

Accounting Information System

Accounting Department

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What is an accounting information system

- An accounting information system (AIS) is a system that businesses use to collect, store and process financial and accounting data used by accountants, managers, chief financial officers (CFOs), business analysts, managers, auditors, regulators, tax agencies and consultants.

Why do businesses use AIS?

- AIS ensures the highest level of accuracy with the company's financial transactions and record-keeping. It also allows them to keep data secure and intact while still making it available to those who need to be able to access it.
- It increases a company's ability to detect fraud and can help them ensure that their finances are running smoothly.
- The AIS is a tool that helps managers make the best decisions about the overall company health.

Functions of an AIS

There are three basic functions of AIS:

- **Efficient and effective collection and storage of financial data:**
 - This is the first function of AIS and includes the collection of transaction data from source documents, recording transactions in journals and posting to ledgers.

Functions of an AIS

- **Supplying information for decision-making:**
 - This second function includes producing managerial reports and financial statements for managers, CFOs and other key decision-makers.
- **Putting controls in place:**
 - The third function of AIS is putting controls in place to record and process data accurately.

AIS components

- Accounting information systems are made of up of six parts that are designed to keep it running efficiently and fluidly:
 - People
 - Procedures and instructions
 - AIS data
 - AIS software
 - IT infrastructure
 - Internal controls

1. People

- This includes anyone who uses the information system. It could include accountants, managers, CFOs and other C-suite executives, financial analysts and auditors. AIS helps different departments work together effectively.

2. Procedures and instructions

- This aspect of the AIS refers to how financial information is collected, stored, processed and distributed. It also has to do with the direction and instruction people who use it are given through employee training.
- These methods are both manual and automated and can come from internal sources like employees or external sources like online orders placed by customers. Procedures and instructions should be coded into the software as well as implemented with employees through training and documentation.

3. AIS data

- The AIS must have a database structure like structured query language (SQL) in order to store information. The accounting information system will store any information relevant to the organization's business practices that could impact its finances.

3. AIS data cont.

While the data may vary depending on the nature of the business, it may include:

- Inventory data
- Tax information
- Check registers
- General ledger
- Customer billing statements
- Sales orders
- Purchase requisitions
- Vendor invoices
- Payroll information
- Timekeeping information

4. AIS software

- The AIS has a software component that's essential to **store, retrieve, process and analyze financial data** for the company. Though AIS used to be a manual-based system, companies today use software like
 - Quickbooks,
 - Sage 50 Accounting,
 - Microsoft's Dynamics GP or
 - Oracle's PeopleSoft, among others.

4. AIS software cont.

- These types of software programs can be customized to meet the needs of each individual business, although for publicly-traded companies, the structure of the AIS is to some extent dictated by Sarbanes-Oxley regulations.

5. IT infrastructure

- This refers to the hardware that's used to operate the AIS. It includes things like computers, servers, routers and other things that most businesses already have. Most importantly, it must be compatible with the software selected for the AIS.

5. IT infrastructure cont.

- It should be able to run efficiently and be optimized for the software that you're using. The infrastructure should also include contingency plans for things like power outages, hardware failure and anything else that could impact the ability of the system to run as designed.

6. Internal controls

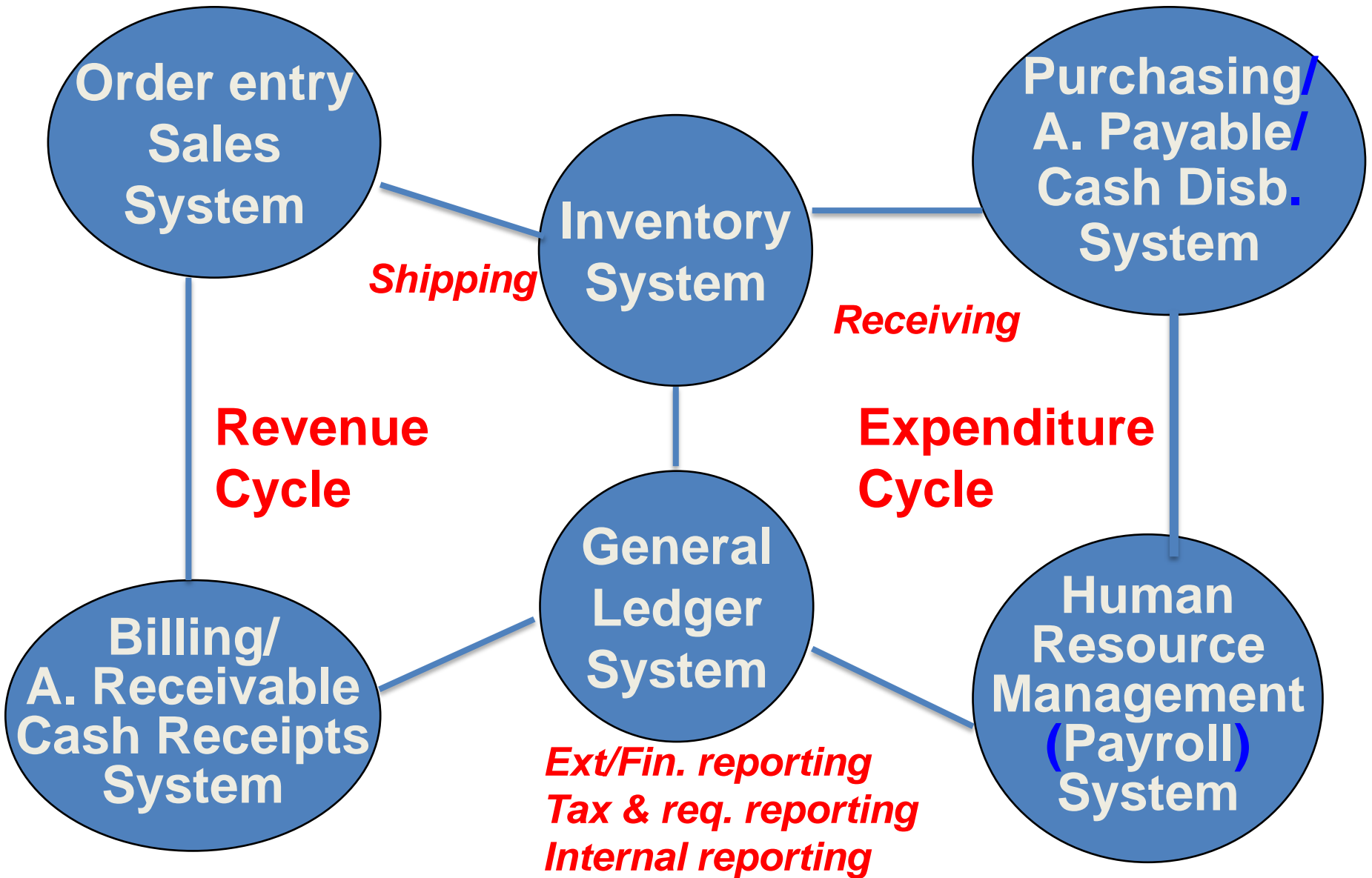
- Internal controls refer to the security measures you take to protect your system and the data you store within it. Internal controls include everything from passwords to biometric verification methods to encryption methods.
- It needs to be able to filter out sensitive data for employees who don't have verified access while still making all of the information readily available for employees with full access.



Systems, Data, and Information

What is system?

- **A system** “is a set of two or more interrelated components that interact to achieve a goal”. Systems are almost always composed of smaller subsystems, each performing a specific function important to and supportive of the larger system of which it is a part.
- For example, the college of business is a system composed of various departments, each of which is a subsystem. Yet college itself is a subsystem of the university.



What is data?

- **Data** “are facts that are collected, recorded, stored, and processed by an information system”. Data usually represent observations or measurements of business activities that are of importance to information system users. Several kinds of data need to be collected in business, such as:
 - Facts about the activities that take place
 - The resources affected by the activities
 - The people who participate in the activity

What is data? Cont.

- For example, data need to be collected about a sales event (e.g., the date of the sale, total amount), the resource being sold (e.g., the identity of the goods or services, the quantity sold, unit price), and the people who participated in the sale (e.g., the identity of the customer and the salesperson).

What is information?

- **Information** “is data that have been organized and processed to provide meaning to a user”. Users typically need information to make decisions or to improve the decision-making process. As a general rule, users can make better decisions as the quantity and quality of information increase.

How an AIS Can Add Value to an Organization?

As a support activity, the AIS adds value by providing accurate and timely information , Well-designed AIS can do this by:

1. Improve the quality and reducing the costs of products or services.
 - an AIS can monitor machinery so operators are notified immediately when performance falls outside acceptable quality limits. This helps maintain product quality.
 - It also reduces the amount of wasted materials and the costs of having to rework anything.

How an AIS Can Add Value to an Organization? Cont.

2. Improving efficiency. A well-designed AIS can make operations more efficient by providing more timely information.

- For example, a just-in-time manufacturing approach requires constant, accurate, up-to-date information about raw materials inventories and their locations.

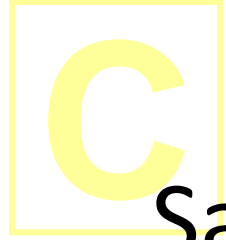
3. Sharing knowledge. A well-designed AIS can make it easier to share knowledge and expertise, perhaps thereby improving operations and even providing a competitive advantage.

4.Improving the efficiency and effectiveness of its supply chain.

- For example, allowing customers to directly access the company's inventory and sales order entry systems can reduce the costs of sales and marketing activities.

5. Improving the internal control structure. Security, control, and privacy are important issues in today's world. An AIS with the proper internal control structure can protect systems from problems such as fraud, errors, equipment and software failures, and natural and political disasters.

6. Improving decision making. An AIS can improve decision making by providing accurate information in a timely manner.



The Revenue Cycle: Sales to Cash Collections

INTRODUCTION

- Questions to be addressed in this section include:
 - What are the basic business activities and data processing operations that are performed in the revenue cycle?
 - What decisions need to be made in the revenue cycle, and what information is needed to make these decisions?

INTRODUCTION

- The revenue cycle is a recurring set of business activities and related information processing operations associated with:
 - Providing goods and services to customers
 - Collecting their cash payments
- The primary external exchange of information is with customers.

INTRODUCTION

- Information about revenue cycle activities flows to other accounting cycles, e.g.:
 - **The expenditure and production cycles**

- **Receive information about sales transactions so they'll know when to initiate the purchase or production of more inventory.**

INTRODUCTION

- Information about revenue cycle activities flows to other accounting cycles, e.g.:
 - The expenditure and production cycles
 - **The human resources/payroll cycle**

- **Uses information about sales to calculate commissions and bonuses.**

INTRODUCTION

- Information about revenue cycle activities flows to other accounting cycles, e.g.:
 - The expenditure and production cycles
 - The human resources/payroll cycle
 - **The general ledger and reporting function**

- **Uses information produced by the revenue cycle in preparing financial statements and performance reports.**

INTRODUCTION

- The primary objective of the revenue cycle:
 - Provide the right product in the right place at the right time for the right price.
- Decisions that must be made:
 - Should we customize products?
 - How much inventory should we carry and where?
 - How should we deliver our product?
 - How should we price our product?
 - Should we give customers credit? If so, how much and on what terms?
 - How can we process payments to maximize cash flow?

INTRODUCTION

- Management also has to evaluate the efficiency and effectiveness of revenue cycle processes:
 - Requires data about:
 - Events that occur.
 - Resources used.
 - Agents who participate.
 - The data needs to be accurate, reliable, and timely.

REVENUE CYCLE BUSINESS ACTIVITIES

- Four basic business activities are performed in the revenue cycle:
 - Sales order entry
 - Shipping
 - Billing
 - Cash collection

REVENUE CYCLE BUSINESS ACTIVITIES

- Four basic business activities are performed in the revenue cycle:

- **Sales order entry**

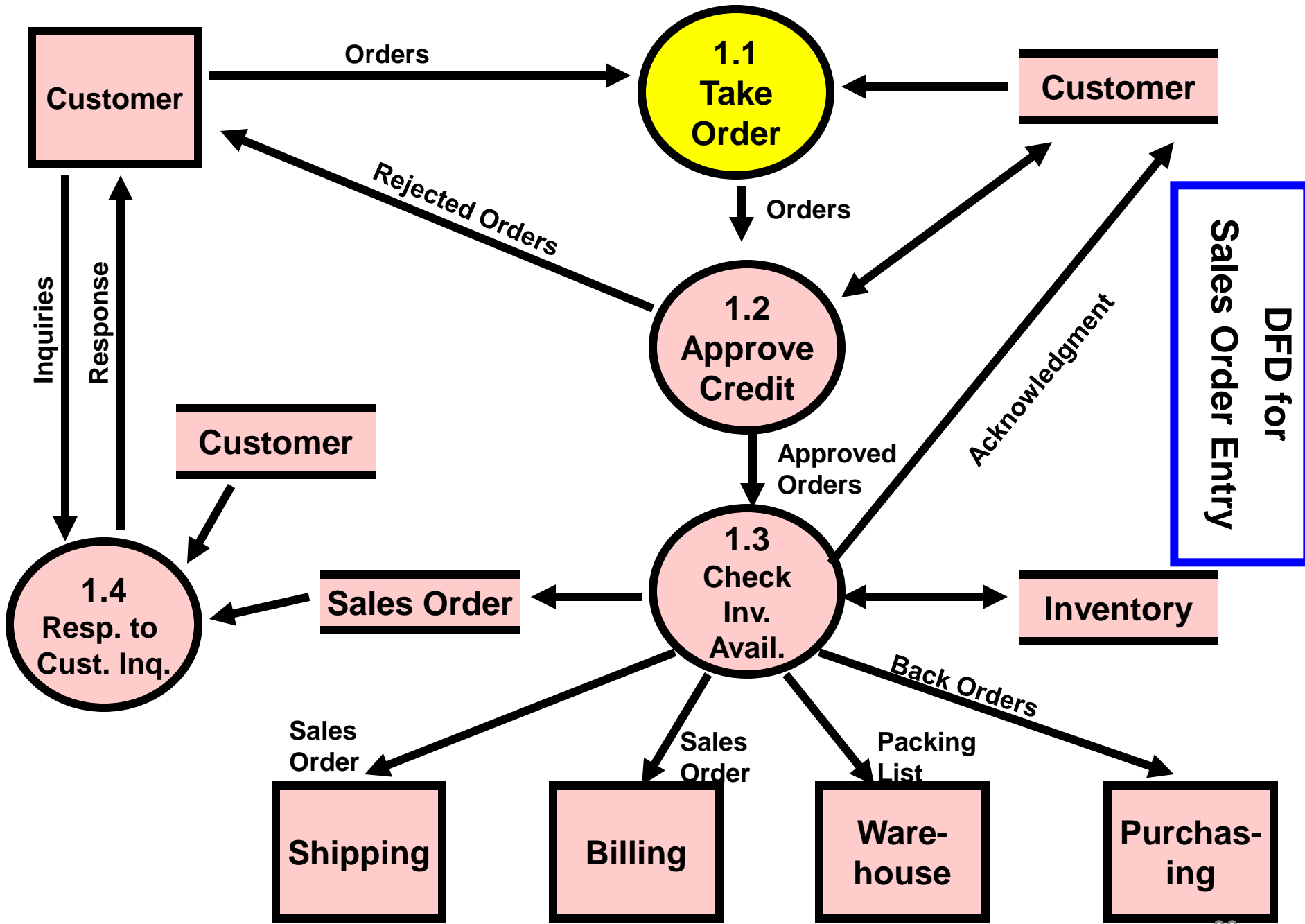
- Shipping

- Billing

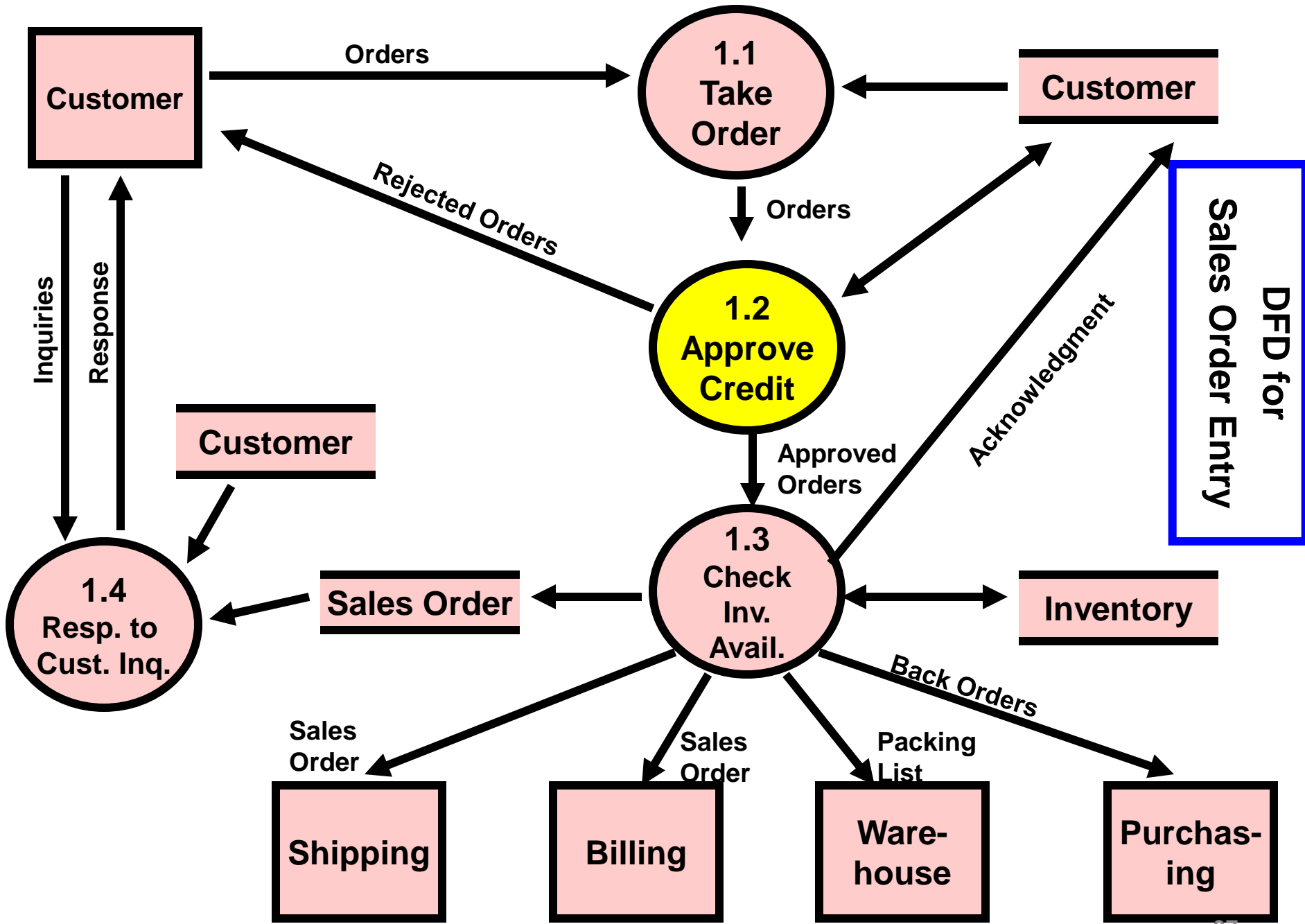
- Cash collection

SALES ORDER ENTRY

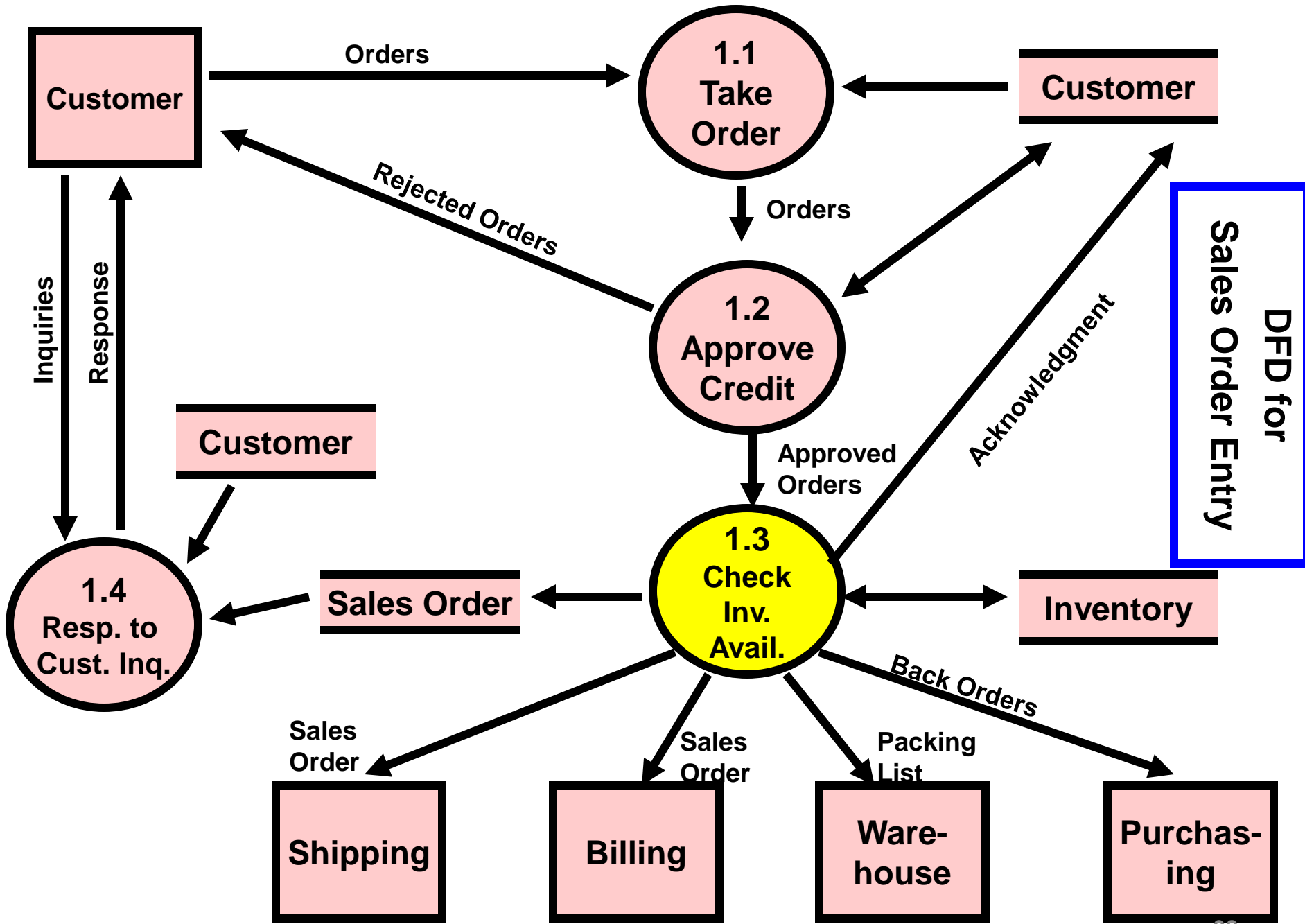
- Sales order entry is performed by the sales order department.
- The sales order department typically reports to the VP of Marketing.
- Steps in the sales order entry process include:
 - Take the customer's order.
 - Check the customer's credit.
 - Check inventory availability.
 - Respond to customer inquiries (may be done by customer service or sales order entry).



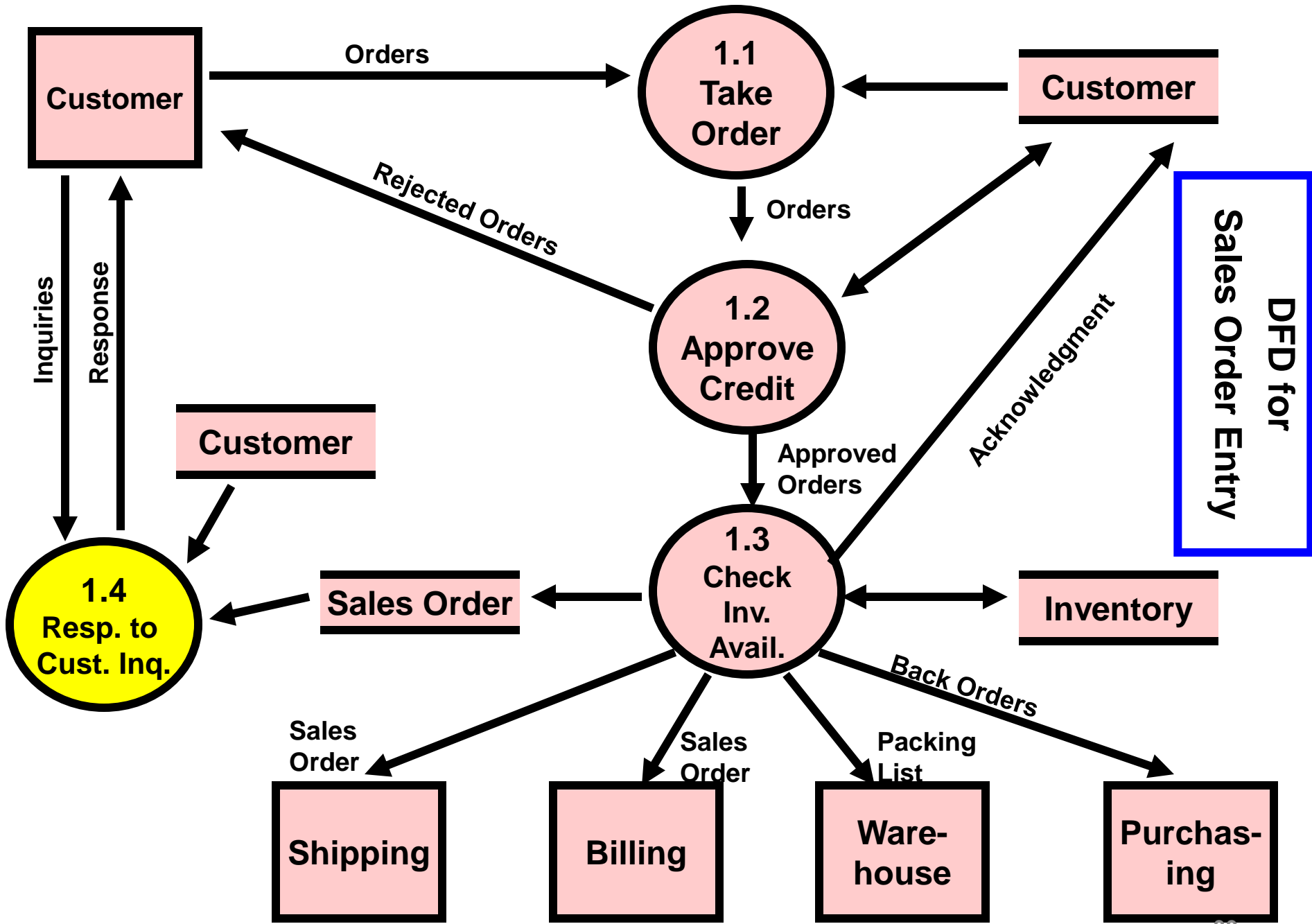
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Sales Order Entry

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SALES ORDER ENTRY

- Take customer orders
 - Order data are received on a sales order document which may be completed and received:
 - In the store
 - By mail
 - By phone
 - On a Website
 - By a salesperson in the field

SALES ORDER ENTRY

- The sales order (paper or electronic) indicates:
 - Item numbers ordered
 - Quantities
 - Prices
 - Salesperson

SALES ORDER ENTRY

- To reduce human error, customers should enter data themselves as much as possible:
 - On Websites
 - On OCR forms (Optical Character Recognition)
 - Via phone menus

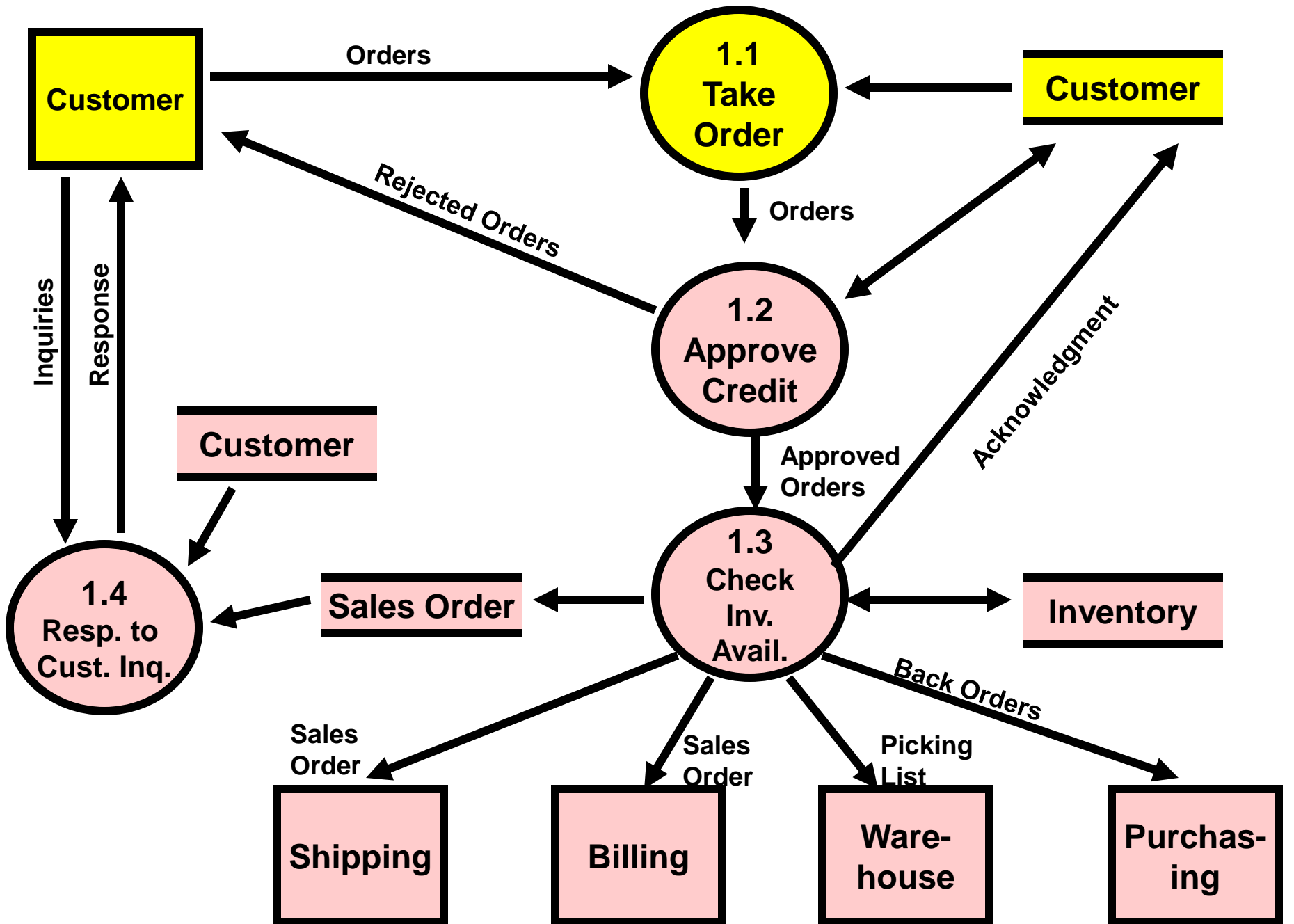
SALES ORDER ENTRY

- How IT can improve efficiency and effectiveness?
 - Orders entered online can be routed directly to the warehouse for picking and shipping.
 - Sales history can be used to customize solicitations.
 - Choice boards can be used to customize orders.

- **Initially popular with Dell and Gateway.**
- **Now used for purchases of shoes and jeans!**

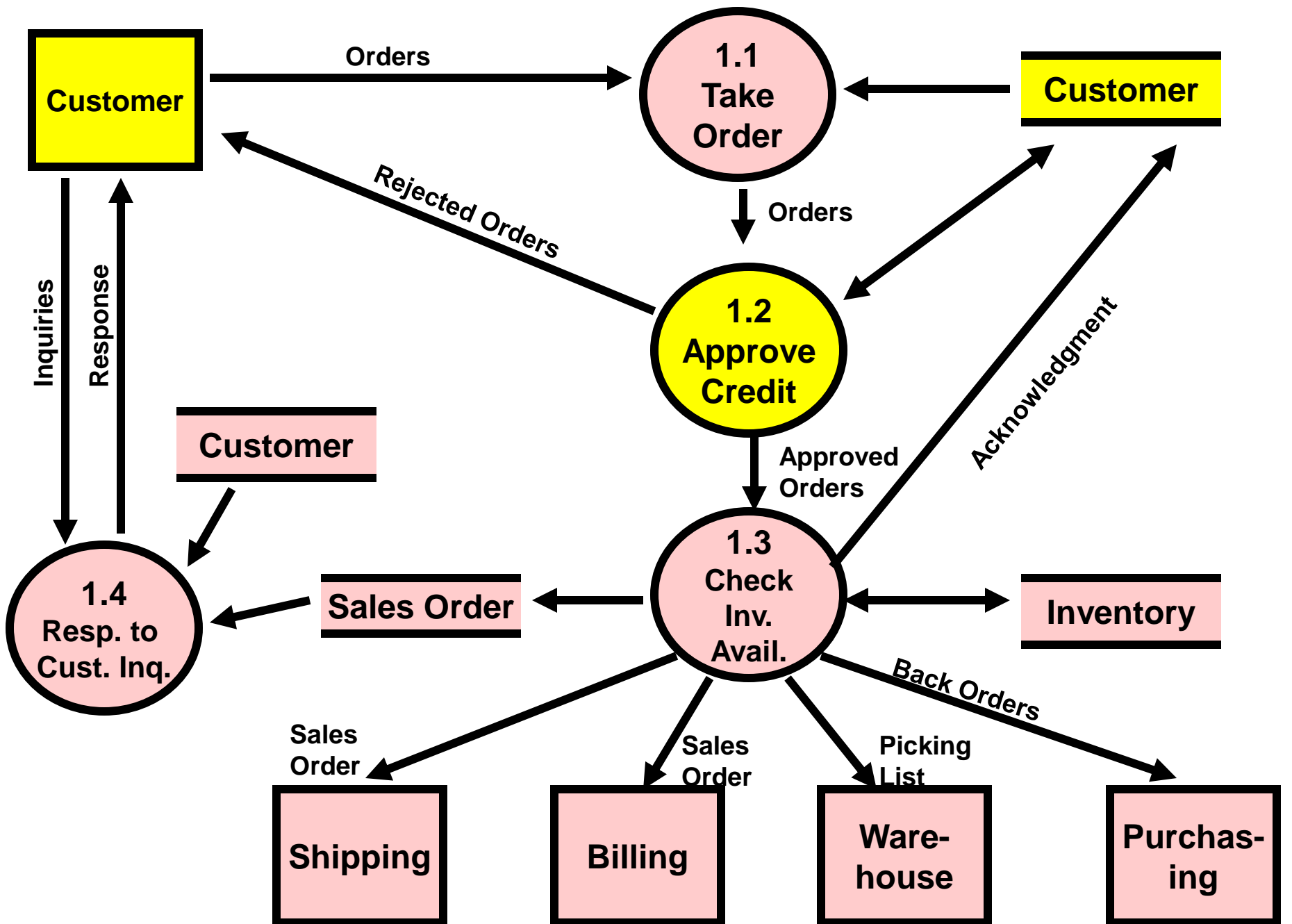
SALES ORDER ENTRY

- Electronic data interchange (EDI) can be used to link a company directly with its customers to receive orders or even manage the customer's inventory.
- Email and instant messaging are used to notify sales staff of price changes and promotions.
- Laptops and handheld devices can equip sales staff with presentations, prices, marketing and technical data, etc.



SALES ORDER ENTRY

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SALES ORDER ENTRY

- Credit sales should be approved before the order is processed any further.
- There are two types of credit authorization:
 - **General authorization**
 - **Specific authorization**

- **For existing customers below their credit limit who don't have past-due balances.**
- **Credit limits vary by customer based on past history and ability to pay.**
- **General authorization involves checking the customer master file to verify the account and status.**

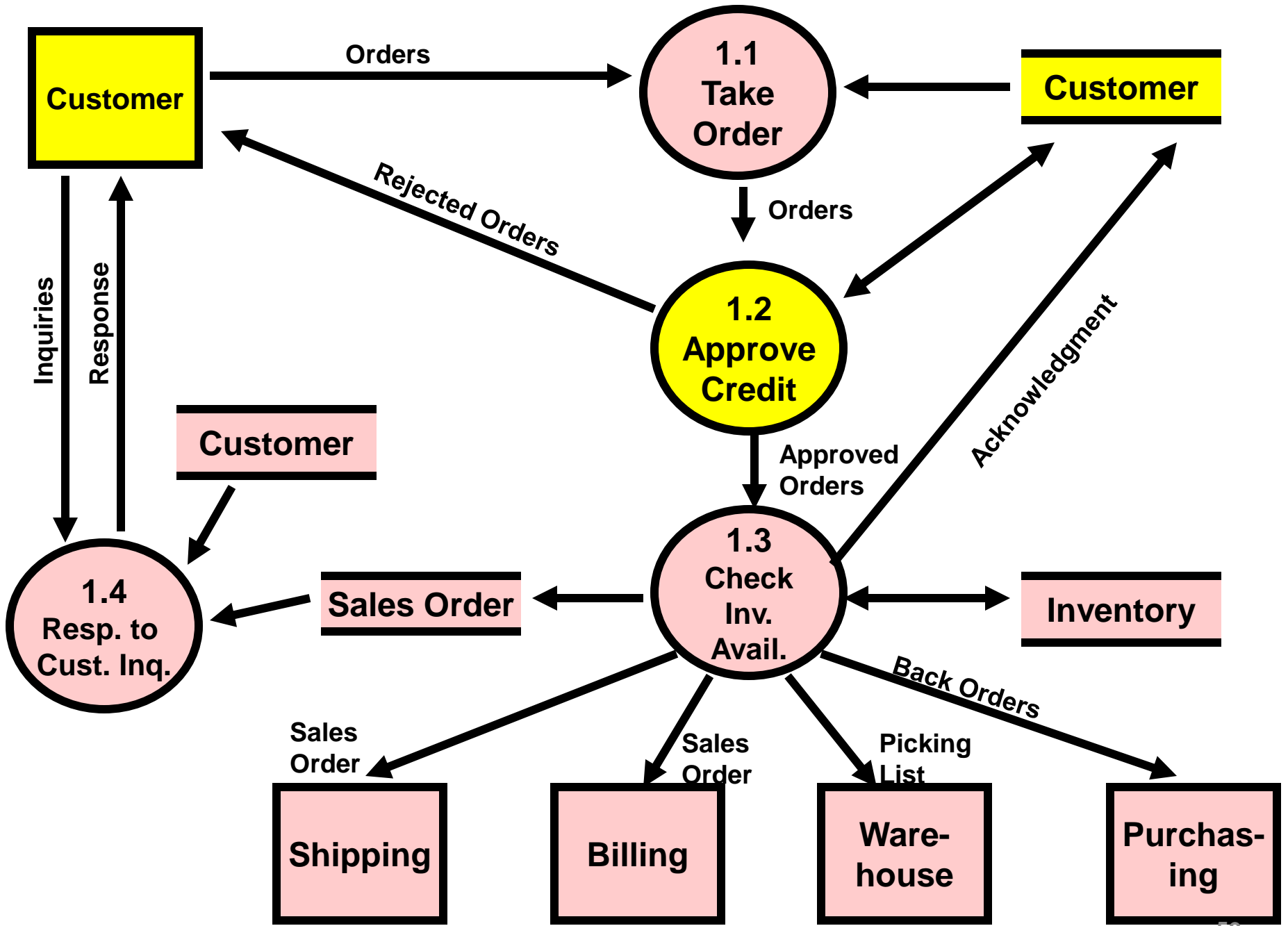
SALES ORDER ENTRY

- Credit sales should be approved before the order is processed any further.
- There are two types of credit authorization:
 - General authorization
 - **Specific authorization**

- **For customers who are:**
 - **New**
 - **Have past-due balances**
 - **Are placing orders that would exceed their credit limit**
- **Specific authorization is done by the credit manager, who reports to the treasurer.**

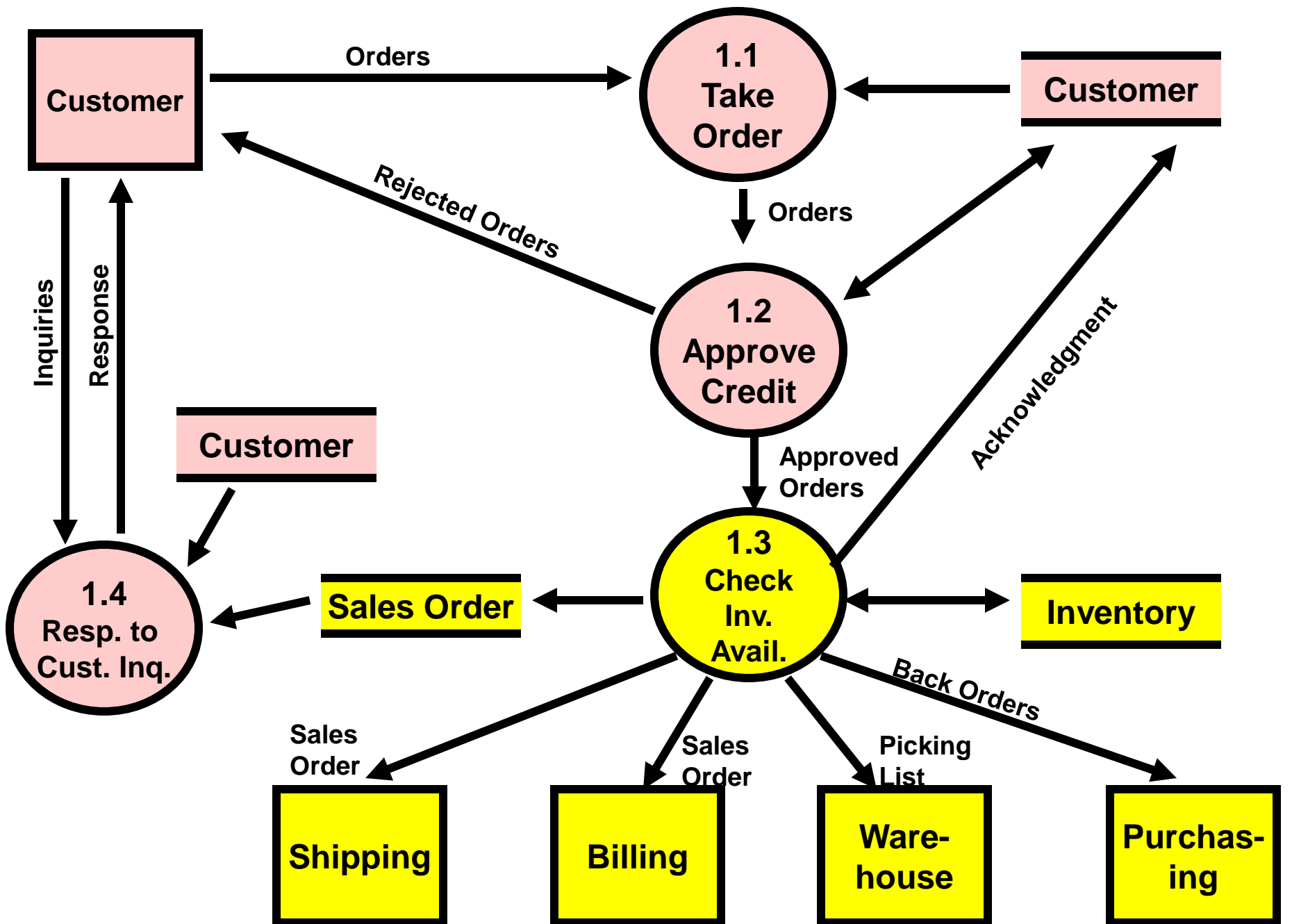
SALES ORDER ENTRY

- How can IT improve the process?
 - Automatic checking of credit limits and balances
 - Emails or IMs to the credit manager for accounts needing specific authorization



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SALES ORDER ENTRY

- When the order has been received and the customer's credit approved, the next step is to ensure there is sufficient inventory to fill the order and advise the customer of the delivery date.
- The sales order clerk can usually reference a screen displaying:
 - Quantity on hand
 - Quantity already committed to others
 - Quantity on order

SALES ORDER ENTRY

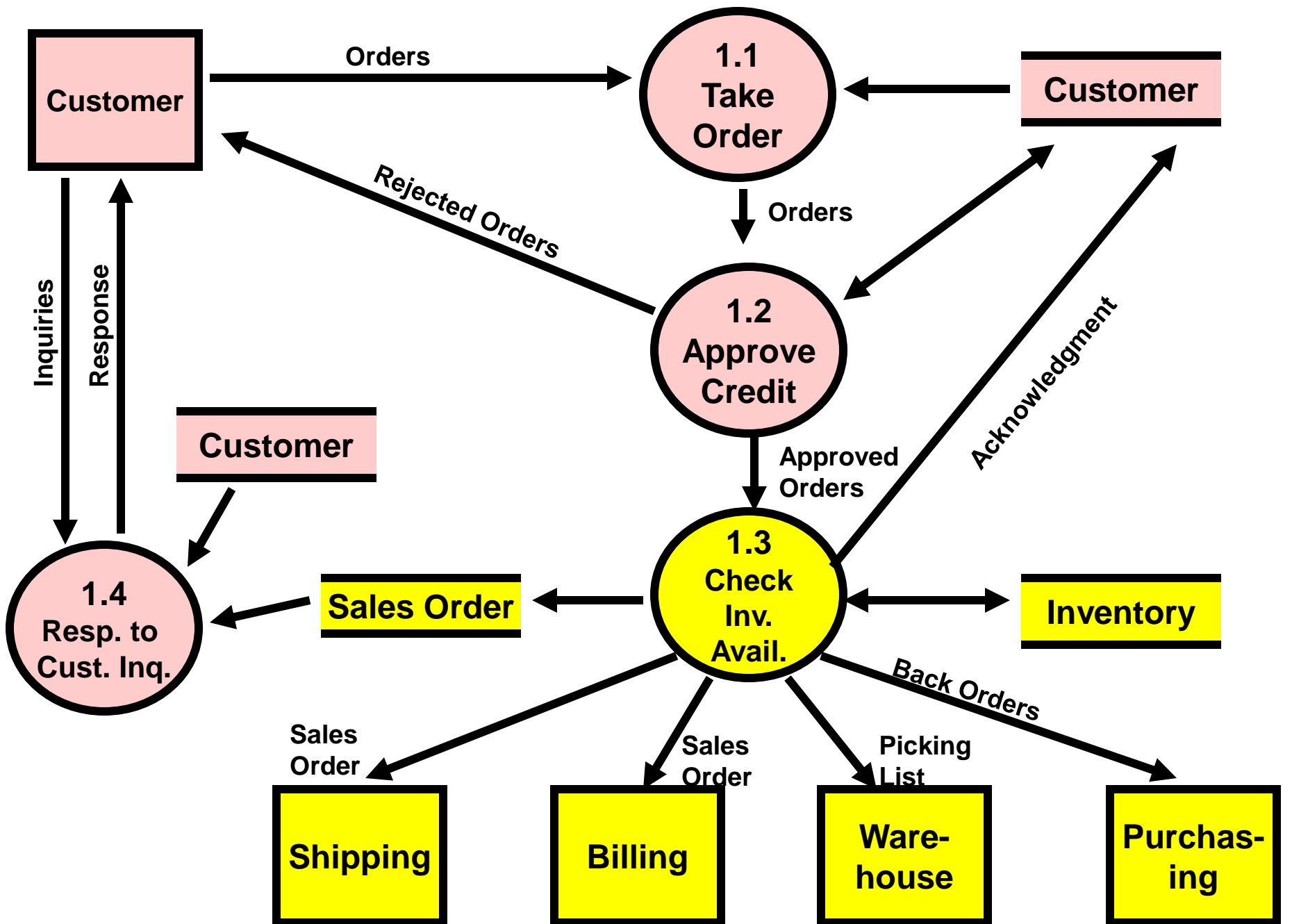
- If there are enough units to fill the order:
 - Complete the sales order.
 - Update the *quantity available* field in the inventory file.
 - Notify the following departments of the sale:
 - Shipping
 - Inventory
 - Billing
 - Send an acknowledgment to the customer.

SALES ORDER ENTRY

- If there's not enough to fill the order, initiate a back order.
 - For manufacturing companies, notify the production department that more should be manufactured.
 - For retail companies, notify purchasing that more should be purchased.

SALES ORDER ENTRY

- Accurate inventory records are needed so customers can be accurately advised of their order status.
 - Requires careful data entry in the sales and shipping processes.
 - Can be problematic in retail establishments:
 - Clerks running a similar item over the scanner several times instead of running each item.
 - Mishandling of sales returns such that returned merchandise isn't re-entered in inventory records.

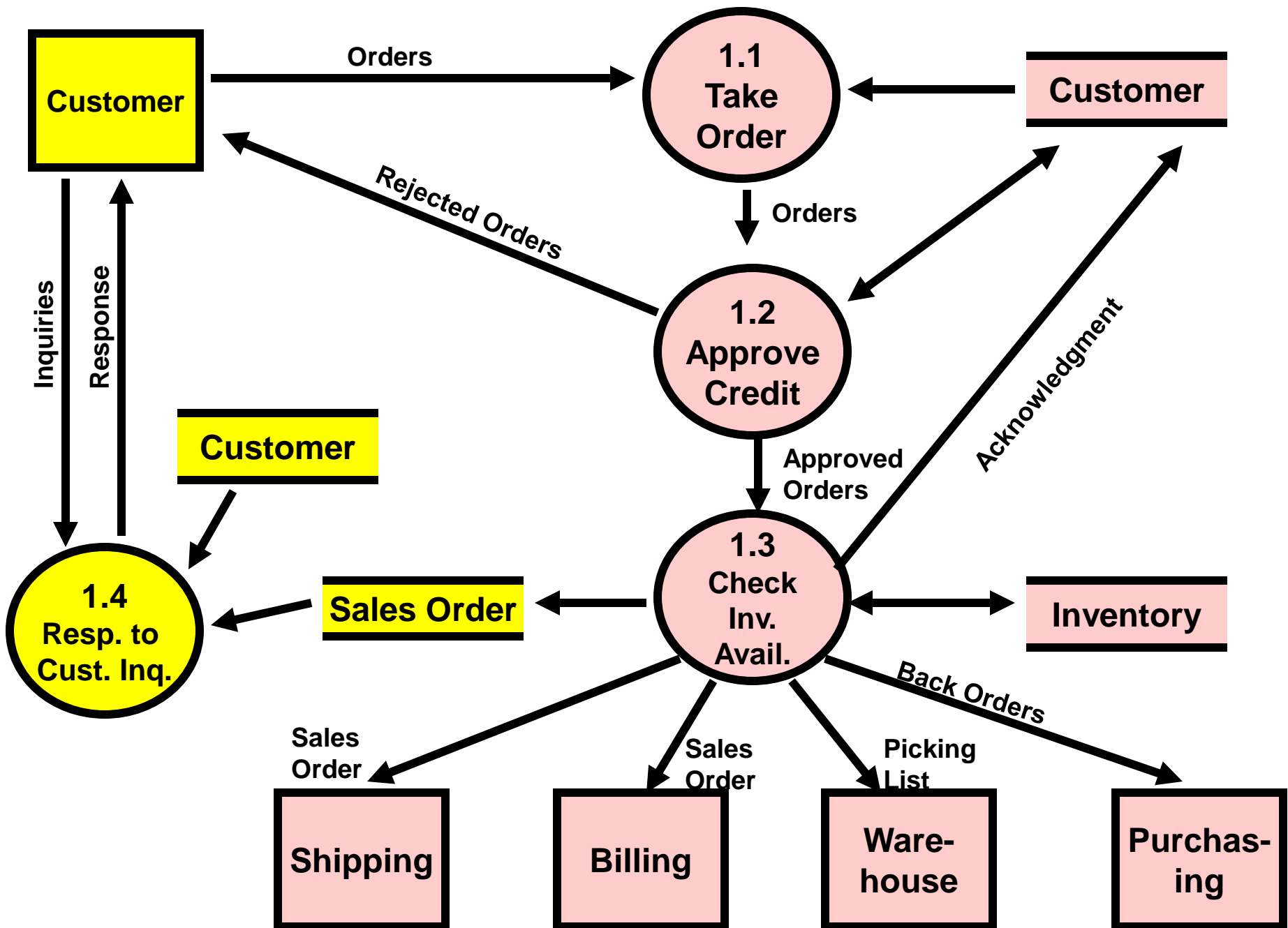


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SALES ORDER ENTRY

- Another step in the sales order entry process is responding to customer inquiries:
 - May occur before or after the order is placed.
 - The quality of this customer service can be critical to company success.



SALES ORDER ENTRY

- Many companies use Customer Relationship Management (CRM) systems to support this process:
 - Organizes customer data to facilitate efficient and personalized service.
 - Provides data about customer needs and business practices so they can be contacted proactively about the need to reorder.

SALES ORDER ENTRY

- The goal of CRM is to retain customers:
 - Rule of thumb: It takes 5 times as much effort to attract a new customer as it does to retain an existing one.
 - CRMs should be seen as tools to improve the level of customer service and encourage loyalty—not as a way to keep them off your back.

SALES ORDER ENTRY

- Transaction processing technology can be used to improve customer relationships:
 - POS systems can link to the customer master file to:
 - Automatically update accounts receivable.
 - Print customized coupons (e.g., if the customer just bought yogurt, print a yogurt coupon to encourage repeat sales).

SALES ORDER ENTRY

- IT should be used to automate responses to routine customer requests.
- Examples:
 - Providing telephone menus or Websites that lead customers to answers about:
 - Account balances
 - Order status
 - Frequently asked questions (FAQs)
 - Online chat or instant messaging.
- These methods free up customer service reps to deal with less routine issues.

EXAMPLE: Timex includes their watch manuals online, so a customer who's missing his manual can find out how to reset his watch when Daylight Savings Time rolls around. No human intervention required.

SALES ORDER ENTRY

- The effectiveness of a website depends on its design:
 - Review records of customer interactions to identify potential problems.
 - A poorly-designed, difficult-to-use website can create customer ill will.
 - A well-designed site can provide insights that lead to increased sales, e.g., by analyzing website traffic to determine products of greatest interest.

SALES ORDER ENTRY

- Sales order entry involved the steps of:
 - Taking the customer's order
 - Checking the customer's credit
 - Checking inventory availability
 - Responding to customer inquiries
- We have now completed sales order entry and are ready to move to the next step.

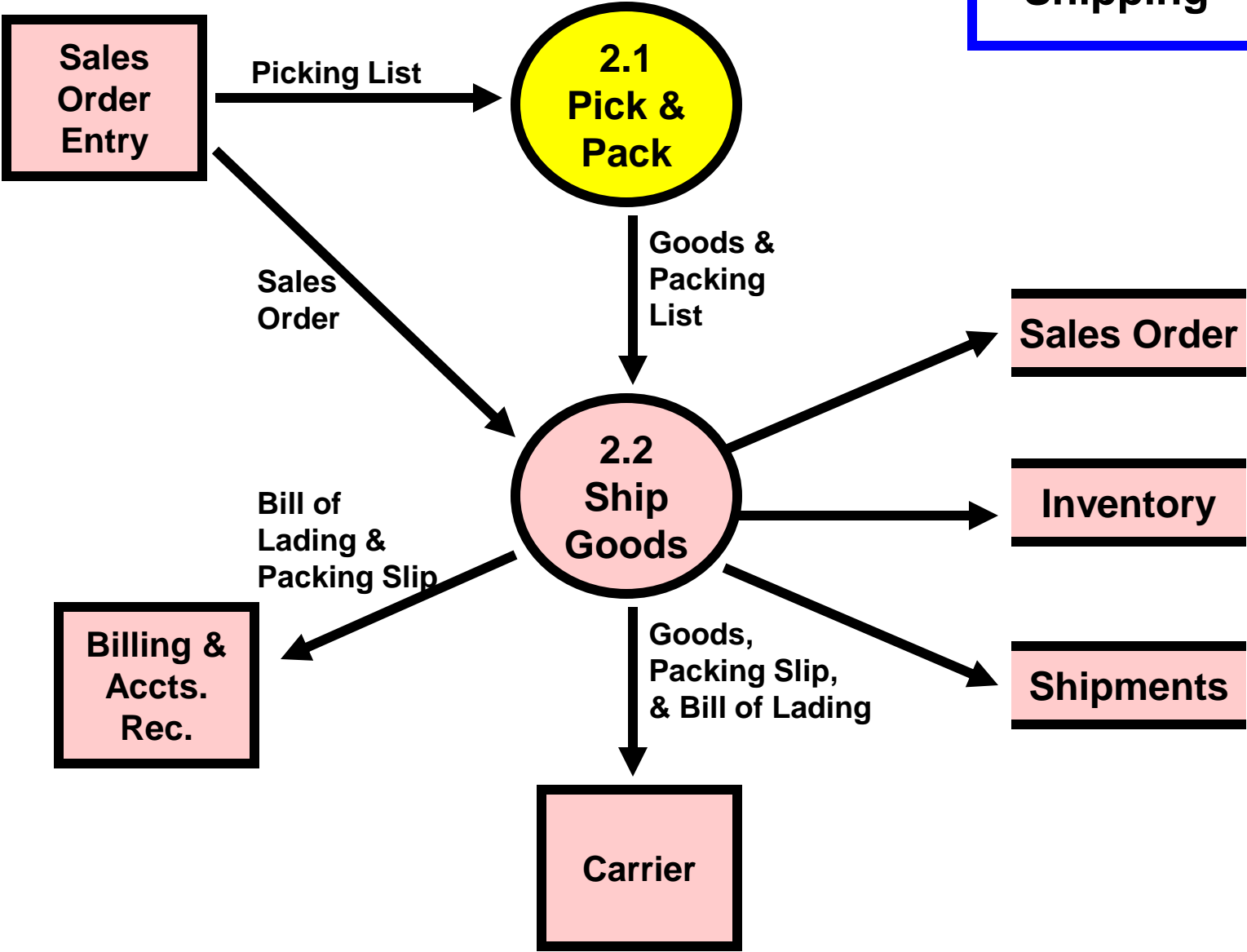
REVENUE CYCLE BUSINESS ACTIVITIES

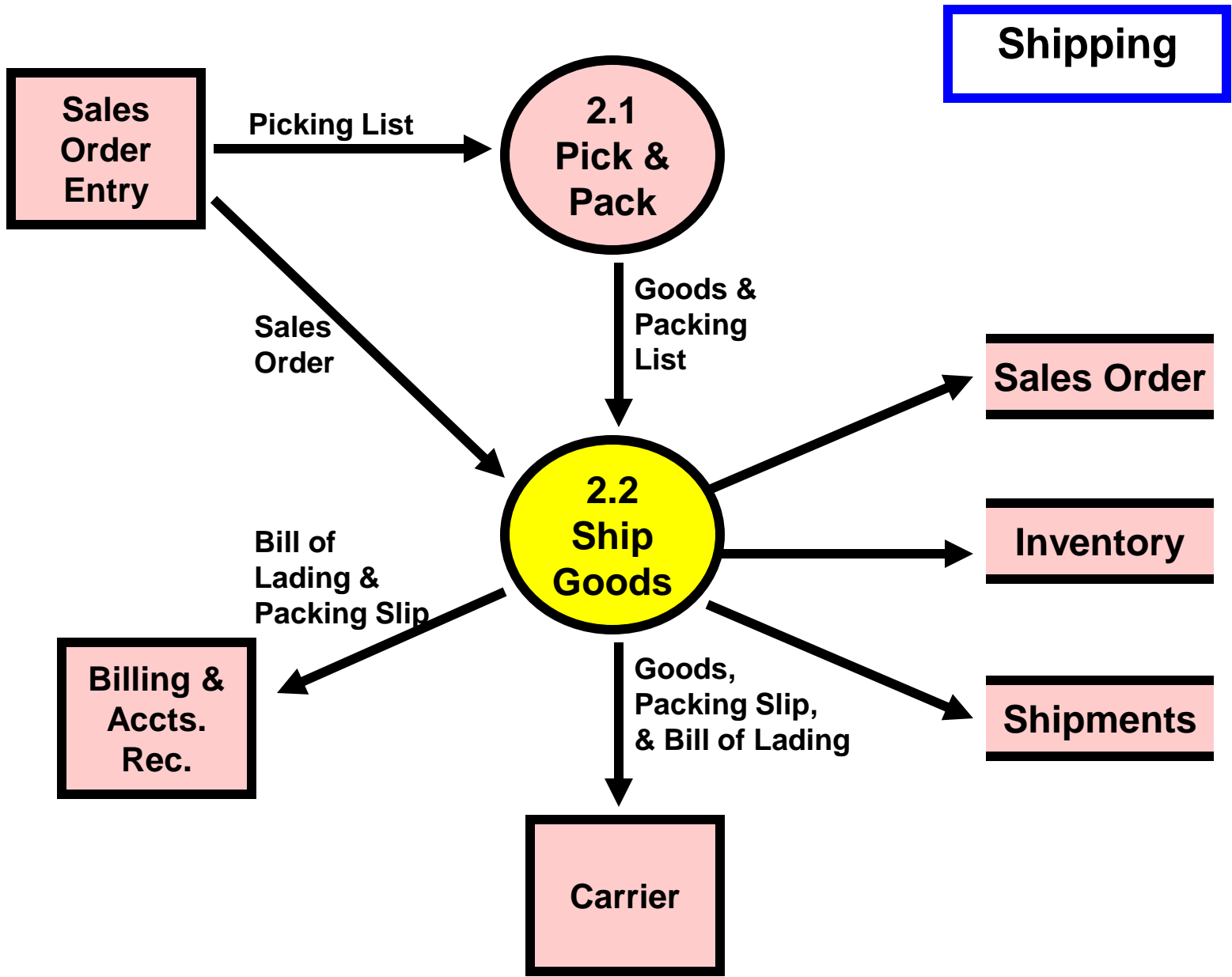
- Four basic business activities are performed in the revenue cycle:
 - Sales order entry
 - **Shipping**
 - Billing
 - Cash collection

SHIPPING

- The second basic activity in the revenue cycle is filling customer orders and shipping the desired merchandise.
- The process consists of two steps
 - Picking and packing the order
 - Shipping the order
- The warehouse department typically picks the order
- The shipping departments packs and ships the order
- Both functions include custody of inventory and ultimately report to the VP of Manufacturing.

Shipping





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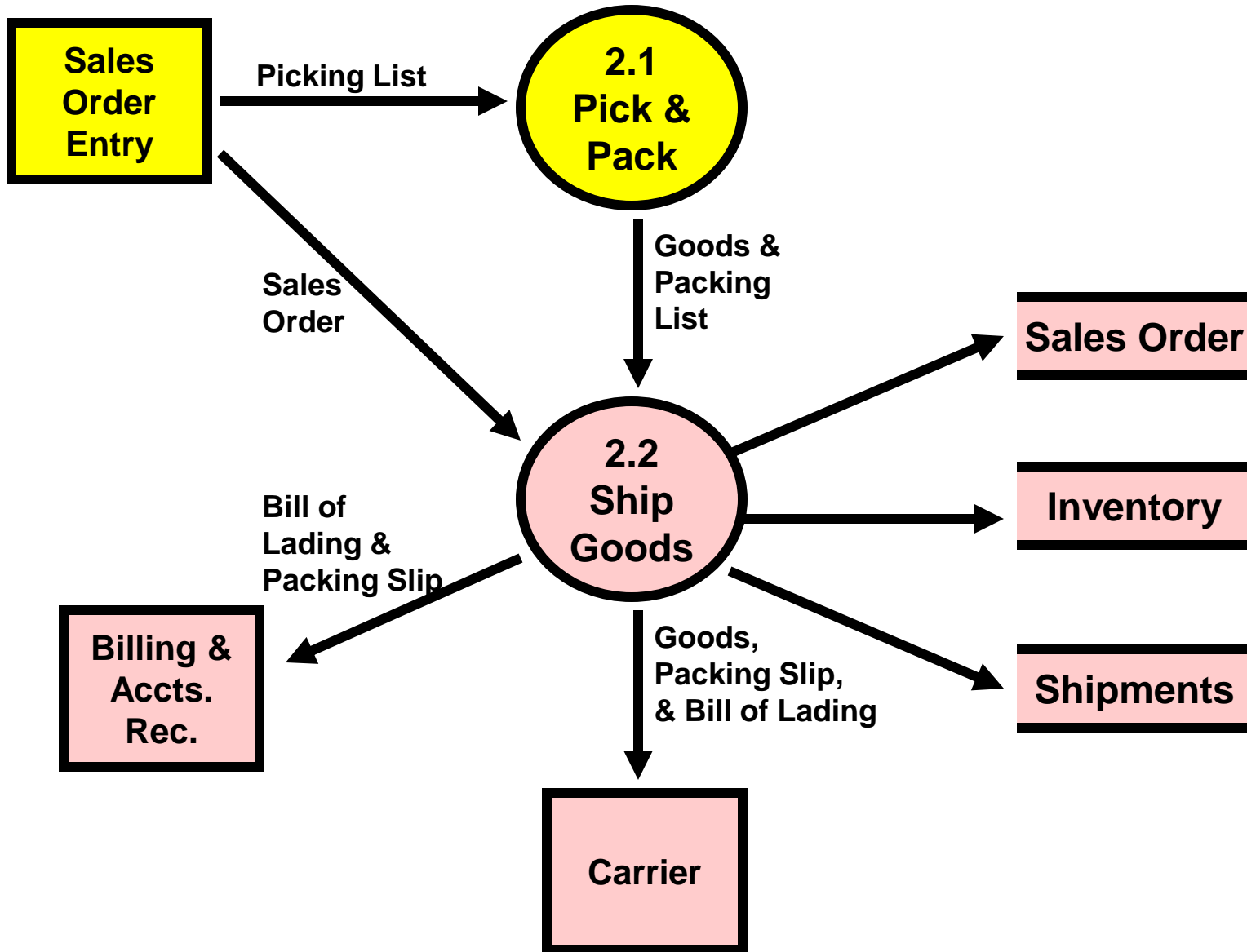
SHIPPING

- A picking ticket is printed by sales order entry and triggers the pick-and-pack process
- The picking ticket identifies:
 - Which products to pick
 - What quantity
- Warehouse workers record the quantities picked on the picking ticket, which may be a paper or electronic document.
- The picked inventory is then transferred to the shipping department.

SHIPPING

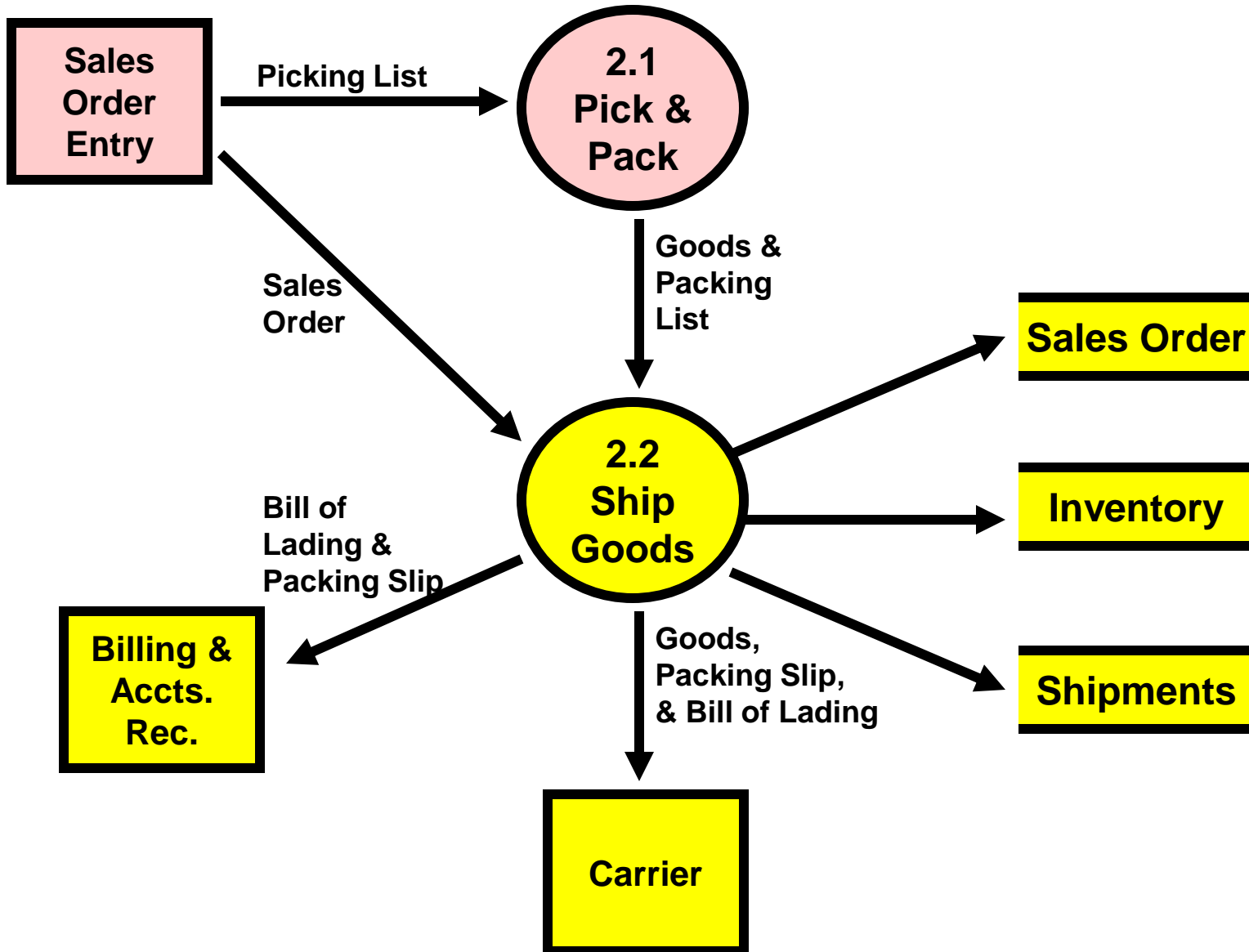
- Technology can speed the movement of inventory and improve the accuracy of perpetual inventory records:
 - Bar code scanners and RFID systems
 - Conveyer belts
 - Wireless technology so workers can receive instructions without returning to dispatch.
 - Radio frequency identification (RFID) tags:
 - Eliminate the need to align goods with scanner.
 - Allow inventory to be tracked as it moves through Warehouse Can store up to 128 bytes of data.

For companies that handle large volumes of merchandise, like Federal Express and UPS, RFID's ability to reduce by even a few seconds the time it takes to process each package can yield enormous cost savings.



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SHIPPING

- The shipping department compares the following quantities:
 - Physical count of inventory.
 - Quantities indicated on picking ticket.
 - Quantities on sales order.
- Discrepancies can arise if:
 - Items weren't stored in the location indicated
 - Perpetual inventory records were inaccurate.
- If there are discrepancies, a back order is initiated.

SHIPPING

- The clerk then records online:
 - The sales order number.
 - The item numbers ordered.
 - The quantities shipped.
 - This process:
 - Updates the quantity-on-hand field in the inventory master file.
 - Produces a packing slip.
- **The packing slip lists the quantity and description of each item in the shipment.**

SHIPPING

- The clerk then records online:
 - The sales order number.
 - The item numbers ordered.
 - The quantities shipped.
- This produces:
 - Updates the quantity-on-hand field in the inventory master file.
 - A packing slip.
 - **Multiple copies of the bill of lading.**

- **The bill of lading is a legal contract that defines responsibility for goods in transit**
- **It identifies:**
 - The carrier
 - The source
 - The destination
 - Special shipping instructions
 - Who pays for the shipping

SHIPPING

- The shipment is accompanied by:
 - The packing slip.
 - A copy of the bill of lading.
 - The freight bill.
 - (Sometimes bill of lading doubles as freight bill).
- What happens to other copies of the bill of lading?
 - One is kept in shipping to track and confirm delivery.
 - One is sent to billing to trigger an invoice.
 - One is retained by the freight carrier.

SHIPPING

- A major shipping decision is the choice of delivery methods:
 - Some companies maintain a fleet of trucks.
 - Companies increasingly outsource to commercial carriers.
 - Reduces costs.
 - Allows company to focus on core business.
 - Selecting best carrier means collecting and monitoring carrier performance data for:
 - On-time delivery.
 - Condition of merchandise delivered.

SHIPPING

- Another decision relates to the location of distribution centers.
 - Many customers want suppliers to deliver products only when needed.
 - Logistical software tools can help identify optimal locations to:
 - Minimize amount of inventory carried.
 - Meet customers' needs.
 - Also helps optimize the use of delivery vehicles on a day-to-day basis.

SHIPPING

- Globalization makes outbound logistics more complex:
 - Distribution methods differ around the world in terms of efficiency and effectiveness.
 - Country-specific taxes and regulations affect distribution choices.
 - Logistical software can also help with these issues.
- Advanced communications systems can provide real-time info on shipping status and thus add value:
 - If you know a shipment will be late and notify the customer, it helps the customer adapt.

REVENUE CYCLE BUSINESS ACTIVITIES

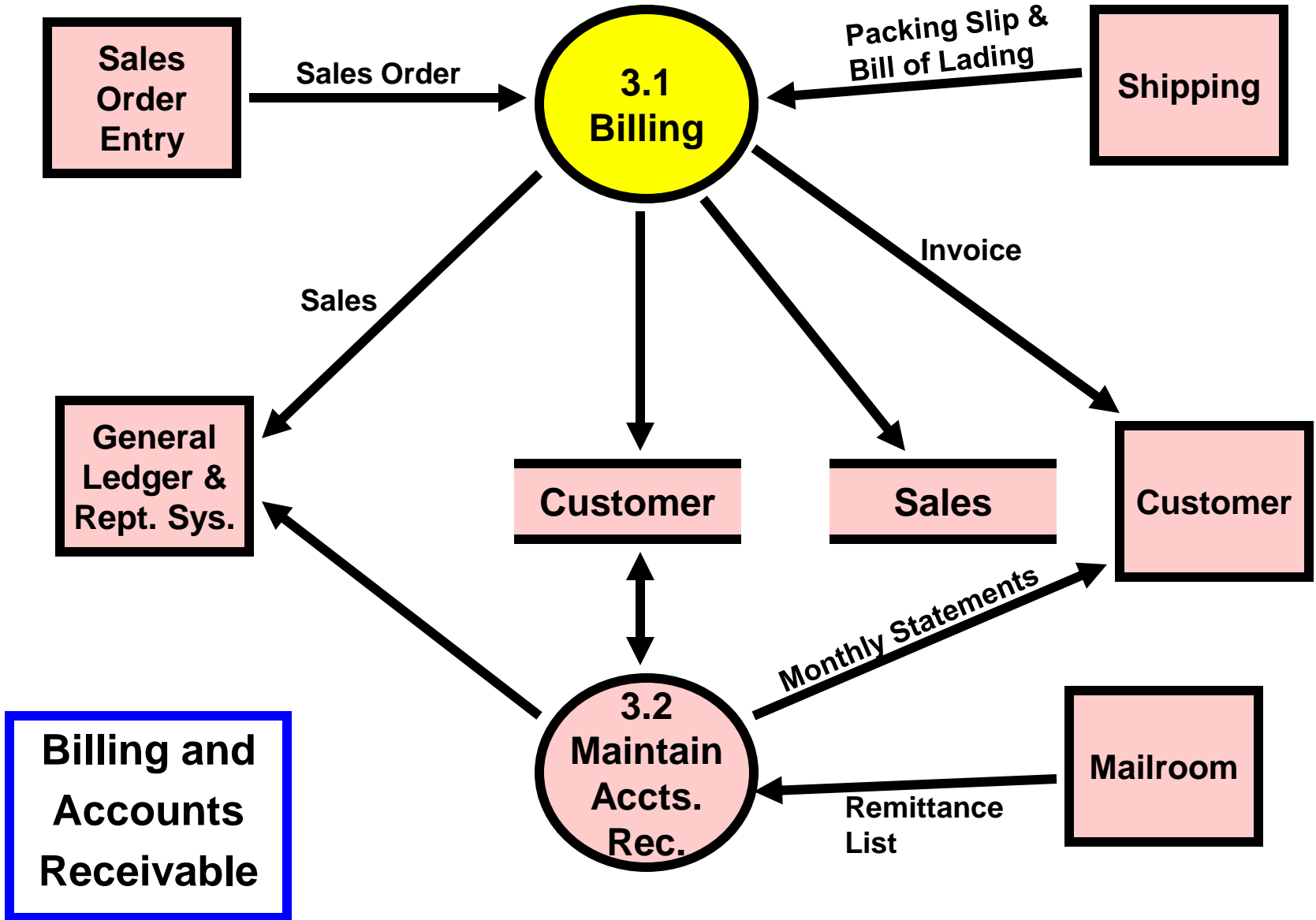
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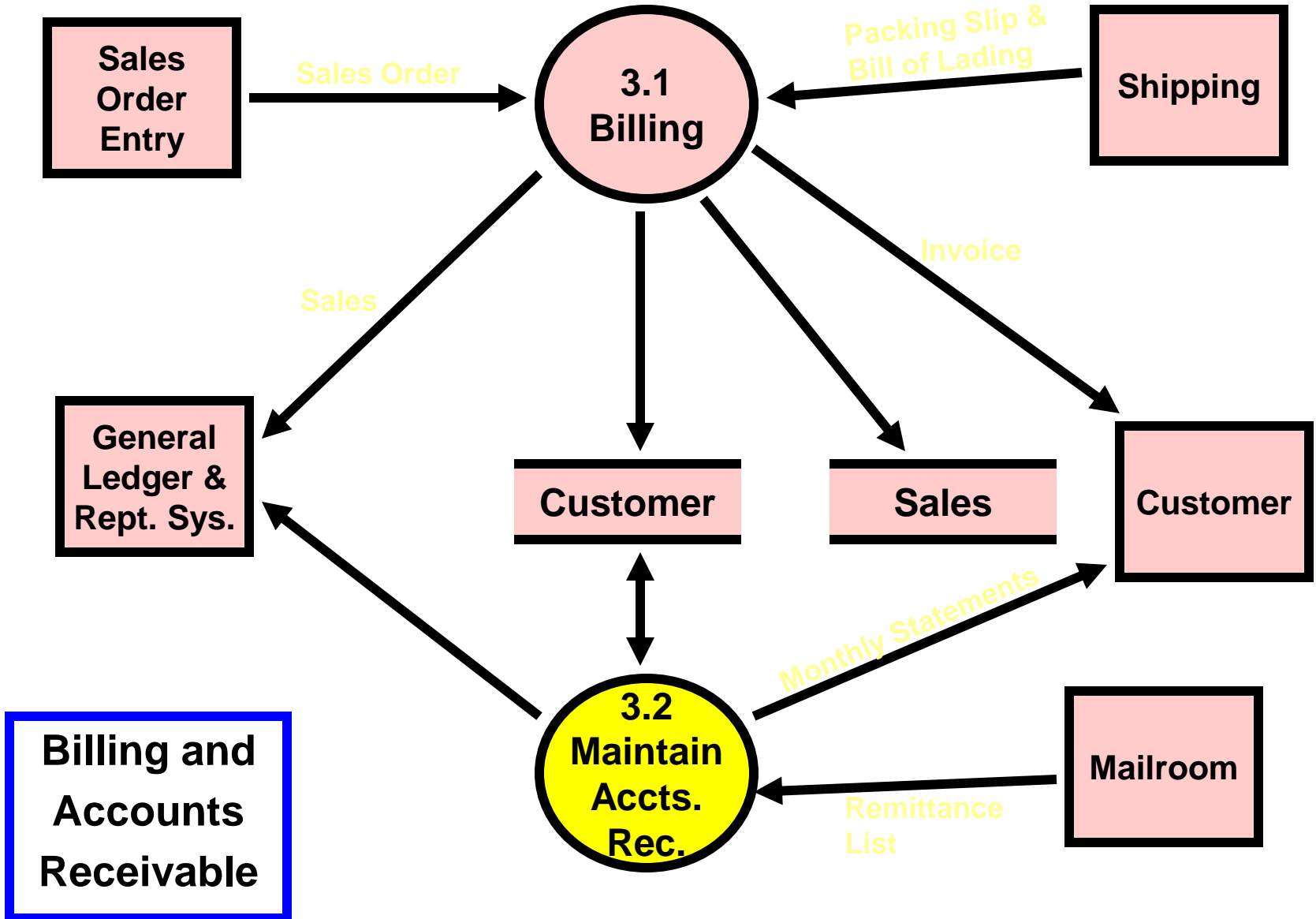
BILLING

- The third revenue cycle activity is billing customers.
- This activity involves two tasks:
 - Invoicing
 - Updating accounts receivable

BILLING

- Accurate and timely billing is crucial.
- Billing is an information processing activity that repackages and summarizes information from the sales order entry and shipping activities.
- Requires information from:
 - **Shipping Department** on items and quantities shipped.
 - **Sales** on prices and other sales terms.





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BILLING

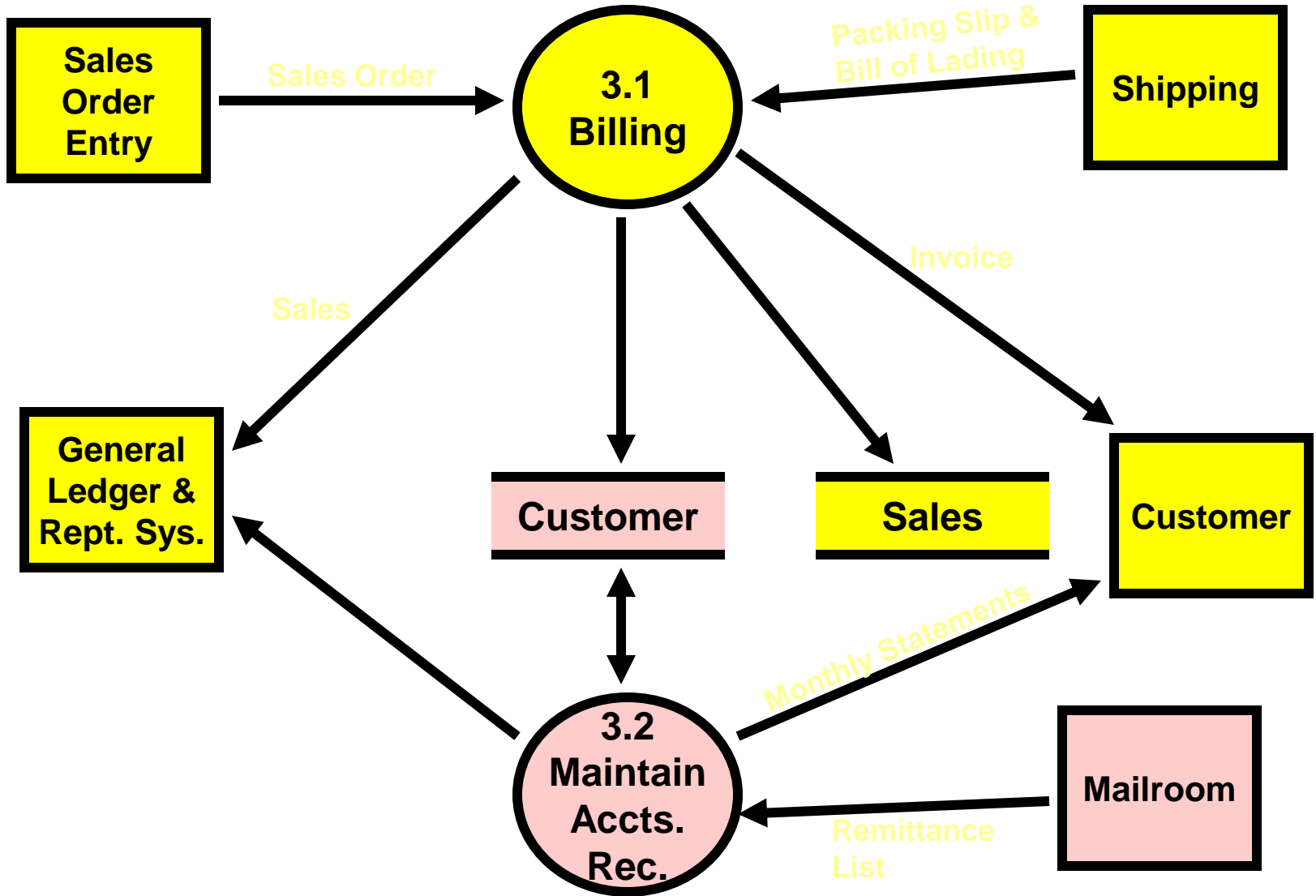
- The basic document created is the sales invoice. The invoice notifies the customer of:
 - The amount to be paid.
 - Where to send payment.
- Invoices may be sent/received:
 - In paper form.
 - By EDI (Electronic Data Interchange).
 - Common for larger companies.
 - Faster and cheaper than snail mail.

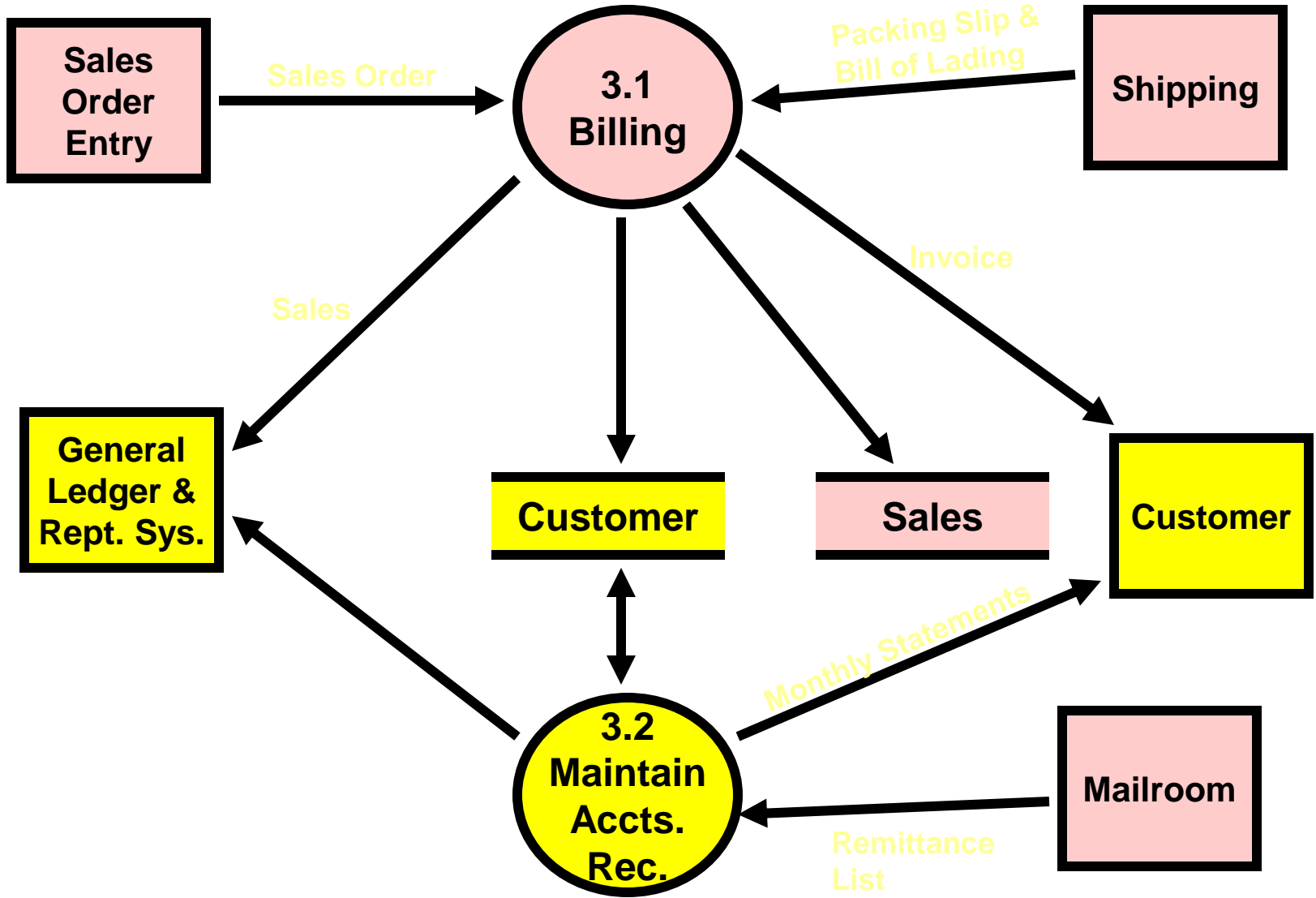
BILLING

- When buyer and seller have accurate online systems:
 - Invoicing process may be skipped.
 - Seller sends an email when goods are shipped.
 - Buyer sends acknowledgment when goods are received.
 - Buyer automatically remits payments within a specified number of days after receiving the goods.
 - Can produce substantial cost savings.

BILLING

- An integrated AIS may also merge the billing process with sales and marketing by using data about a customer's past purchases to send information about related products and services with his monthly statement.





BILLING

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- This activity involves two tasks:
 - Invoicing
 - **Updating accounts receivable**

BILLING

- The accounts receivable function reports to the controller.
- This function performs two basic tasks:
 - Debits customer accounts for the amount the customer is invoiced.
 - Credits customer accounts for the amount of customer payments.
- Two basic ways to maintain accounts receivable:
 - Open-invoice method
 - Balance forward method

BILLING

- Open-invoice method:
 - Customers pay according to each invoice.
 - Two copies of the invoice are typically sent to the customer.
 - Customer is asked to return one copy with payment.
 - This copy is a turnaround document called a *remittance advice*.
 - Advantages of open-invoice method:
 - Conducive to offering early-payment discounts
 - Results in more uniform flow of cash collections
 - Disadvantages of open-invoice method:
 - More complex to maintain

BILLING

- Balance forward method:
 - Customers pay according to amount on their monthly statement, rather than by invoice.
 - Monthly statement lists transactions since the last statement and lists the current balance.
 - The tear-off portion includes pre-printed information with customer name, account number, and balance
 - Customers are asked to return the stub, which serves as the remittance advice.
 - Remittances are applied against the total balance rather than against a specific invoice.

BILLING

– Advantages of balance-forward method:

- It's more efficient and reduces costs because you don't bill for each individual sale.
- It's more convenient for the customer to make one monthly remittance.

BILLING

- Cycle billing is commonly used with the balance-forward method.
 - Monthly statements are prepared for subsets of customers at different times.
 - EXAMPLE: Bill customers according to the following schedule:
 - 1st week of month—Last names beginning with A-F
 - 2nd week of month—Last names beginning with G-M
 - 3rd week of month—Last names beginning with N-S
 - 4th week of month—Last names beginning with T-Z

BILLING

- Advantages of cycle billing:
 - Produces more even cash flow.
 - Produces more even workload.
 - Doesn't tie up computer for several days to print statements.

BILLING

- Image processing can improve the efficiency and effectiveness of managing customer accounts.
 - Digital images of customer remittances and accounts are stored electronically
- Advantages:
 - Fast, easy retrieval.
 - Copy of document can be instantly transmitted to customer or others.
 - Multiple people can view document at once.
 - Drastically reduces document storage space.

BILLING

- Exception procedures: Account adjustments and write-offs:
 - Adjustments to customer accounts may need to be made for:
 - Returns
 - Allowances for damaged goods
 - Write-offs as uncollectible
 - These adjustments are handled by the credit manager.

BILLING

- If there's a return, the credit manager:
 - Receives confirmation from the receiving dock that the goods were actually returned to inventory.
 - Then issues a credit memo which authorizes the crediting of the customer's account.
- If goods are slightly damaged, the customer may agree to keep them for a price reduction.
 - Credit manager issues a credit memo to reflect that reduction.

BILLING

- Distribution of credit memos:
 - One copy to accounts receivable to adjust the customer account.
 - One copy to the customer.
- If repeated attempts to collect payment fail, the credit manager may issue a credit memo to write off an account.
 - A copy will not be sent to the customer.

BILLING

- **NOTE:** Because accounts receivable handles the customer accounts, why does someone else have to issue the credit memos?
 - **EXAMPLE:** An accounts receivable employee could allow a relative or friend (or even himself) to run up an account with the company and then simply write the account off or credit it for returns and allowances.
- Having the credit memos issued by the credit manager is good segregation of duties between:
 - Authorizing a transaction (write-off).
 - Recording the transaction.

REVENUE CYCLE BUSINESS ACTIVITIES

- Four basic business activities are performed in the revenue cycle:
 - Sales order entry
 - Shipping
 - Billing
 - **Cash collection**

CASH COLLECTIONS

- The final activity in the revenue cycle is collecting cash from customers.
- The cashier, who reports to the treasurer, handles customer remittances and deposits them in the bank.
- Because cash and checks are highly vulnerable, controls should be in place to discourage theft.
 - Accounts receivable personnel should not have access to cash (including checks).

CASH COLLECTIONS

- Possible approaches to collecting cash:
 - **Turnaround documents forwarded to accounts receivable.**

- **The mailroom opens customer envelopes and forwards to accounts receivable either:**
 - **Remittance advices.**
 - **Photocopies of remittance advices.**
 - **A remittance list prepared in the mailroom.**

CASH COLLECTIONS

- Possible approaches to collecting cash:
 - Turnaround documents forwarded to accounts receivable.
 - **Lockbox arrangements.**

- **Customers remit payments to a bank P.O. box.**
- **The bank sends the company:**
 - Remittance advices.
 - An electronic list of the remittances.
 - Copies of the checks.
- **Advantages:**
 - Prevents theft by company employees.
 - Improves cash flow management.
 - Lockboxes may be regional, which reduces time in the mail.
 - Checks are deposited immediately on receipt.
 - Foreign banks can be utilized for international customers.

CASH COLLECTIONS

- Possible approaches to collecting cash:
 - Turnaround documents forwarded to accounts receivable.
 - Lockbox arrangements.
 - **Electronic lockboxes.**

- **Upon receiving and scanning the checks, the bank immediately sends electronic notification to the company, including:**
 - **Customer account number**
 - **Amount remitted**

CASH COLLECTIONS

- Possible approaches to collecting cash:
 - Turnaround documents forwarded to accounts receivable.
 - Lockbox arrangements.
 - Electronic lockboxes.

- **Customers remit payment electronically to the company's bank.**
- **Eliminates mailing delays.**
- **Typically done through banking system's Automated Clearing House (ACH) network.**
- **PROBLEM: Some banks do not have both EDI and EFT capabilities, which complicates the task of crediting the customer's account on a timely basis.**

CASH COLLECTIONS

- Possible approaches to collecting cash:
 - Turnaround documents forwarded to accounts receivable.
 - Lockbox arrangements.
 - Electronic lockboxes.
 - Electronic funds transfer and bill payment.
 - **Financial electronic data interchange (FEDI).**

- **Integrates EFT with EDI.**
- **Remittance data and funds transfer instructions are sent simultaneously by the customer.**
- **Requires that both buyer and seller use EDI-capable banks.**

CASH COLLECTIONS

- Possible approaches to collecting cash:
 - Turnaround documents forwarded to accounts receivable.
 - Lockbox arrangements.
 - Electronic lockboxes.
 - Electronic funds transfer and bill payment.
 - Financial electronic data interchange (FEDI).
 - **Accept credit cards or procurement cards from customers.**

- **Speeds collection because credit card issuer usually transfers funds within two days.**
- **Typically costs 2–4% of gross sales price.**

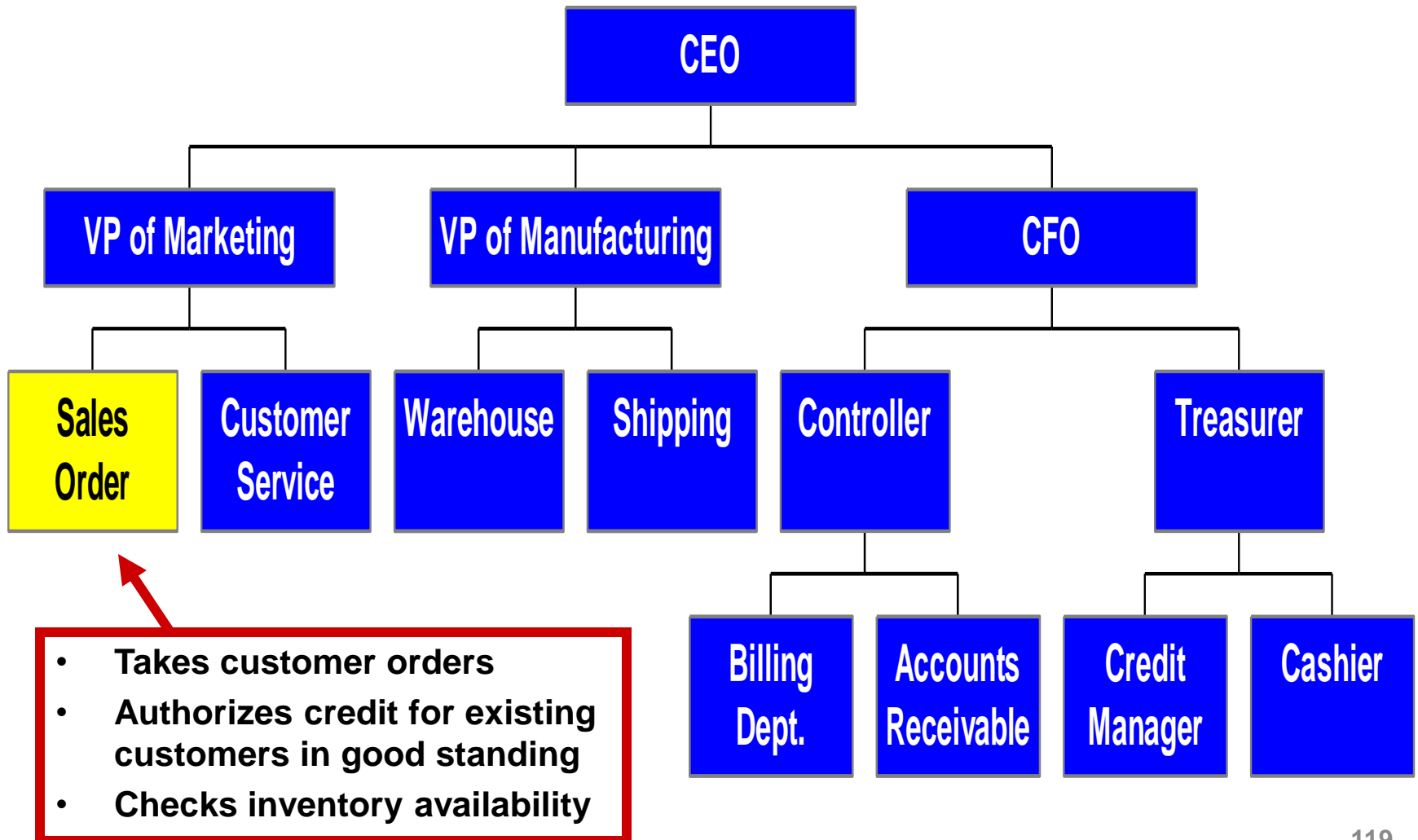
CASH COLLECTIONS

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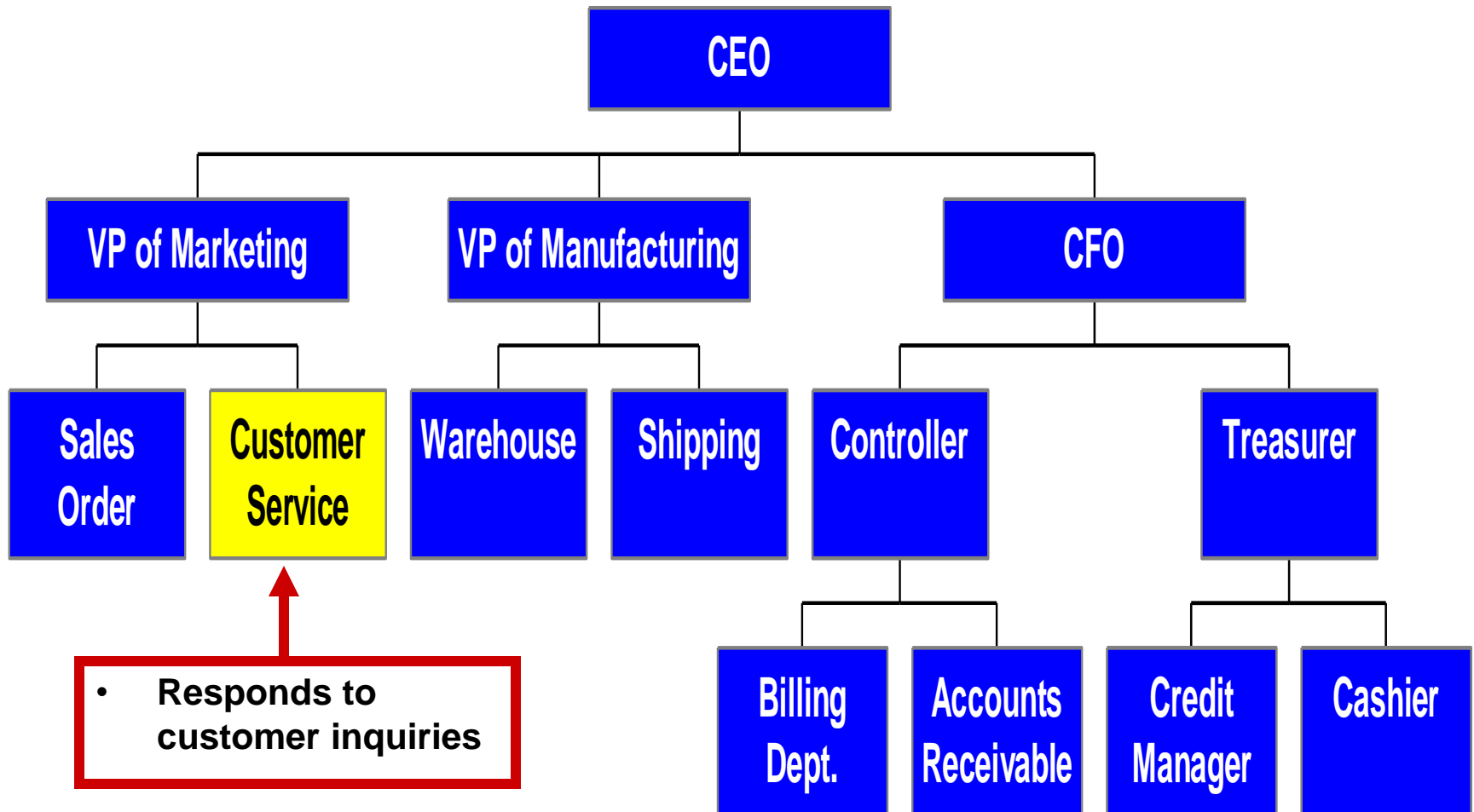
REVIEW OF REVENUE CYCLE ACTIVITIES

- Before we move on to discuss internal controls in the revenue cycle, let's do a brief review of the organization chart, including:
 - Who does what in the revenue cycle?
 - To whom do they typically report?

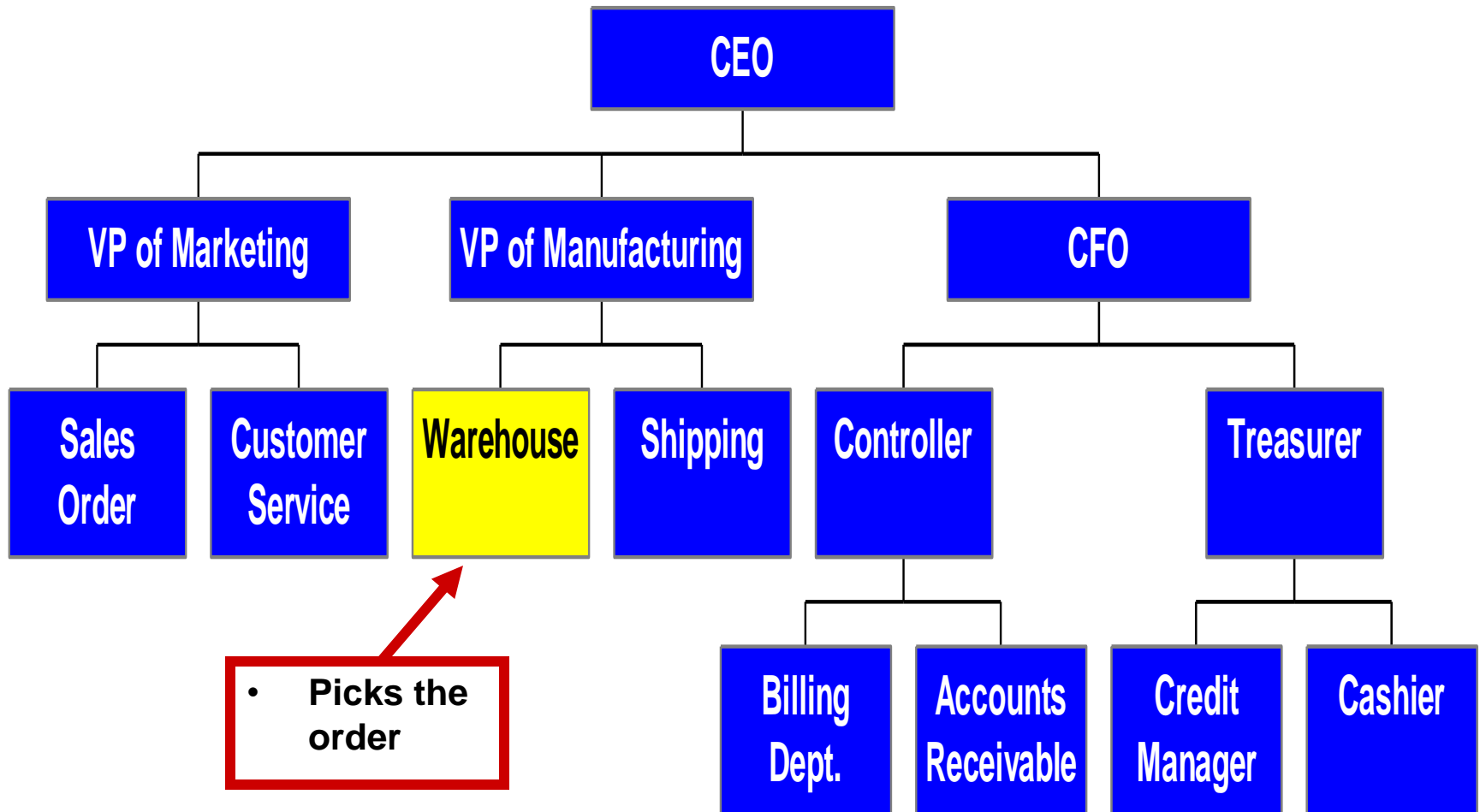
PARTIAL ORGANIZATION CHART FOR UNITS INVOLVED IN REVENUE CYCLE



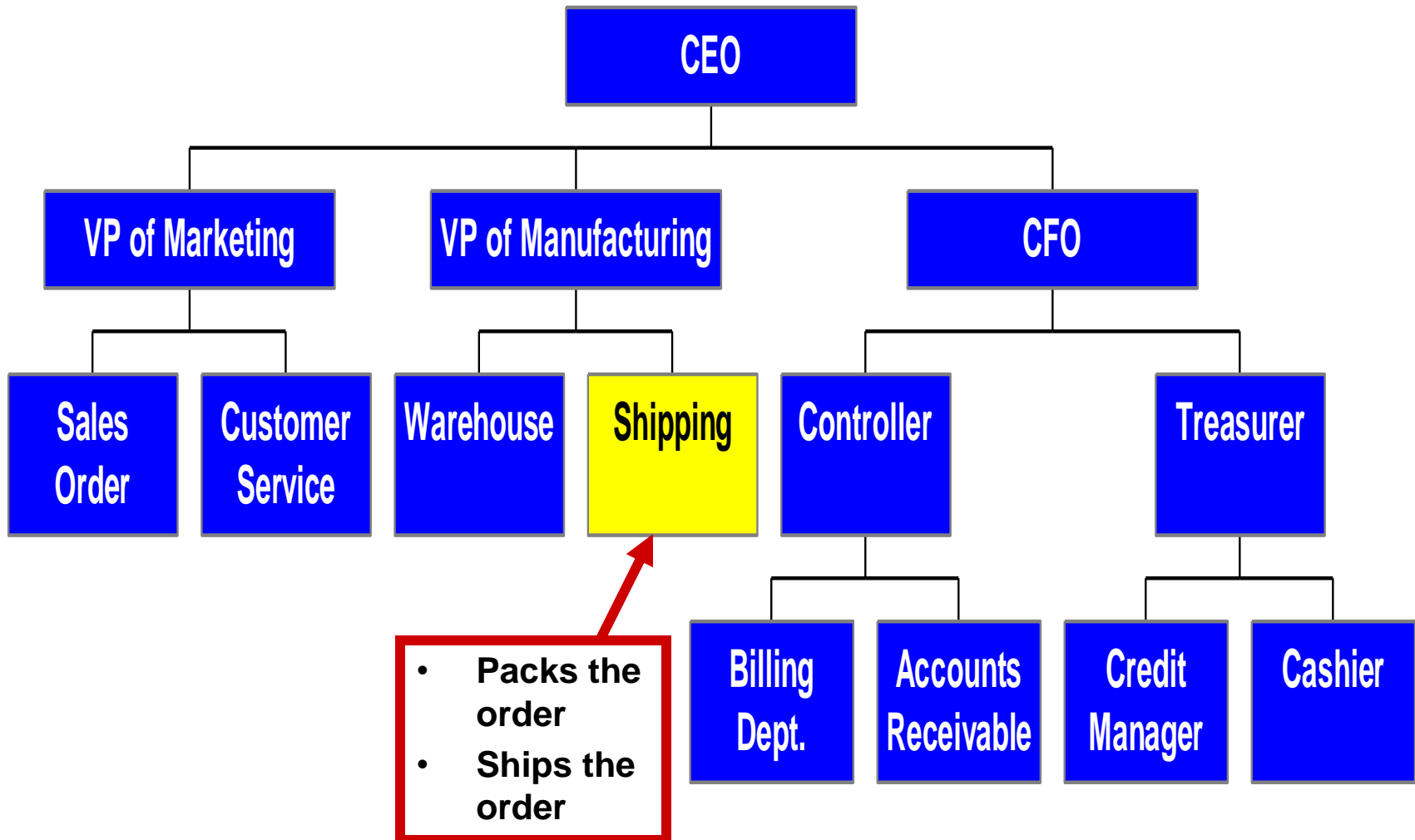
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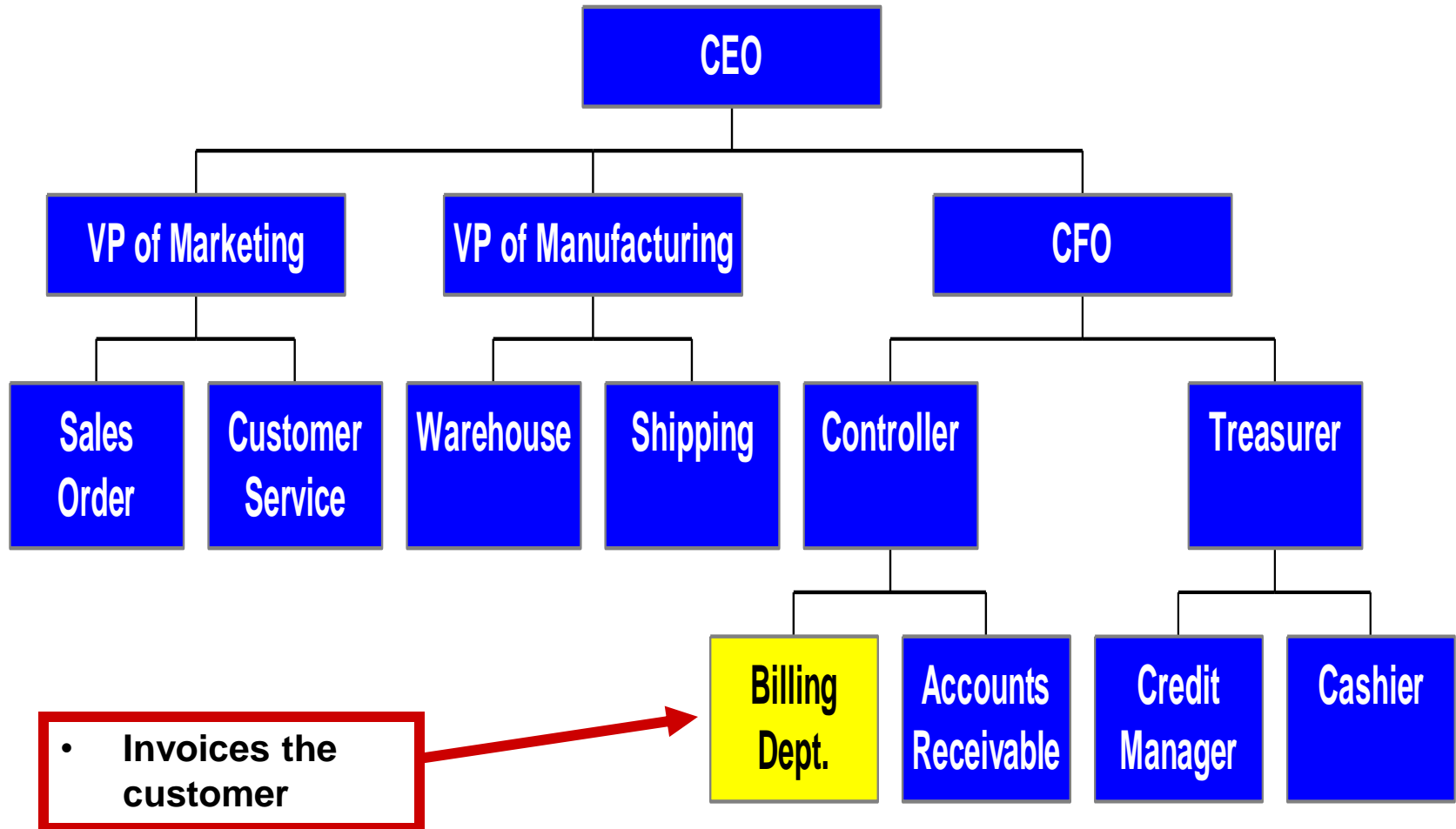
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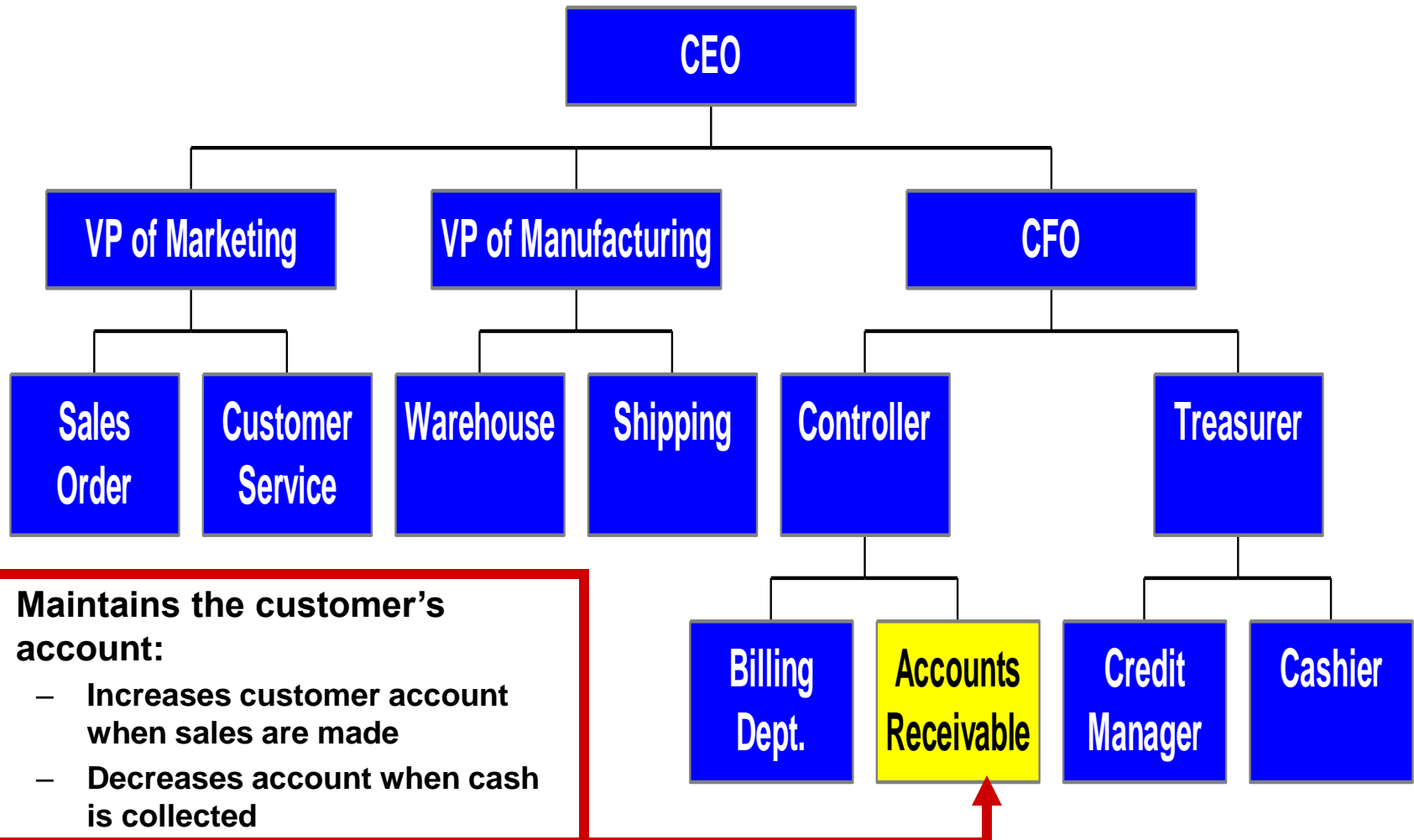
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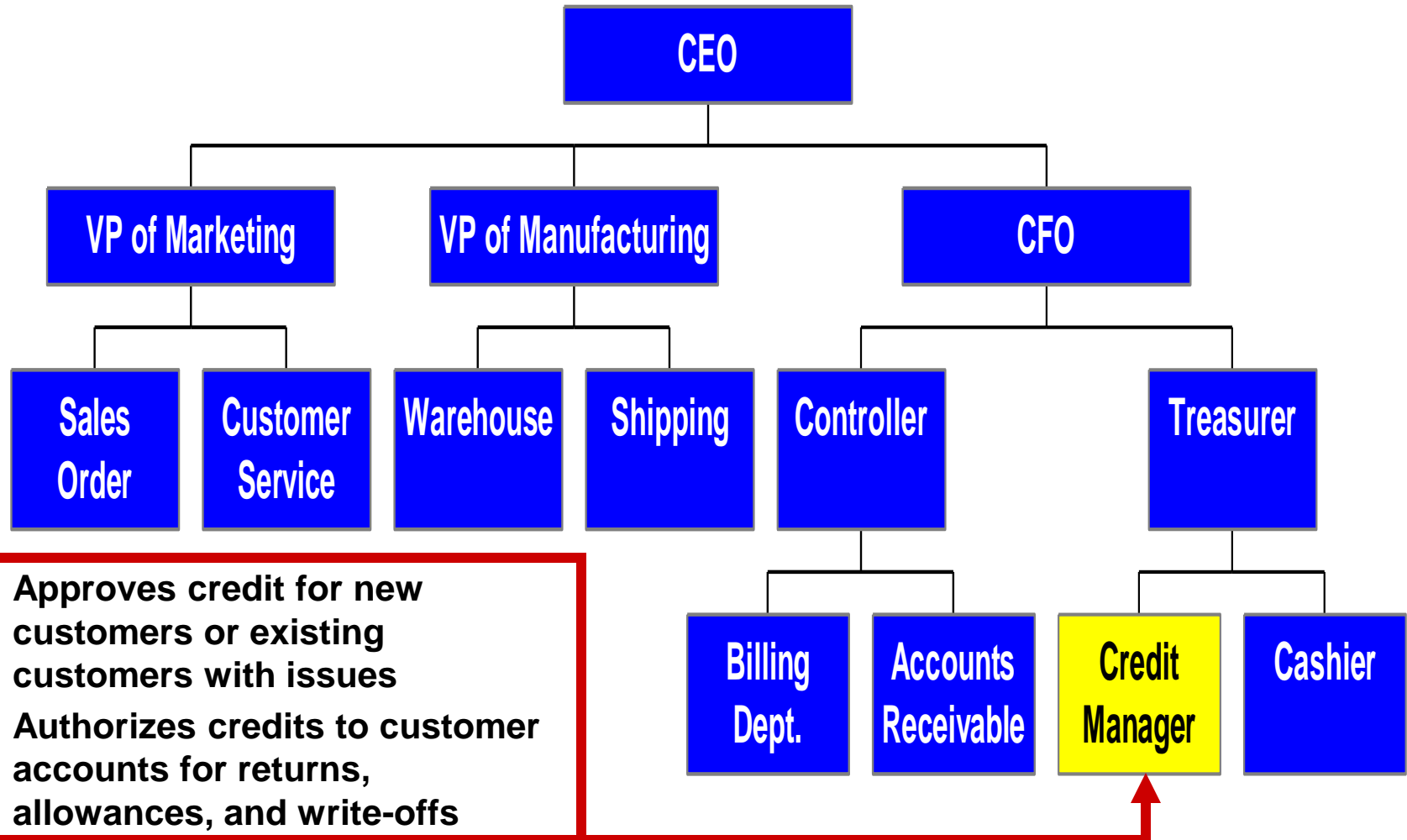
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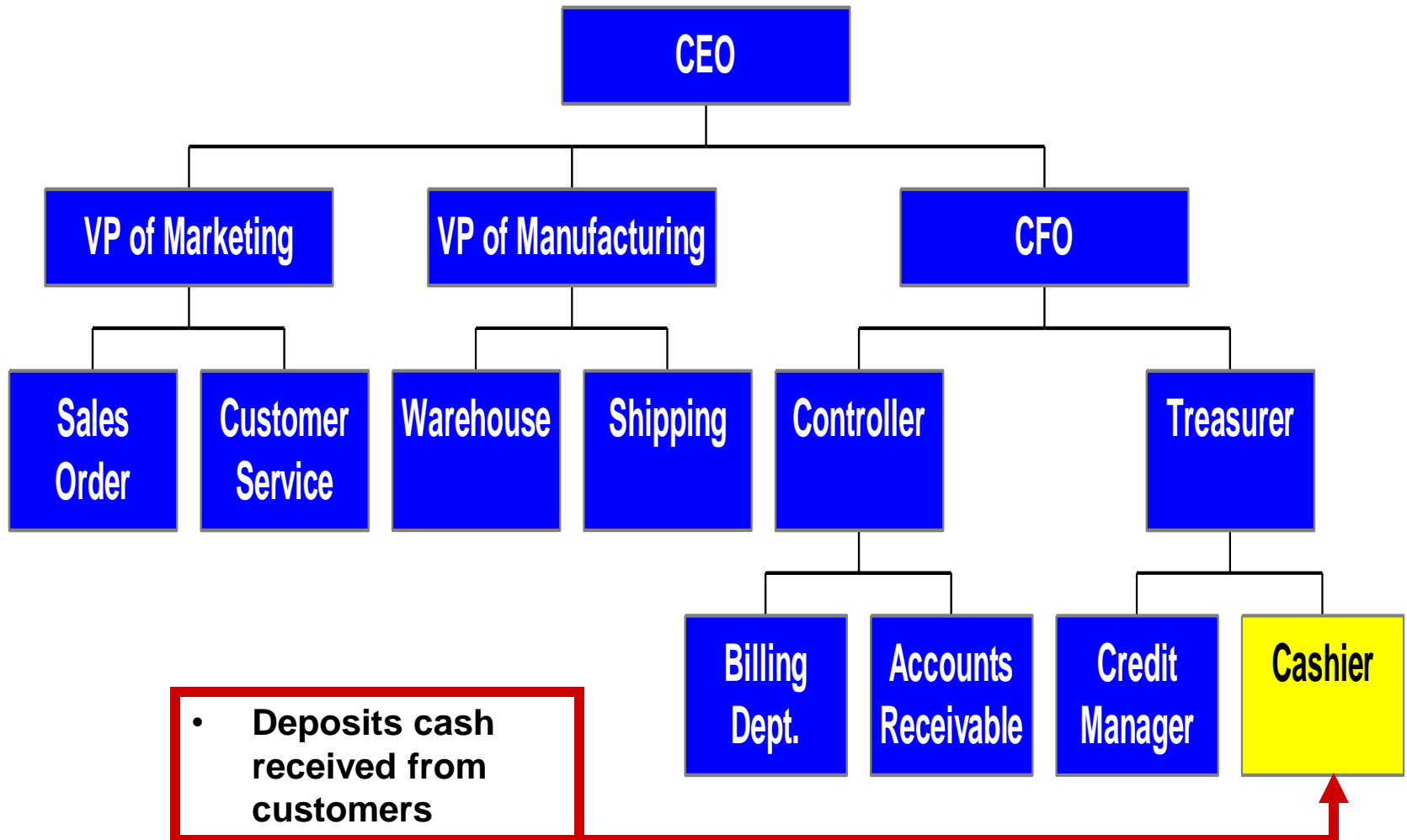
PARTIAL ORGANIZATION CHART FOR UNITS INVOLVED IN REVENUE CYCLE



PARTIAL ORGANIZATION CHART FOR UNITS INVOLVED IN REVENUE CYCLE



PARTIAL ORGANIZATION CHART FOR UNITS INVOLVED IN REVENUE CYCLE



CONTROL OBJECTIVES, THREATS, AND PROCEDURES

- In the revenue cycle (or any cycle), a well-designed AIS should provide adequate controls to ensure that the following objectives are met:
 - All transactions are properly authorized.
 - All recorded transactions are valid.
 - All valid and authorized transactions are recorded.
 - All transactions are recorded accurately.
 - Assets are safeguarded from loss or theft.
 - Business activities are performed efficiently and effectively.
 - The company is in compliance with all applicable laws and regulations.
 - All disclosures are full and fair.

CONTROL OBJECTIVES, THREATS, AND PROCEDURES

- We'll soon be discussing the threats that may occur in the revenue cycle.
- If you understand the preceding objectives, you probably won't have to worry about "memorizing" threats.
- Almost every threat represents a violation of one of those control objectives.
- Let's look more closely.

CONTROL OBJECTIVES, THREATS, AND PROCEDURES

- In the revenue cycle (or any cycle), a well-designed AIS should provide adequate controls to ensure that the following objectives are met:
 - **All transactions are properly authorized.**
 - All recorded transactions are valid.
 - All valid and authorized transactions are recorded.
 - All transactions are recorded accurately.
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- A related threat would be that a transaction would go through without proper authorization.
- Such a transaction might result from either a mistake or a fraud.
- **EXAMPLE:** An employee might process an unauthorized write-off of his own account, so that he wouldn't have to pay.

CONTROL OBJECTIVES, THREATS, AND PROCEDURES

- In the revenue cycle (or any cycle), a well-designed AIS should provide adequate controls to ensure that the following objectives are met:
 - All transactions are properly authorized
 - **All recorded transactions are valid**

- **The related threat is that a transaction would be recorded that isn't valid, i.e., it didn't actually occur.**
- **EXAMPLE 1: An employee records a return of merchandise on his own account when the goods were never really returned.**
- **EXAMPLE 2: Many financial statement frauds involve companies recording totally fictitious revenues in order to make the company's financial position appear more favorable than it actually is.**

CONTROL OBJECTIVES, THREATS, AND PROCEDURES

- In the revenue cycle (or any cycle), a well-designed AIS should provide adequate controls to ensure that the following objectives are met:
 - All transactions are properly authorized.
 - All recorded transactions are valid.
 - **All valid and authorized transactions are recorded.**
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- The related threat would be that a transaction that actually did occur didn't get recorded.
- **EXAMPLE 1:** An employee fails to record a sale that the company made to him so he won't have to pay the receivable.
- **EXAMPLE 2:** In financial statement fraud cases, the company often fails to record transactions that reduce income or net assets, e.g., doesn't record returns from customers or discounts granted to them. This omission causes net sales to appear higher than they really are.

CONTROL OBJECTIVES, THREATS, AND PROCEDURES

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 - All transactions are properly authorized.
 - All recorded transactions are valid.
 - All valid and authorized transactions are recorded.
 - **All transactions are recorded accurately.**
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- The threat would be that a transaction is recorded inaccurately. Inaccurate recording typically means that a transaction is recorded either:
 - In the wrong amount
 - In the wrong account
 - In the wrong time period
- It could also mean that the transaction was credited to the wrong agents or participants.

CONTROL OBJECTIVES, THREATS, AND PROCEDURES

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 - Business activities are performed efficiently and effectively.
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 - All disclosures are full and fair.

- **EXAMPLES: A fraud might involve a company:**
 - Over-recording the amount of a sale (wrong amount)
 - Recording an unearned revenue as an earned revenue (wrong account)
 - Recording a sale earlier than it occurs (wrong time period)
 - Crediting the wrong salesperson for the sale (wrong agent)

CONTROL OBJECTIVES, THREATS, AND PROCEDURES

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- following objectives are met:
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 - All valid and authorized transactions are recorded.
 - **All transactions are recorded accurately.**
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 - Business activities are performed efficiently and effectively.
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 - All disclosures are full and fair.

- The reverse side of these activities might include:
 - Under-recording a sales return (wrong amount)
 - Debiting an asset account instead of sales returns (wrong account)
 - Recording the return later than it actually occurred (wrong time period)

CONTROL OBJECTIVES, THREATS, AND PROCEDURES

- In the revenue cycle (or any cycle), a well-designed AIS should provide adequate controls to ensure that the following objectives are met:
 - All transactions are properly authorized.
 - All recorded transactions are valid.
 - All valid and authorized transactions are recorded.
 - All transactions are recorded accurately.
 - **Assets are safeguarded from loss or theft.**
 - Business activities are performed efficiently and effectively.
 - The company is in compliance with all applicable laws and regulations.
 - All disclosures are full and fair.

- Threats in this area usually involve theft, destruction, or misuse of assets, including data.

CONTROL OBJECTIVES, THREATS, AND PROCEDURES

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 - All transactions are properly authorized.
 - All recorded transactions are valid.
 - All valid and authorized transactions are recorded.
 - All transactions are recorded accurately.
 - Assets are safeguarded from loss or theft.
 - **Business activities are performed efficiently and effectively.**
 - The company is in compliance with all applicable laws and regulations.
 - All disclosures are full and fair.

- The threat is that the activities would be performed inefficiently or ineffectively.

CONTROL OBJECTIVES, THREATS, AND PROCEDURES

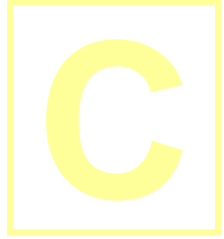
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- The obvious threat is non-compliance with laws and regulations.
- An example in the revenue cycle could be a car dealer who:
 - Sells a vehicle to which he doesn't have clear title; or
 - Refuses to allow a customer to return a car in violation of state lemon laws.
- Another example might be requesting a credit check on a customer in violation of the Fair Credit Reporting Act (FCRA).

CONTROL OBJECTIVES, THREATS, AND PROCEDURES

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 - **All disclosures are full and fair.**

- The threat is incomplete and/or misleading disclosures.
- This threat is more important in other areas, particularly those areas that involve liabilities and contingencies.
- However, one threat in the revenue cycle could be misleading disclosures about customers' rights to return product.



Expenditure Cycle

Expenditure Cycle:

Main Objective

- The *expenditure cycle* is a recurring set of business activities and related data processing operations associated with the purchase of and payment for goods and services.
- 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

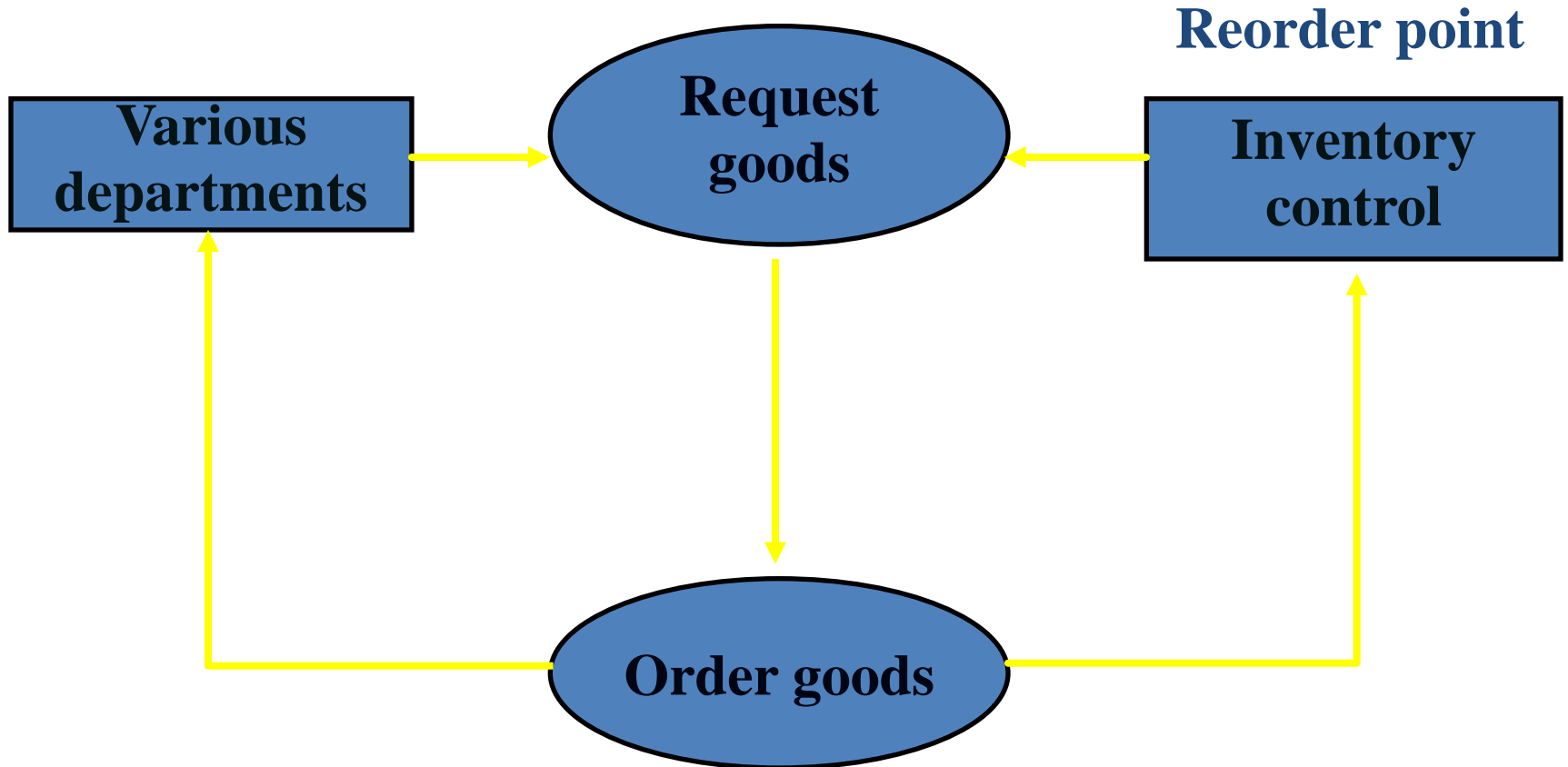
- What is the optimal level of inventory and supplies to carry?
- Which suppliers provide the best quality and service at the best prices?
- Where should inventories and supplies be held?
- How can the organization consolidate purchases across units to obtain optimal prices?

- 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?

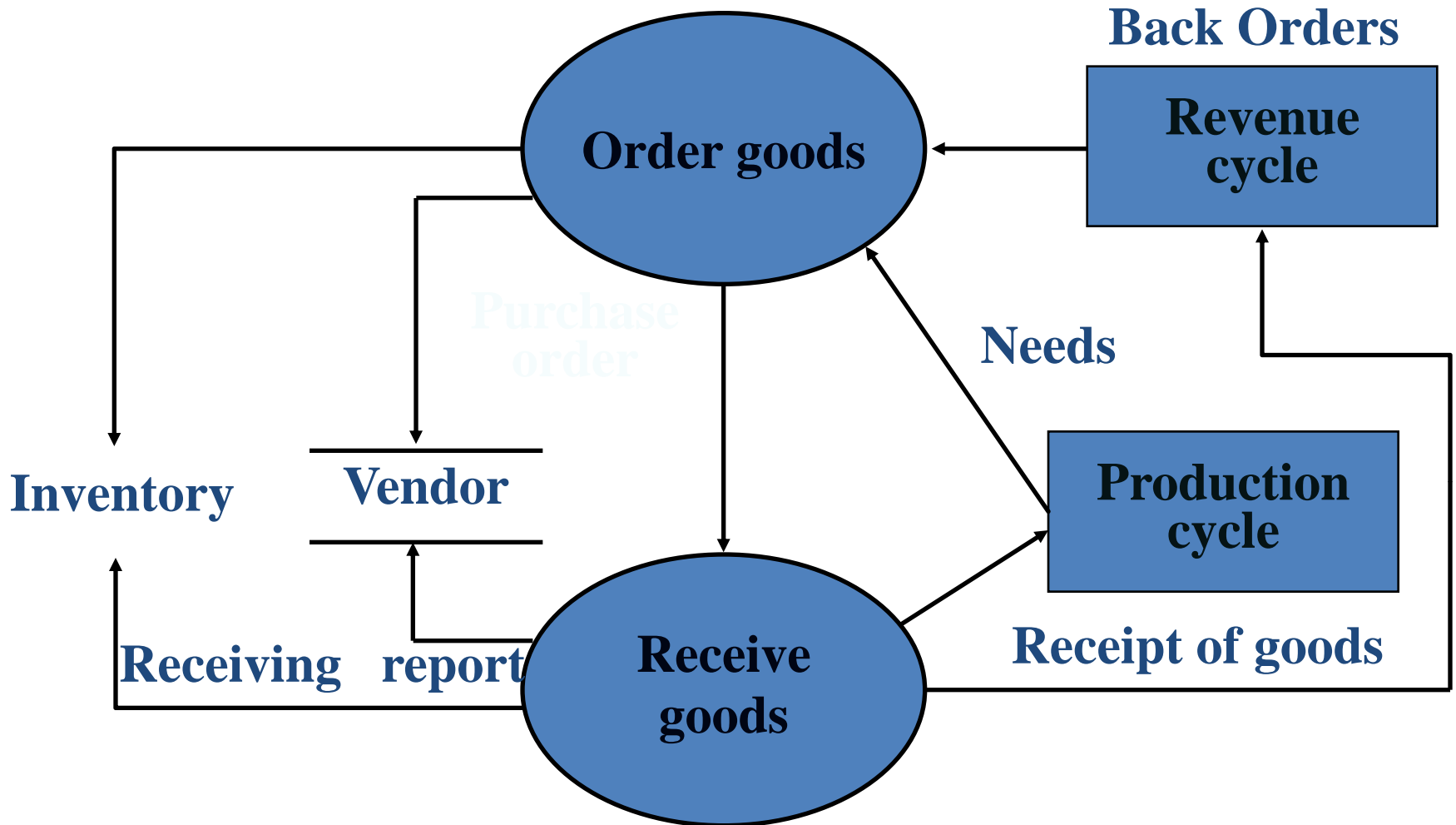
Expenditure Cycle: Business Activities

- What are the three basic business activities in the expenditure cycle?
 1. Ordering goods, supplies and services
 2. Receiving and storing goods, supplies and services
 3. Paying for goods, supplies and services

Expenditure Cycle

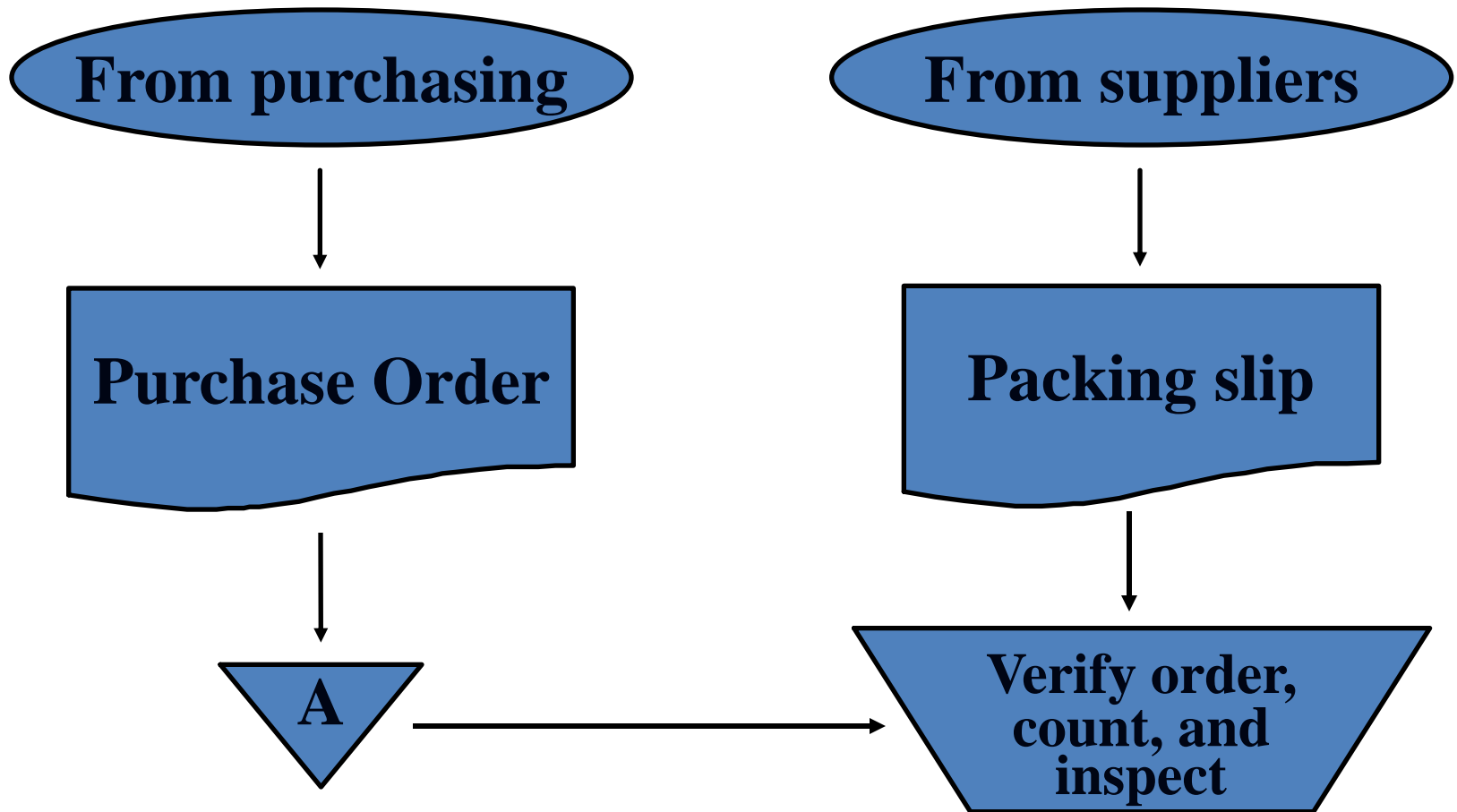


Expenditure Cycle-cont.



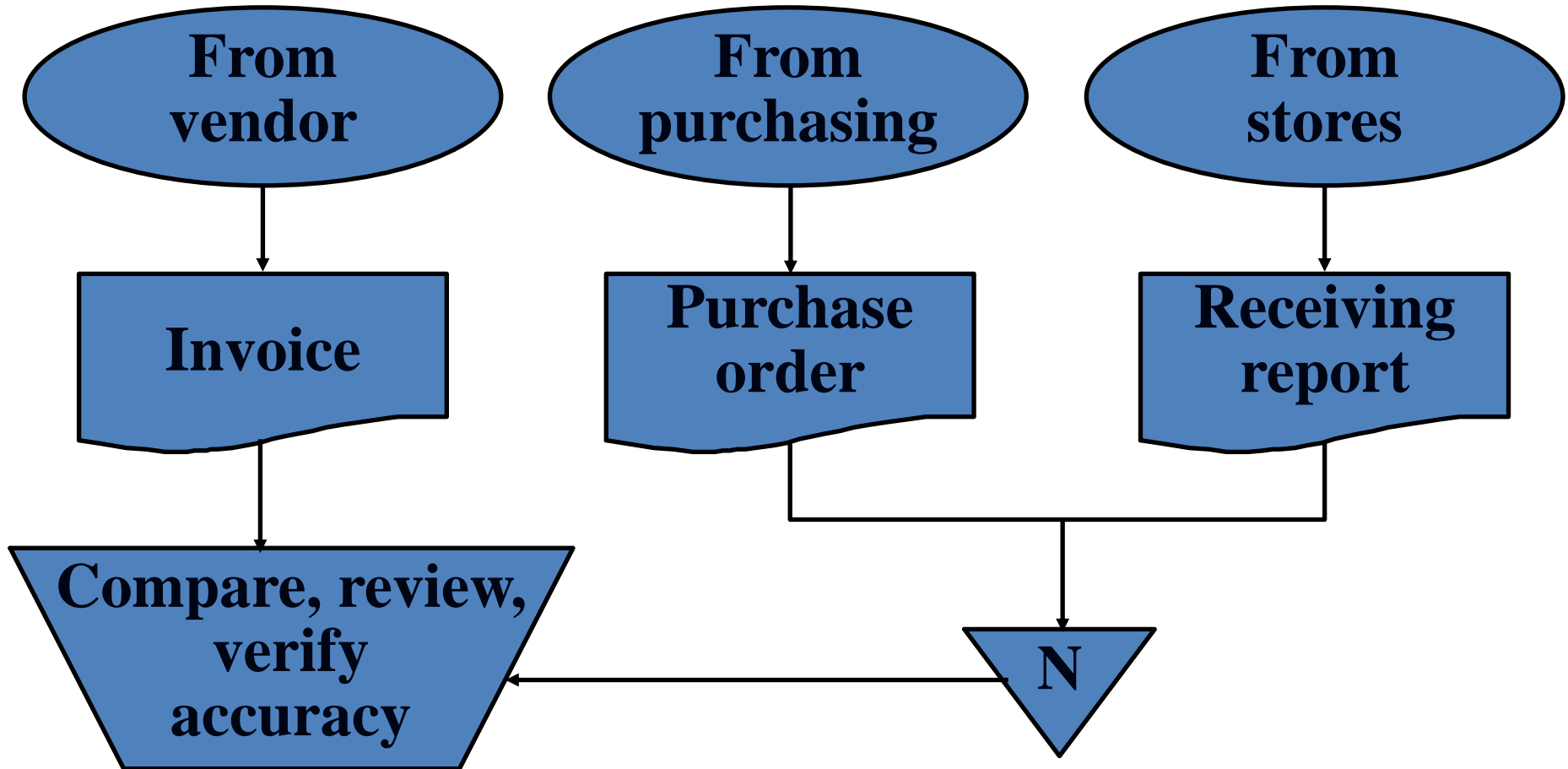
Expenditure Cycle

RECEIVING



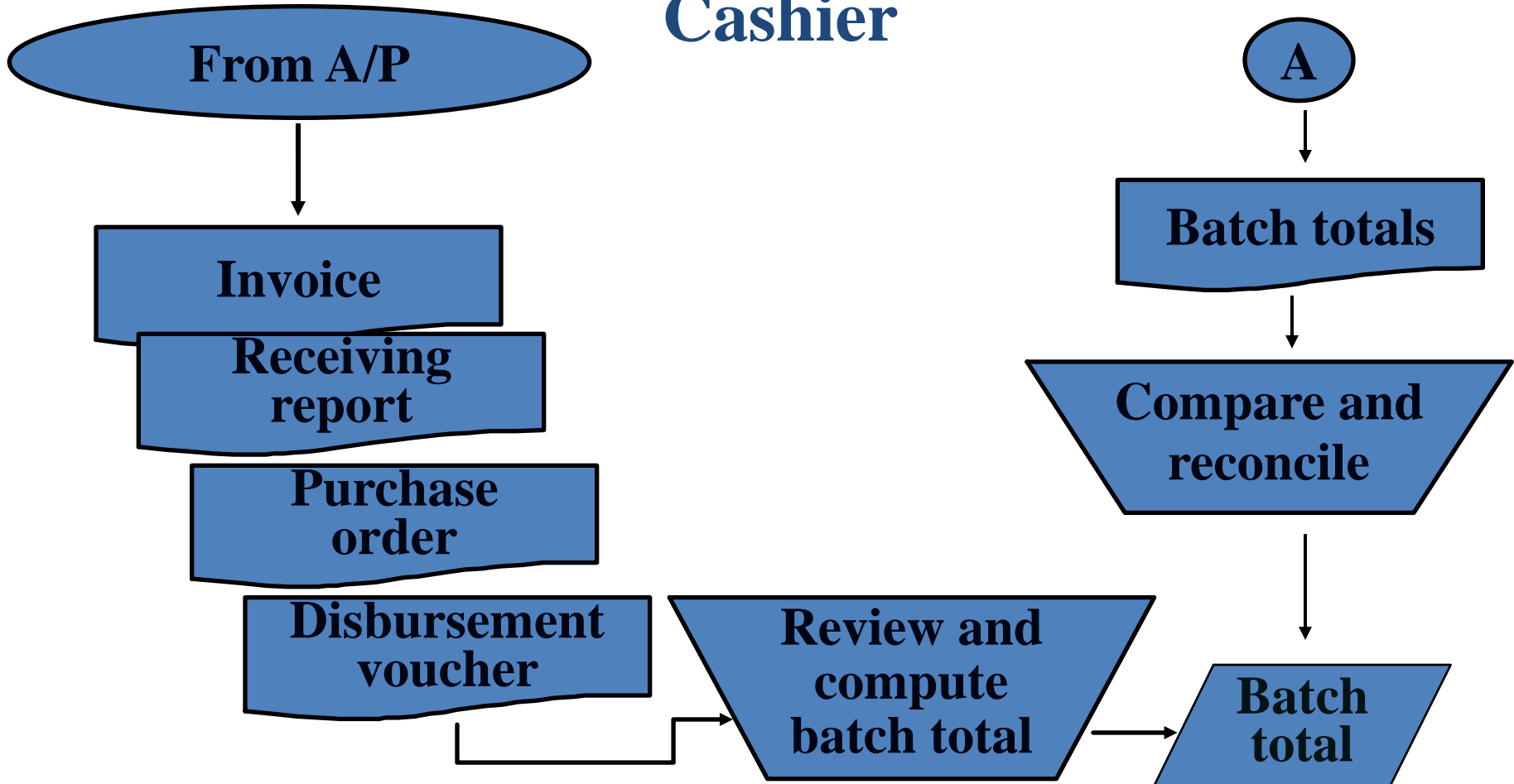
Expenditure Cycle

ACCOUNTS PAYABLE



Expenditure Cycle

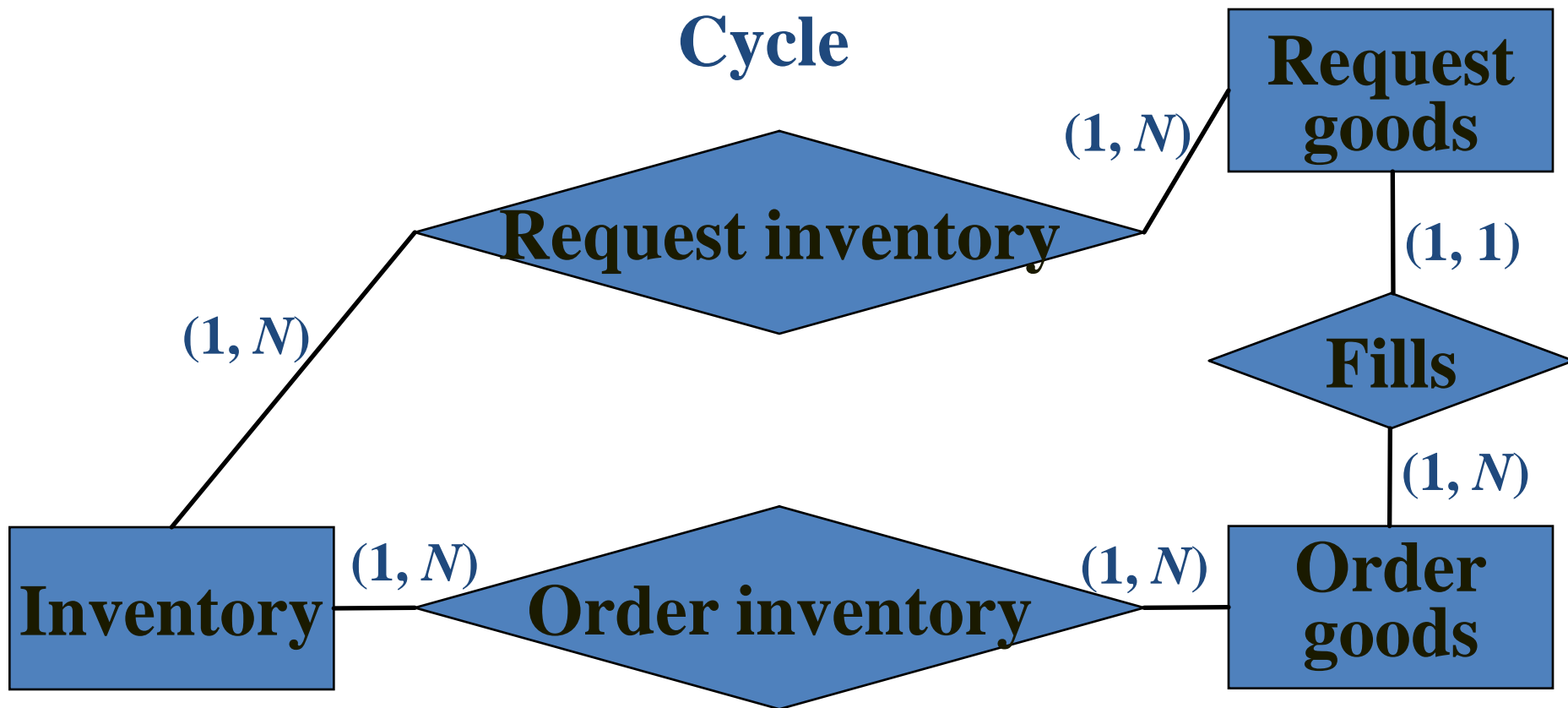
Cashier



Expenditure Cycle Data Model

- The REA data model integrates both traditional accounting transactions data with other operational data.
- Here are some examples?
 - the date and amount of each purchase
 - information about where items are stored
 - vendor performance measures, such as delivery date

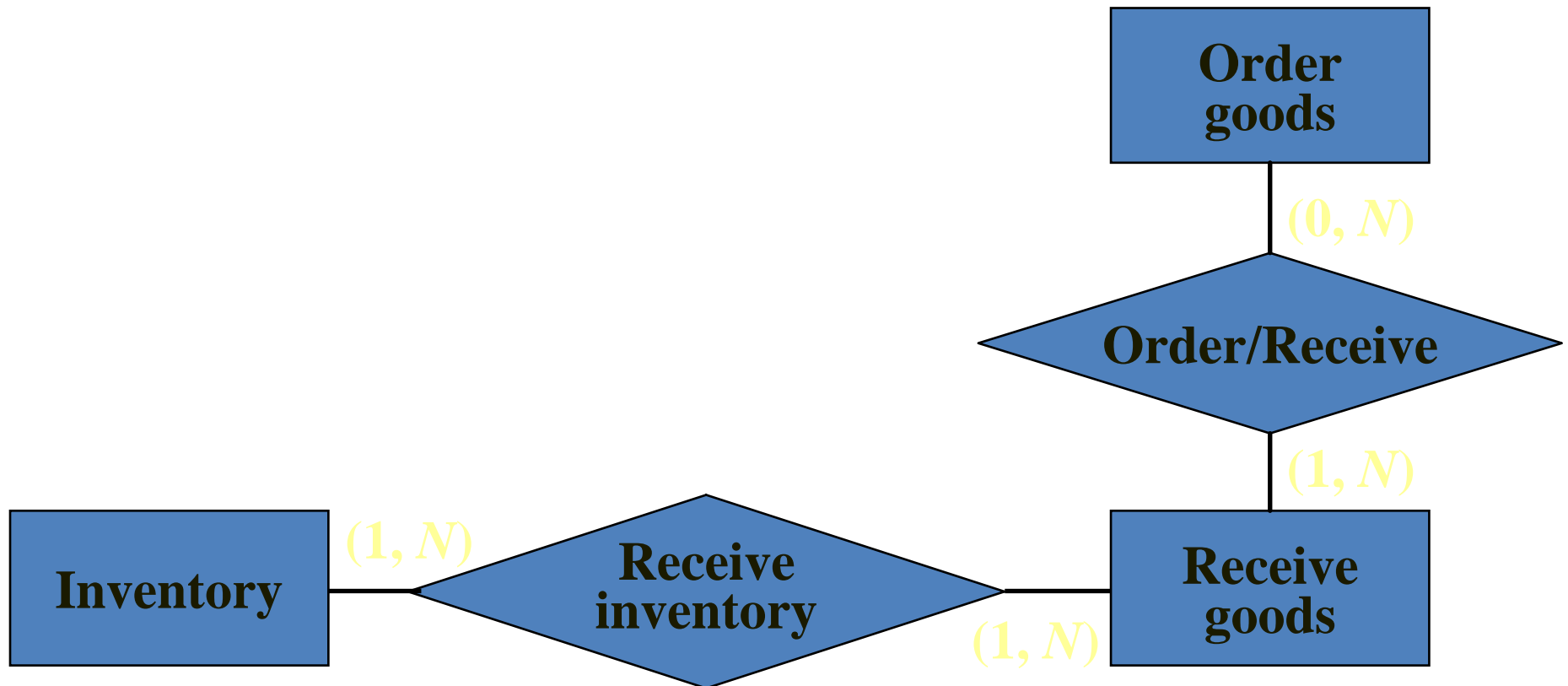
Partial REA Diagram of the Expenditure Cycle



- The REA diagram models the relationship between the request goods and order goods events as being many-to-one.
- Why?
 - The company sometimes issues purchase orders for individual purchase requests.
 - At other times it takes advantage of volume discounts by issuing one purchase order for a set of requests.

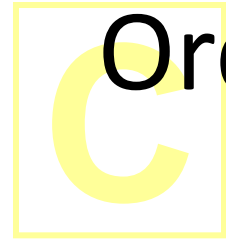
Expenditure Cycle Data Model

Partial REA Diagram of the Expenditure Cycle



Expenditure Cycle Data Model

- Why is there a many-to-many relationship between the order goods and receive goods events?
 - Vendors sometimes make several separate deliveries to fill one purchase order.
 - Other times, vendors fill several purchase orders with one delivery.
 - Sometimes, vendors make a delivery to fill a single purchase order in full.



Ordering Goods, Supplies And Services

Ordering Goods, Supplies And Services

The first major business activity in the expenditure cycle is ordering 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.

Ordering Goods, Supplies And Services

– *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.

Ordering Goods, Supplies And Services

- 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.

Ordering Goods, Supplies And Services

- 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

Ordering Goods, Supplies And Services

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

Ordering Goods, Supplies And Services

- 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.

Receiving and Storing Goods, Supplies and Services

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:
 - Deciding whether to accept a delivery
 - Verifying quantity and quality

Receiving and Storing Goods, Supplies and Services

- *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.

Pay for Goods and Services: Approve Vendor Invoices

The third activity entails approving vendor invoices for payments.

- The accounts payable department approves vendor invoices for payment
- The cashier is responsible for making the payment

Pay for Goods and Services: Approve Vendor Invoices

The objective of accounts payable is to authorize payment only for goods and services that were ordered and actually received.

- There are two ways to process vendor invoices:
 1. Nonvoucher system
 2. Voucher system

Pay for Goods and Services: Improving Accounts Payable

Processing efficiency can be improved by:

- Requiring suppliers to submit invoices electronically, either by EDI or via the Internet
- Eliminating vendor invoices. This “invoiceless” approach is called evaluated receipt settlement (ERS).

Pay for Goods: Pay Approved Invoices

- The cashier approves invoices
- The combination of vendor invoice and supporting documentation is called a *voucher package*.
- A key decision in the cash disbursement process is determining whether to take advantage of discounts for prompt payment.