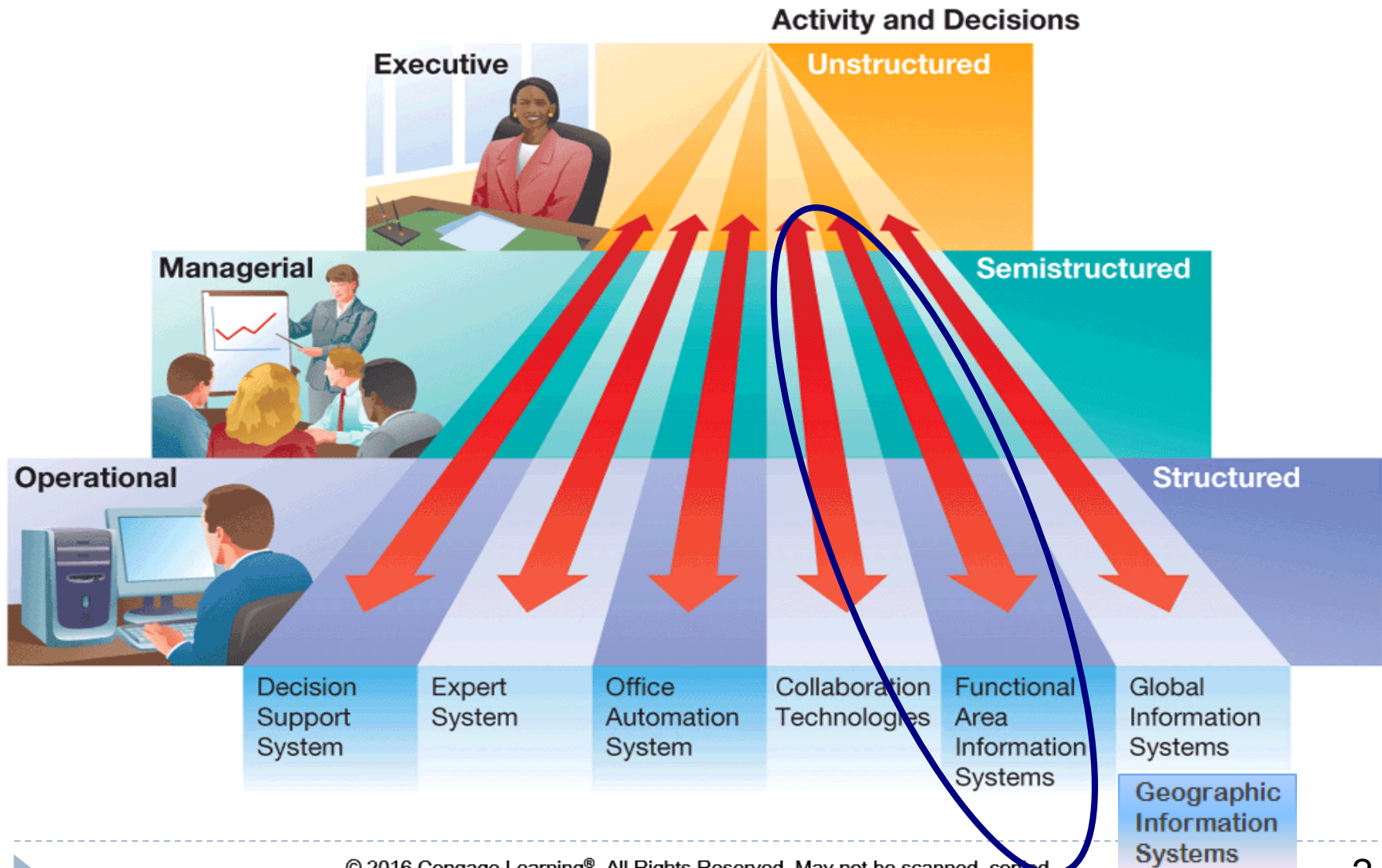
Introduction to Information Systems

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Functional Area Systems – Accounting Transaction Systems

Lecture Outline 4, Part I

Organizational Information Systems



Overview

- ▶ Overview of Functional Areas in the organization
- ▶ Functional Area: Accounting
- ▶ Accounting Information Systems
- ▶ The GL system – Accounting Basics
- ▶ Accounting Transactions and Terminology
- ▶ Accounting System implementation

Functions in an organization

- ▶ An organization is composed of one or more business functional areas
 - ▶ Business functions should all support the main Mission and Vision of an Organization
- ▶ Major functions of a business:
 - ▶ Finance / Accounting
 - ▶ Human Resources
 - ▶ Sales / Marketing
 - ▶ Production Operations
 - ▶ Manufacturing
 - ▶ Retail
 - ▶ Services

Functional Area Systems

- ▶ Traditionally, information systems were designed to support a specific functional area to increase its internal effectiveness and efficiency
- ▶ **Functional area** information **systems** provide information mainly to lower and middle level managers in the **functional areas**. They use the information to help them plan, organize, and control operations. The information is provided in a variety of reports

Functional Area Information Systems

- ▶ **Finance:** provide internal and external professional access to stock, investment and capital spending information.
- ▶ **Accounting:** similar to financial MIS, more focused on cash flow management, invoicing, payroll, receivables.
- ▶ **Marketing:** pricing, distribution, promotional, and information by customer and salesperson.
- ▶ **Operations (Manufacturing):** regular reports on production, yield, quality, inventory levels. These systems typically deal with manufacturing, sourcing, and supply chain management.
- ▶ **Human Resources Management:** employees, benefits, hiring, etc.

Functional Area Information Systems

System Description	Examples	Functional Area?
Used for managing, controlling, and auditing the financial resources of the organization	<ul style="list-style-type: none"> • Inventory Management System • Accounts payable • Expense Accounts • Cash Management • Payroll Processing 	
Used for Managing, controlling, and auditing the Human Resources of the organization	<ul style="list-style-type: none"> • Recruiting • Learning Management Systems • Benefits Management • Employee Termination • Workforce Planning 	
Used for Managing new product development, distribution, pricing, promotional effectiveness, sales forecasting...	<ul style="list-style-type: none"> • Market Research • New Product Development • Promotion and Advertising • Pricing and Sales Analysis • Product location 	
Used for managing, controlling, and auditing production and operations resources	<ul style="list-style-type: none"> • Inventory Management • Cost and quality tracking • Materials and resource planning • CMS • Resource Utilization 	

Accounting System Processes and Transactions

Functional Area Systems

Functional Area Systems: Accounting

- ▶ An Accounting Information System (AIS) monitors/ documents the operations of the aspects of business operations that have to with:
 - ▶ accountability for the assets/liabilities of the enterprise
 - ▶ the determination of the results of operations leading to the computation of comprehensive income
 - ▶ the financial reporting aspects of business operations.
- ▶ Evidence of financial transactions must be contained in one main accounting system that is capable of producing (at least) two main financial statements that are required for a business: **the balance sheet** and **the income statement**.

Accounting Information System (AIS)

- ▶ By Definition, accounting is a data collection, identification and storage process, as well as an information system
 - ▶ AIS collects, records, stores and processes accounting and other data to produce information
- ▶ AIS helps managers answer questions such as:
 - ▶ How much, and what kind of debt is outstanding?
 - ▶ Were sales higher this period than last?
 - ▶ What assets do we have?
 - ▶ What were our cash outflows and inflows?
 - ▶ Did we make a profit last period?

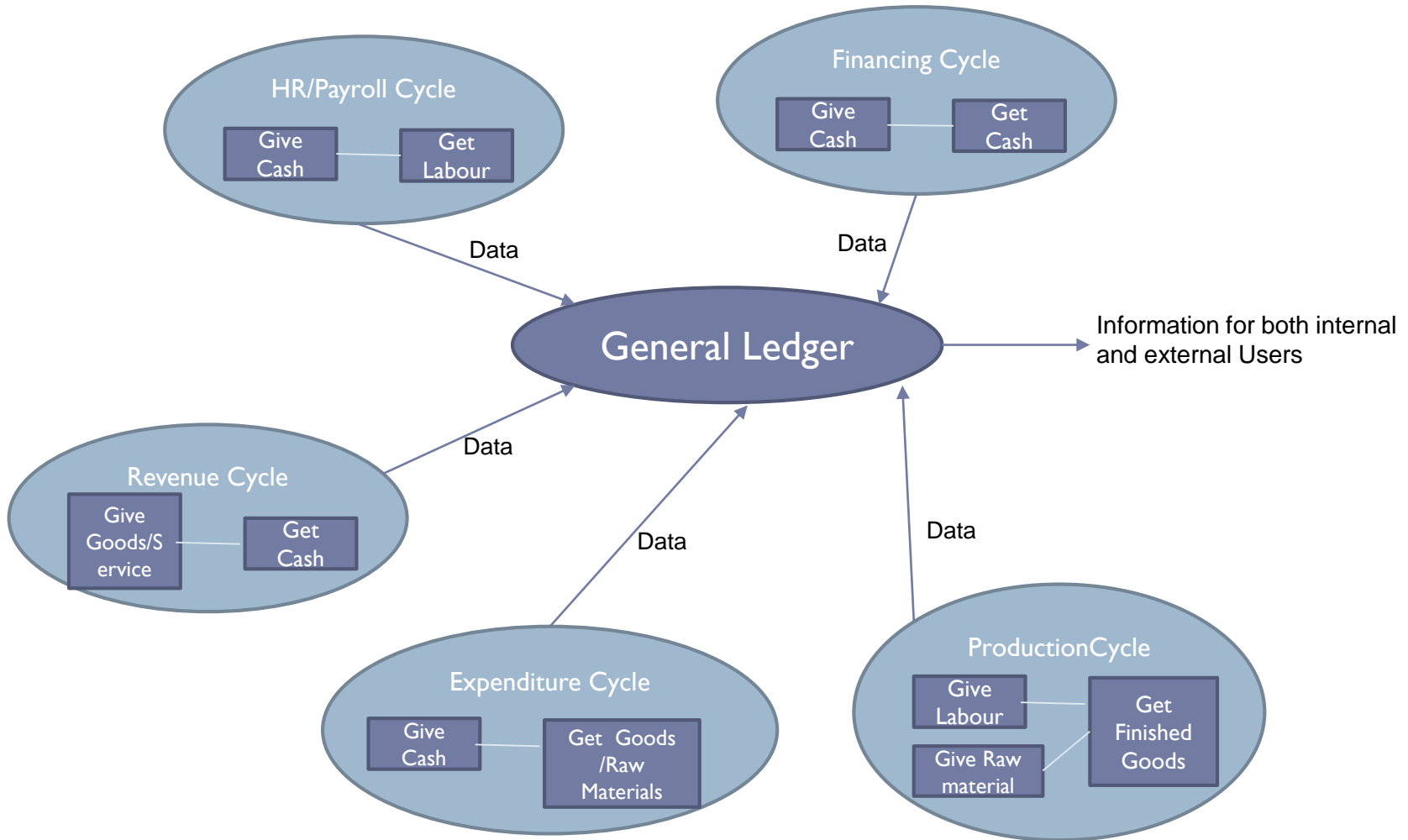
Business Processes – Transaction Cycles

- ▶ Many business activities are part of events involved in a give-get exchange.
- ▶ Organizations engage in many of those give-get exchanges e.g giving cash in exchange for something, or giving employees a paycheque in return of their labour
- ▶ To properly gather data needed to support processes and to create information for decision-making, businesses must identify their business processes as groups of those give-get exchanges – those are known as **Transaction Cycles**.
 - ▶ Then they can record data (TPS) as those business processes occur.
- ▶ These cycles process a few related transactions repeatedly

Transaction Processing Cycles

- ▶ Revenue Cycle: Goods and Services are sold for Cash of a future promise to receive cash
- ▶ Expenditure Cycle: Companies purchase raw materials to use in productions, or inventories for resale in exchange for cash or a future promise to pay cash
- ▶ Production or Conversion Cycle: Raw materials transformed into finished goods
- ▶ Human Resources/Payroll Cycle: Employees are hired, trained, compensated, evaluated, promoted, and terminated
- ▶ Financing Cycle: Companies sell shares to investors and borrow money, where investors are paid dividends and interest is paid on loans

AIS Subsystems



Accounting TPS: Transaction Cycles

- ▶ Every Cycle can be implemented on Information Systems with modules for each cycle.
 - ▶ Not every organization needs to implement every module
- ▶ Each Cycle can include many different processes and activities
- ▶ The last activity in each cycle, is to send appropriate information to other cycles
- ▶ In the end all the data ends up in the General Ledger and Reporting System, which is the information-processing operation involved in updating the general ledger and preparing reports for both managers and external parties

Revenue Cycle

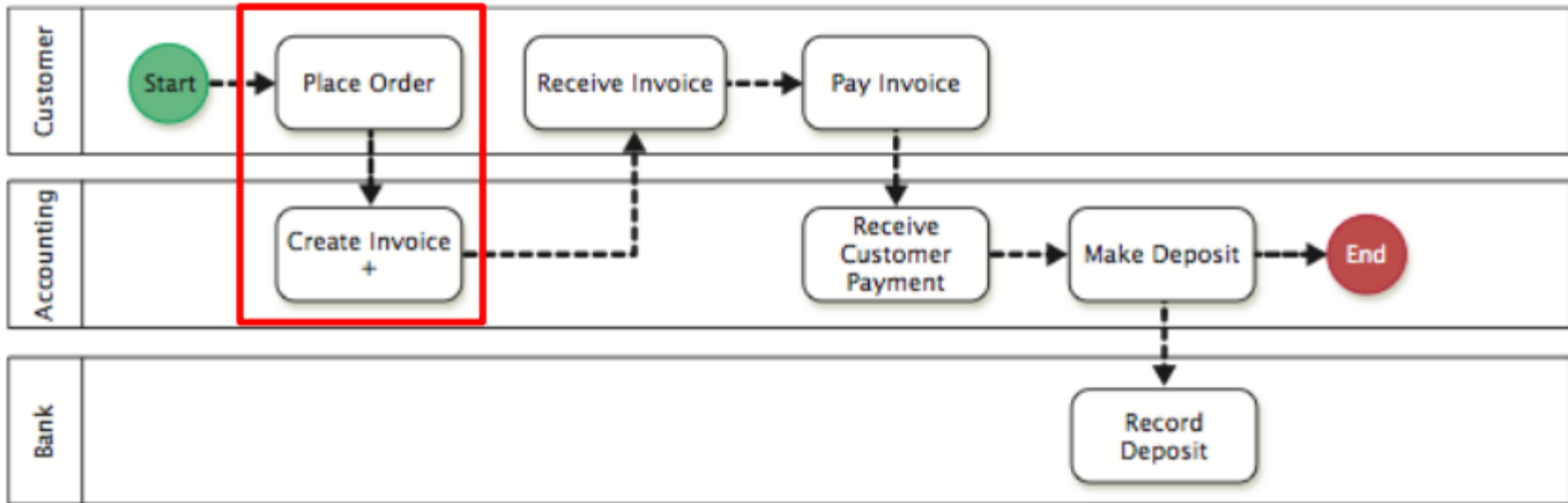
Source Document	Function
Sales order	Take customer order.
Delivery ticket	Deliver or ship order
Remittance advice	Receive cash.
Deposit slip	Deposit cash receipts.
Credit memo	Adjust customer accounts

Sales Cycle Activities

▶ Flow Chart:



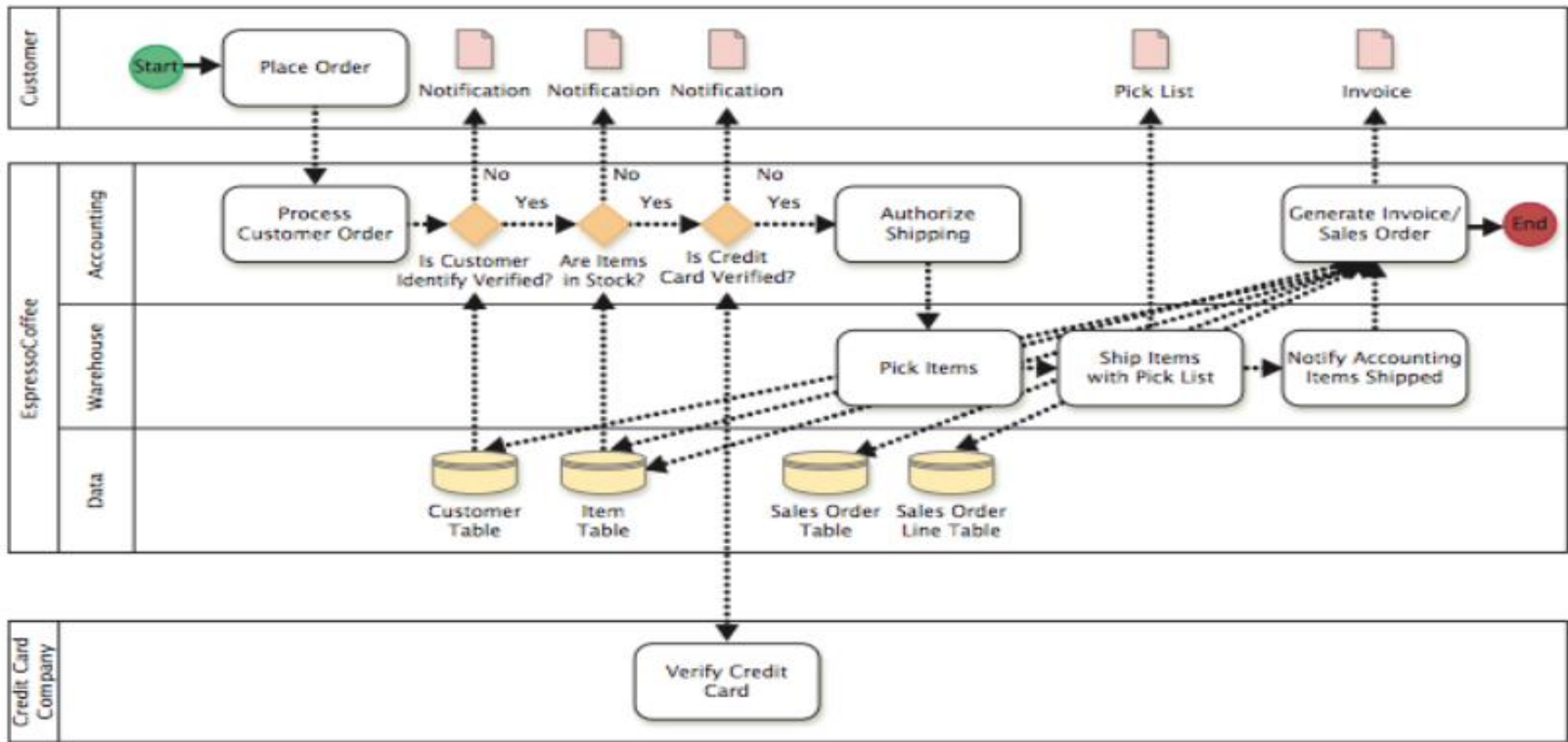
▶ Swimlane:



Understanding the Accounting Process Model for a Customer/Sales Transaction

- ▶ Let's examine the baseline accounting process for a customer/ sales transaction within a company:
 - ▶ Company: Online Retailer
 - ▶ Customer places and online order
 - ▶ Order is processed on the system
 - ▶ The order shipment is confirmed and sent to the warehouse – which fulfils the order, ships the product and notifies Accounting
 - ▶ Accounting generates the invoice and sends to the customer
- ▶ How do we design the accounting/sales system to manage this business process?

Customer Module: Process Order



Database Tables



Expenditure Cycle

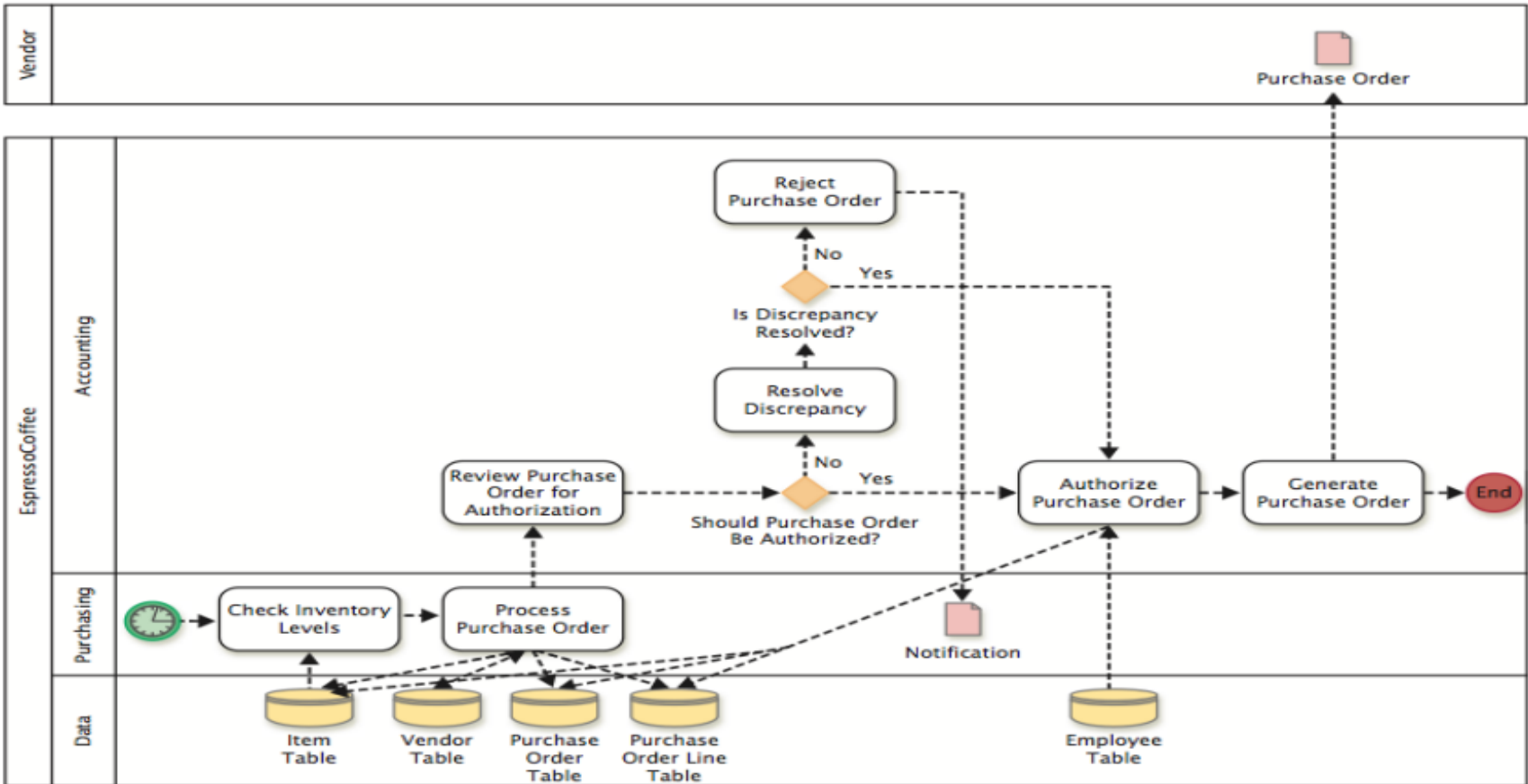
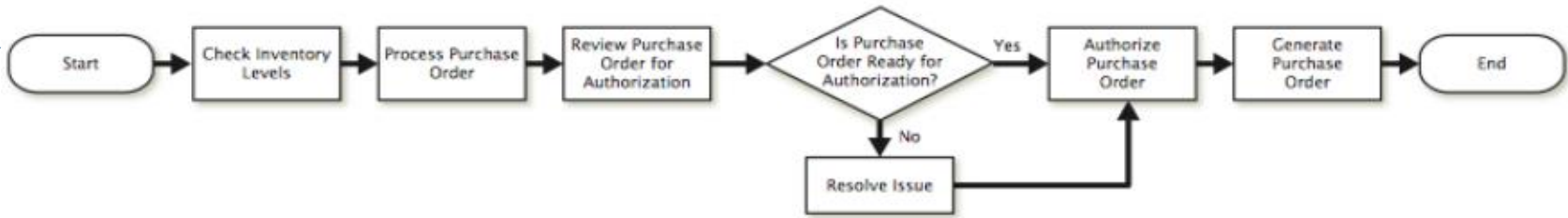
Source Document	Function
Purchase requisition	Request items.
Purchase order	Order items.
Receiving report	Receive items.
Check	Pay for items.

Accounting Process

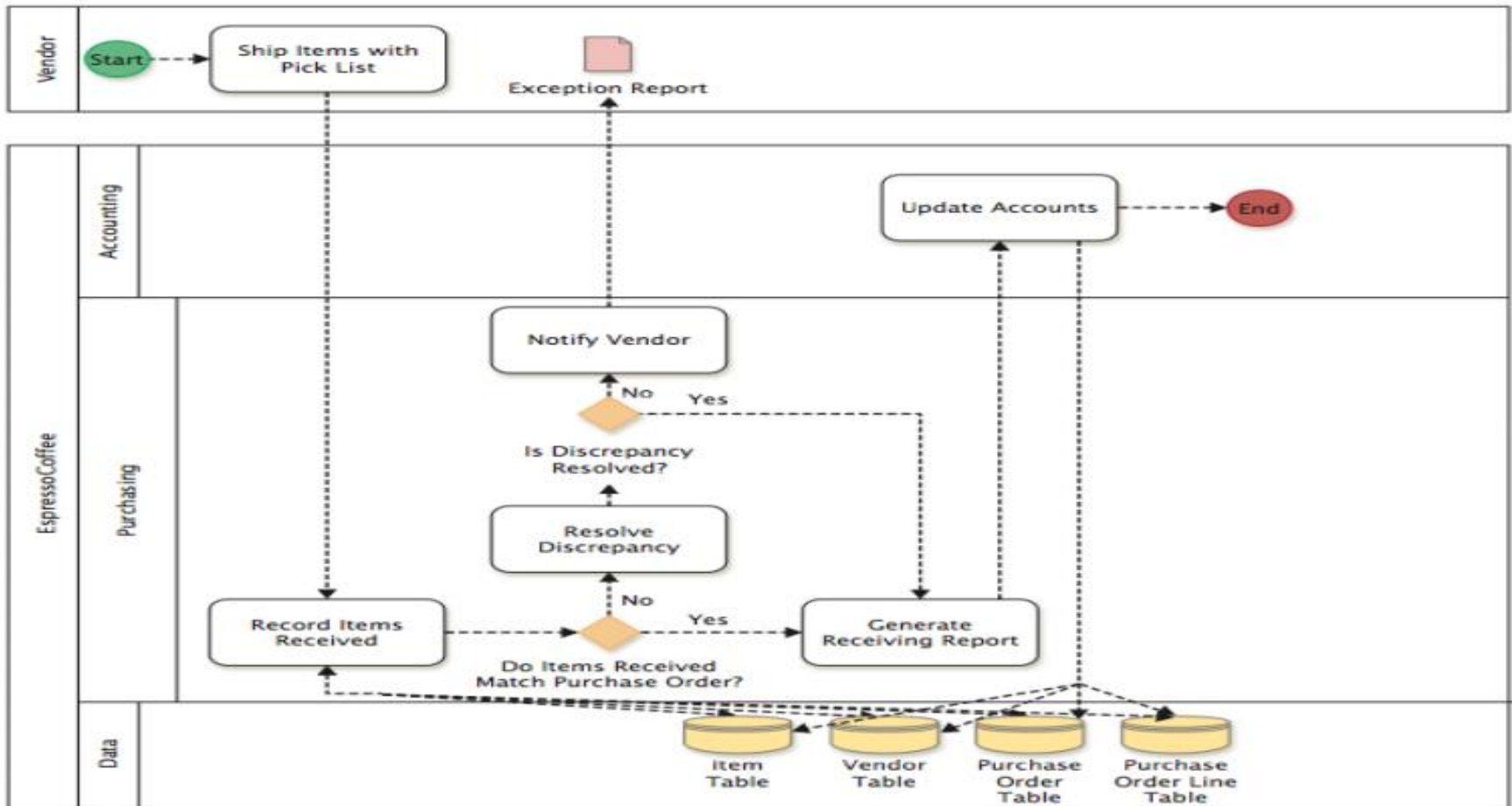
Model for a Purchase Order Transaction

- ▶ Examine the baseline accounting process for a purchase order transaction within a company:
- ▶ **Company: Online retailer**
 - ▶ Create a purchase order for the supplier
 - ▶ The order shipment is confirmed and sent to The warehouse – which receives the order into inventory
 - ▶ The warehouse generates a receiving report and updates Accounting
 - ▶ Accounting receives the bill from the supplier and matches to the receiving report – processes bill

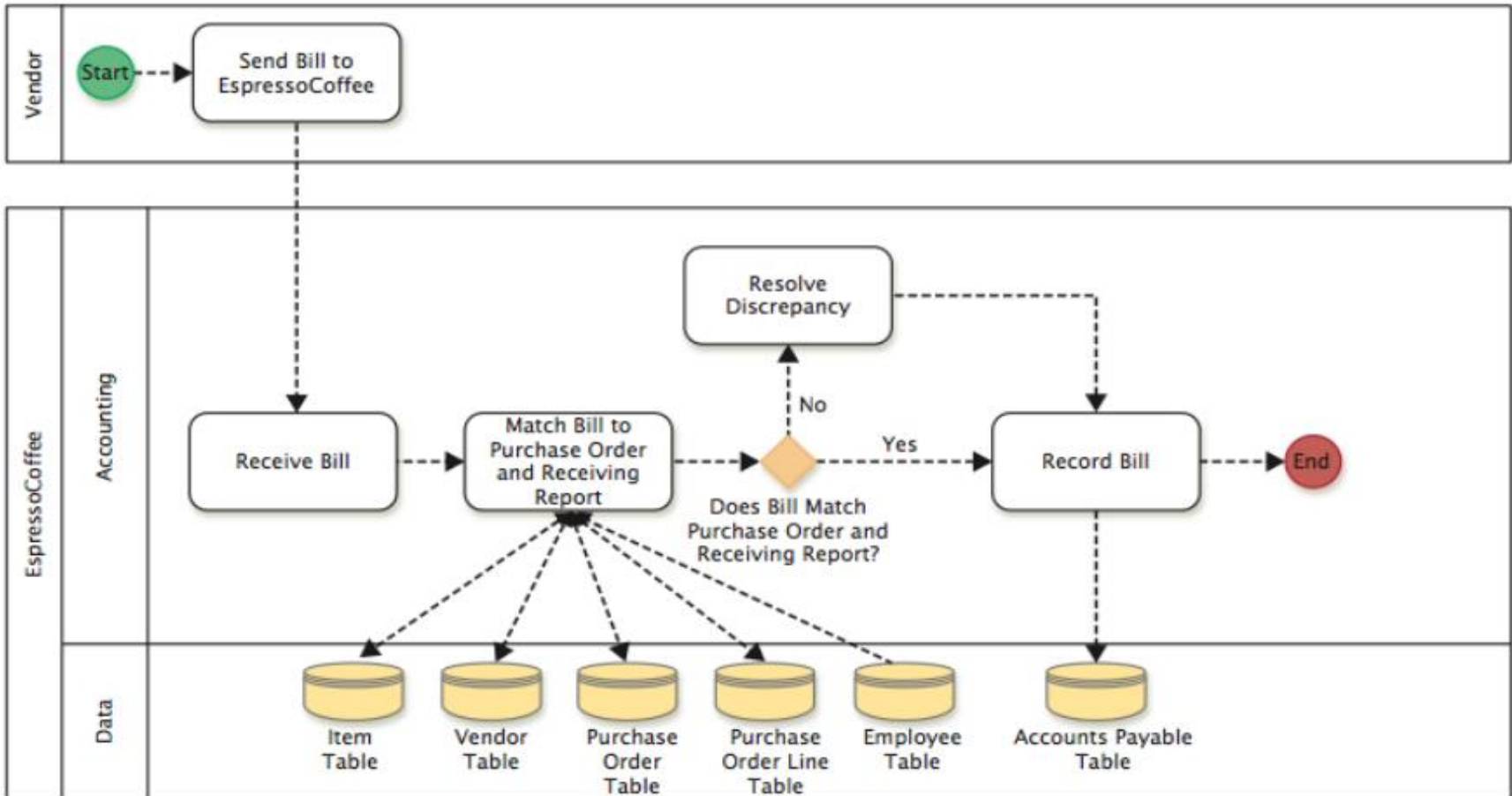
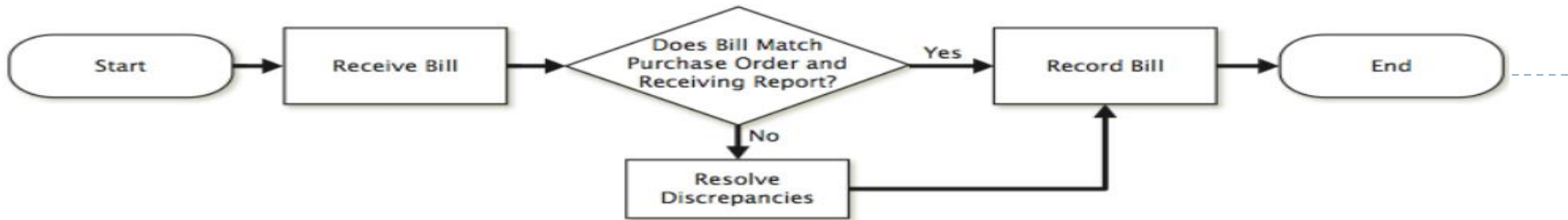
Purchase Order Process



Receive Items Process



Process Bill



Summary

- ▶ **Functional Area Systems**
- ▶ **Accounting Functional Area**
 - ▶ Definition
 - ▶ Transaction Processing Cycles
 - ▶ Modeling Transactions