



Generic Business Process (I)

Expenditure Cycle & Revenue Cycle

Topik Bahasan

- Expenditure Cycle
- Revenue Cycle

Sumber Materi

- Romney / Steinbart, Accounting Information Systems, 9th Edition ch. 11-12, Prentice Hall



Revenue Cycle

Sales and Cash Collections

Learning Objectives

1. Describe the major business activities and related data processing operations performed in the revenue cycle.
2. Discuss the key decisions that need to be made in the revenue cycle and identify the information needed to make those decisions.
3. Document your understanding of the revenue cycle.
4. Identify major threats in the revenue cycle and evaluate the adequacy of various control procedures for dealing with those threats.
5. Read and understand a data model (REA diagram) of the revenue cycle.

Learning Objective 1

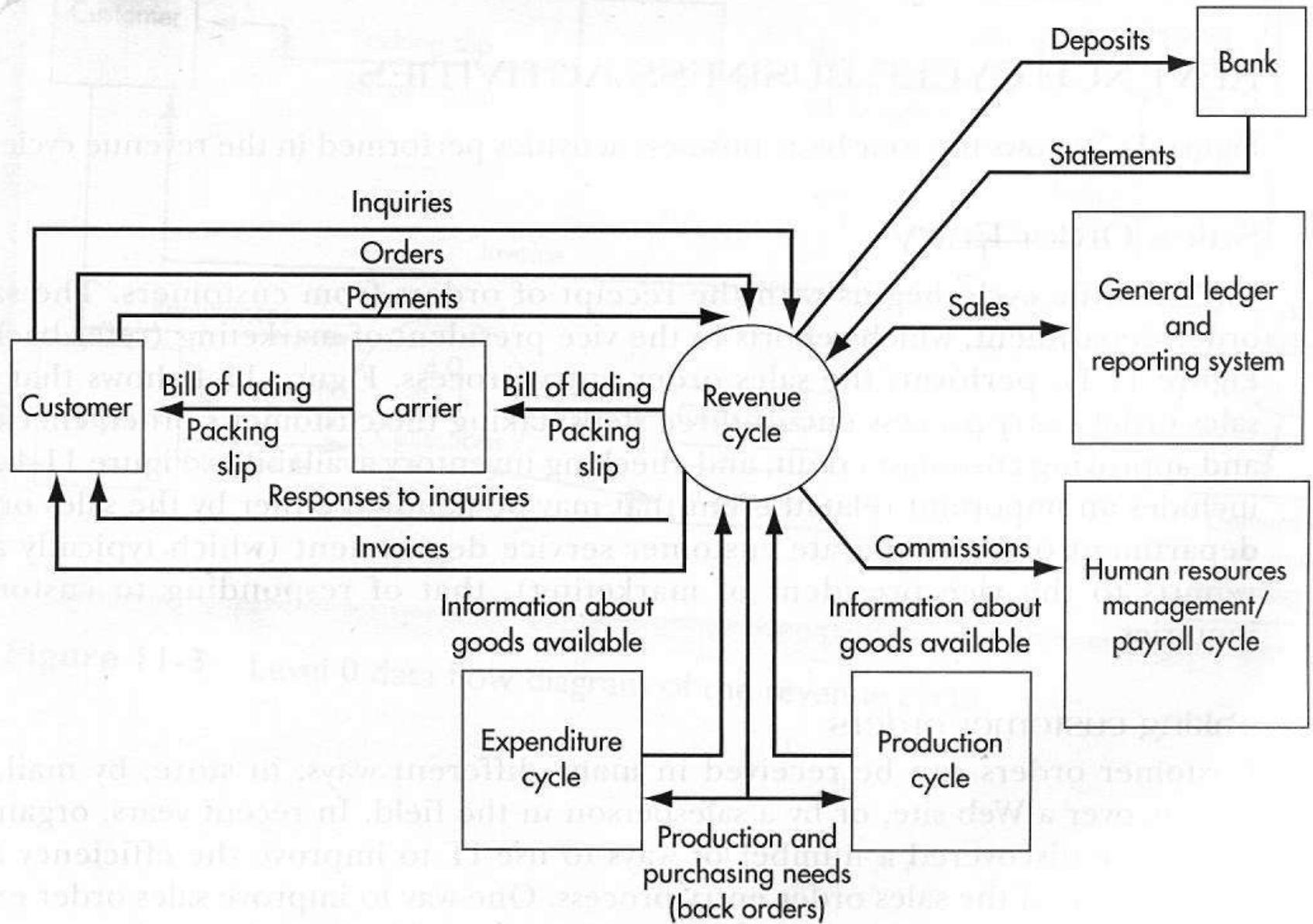
- Describe the major business activities and related data processing operations performed in the revenue cycle.

Revenue Cycle

Business Activities

- The *first function* of the AIS is to support the performance of the organization's business activities.
- The revenue cycle is a recurring set of business and related information processing operations associated with providing goods and services to customers and collecting cash payment for those sales.

Figure 11-2 The context diagram of the revenue cycle



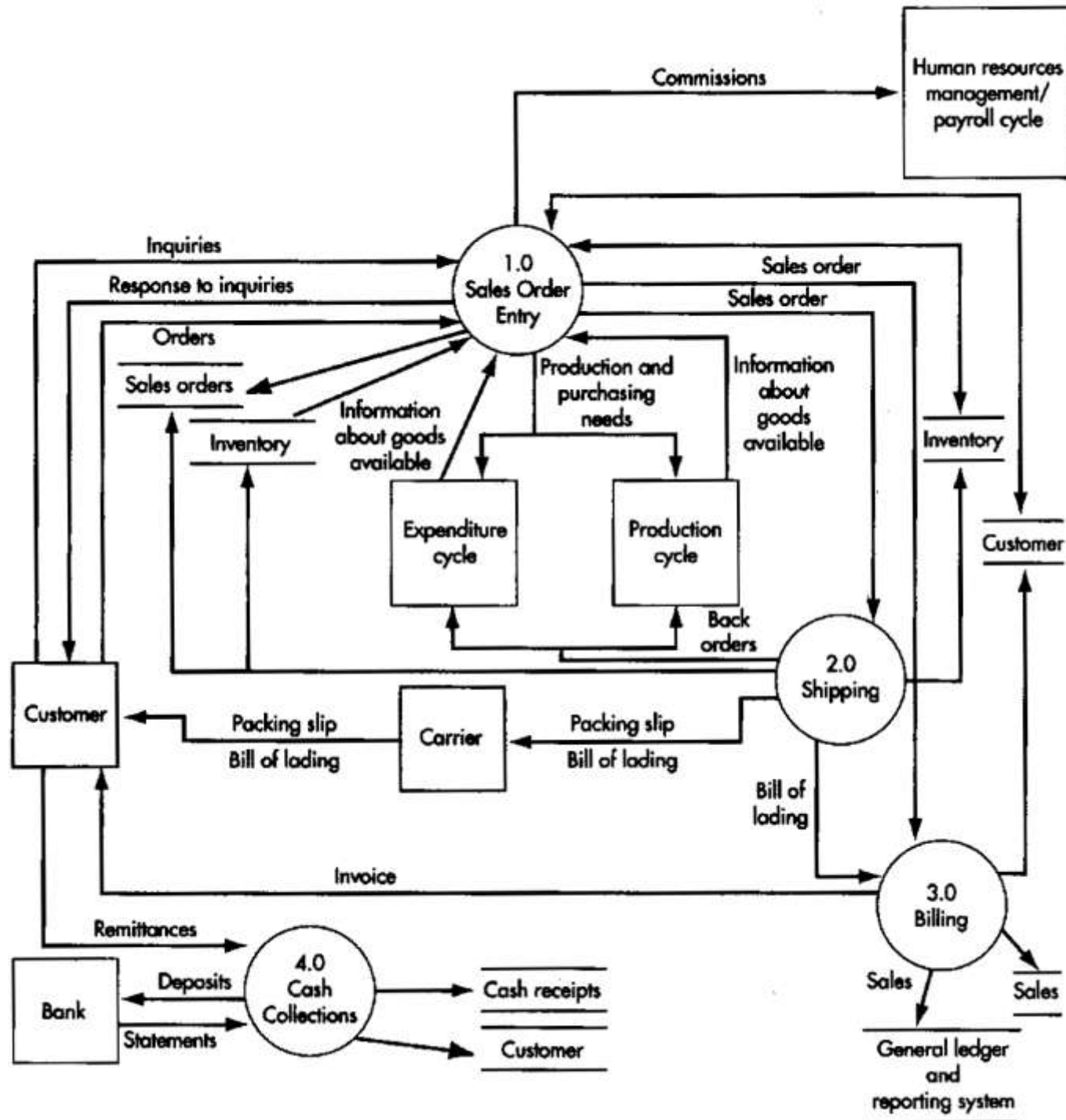
Revenue Cycle

Business Activities

- What are the four basic revenue cycle business activities?
 - 1 Sales order entry
 - 2 Shipping
 - 3 Billing and accounts receivable
 - 4 Cash collections

Learning Objective 2

- Discuss the key decisions that need to be made in the revenue cycle and identify the information needed to make those decisions.



Sales Order Entry (Activity I)

- This step includes all the activities involved in soliciting and processing customer orders.
- *Key decisions and information needs:*
 - decisions concerning credit policies, including the approval of credit
 - information about inventory availability and customer credit status from the inventory control and accounting functions, respectively

Sales Order Entry (Activity 1)

- The sales order entry function involves three main activities:
 - 1 Responding to customer inquiries
 - 2 Checking and approving customer credit
 - 3 Checking inventory available

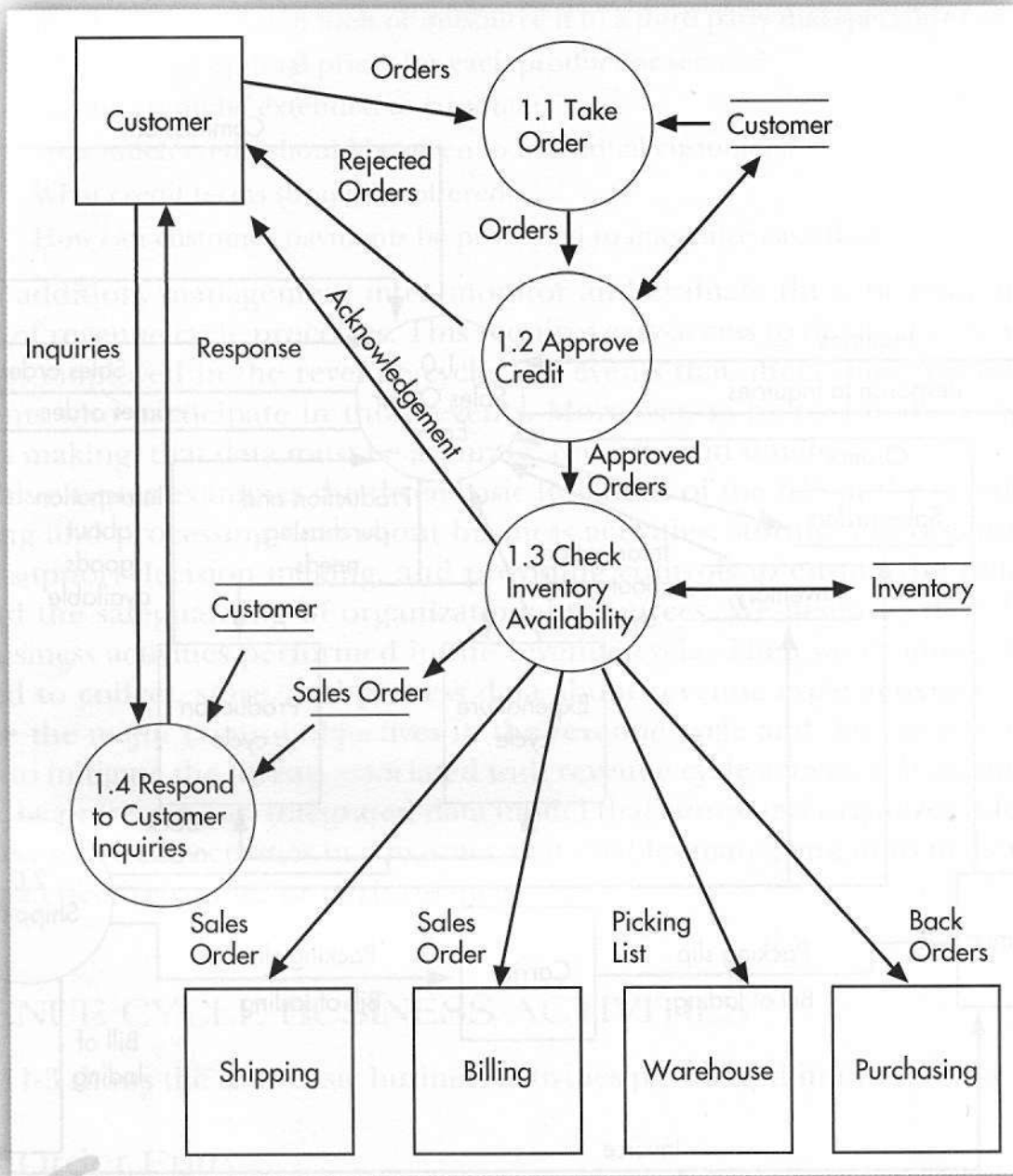


Figure 11-4 Level I data flow diagram: sales order entry

Information Needs and Procedures

- The AIS should provide the operational information needed to perform the following functions:
- Respond to customer inquiries about account balances and order status.
- Decide whether to extend credit to a customer.

Sales Order Entry (Activity 1)

- Regardless of how customer orders are initially received, the following edit checks are necessary:
 - Validity checks
 - A Completeness test
 - Reasonableness tests
 - Credit approval
 - General authorization
 - Credit limit
 - Specific authorization
 - Limit checks

Sales Order Entry (Activity 1)

- Next, the system checks whether the inventory is sufficient to fill accepted orders.
- Internally generated documents produced by sales order entry:
 - sales order
 - packing slip
 - picking ticket

12345

SALES ORDER
Alpha Omega Electronics
 2431 Bradford Lane
 St. Louis, MO 63105-2311

Sold To: Hardware City
 35 Appliance Way
 Phoenix, AZ 85201

Ship To: Hardware City
 6742 Mesa Dr.
 Mesa, AZ 85284

Date: March 17, 2003	Customer Purchase Order No. 7291	Salesperson JKL	Shipping Instructions: Rush
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Quantity Ordered	Quantity Shipped	Quantity Back Ordered	Item Number	Description	Unit Price	Amount
100	100		2741	Calculator	17.95	1795.00
50	50		3315	Pager	49.95	2497.50

Thank You!

Figure 11-5 Sample AOE sales order

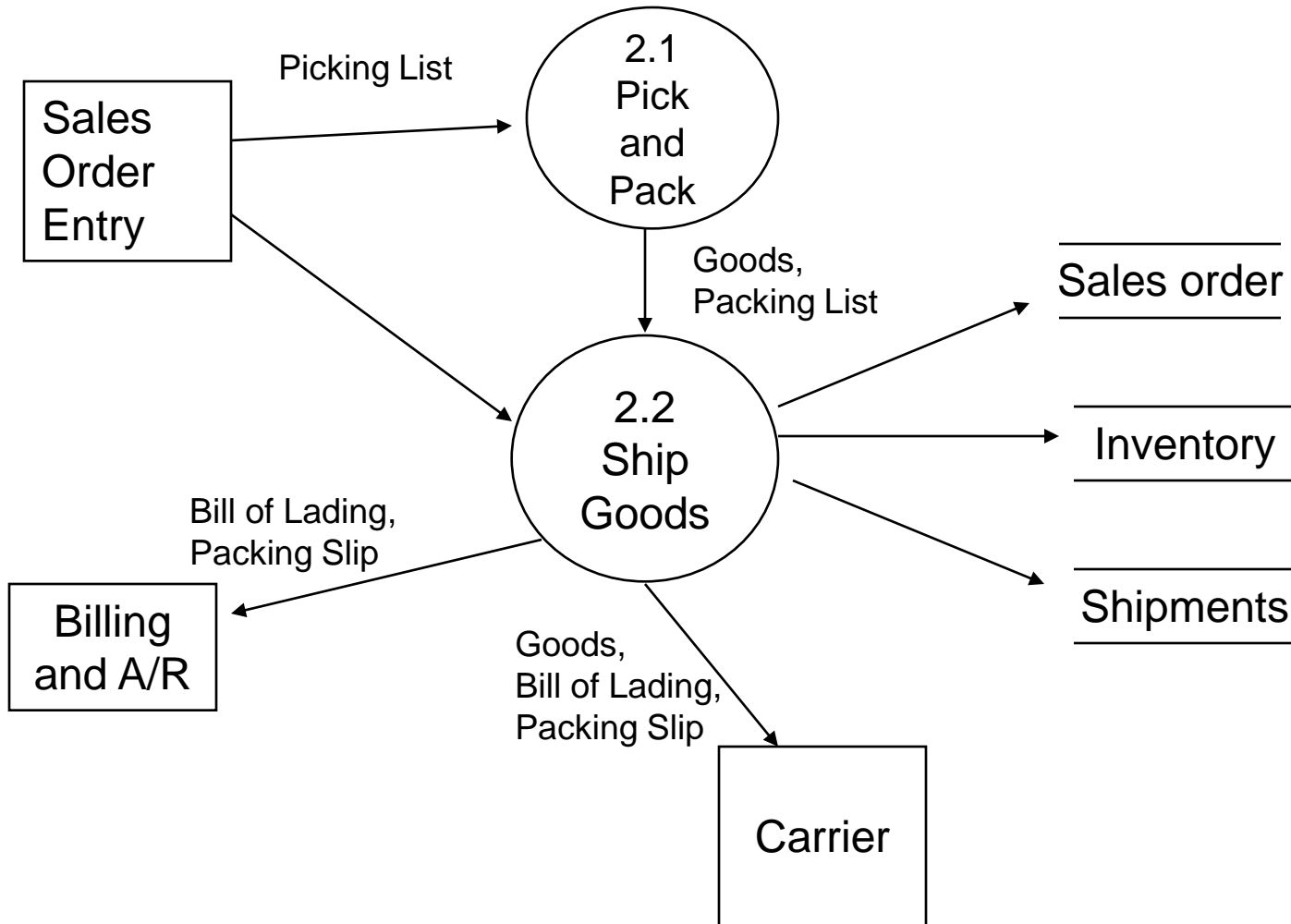
Information Needs and Procedures

- Determine inventory availability.
- Decide what types of credit terms to offer.
- Set prices for products and services.
- Set policies regarding sales returns and warranties.
- Select methods for delivering merchandise.

Shipping (Activity 2)

- Warehouse workers are responsible for filling customer orders by removing items from inventory.
- *Key decisions and information needs:*
 - Determine the delivery method.
 - in-house
 - outsource

Shipping



STRAIGHT BILL OF LADING—SHORT FORM

Not Negotiable.

Shipper's No.

Carrier

Carrier's No.

RECEIVED, subject to the classifications and tariffs in effect on the date of this bill of lading.

at _____ 20 _____ from _____
 the property described below, in apparent good order, except as noted (contents and condition of contents of packages unknown), marked, consigned, and destined as indicated below, which said carrier (the word carrier being understood throughout this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to its usual place of delivery at said destination, if on its route, otherwise to deliver to another carrier on the route to said destination. It is mutually agreed, as to each carrier of all or any of said property over all or any portion of said route to destination, and as to each party at any time interested in any or all of said property, that every service to be performed hereunder shall be subject to all terms and conditions of the Uniform Domestic Straight Bill of Lading set forth (1) in Uniform Freight Classification in effect on the date hereof, if this is a rail or a rail-water shipment, or (2) in the applicable motor carrier classification or tariff if this is a motor carrier shipment.

Shipper hereby certifies that he is familiar with all the terms and conditions of the said bill of lading, including those on the back thereof, set forth in the classification or tariff which governs the transportation of this shipment, and the said terms and conditions are hereby agreed to by the shipper and accepted for himself and his assigns.

Consigned to _____
 (Mail or street address of consignee—For purposes of notification only.)

Destination _____ State _____ Zip Code _____ County _____

Delivery Address ★ _____
 (★ To be filled in only when shipper desires and governing tariffs provide for delivery thereat.)

Route _____

Delivering Carrier _____ Car or Vehicle Initials _____ No. _____

No. Packages	Kind of Package, Description of Articles, Special Marks, and Exceptions	*Weight (Sub. to Car.)	Class or Rate	Check Column	Subject to Section 7 of Conditions of applicable bill of lading, if this shipment is to be delivered to the consignee without recourse on the consignor, the consignor shall sign the following statement. The carrier shall not make delivery of this shipment without payment of freight and all other lawful charges.
					(Signature of Consignor.) If charges are to be prepaid, write or stamp here, "To Be Prepaid."

*If the shipment moves between two ports by a carrier by water, the law requires that the bill of lading shall state whether it is "carrier's or shipper's weight."

NOTE—Where the rate is dependent on value, shippers are required to state specifically in writing the agreed or declared value of the property.

The agreed or declared value of the property is hereby specifically stated by the shipper to be not exceeding

per _____

†The fibre boxes used for this shipment conform to the specifications set forth in the box maker's certificate thereon, and all other requirements of Uniform Freight Classification.

‡Shipper's imprint in lieu of stamp; not a part of bill of lading approved by the Interstate Commerce Commission.

Received \$ _____ to apply in prepayment of the charges on the property described hereon.

Agent or Cashier

Per _____
 (This signature here acknowledges only the amount prepaid.)

Charges advanced:
 \$ _____

_____ Shipper, per _____ Agent, Per _____

Permanent post office address of shipper, _____

Figure 11-7 Sample bill of lading

Shipping (Activity 2)

- *Documents, records, and procedures:*
 - The picking ticket printed by the sales order entry triggers the shipping process and is used to identify which products to remove from inventory.
 - A physical count is compared with the quantities on the picking ticket and packing slip.
 - Some spot checks are made and a bill of lading is prepared.

Billing and Accounts Receivable (Activity 3)

- Two activities are performed at this stage of the revenue cycle:
 - 1 Invoicing customers
 - 2 Maintaining customer accounts
- *Key decisions and information needs:*
 - Accurate billing is crucial and requires information identifying the items and quantities shipped, prices, and special sales terms.

Billing and Accounts Receivable (Activity 3)

- The sales invoice notifies customers of the amount to be paid and where to send payment.
- A monthly statement summarizes transactions that occurred and informs customers of their current account balance.
- A credit memo authorizes the billing department to credit a customer's account.

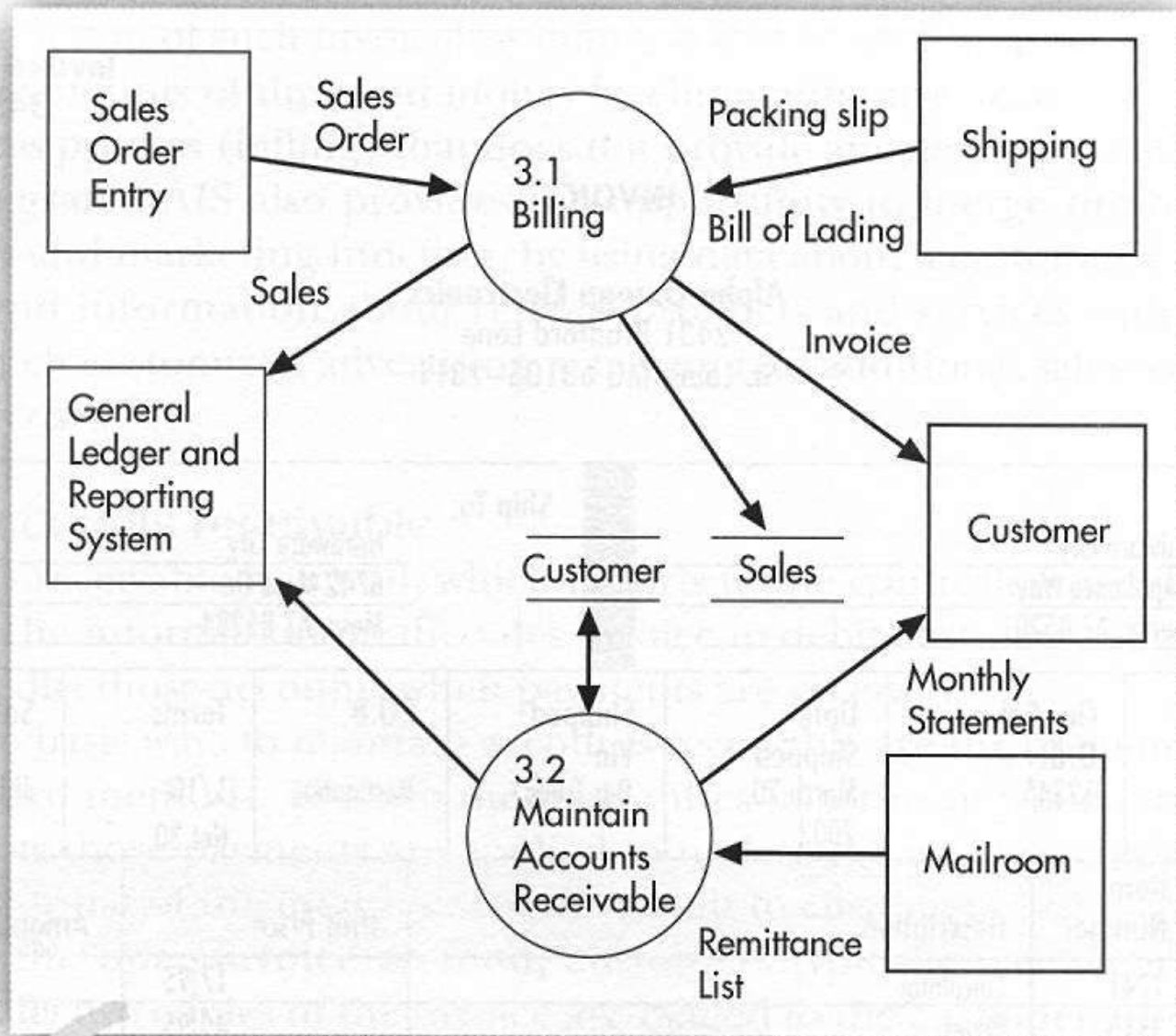


Figure 11-8 Level I data flow diagram: billing & accounts receivable

Billing and Accounts Receivable (Activity 3)

- *Types of billing systems:*
 - In a *postbilling* system, invoices are prepared after confirmation that the items were shipped.
 - In a *prebilling* system, invoices are prepared (but not sent) as soon as the order is approved.
- The inventory, accounts receivable, and general ledger files are updated at this time.

Billing and Accounts Receivable (Activity 3)

- Methods for maintaining accounts receivable:
 - open invoice method
 - balance-forward method
- To obtain a more uniform flow of cash receipts, many companies use a process called cycle billing.

11121

CREDIT MEMORANDUM

Alpha Omega Electronics
 2431 Bradford Lane
 St. Louis, MO 63105-2311

Credit To: <u>Hardware City</u>		Date <u>April 7, 2003</u>	
<u>35 Appliance Way</u>		Salesperson <u>FRM</u>	
<u>Phoenix, AZ 85201</u>			
Apply To Invoice Number 34603	Date April 1, 2003	Customer's Order No. 7413	
3	4120	PCS	85.00
			255.00
Reason Credit Issued: Units damaged during shipment. Returned on April 6, 2003			
Received By: ALZ		Authorized By: PJS	
We Credit Your Account For This Amount			255.00

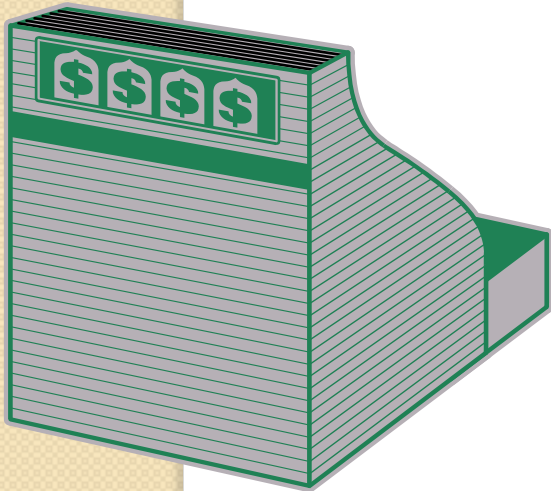
Figure 11-11 Sample AOE credit memo

Information Needs and Procedures

- What are examples of additional information the AIS should provide?
 - response time to customer inquiries
 - time required to fill and deliver orders
 - percentage of sales that require back orders
 - customer satisfaction
 - analysis of market share and trends
 - profitability analyses by product, customer, and sales region

Cash Collections (Activity 4)

- Two areas are involved in this activity:
 - 1 The cashier
 - 2 The accounts receivable function



Cash Collections (Activity 4)

- *Key decisions and information needs:*
 - Reduction of cash theft is essential.
 - The billing/accounts receivable function should not have physical access to cash or checks.
 - The accounts receivable function must be able to identify the source of any remittances and the applicable invoices that should be credited.

Cash Collections (Activity 4)

- *Documents, records, and procedures:*
 - Checks are received and deposited.
 - A *remittance list* is prepared and entered on-line showing the customer, invoice number, and the amount of each payment.
 - The system performs a number of on-line edit checks to verify the accuracy of data entry.

Learning Objective 3

- Document your understanding of the revenue cycle.

Opportunities for Using Information Technology

- What are some opportunities of using information technology for *sales order entry (Activity 1)*?
 - on-line processing of sales orders with e-mail
 - electronic data interchange (EDI)
 - linking EDI with customers' point-of-sale (POS)
 - optical character recognition (OCR)
 - the Internet

Opportunities for Using Information Technology

- What are some opportunities of using information technology for *shipping (Activity 2)*?
 - automated warehouse systems consisting of:
 - computers
 - bar-code scanners
 - conveyer belts
 - forklifts

Opportunities for Using Information Technology

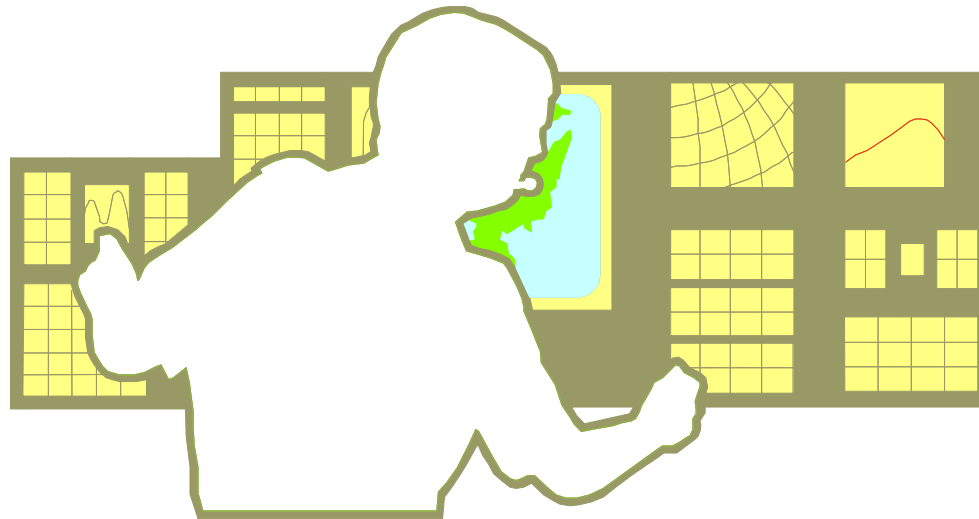
- What are some opportunities of using information technology for *billing and accounts receivable (Activity 3)*?
 - on-line processing of invoices
 - electronic data interchange (EDI)
 - imaging to create and store digital versions of all paper relating to a customer's account.

Opportunities for Using Information Technology

- What are some opportunities of using information technology for *cash collections (Activity 4)*?
 - lockbox (a postal address to which customers send their remittances)
 - The bank picks up the checks from the post office box and deposits them to the company's account.

Opportunities for Using Information Technology

- electronic lockbox
- electronic funds transfer (EFT)
- financial electronic data interchange (FEDI)



Learning Objective 4

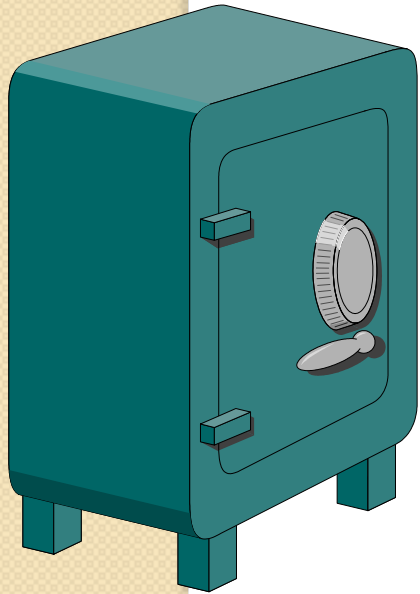
- Identify major threats in the revenue cycle and evaluate the adequacy of various control procedures for dealing with those threats.

Control Objectives, Threats, and Procedures

- The *second function* of a well-designed AIS is to provide adequate controls to ensure that the following objectives are met:
 - Transactions are properly authorized.
 - Recorded transactions are valid.
 - Valid, authorized transactions are recorded.
 - Transactions are recorded accurately.

Control Objectives, Threats, and Procedures

- Assets (cash, inventory, and data) are safeguarded from loss or theft.
- Business activities are performed efficiently and effectively.



Control Objectives, Threats, and Procedures

- What are some *threats*?
 - credit sales to customers with poor credit
 - shipping errors
 - theft of cash and inventory
 - failure to bill customers
 - billing errors
 - loss of data

Control Objectives, Threats, and Procedures

- What are some *exposures*?
 - uncollectible sales and losses due to bad debts
 - customer dissatisfaction
 - loss of assets and overstated assets
 - loss of revenue and inventory
 - incorrect records and poor decision making
 - loss of confidential information

Control Objectives, Threats, and Procedures

- What are some *control procedures*?
 - credit approval by credit manager and sales function
 - reconciliation of sales order with picking ticket and packing slip
 - restriction of access to inventory and data
 - lockbox arrangement
 - segregation of duties

Table 11-1 Threats and Controls in the Revenue Cycle

Process/Activity	Threat	Applicable Control Procedures
Sales Order Entry	1. Incomplete or inaccurate customer orders	Data entry edit checks
	2. Credit sales to customers with poor credit	Credit approval by credit manager, not by sales function; accurate records of customer account balances
	3. Legitimacy of orders	Signatures on paper documents; digital signatures and digital certificates for e-business
	4. Stockouts, carrying costs, and markdowns	Inventory control systems
Shipping	5. Shipping errors: Wrong merchandise Wrong quantities Wrong address	Reconciliation of sales order with picking ticket and packing slip; bar code scanners; Data entry application controls
	6. Theft of inventory	Restrict physical access to inventory; Documentation of all internal transfers of inventory; periodic physical counts of inventory and reconciliation of counts to recorded amounts
	Billing and Accounts Receivable	7. Failure to bill customers
8. Billing errors		Data entry edit controls

		recorded amounts
Billing and Accounts Receivable	7. Failure to bill customers	Separation of shipping and billing functions; Prenumbering of all shipping documents and periodic reconciliation to invoices; reconciliation of picking tickets and bills of lading with sales orders
	8. Billing errors	Data entry edit controls Price lists
	9. Posting errors in updating accounts receivable	Reconciliation of subsidiary accounts receiv- able ledger with general ledger; monthly statements to customers
Cash Collections	10. Theft of cash	Segregation of duties; minimization of cash handling; lockbox arrangements; prompt endorsement and deposit of all receipts; Periodic reconciliation of bank statement with records by someone not involved in cash receipts processing
General Control Issues	11. Loss of data	Backup and disaster recovery procedures; access controls (physical and logical)
	12. Poor performance	Preparation and review of performance reports



Purchasing and Cash Disbursements

Expenditure Cycle:

Learning Objectives

1. Describe the basic business activities and related data processing operations performed in the expenditure cycle.
2. Discuss the key decisions that need to be made in the expenditure cycle, and identify the information needed to make those decisions.
3. Document your understanding of expenditure cycle activities.

Learning Objectives

4. Identify major threats in the expenditure cycle, and evaluate the adequacy of various control procedures for dealing with them.
5. Read and understand a data model (REA diagram) of the expenditure cycle.

Introduction

- Linda Spurgeon, Alpha Omega Electronics' (AOE) president, asked Elizabeth Venko, the controller, to address the following issues:
 - What must be done to ensure that AOE's inventory records are current and accurate?
 - What can be done to ensure timely delivery of quality components?

Introduction

- Is it possible to reduce AOE's investment in materials inventories?
- What must be done to ensure that available discounts are taken?
- How could the information system provide better information to guide planning and production?
- How could IT be used to reengineer expenditure cycle activities?

Learning Objective 1

- Describe the basic business activities and related data processing operations performed in the expenditure cycle.

Expenditure Cycle: Main Objective

- The primary objective of the expenditure cycle is to minimize the total cost of acquiring and maintaining inventories, supplies, and the various services necessary for the organization to function.

Expenditure Cycle: Key Decisions

- What is the optimal level of inventory and supplies to carry?
- Which suppliers provide the best quality and service at the best prices?
- Where should inventories and supplies be held?
- How can the organization consolidate purchases across units to obtain optimal prices?

Expenditure Cycle: Key Decisions

- How can information technology be used to improve both the efficiency and accuracy of the inbound logistics function?
- Is sufficient cash available to take advantage of any discounts suppliers offer?
- How can payments to vendors be managed to maximize cash flow?

Expenditure Cycle

Business Activities

- The expenditure cycle is a recurring set of business and related information processing operations associated with the purchase of and payment for goods and services.
- The *first function* of the AIS is to support the effective performance of the organization's business activities.

Expenditure Cycle

Business Activities

- What are the five basic expenditure cycle business activities?
 - 1 Requesting the purchase of needed goods
 - 2 Ordering goods to be purchased
 - 3 Receiving ordered goods
 - 4 Approving vendor invoices for payment
 - 5 Paying for goods purchased

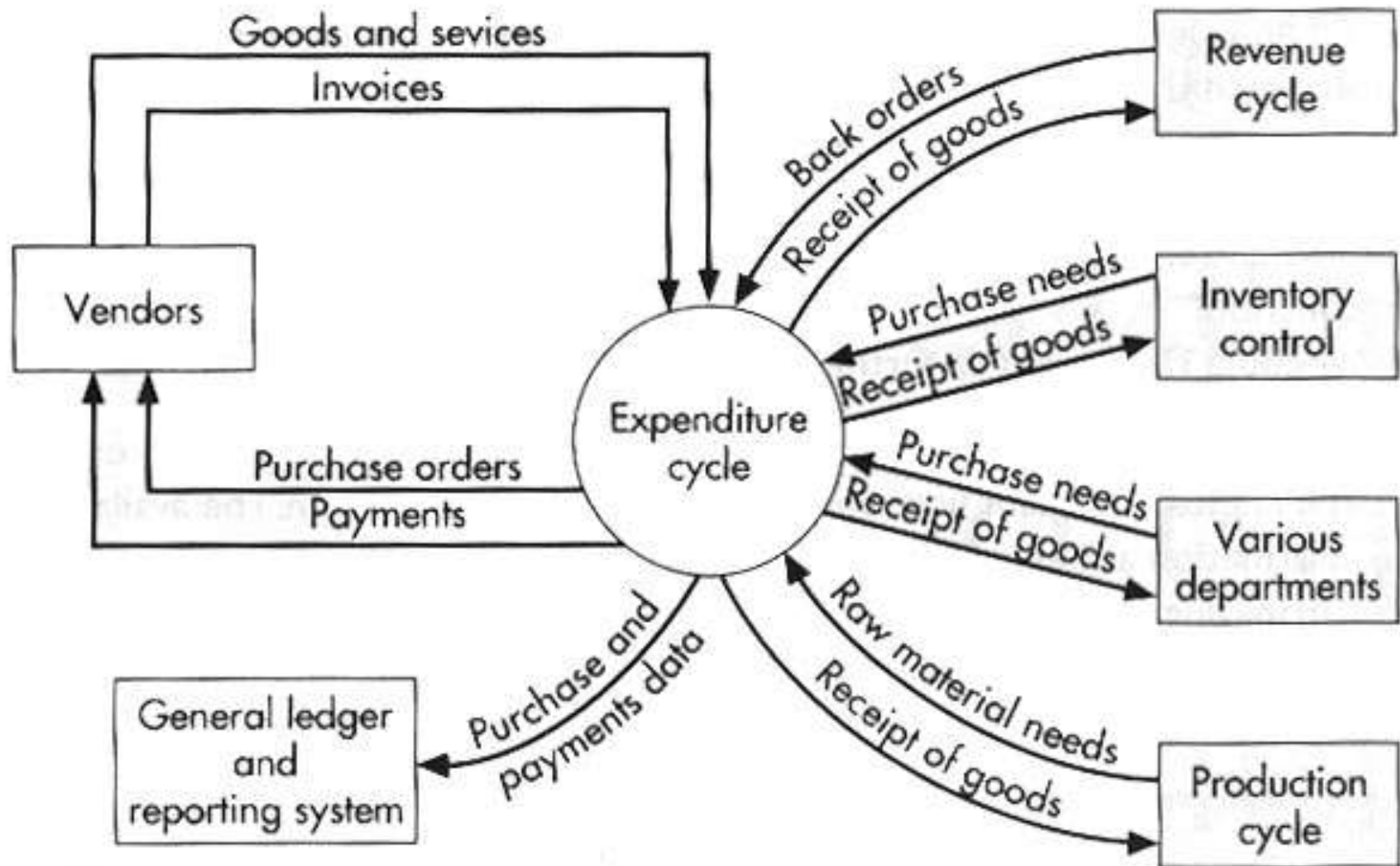


Figure 12-1 Context diagram of the expenditure cycle

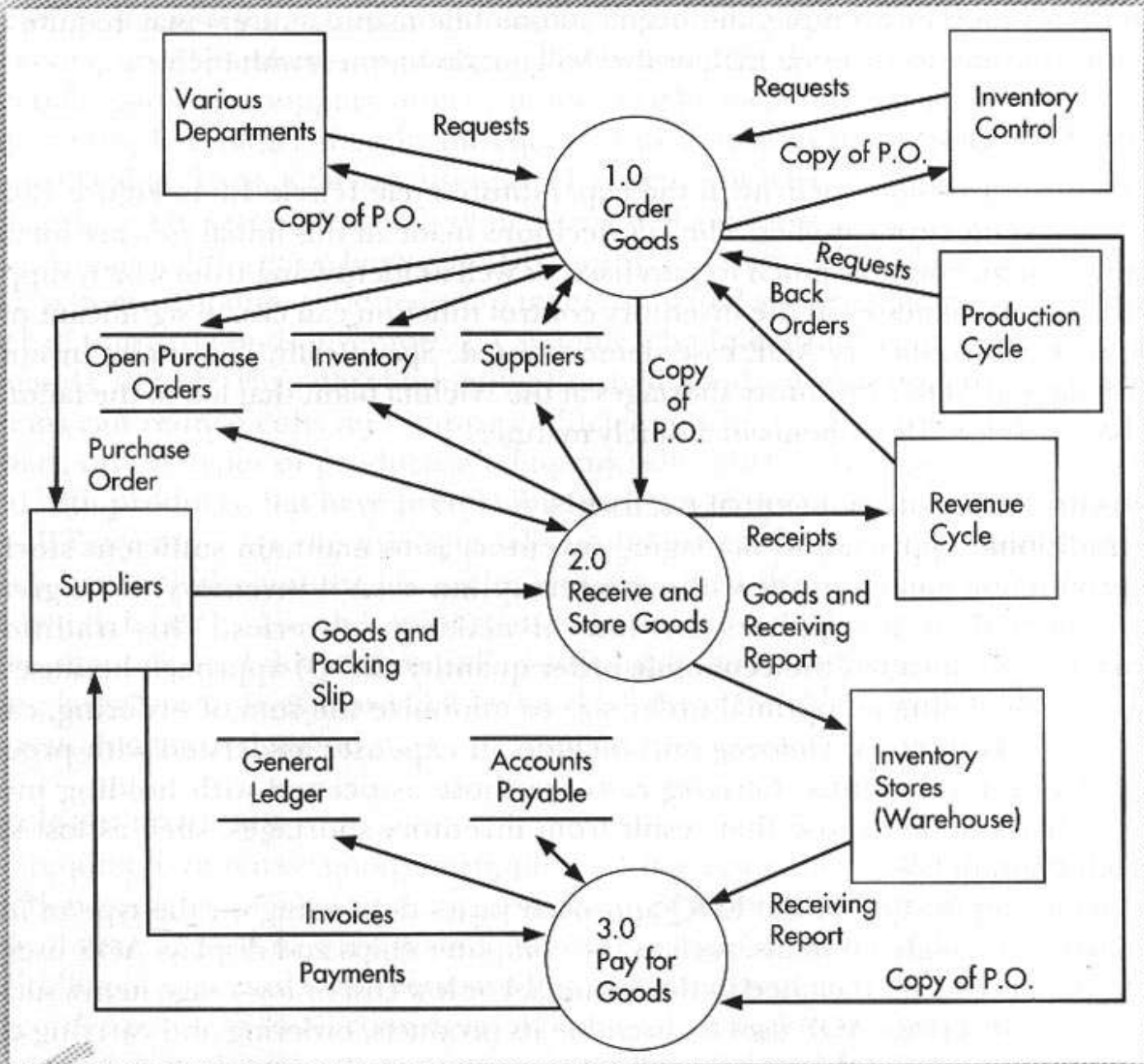


Figure 12-2 Level 0 data flow diagram for the expenditure cycle

Request Goods (Activity I)

- The first major business activity in the expenditure cycle involves the request to purchase inventory or supplies.
- *The traditional inventory control method* (often called economic order quantity [EOQ]):
 - This approach is based on calculating an optimal order size so as to minimize the sum of ordering, carrying, and stockout costs.

Request Goods (Activity I)

- *Alternative inventory control methods:*
 - MRP (material requirement planning)
 - This approach seeks to reduce required inventory levels by scheduling production, rather than estimating needs.
 - JIT (just in time)
 - JIT systems attempt to minimize both carrying and stockout costs.

Request Goods (Activity I)

- What is a major difference between MRP and JIT?
- MRP systems schedule production to meet estimated sales need, thereby creating a stock of finished goods inventory.
- JIT systems schedule production to meet customer demands, thereby virtually eliminating finished goods inventory.

Request Goods (Activity 1)

- *Documents and procedures:*
- The purchase requisition is a document that identifies the following:
 - requisitioner and item number
 - specifies the delivery location and date needed
 - specifies descriptions, quantity, and price of each item requested
 - may suggest a vendor

ALPHA OMEGA ELECTRONICS		No. 89010	
PURCHASE REQUISITION			
Date Prepared: 07/02/2003	Prepared by: Harold Brown <i>HFB</i>		Suggested Vendor: Best Office Supply
Deliver To: Copy Center		Attention: Harold Brown	Date Needed: 7/15/2003
Item Number	Quantity	Description	Price/Unit
32047	15 boxes	Xerox 4200 paper, 20 wt., 10 ream box	\$33.99
80170	5 boxes	Moore 2600 continuous form, 20 lb	\$31.99
81756	20 boxes	Dysan 100 HD diskettes, box of 10	\$ 6.49
10407	10	IBM 4207 Proprinter ribbon, black	\$ 8.99
Approved by: Susan Chen		Department: Admin. Services	Date Approved: 07/02/2003
			Account No.: 91887

Figure 12-3 Sample AOE purchase requisition (items in bold are preprinted)

Order Goods

- *What is a key decision?*
 - determine vendor
- *What factors should be considered?*
 - price
 - quality of materials
 - dependability in making deliveries

Order Goods

- *Documents and procedures:*
- The purchase order is a document that formally requests a vendor to sell and deliver specified products at designated prices.
- It is also a promise to pay and becomes a contract once it is accepted by the vendor.
- Frequently, several purchase orders are generated to fill one purchase requisition.

Alpha Omega Electronics

No. 2463

Billing Address: 2431 Bradford Lane
St. Louis, MO 63105-2311
(314) 467-2341

Reference the above number on all
invoices and shipping documents

PURCHASE ORDER

To: Best Office Supply
4567 Olive Blvd.
St. Louis, MO 63112-2345

Ship To: AOE, Inc.
1735 Sandy Dr.
Dayton, OH 33421-2243

**Vendor
Number:**
121

Order Date:
07/03/2003

**Requisition
Number:**
89010

Buyer:
Fred Mozart

Terms:
1/10, n/30

F.O.B.
Destination

Ship Via:
Your choice

Delivery Date:
07/15/2003

Remarks:

Item	Item Number	Quantity	Description	Unit Price
1	32047	15 boxes	Xerox 4200 paper, 20 wt., 10 ream box	\$33.99
2	80170	5 boxes	Moore 2600 continuous form, 20 lb.	\$31.99
3	81756	20 boxes	Dysan 100 HD Diskettes, box of 10	\$6.49
4	10407	10	IBM 4207 Proprinter ribbon, black	\$8.99

Approved by: *Susan Beethoven*

Figure 12-4 Sample AOE: purchase order (items in bold are preprinted)

Receive and Store Goods (Activity 2)

- The second major business activity involves the receipt and storage of ordered items.
- *Key decisions and information needs:*
- The receiving department has two major responsibilities:
 - 1 Deciding whether to accept a delivery
 - 2 Verifying quantity and quality

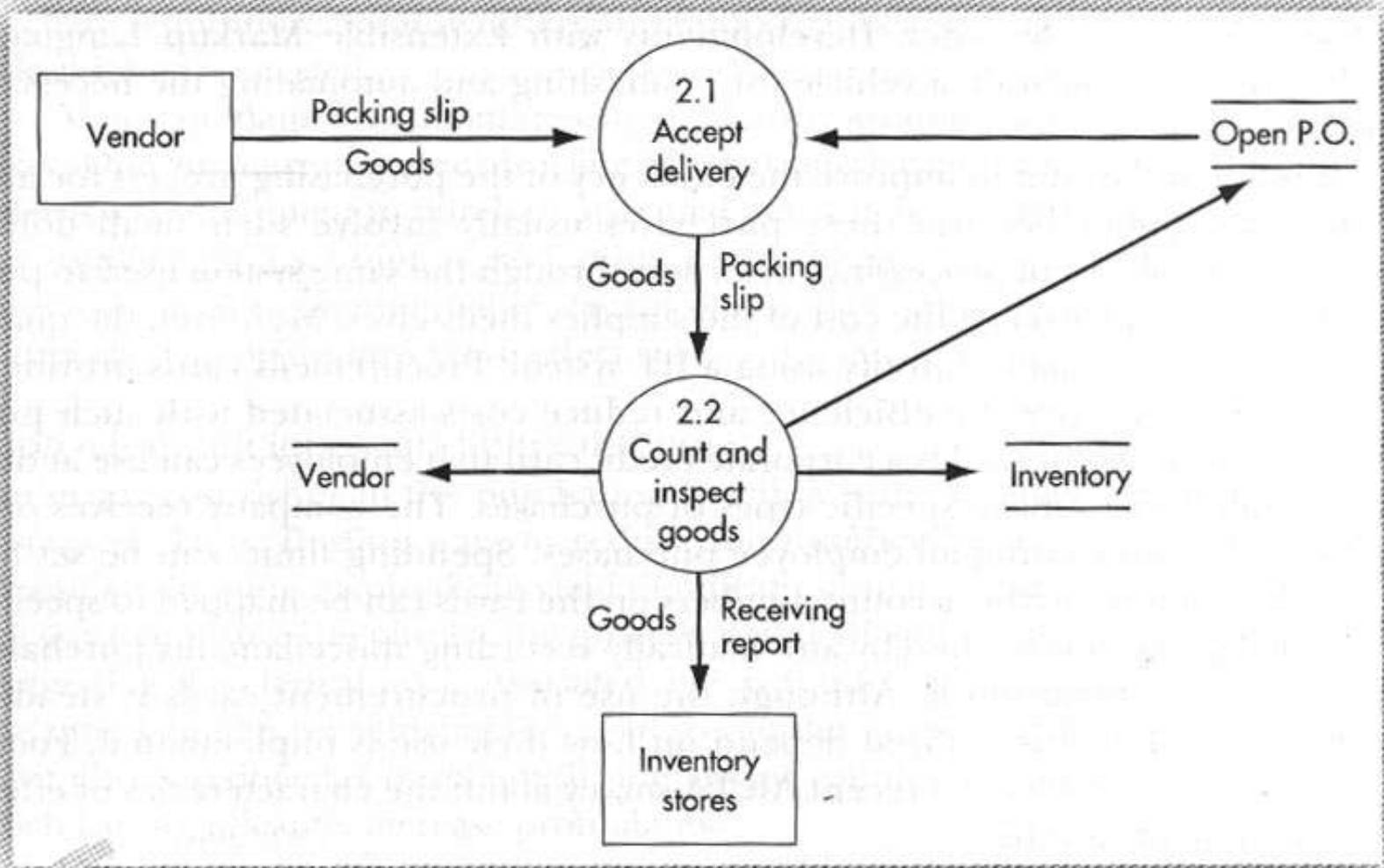


Figure 12-5 Level I DFD of the receiving function

Receive and Store Goods (Activity 3)

- *Documents and procedures:*
- The receiving report documents details about each delivery, including the date received, shipper, vendor, and purchase order number.
- For each item received, it shows the item number, description, unit of measure, and count of the quantity received.

Alpha Omega Electronics

No. 3113

RECEIVING REPORT

Vendor: Best Office Supply

Date Received:
07/13/2003

Shipped via: UPS

Purchase Order
Number: 2463

Item Number	Quantity	Description
32047	15	Xerox 4200 paper, 20 wt., 10 ream box
80170	5	Moore 2600 continuous form, 20 lb.
81756	20	Dysan 100 HD diskettes, box of 10
10407	10	IBM 4207 Proprinter ribbons, black

Remarks:

Two boxes of Moore 2600 paper received with water damage on outside, but the paper appears to be okay

Received by:

Nathan Hale

Inspected by:

Nathan Hale

Delivered to:

Harold Brown

Figure 12-6 Sample AOE receiving report (items in bold are preprinted)

Approve Vendor Invoices

(Activity 3)

- The third activity entails approving vendor invoices for payments.
- *Key decisions and information needs:*
- The objective of accounts payable is to authorize payment only for goods and services that were ordered and actually received.
- This requires internally generated information from both the purchasing and receiving function.

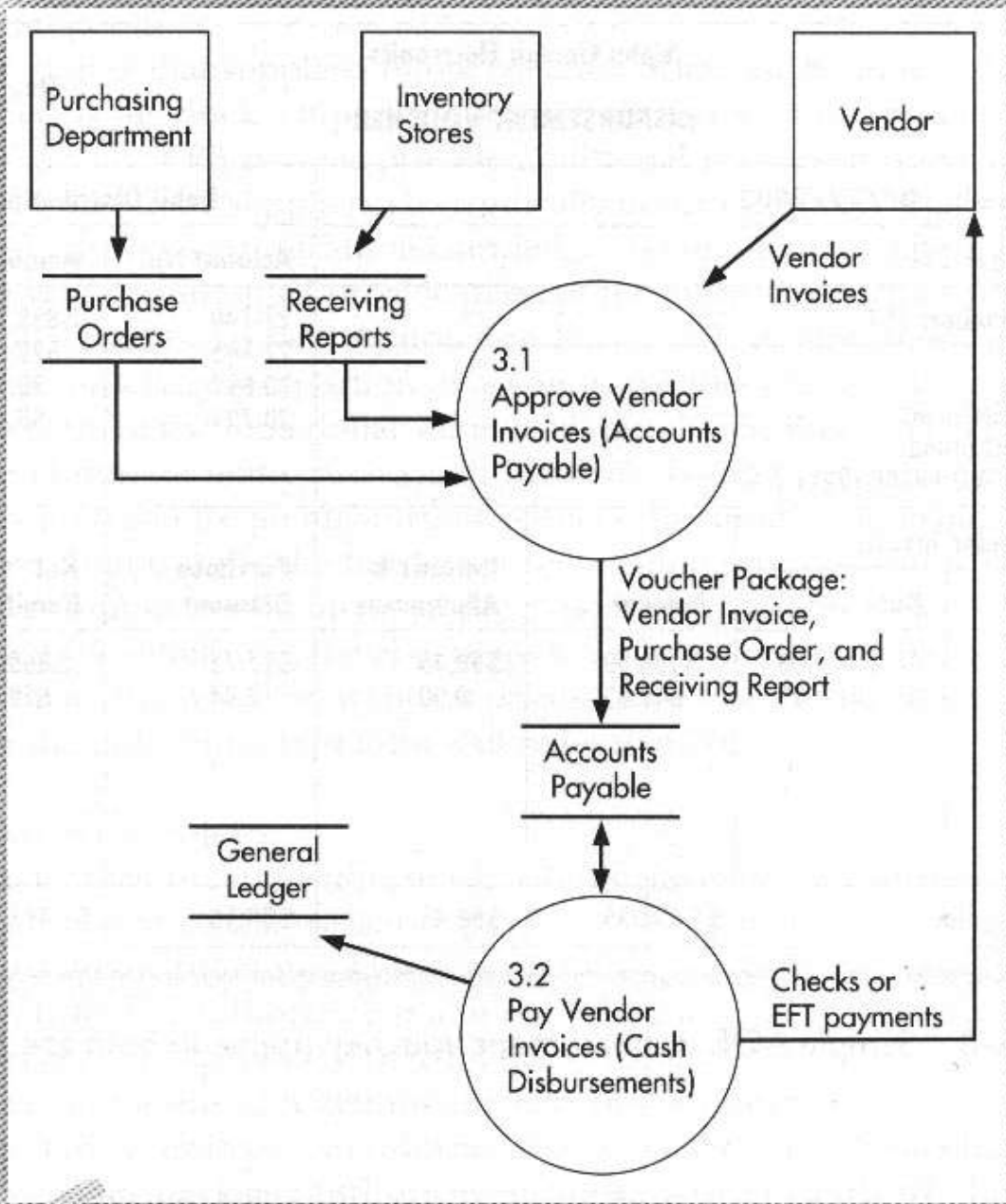


Figure 12-7 Level I data flow diagram of the pay for goods function

Approve Vendor Invoices (Activity 3)

- *Documents, records, and procedures:*
- There are two basic ways to process vendor invoices:
 - 1 Nonvoucher system
 - 2 Voucher system
 - disbursement voucher
 - voucher package

Alpha Omega Electronics
DISBURSEMENT VOUCHER

No. 16123

Date Entered: 07/22/2003		Debit Distribution			
Prepared by: <i>BC</i>		Account No.	Amount		
Vendor Number: 109		22-140	\$868.33		
Remit To: Avalon Electronics 1401 East Grand St. Louis, MO 63106-2211		22-145	629.01		
		20-699	30.56		
		20-799	98.45		
Vendor Invoice					
Number	Date	Amount	Returns & Allowances	Purchase Discount	Net Remittance
5386	07/15/2003	\$984.50	\$98.45	\$17.72	\$868.33
5389	07/20/2003	641.85	0.00	12.84	629.01
Voucher Totals:		\$1,626.35	\$98.45	\$30.56	\$1,497.34

Figure 12-8 Sample AOE disbursement voucher (items in bold are preprinted)

Pay for Goods

- The final activity is the payment of approved invoices.
- *What is a key decision?*
 - taking vendor discounts
- A short-term cash flow budget is useful for making this decision.

Pay for Goods

- *Documents, records, and procedures:*
- The cashier receives and reviews each voucher package,
 - computes a batch total, and
 - enters the disbursement data.
- The system uses the voucher file to update the accounts payable, open invoice, and the general ledger files.

Evaluation of receipt settlement

- Traditional three way
- Two way match

Traditional Three-Way Match

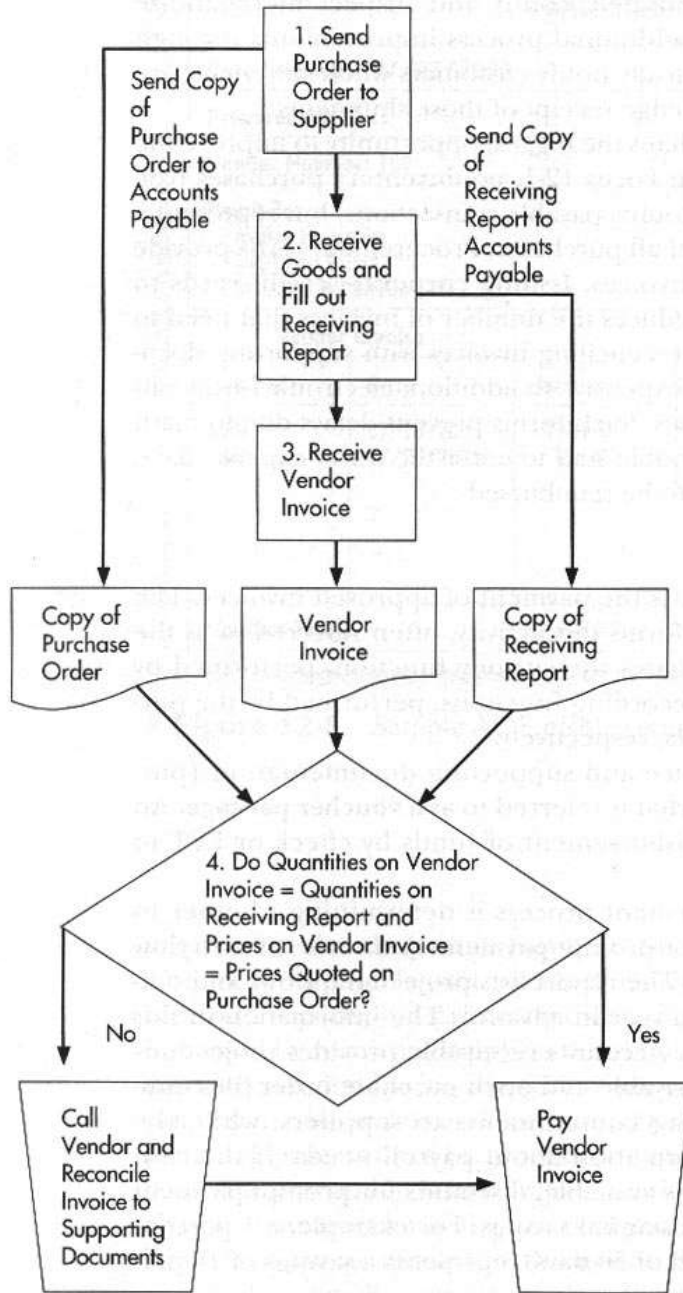


Figure 12-9

Comparison of traditional three-way match for accounts payable with evaluated receipt settlement approach (two-way match)

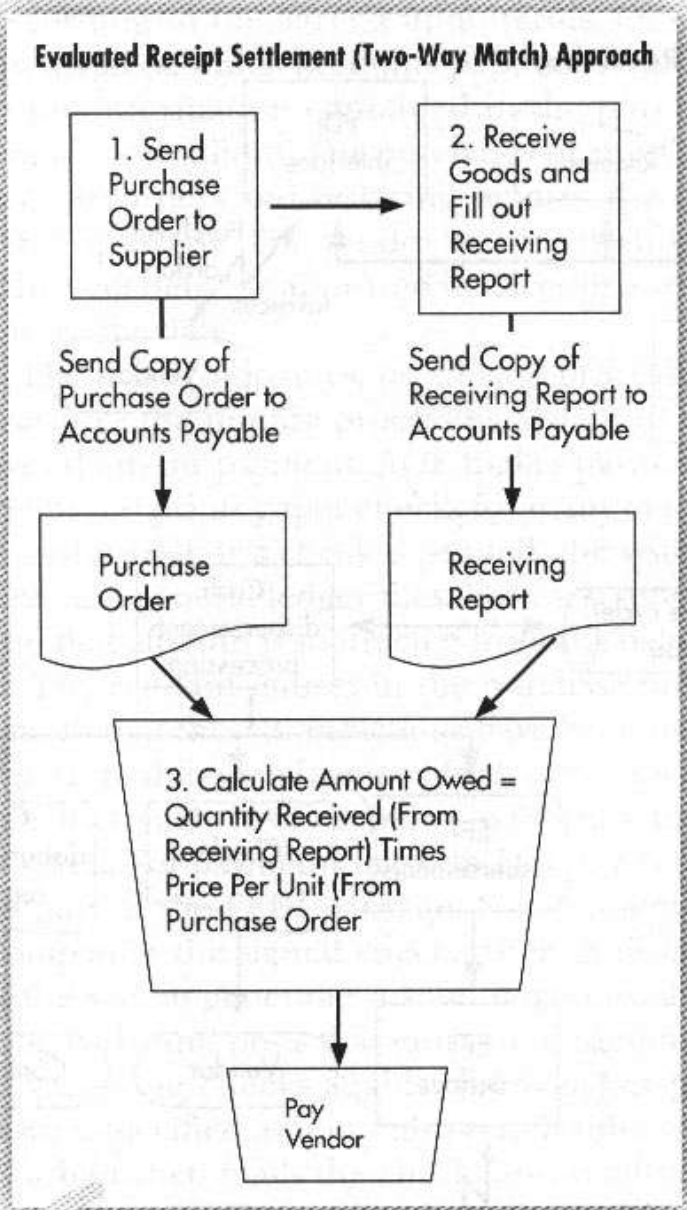


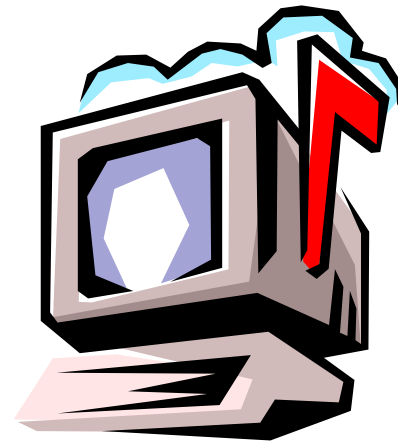
Figure 12-9 Comparison of traditional three-way match for accounts payable with evaluated receipt settlement approach (two-way match) (Continued)

Opportunities for Using Information Technology

- What are some opportunities of using information technology for *requesting goods (Activity 1)*?
 - online data entry instead of paper documents
 - bar-code technology that facilitates the maintenance of accurate perpetual inventory records

Opportunities for Using Information Technology

- electronic data interchange (EDI)
- procurement cards
- Internet



Opportunities for Using Information Technology

- What are some opportunities of using information technology to *receive and store goods (Activity 2)*?
 - vendor requirement to bar-code all of their products
 - passive radio frequency identification
 - satellite technology

Opportunities for Using Information Technology

- What are some opportunities of using information technology to *approve vendor invoices (Activity 3)*?
 - electronic data interchange (EDI)
 - elimination of vendor invoices entirely
 - image processing and optical character recognition (OCR)
 - corporate credit cards

Opportunities for Using Information Technology

- electronic funds transfers (EFT)
- financial electronic data interchange (FEDI)

Learning Objective 2

- Discuss the key decisions that need to be made in the expenditure cycle, and identify the information needed to make those decisions.

Information Needs

- The *third function* of the AIS is to provide information useful for decision making.
- Usefulness in the expenditure cycle means that the AIS must provide the operational information needed to perform the following functions:
- Determine when and how much additional inventory to order.

Information Needs

- Select the appropriate vendors from whom to order.
- Verify the accuracy of vendor invoices.
- Decide whether purchase discounts should be taken.
- Monitor cash flow needs to pay outstanding obligations.

Information Needs

- What are examples of additional information the AIS should provide?
 - efficiency and effectiveness of the purchasing department
 - analyses of vendor performance such as on-time delivery, quality, etc.
 - time taken to move goods from the receiving dock into production
 - percentage of purchase discounts taken

Learning Objective 4

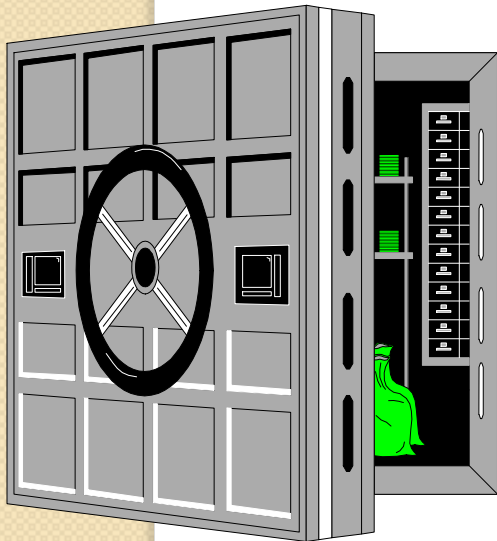
- Identify major threats in the expenditure cycle, and evaluate the adequacy of various control procedures for dealing with them.

Control Objectives, Threats, and Procedures

- The *second function* of a well-designed AIS is to provide adequate controls to ensure that the following objectives are met:
- Transactions are properly authorized.
- Recorded transactions are valid.
- Valid, authorized transactions are recorded.
- Transactions are recorded accurately.

Control Objectives, Threats, and Procedures

- Assets (cash, inventory, and data) are safeguarded from loss or theft.
- Business activities are performed efficiently and effectively.



Control Objectives, Threats, and Procedures

- What are some *threats*?
 - stockouts
 - purchasing too many or unnecessary goods
 - purchasing goods at inflated prices
 - purchasing goods of inferior quality
 - purchasing from unauthorized vendors
 - kickbacks

Control Objectives, Threats, and Procedures

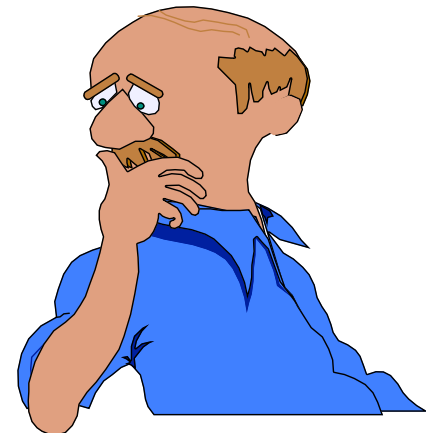
- receiving unordered goods
- errors in counting goods
- theft of inventory
- failure to take available purchasing discounts
- errors in recording and posting purchases and payments
- loss of data

Control Objectives, Threats, and Procedures

- What are some *exposures*?
 - production delays and lost sales
 - increased inventory costs
 - cost overruns
 - inferior quality of purchased goods
 - inflated prices
 - violation of laws or import quotas
 - payment for items not received

Control Objectives, Threats, and Procedures

- inaccurate inventory records
- loss of assets
- cash flow problems
- overstated expenses
- incorrect data for decision making



Control Objectives, Threats, and Procedures

- What are some *control procedures*?
 - inventory control system
 - vendor performance analysis
 - approved purchase requisitions
 - restricted access to blank purchase requisitions
 - price list consultation
 - budgetary controls

Control Objectives, Threats, and Procedures

- use of approved vendor lists
- approval of purchase orders
- prenumbered purchase orders
- prohibition of gifts from vendors
- incentives to count all deliveries
- physical access control
- recheck of invoice accuracy
- cancellation of voucher package

Table 12-1 Threats and Controls in the Expenditure Cycle

Process/Activity	Threat	Applicable Control Procedures
Order goods	1. Preventing stockouts and/or excess inventory	Inventory control systems; perpetual inventory records; bar code technology; periodic counts of inventory
	2. Requesting unnecessary items	Accurate perpetual inventory records; approval of purchase requisitions
	3. Purchasing goods at inflated prices	Solicit competitive bids; use of approved suppliers; approval of purchase orders; budgetary controls
	4. Purchasing goods of inferior quality	Use of approved vendors; approval of purchase orders; monitor vendor performance; budgetary controls
	5. Purchasing from unauthorized suppliers	Approval of purchase orders; restrict access to supplier master file
	6. Kickbacks	Policies; require purchasing employees to disclose financial interests in suppliers; vendor audits
Receive and store goods	7. Receiving unordered goods	Require receiving to verify existence of valid purchase order
	8. Making errors in counting	Use of bar coding technology; document employee performance; incentives for accurate counts
	9. Stealing inventory	Physical access controls; periodic counts of inventory and reconciliation of physical counts to records; document all transfers of inventory
Approve and pay	10. Failing to catch errors in vendor invoices	Double-check invoice accuracy; training of

		transfers of inventory
Approve and pay vendor invoices	10. Failing to catch errors in vendor invoices	Double-check invoice accuracy; training of accounts payable staff; use of ERS
	11. Paying for goods not received	Only pay invoices supported by original receiving report; use of ERS; budgetary controls
	12. Failing to take available purchase discounts	Proper filing; cash flow budgets
	13. Paying the same invoice twice	Only pay invoices supported by original voucher package; cancellation of voucher package upon payment; use of ERS; control access to supplier master file
	14. Recording and posting errors in accounts payable	Various data entry and processing edit controls
	15. Misappropriating cash, checks, or EFTs	Restrict access to blank checks, check signing machine, and EFT transfer terminals; segregation of duties of accounts payable and cashier; reconciliation of bank account by someone independent of cash disbursement process; check protection measures including Positive Pay; regular review of EFT transactions
General control	16. Losing data	Backup and disaster recovery plans; physical and logical access controls
	17. Performing poorly	Development and periodic review of appropriate performance reports