

MANAGEMENT INFORMATION SYSTEMS 8/E

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Chapter 11

The Accounting Information System

Objectives

- Understand what data processing is.
- Understand the tasks that an accounting information system (AIS) performs.
- Know the characteristics of an AIS.
- Be familiar with an integrated set of AIS subsystems that are found in many organizations.
- Have a good appreciation for how data flow diagramming is used to document a business system.
- Understand the role of the AIS in problem solving.

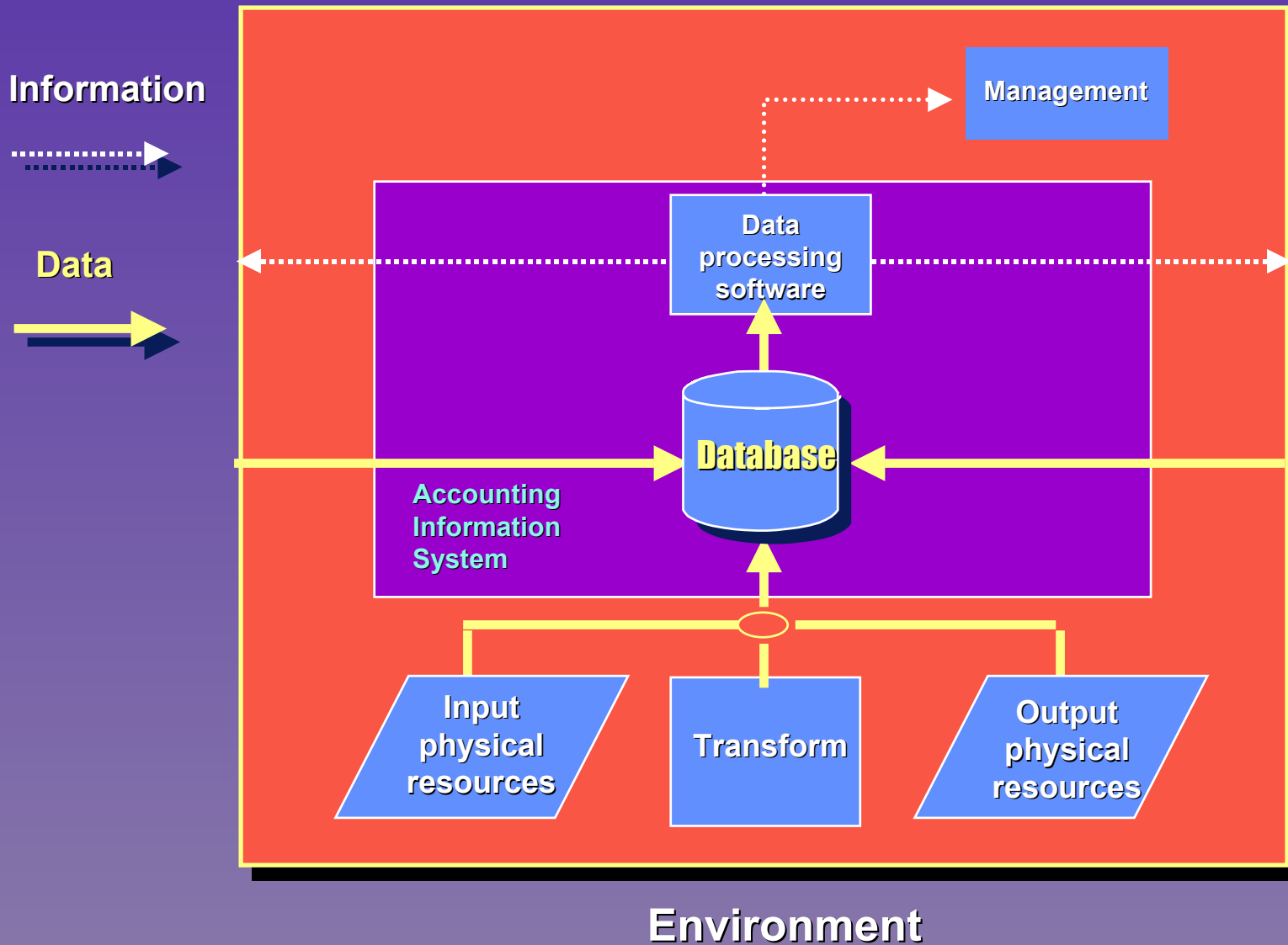
What is Data Processing?

- Manipulation or transformation of symbols for the purpose of increasing their usefulness.
- Data processing (DP) and transaction processing (TP) are often used interchangeably.
- Applied to business data

Accounting Information Systems (AIS)

- Gathers data describing a firm's activity
- Transforms data into information
- Makes information available to users inside and outside the firm

A Model of an Accounting Information System Environment



Data Processing Tasks

1. Gather data

- Each transaction is documented
- What happened?
- When did it happen?
- How much (volume, value)?
- Transactions describe

Data Processing Tasks (cont.)

2. Manipulate data

- Classify (use codes)
- Sort
- Calculate
- Summarize

Data Processing Tasks (cont.)

3. Store data

- Describes each transaction
- Represents most of the database

Data Processing Tasks (cont.)

4. Document preparation

- Triggers
 - » By an action
 - » By a time schedule
- Hardcopy or on-screen

Characteristics of the AIS

- Performs necessary tasks
- Standard procedures
- Detailed data
- Historical focus
- Provides minimal problem-solving information

Sample AIS

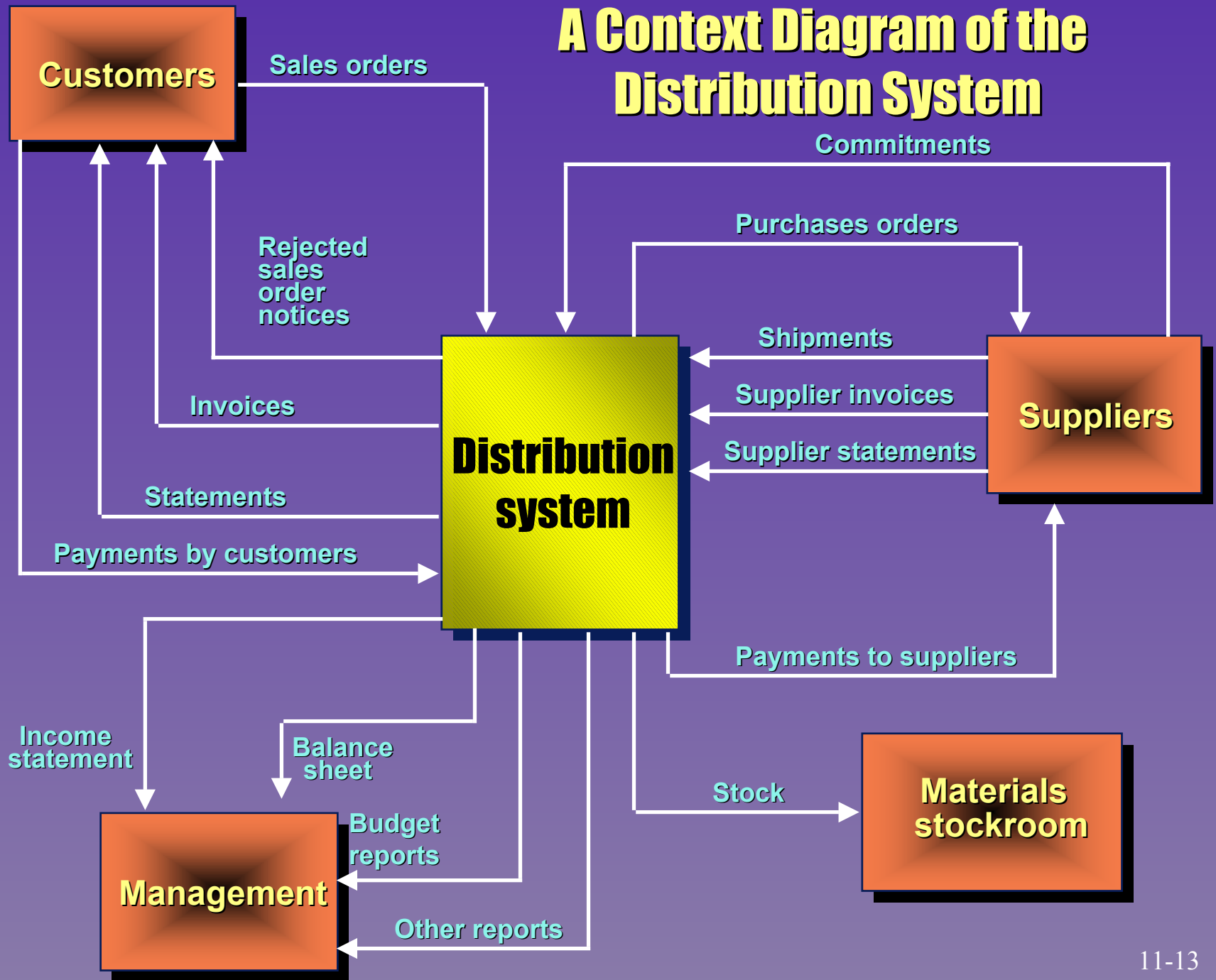
The Distribution System

- Users
 - Manufacturers
 - Wholesalers
 - Retailers
- General in nature
- Used in many different types of firms
 - Retailers
 - Manufacturing
 - Service

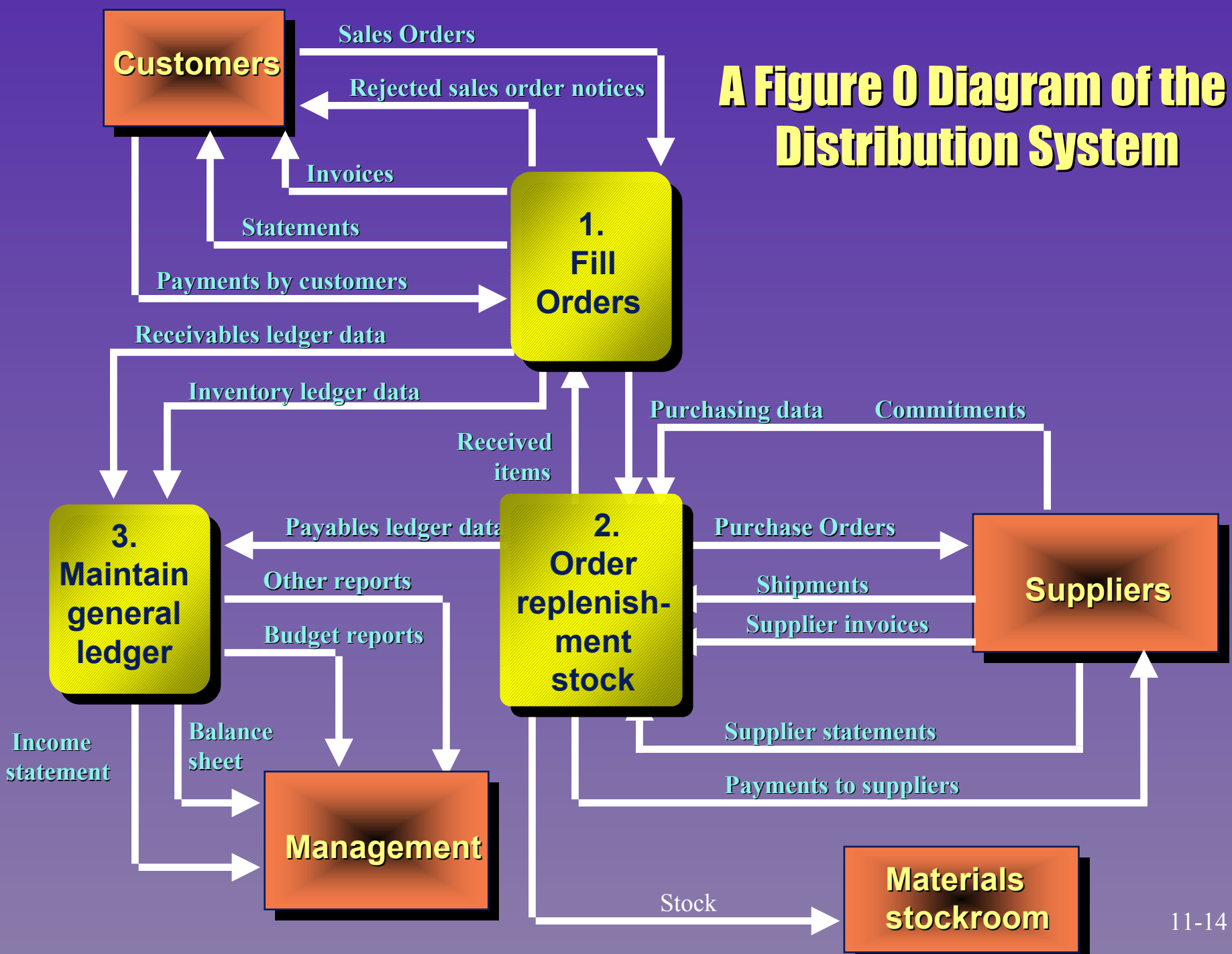
DFDs

- Data flow diagram
 - Document a system in a hierarchical manner
 - Data flows, processes, environmental elements
- Context level is overall system within environment
- Leveled and Balanced DFDs

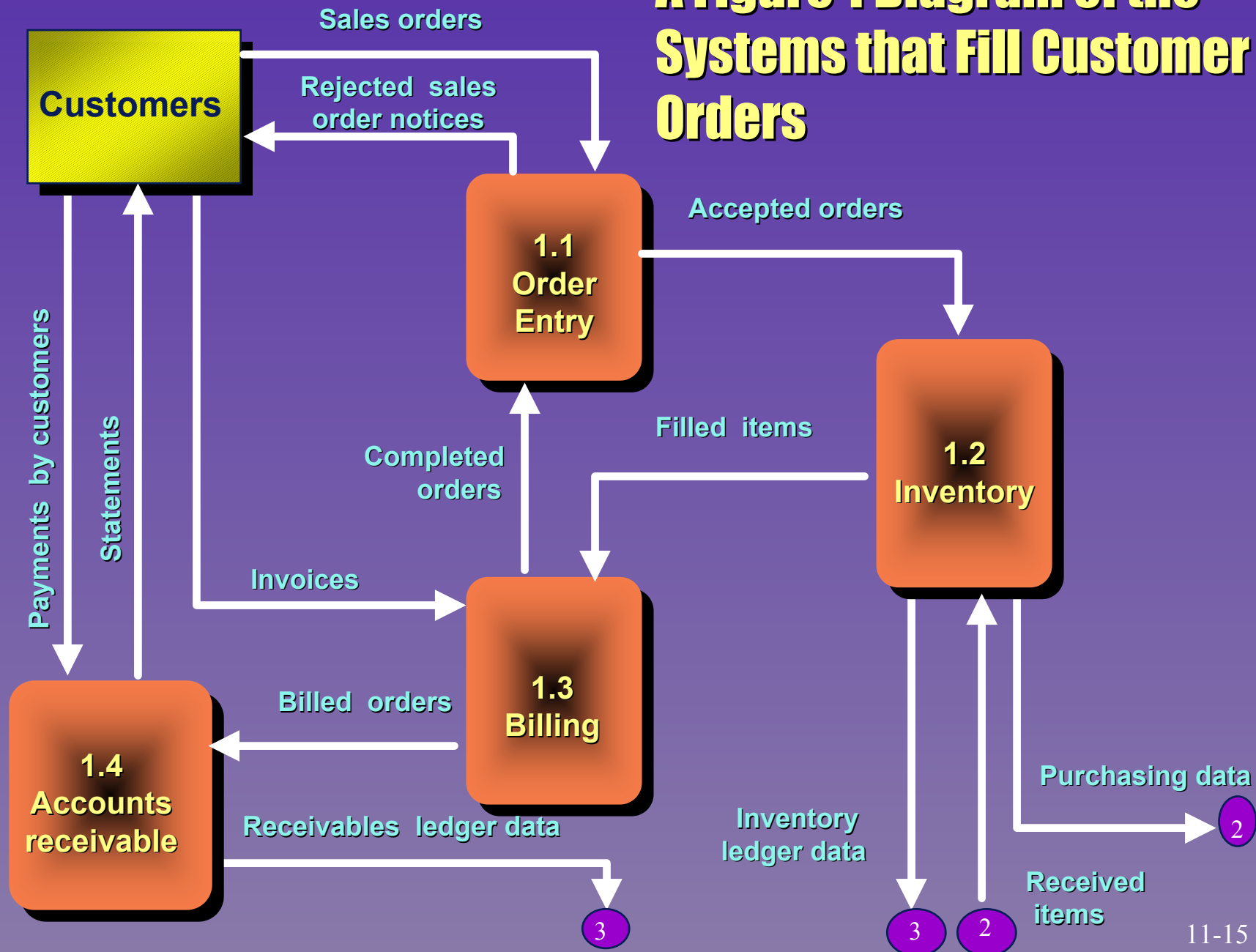
A Context Diagram of the Distribution System



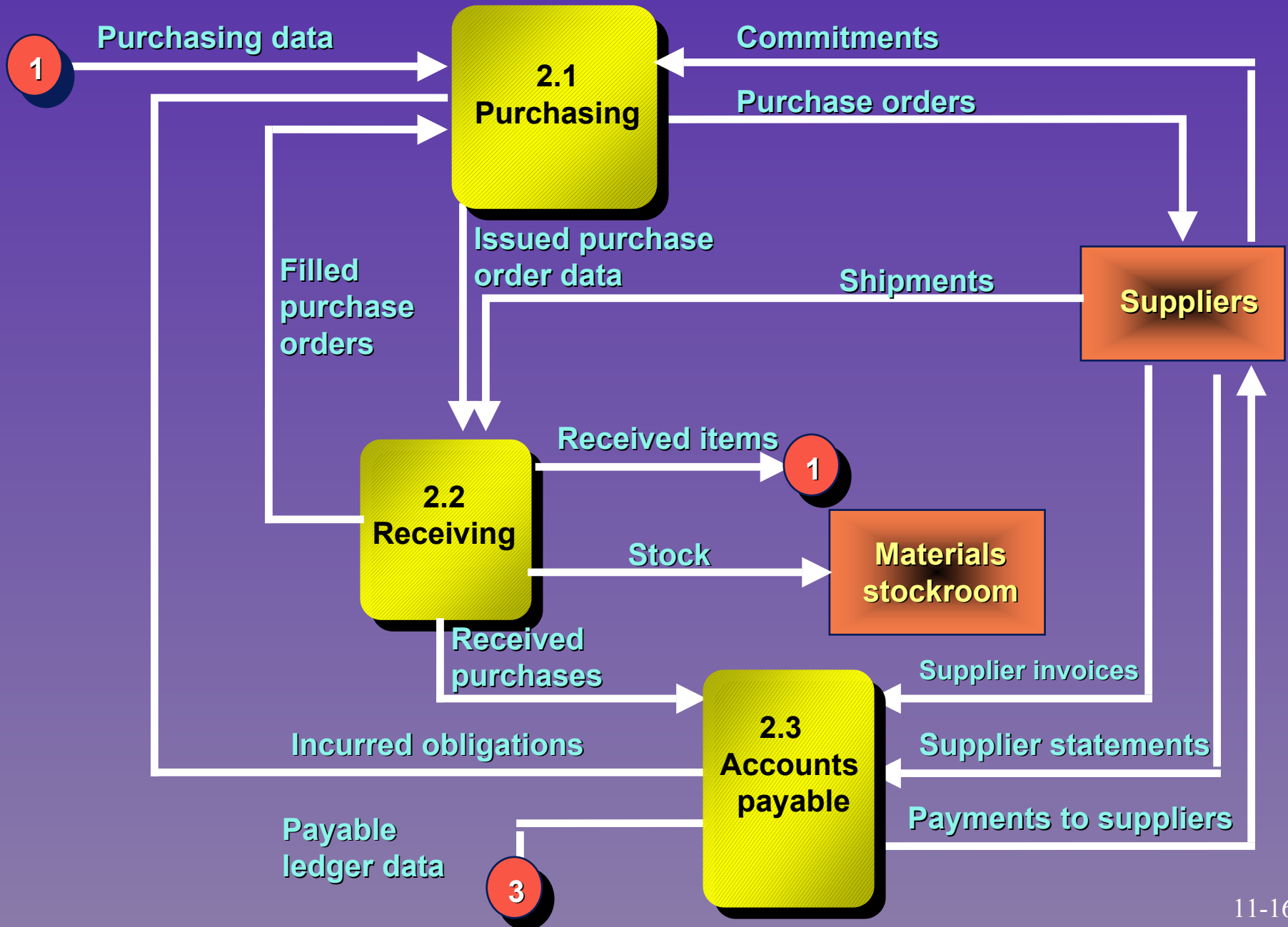
A Figure 0 Diagram of the Distribution System



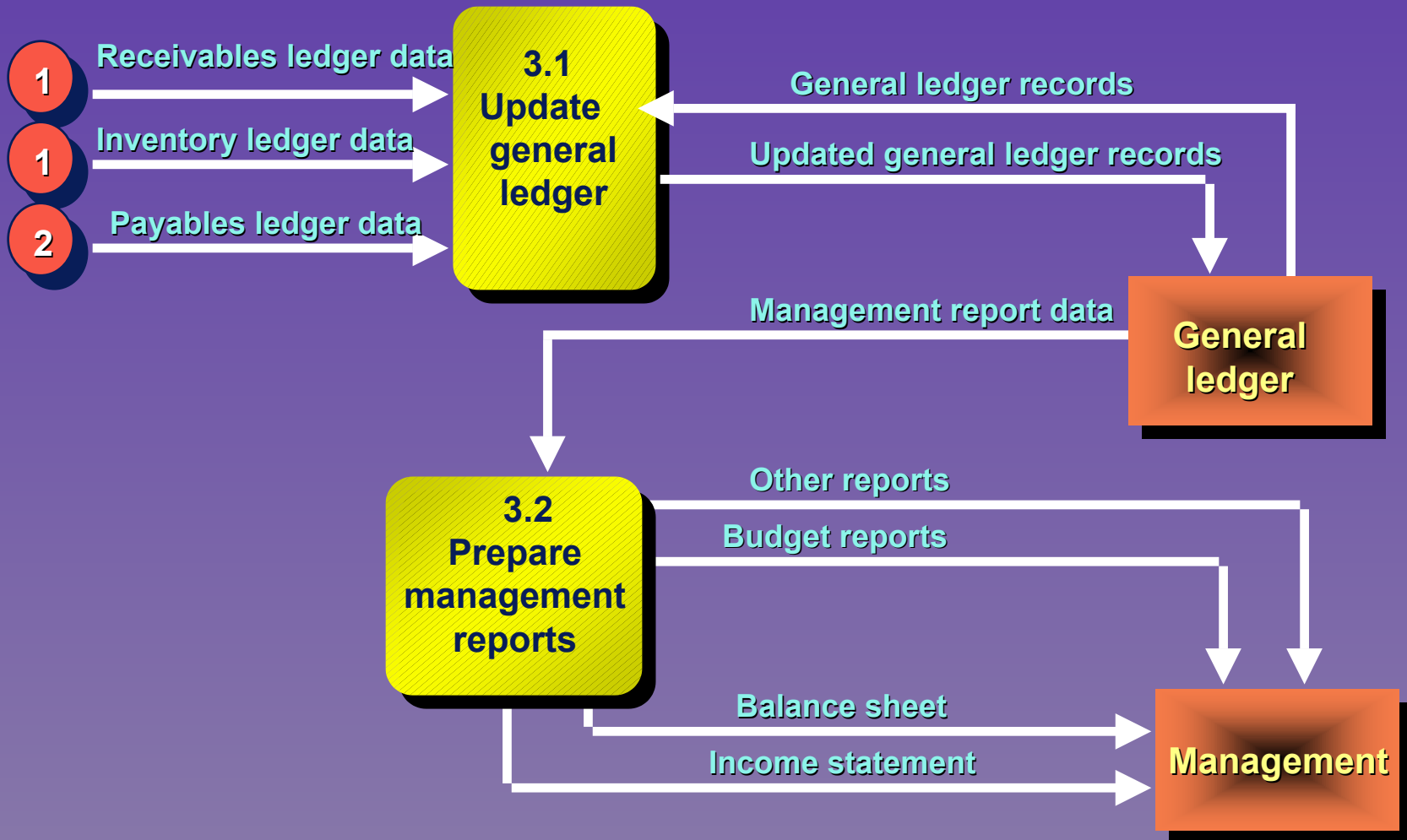
A Figure 1 Diagram of the Systems that Fill Customer Orders



A Figure 2 Diagram of the Systems that Order Replenishment Stock



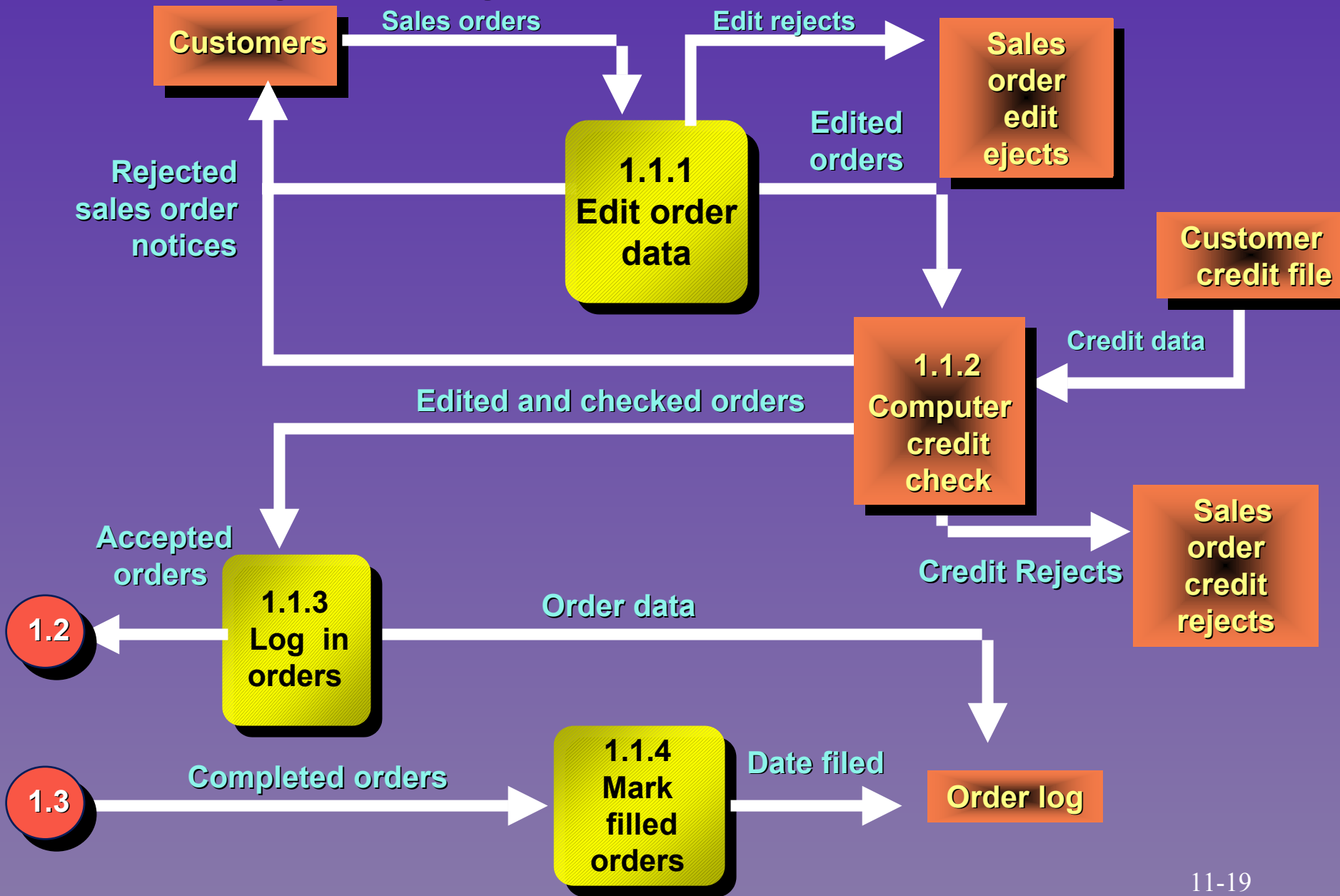
A Figure 3 Diagram of the Systems That Perform General Ledger Processes



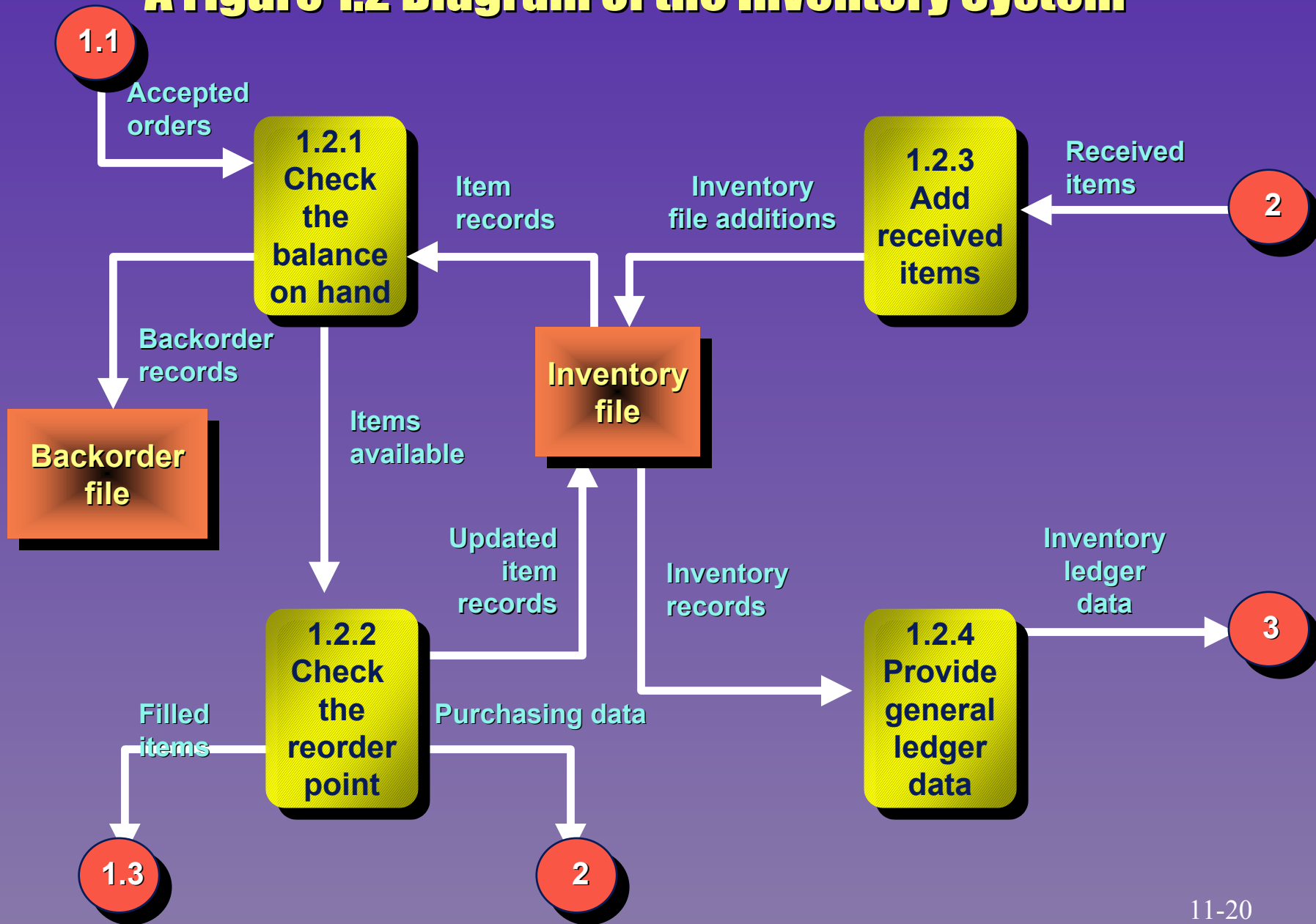
Fill Customer Orders

- Order entry
 - Sales order form
- Inventory
 - Process sales
 - Process receipts
 - Feed general ledger

A Figure 1.1 Diagram of the Order Entry System



A Figure 1.2 Diagram of the Inventory System



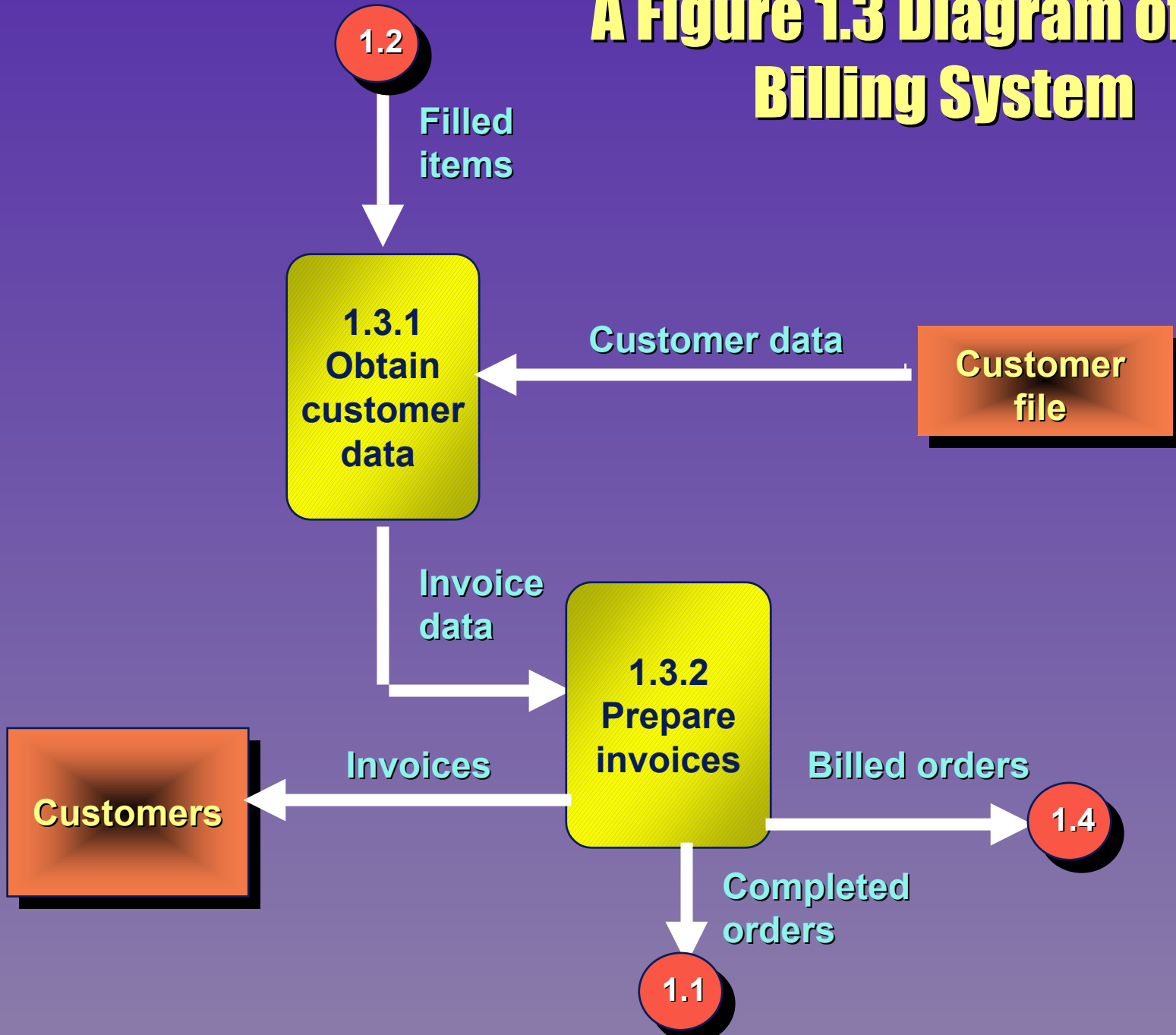
Billing

■ Invoice

– Note:

- » 1. Customer data
- » 2. Item data

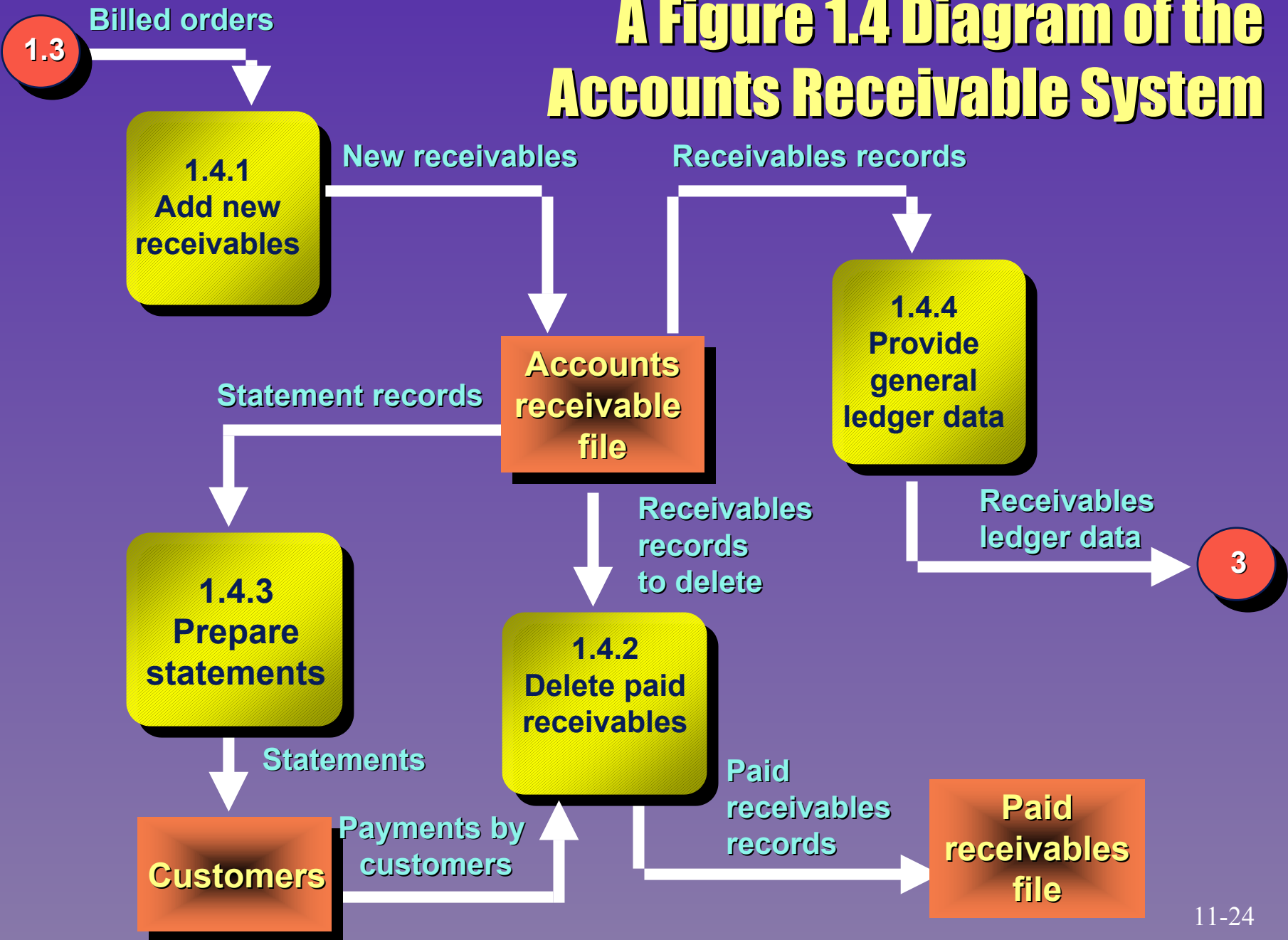
A Figure 1.3 Diagram of the Billing System



Accounts Receivable

- Four separate triggers
 - Today's sales
 - Today's payments
 - Time to send statements
 - Need to provide general ledger data

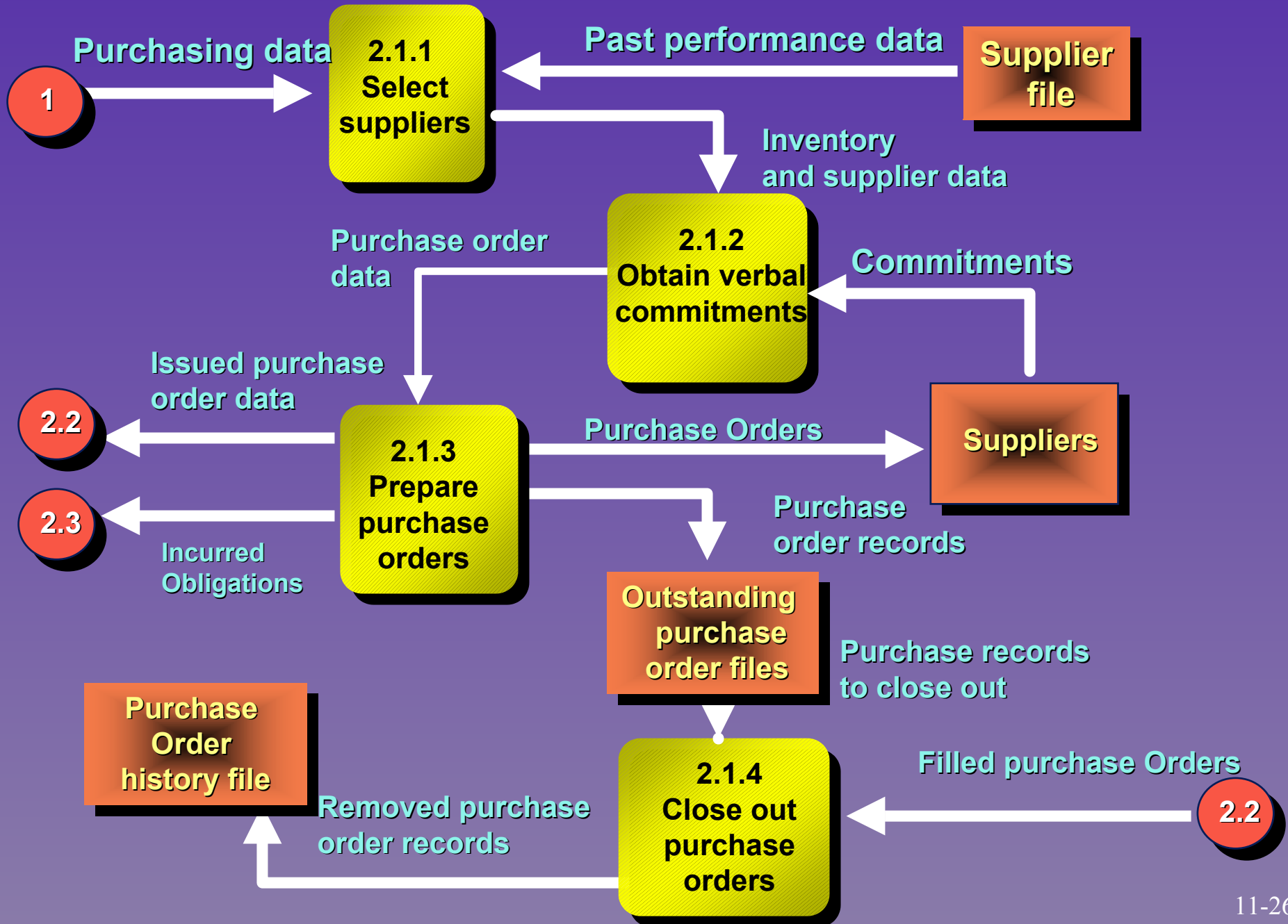
A Figure 1.4 Diagram of the Accounts Receivable System



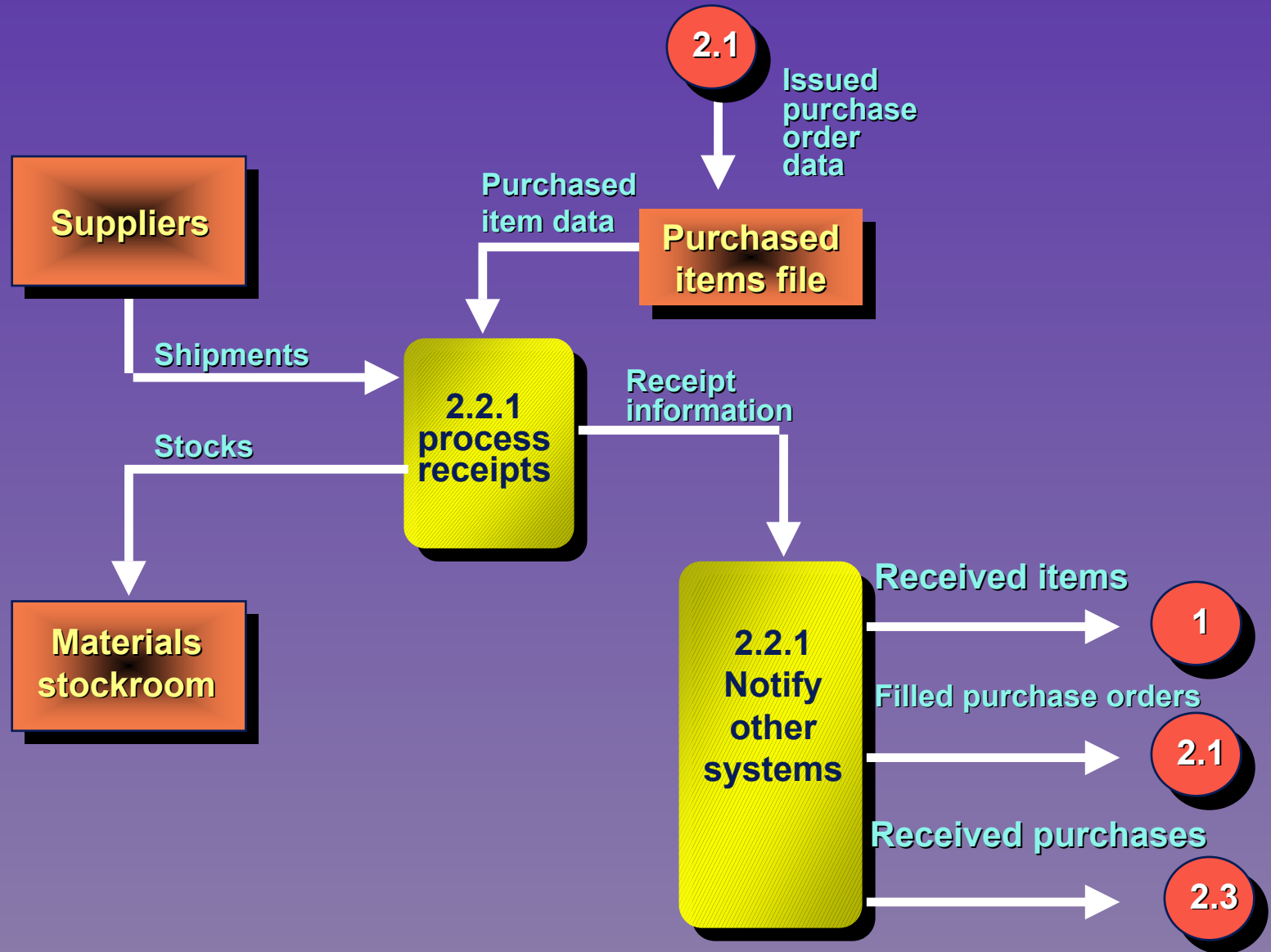
Order Replenishment Stock

- Purchasing
 - Emerging technologies
 - » EDI
 - » ISDN
 - Purchase order

A Figure 2.1 Diagram of the Purchasing System



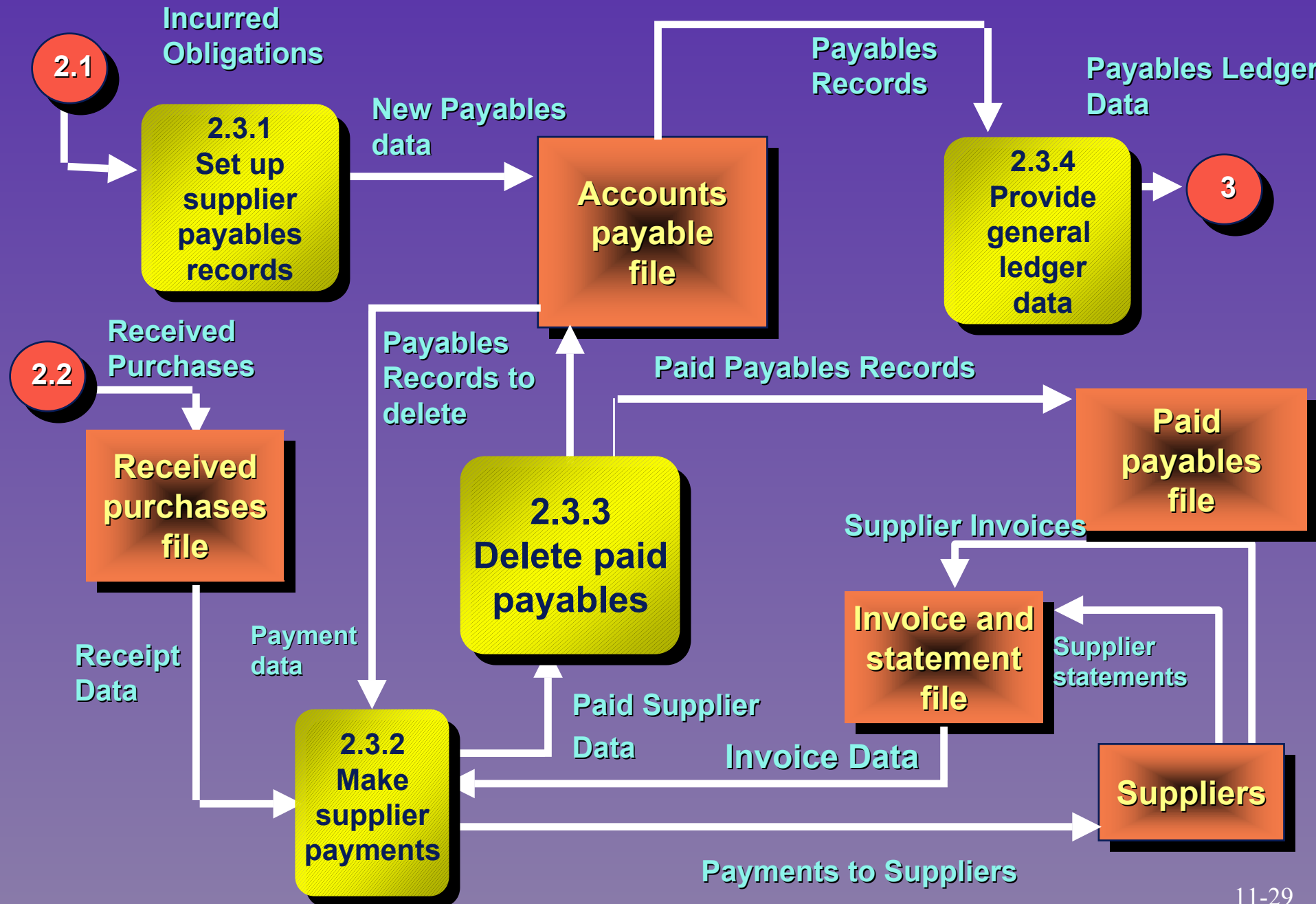
A Figure 2.2 Diagram of the Receiving System



Accounts Payable

- The firm pays suppliers when:
 1. Stock was ordered (P.O. file copy)
 2. Stock was received (Received purchases file)
 3. Invoice

A Figure 2.3 Diagram of the Accounts Payable System



AIS is the Foundation System

- The AIS must be implemented first

- MIS

- DSS

- ES

Depends on a
well-designed AIS

Summary

- AIS maintains financial records of the firm
- Data processing components
 - Data gathering
 - Data manipulation
 - Data storage
 - Document preparation
- AIS Subsystems
- AIS contributes to problem solving

Case Study

1. How is output 'triggered' to be produced by an accounting information system?
 - A) by an action
 - B) by a time schedule
 - C) by either A) or B)

2. Accounting information systems
 - A) adhere to relatively standardized procedures
 - B) have a primarily historical perspective
 - C) both A) and B)