



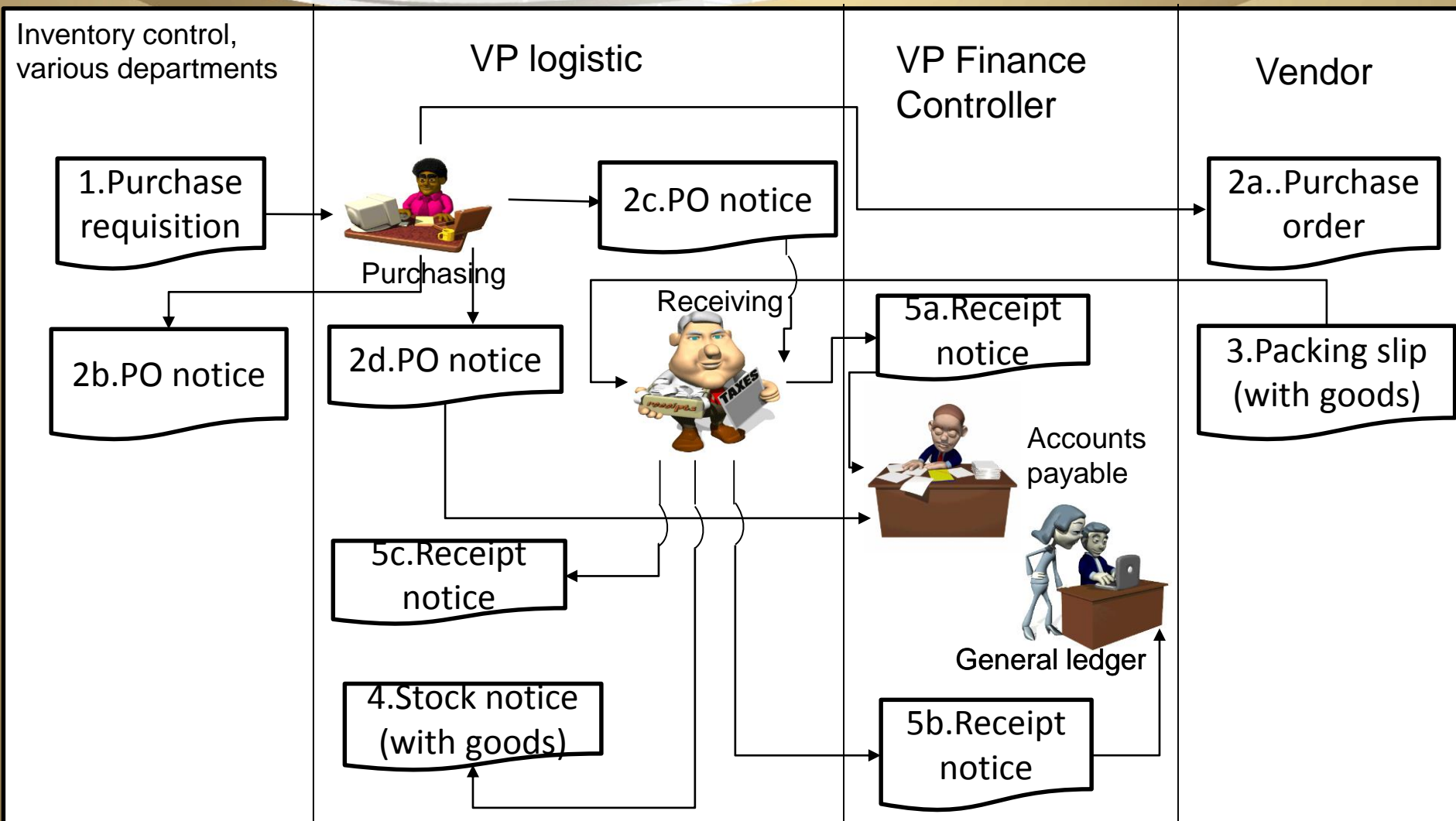
Purchasing

Enterprise Resource Planning

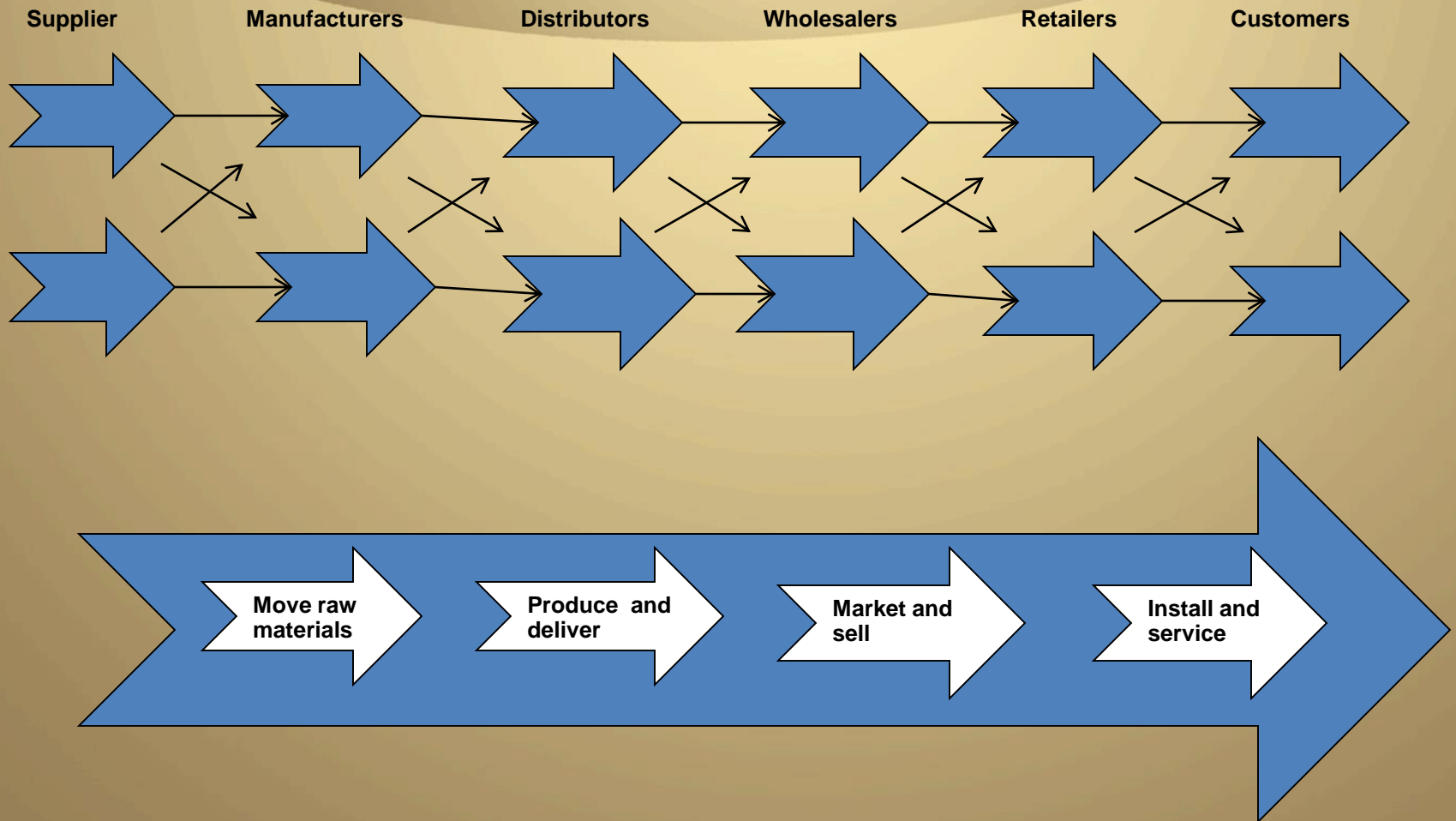
Process Definitions and Functions

- The **purchasing process** is an interacting structure of people, equipment, methods, and controls that is designed to accomplish the following primary functions:
 1. Handle the repetitive work routines of the purchasing department and the receiving department
 2. Support the decision needs of those who manage the purchasing and receiving departments
 3. Assist in the preparation of internal and external reports

Internal Perspective of Purchasing Process



Organization's Supply Chain



Goal Conflicts and Ambiguities in the Organization

- Individual managers' goals may not be in congruence with organizational objectives
 - Purchasing may buy large quantities of inventory for quantity discounts and to reduce ordering costs
 - This may drive up costs of receiving, inspecting, and carrying inventory
- Ambiguity often exists in defining goals and success in meeting goals.
 - A purchasing goals might be to select a vendor who will provide the best quality at the lowest price by the promised delivery date
 - Realistically, one vendor probably will not satisfy all three conditions

Goal Conflicts and Ambiguities in the Organization, Cont'd.

- Prioritization of goals is necessary in choosing the best solution given the various conflicts and constraints placed on the process
 - Trade-offs are made in prioritizing among the goals that conflict
 - If the market is sensitive to satisfying customer needs, the company may pay higher prices to ensure that it is procuring the best quality goods and obtaining them when needed

Purchasing and the Supply Chain

- **The supply chain is the system of adding value beginning with acquiring raw materials (purchasing) and ending with product field support**
- **Organizations attempt to achieve maximum value added in all the supply chain activities**
- **Internet purchases are driving down purchasing costs**
- **Supply chain management (SCM) software assists with demand planning, one of the most important areas of supply chain management**

2 categories of SCM Software

1. *Supply chain planning* software

- Accumulates data about orders from retail customers, sales from retail outlets, and data about manufacturing and delivery capability to assist in planning for each of the SCM steps.

2. *Supply chain execution* software

- Automates the *SCM* steps.
- *ERP* software is assigned to this category as it receives customer orders, routes orders to an appropriate warehouse, and executes the invoice for the sale.

2 categories of SCM Software, Cont'd.

- Many of the connections between players in the supply chain are B2B automated interfaces.
- For example, the sourcing step may be implemented through an automatic order sent to a supplier via the Internet.

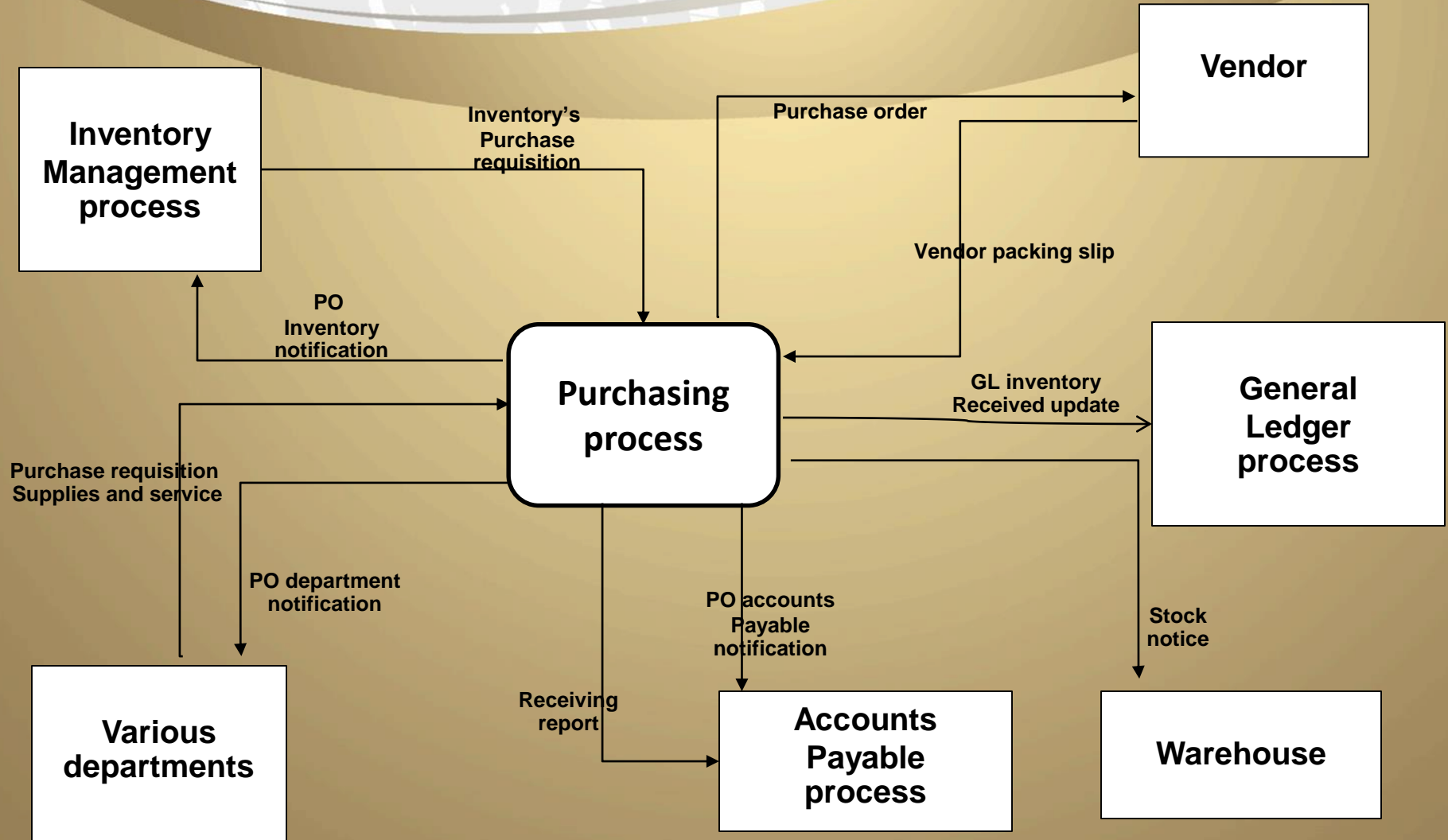
Benefits of Managing the Supply Chain

- Lower costs to the customer
- Higher availability of product
- Higher response to customer request for product customization and other specifications
- Reduced inventories along the supply chain
- Improved relationships between buyers and sellers
- Smooth workloads due to planned goods arrivals and departures, leading to reduced overtime costs
- Reduced item costs as a result of planned purchases through contracts and other arrangements
- Increased customer orders due to improved customer responsiveness
- Reduced product defects through specifying quality during planning and sharing defect information with suppliers during execution

Things that can go wrong in SCM initiatives

- Data not collected or not shared across functional boundaries
- Lack of sharing of information between supply chain partners
- Inaccurate data in the supply chain negatively affects the entire chain.
- Over-reliance on demand forecasting that may be inaccurate
 - Good demand forecasting requires an intelligent combination of software tools and human experience
- Competing objectives can lead to unrealistic forecasts.
 - Marketing may want a high target to ensure a successful product
 - This may be unrealistic
 - Therefore promotion and production budgets will be inaccurate
 - Sales, on the other hand, will be evaluated on its ability to meet sales quotas and wants a lower demand forecast.

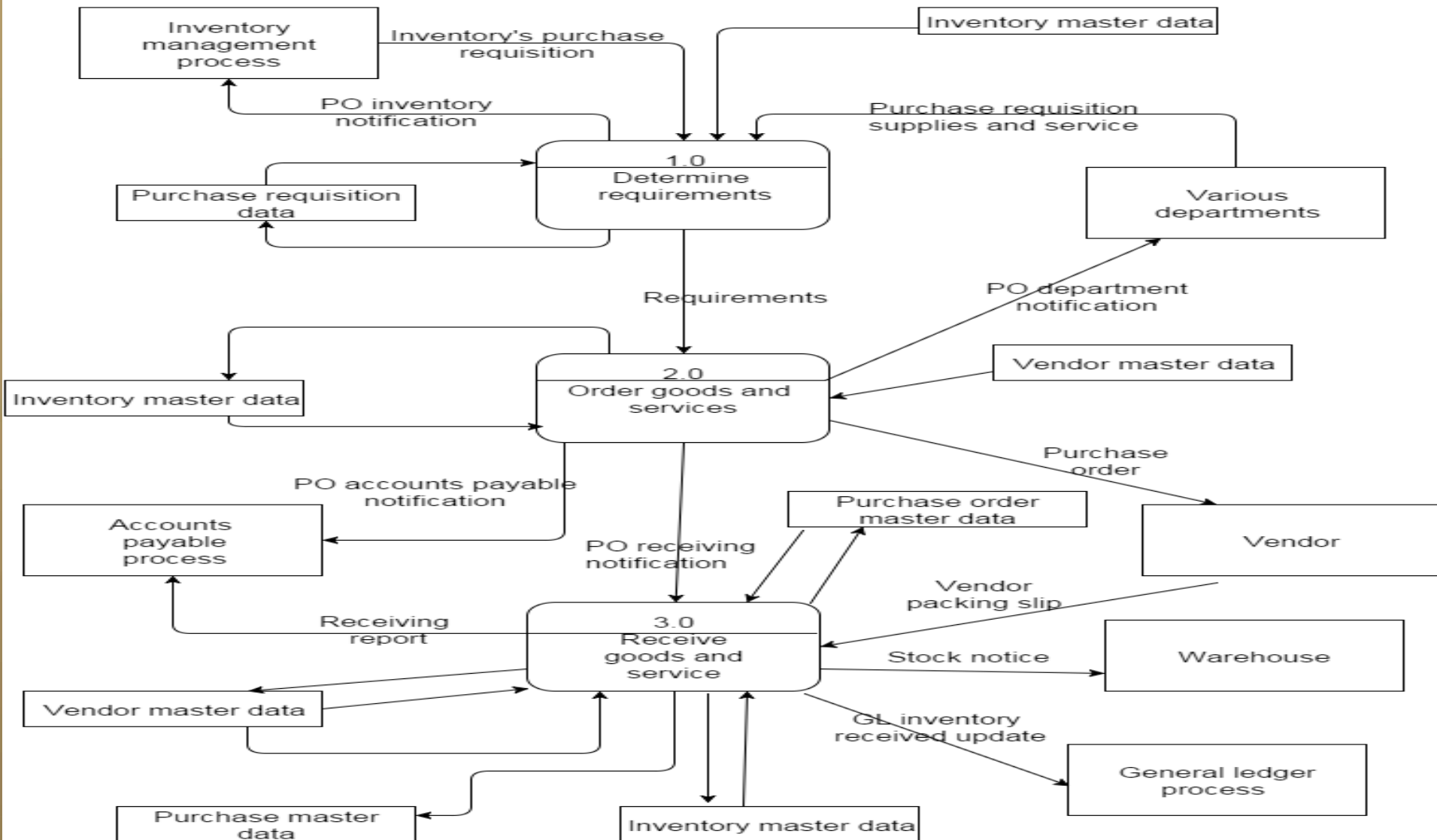
Purchasing Process-Context Diagram



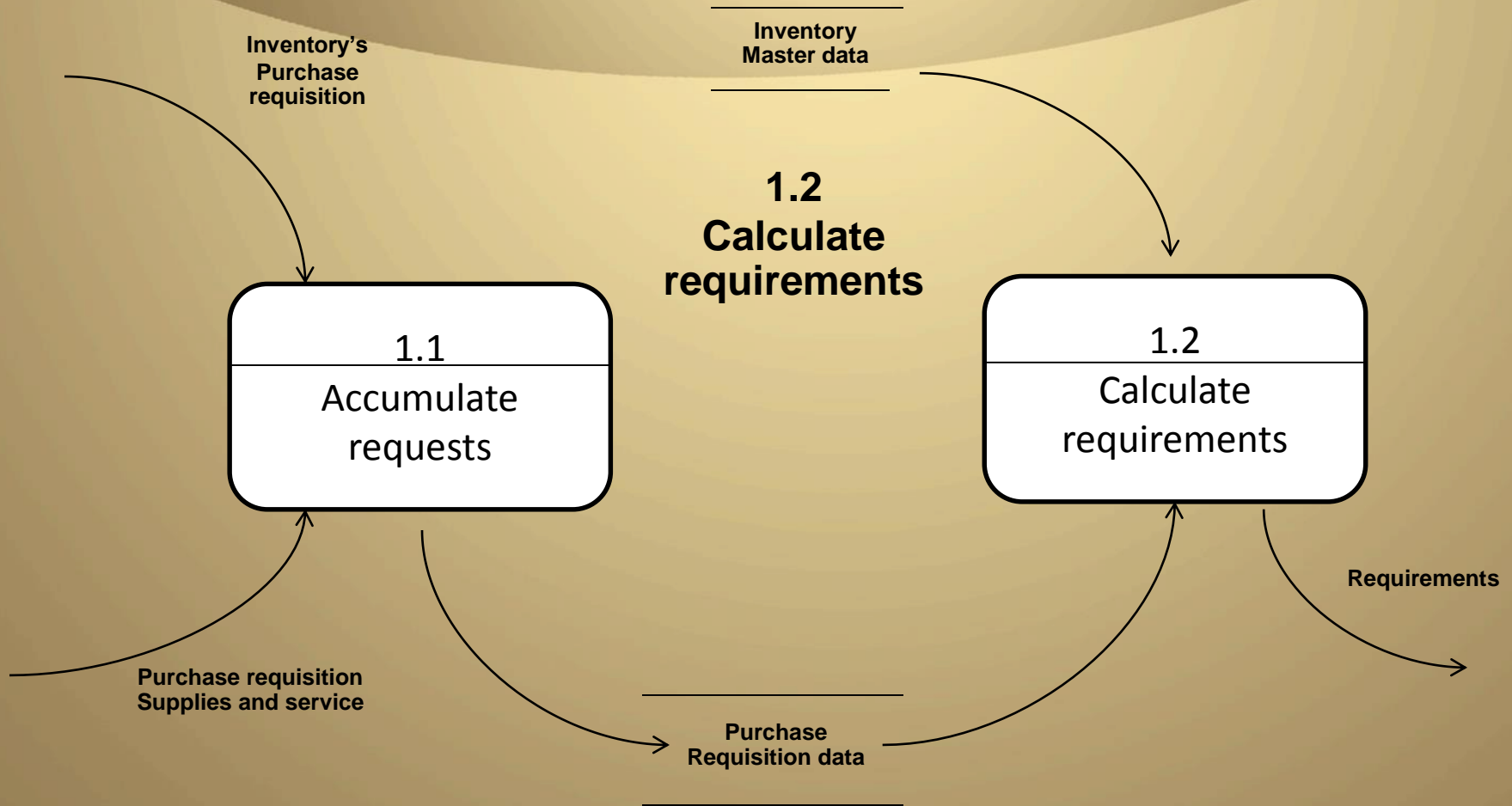
Inventory Reorder Methods

- Reorder point analysis
 - each item is assigned a reorder point based on its sales rate
- Economic order quantity
 - order quantity based on costs of ordering and carrying inventory
- ABC analysis a technique for ranking items in a group based on the output of the items
 - ABC analysis can be used to categorize inventory items according to their importance

Purchasing Process-Level 0 Diagram



Purchasing Process - Diagram 1



Sample Purchase Request

Purchase Request

Requester

Requester Name

Branch

Department

E-Mail

User

Jayson Butler

Main

General

No.

Status

Posting Date

Valid Until

Document Date

Required Date

Primary

Open

07.01.13

07.02.13

07.01.13

☐ Send E-mail When GRPO or PO is Created

Contents

Attachments

Item/Service Type

Item

Summary Type

No Summary

#	Item No.	Required Date	Required Qty.	Unit Price	Disc...	Tax Code	Total (LC)
1					0.00	P1	

Owner

Remarks

Total Before Discount

Freight

Tax

Total Payment Due

AUD 0.00

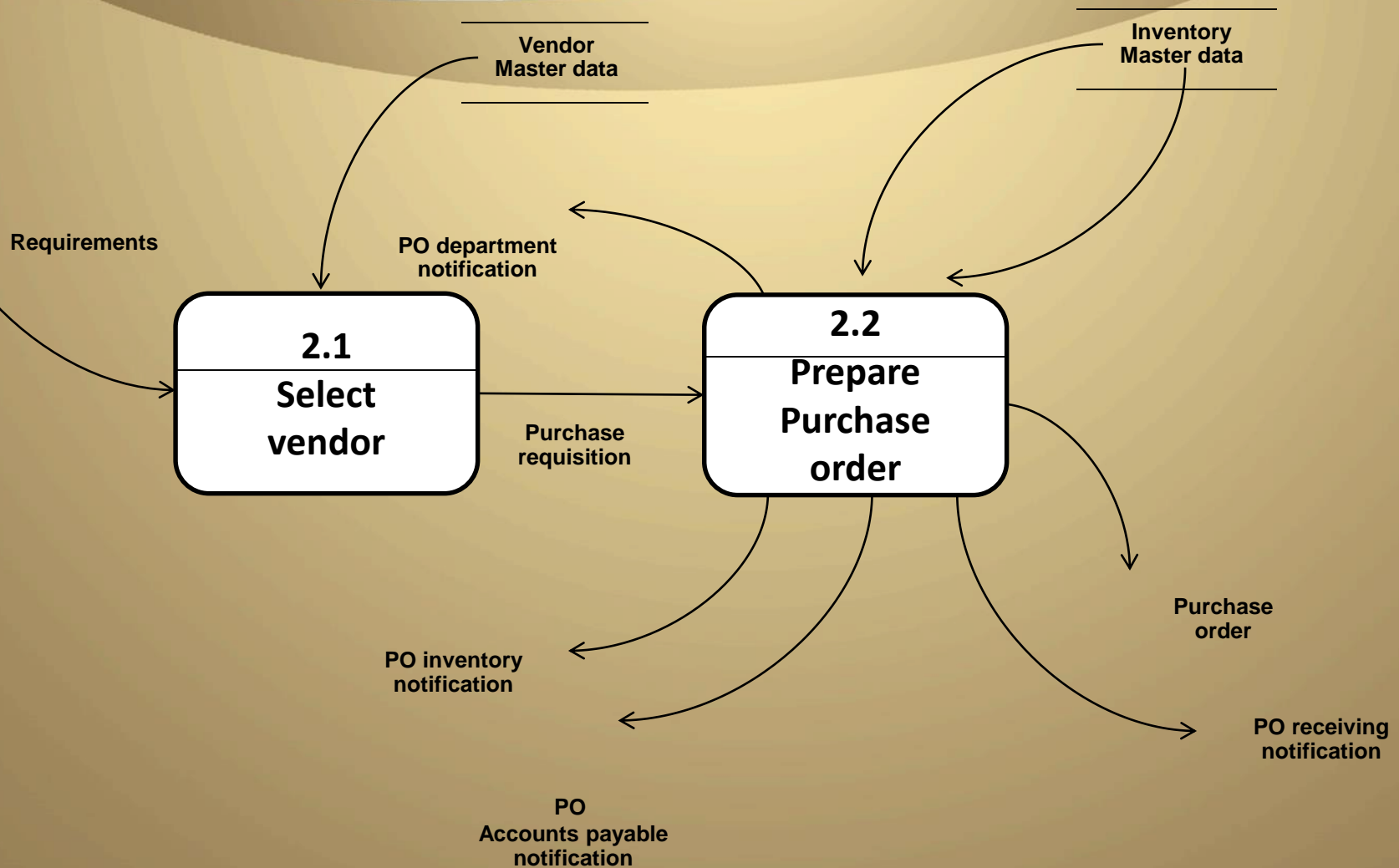
Add

Cancel

Copy From

Copy To

Purchasing Process - Diagram 2



Sample Purchase Order

Purchase Order

Supplier

V10000

Name

Acme Associates

Contact Person

Sarah Kierl

Supplier Ref. No.

Local Currency

No.

Primary

277

- 0

Status

Open

Posting Date

28.06.11

Delivery Date

28.06.11

Document Date

28.06.11

Contents

Logistics

Accounting

Purchasing Sample Screen

Item/Service Type

Item

Summary Type

No Summary

#	Item No.	Item Description	Quantity	Unit Price	Discoun...	VAT C...	Total (LC)
1	A00001	IBM Infoprint 1312	4	GBP 200.00	0.00	I1	GBP 800.00
2	A00002	IBM Infoprint 1222	4	GBP 100.00	0.00	I1	GBP 400.00
3	A00003	IBM Infoprint 1226	2	GBP 150.00	0.00	I1	GBP 300.00
4	C00001	Motherboard P4 Turbo	1	GBP 200.00	0.00	I1	GBP 200.00
5	C00002	Motherboard P4 Turbo - Asus Chipset	1	GBP 150.00	0.00	I1	GBP 150.00
6	C00003	Intel P4 2.4 GhZ	8	GBP 65.00	0.00	I1	GBP 520.00
7	DE6500	Dell Precision M6500	1	GBP 1,800.00	0.00	I1	GBP 1,800.00
8					0.00	I1	

Buyer

James Chan (Buyer)

Owner

Butler, Jayson

Remarks

Total Before Discount

GBP 4,170.00

Discount

%

Freight

☐ Rounding

Tax

GBP 817.32

Total Payment Due

GBP 4,987.32

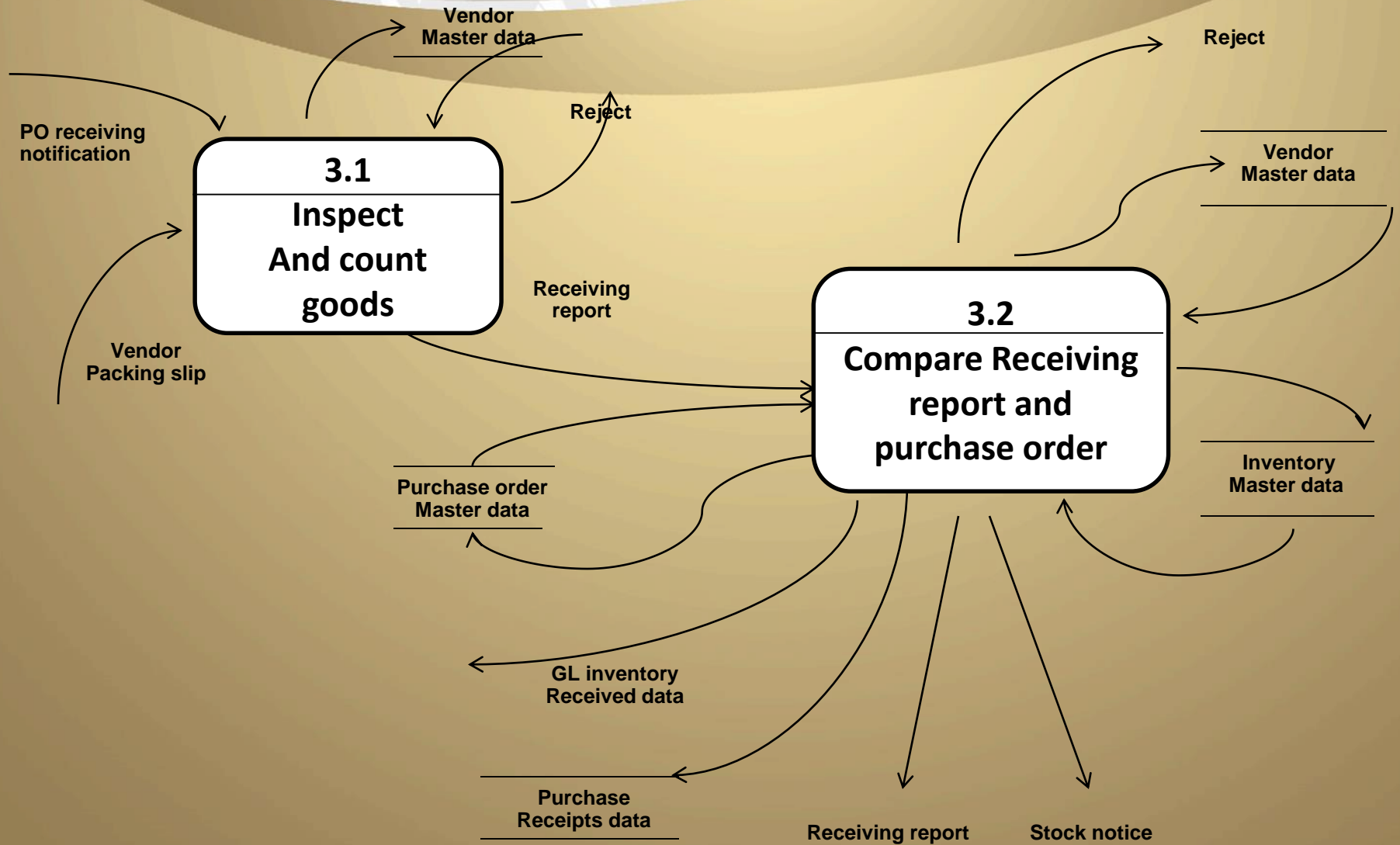
OK

Cancel

Copy From

Copy To

Purchasing Process - Diagram 3

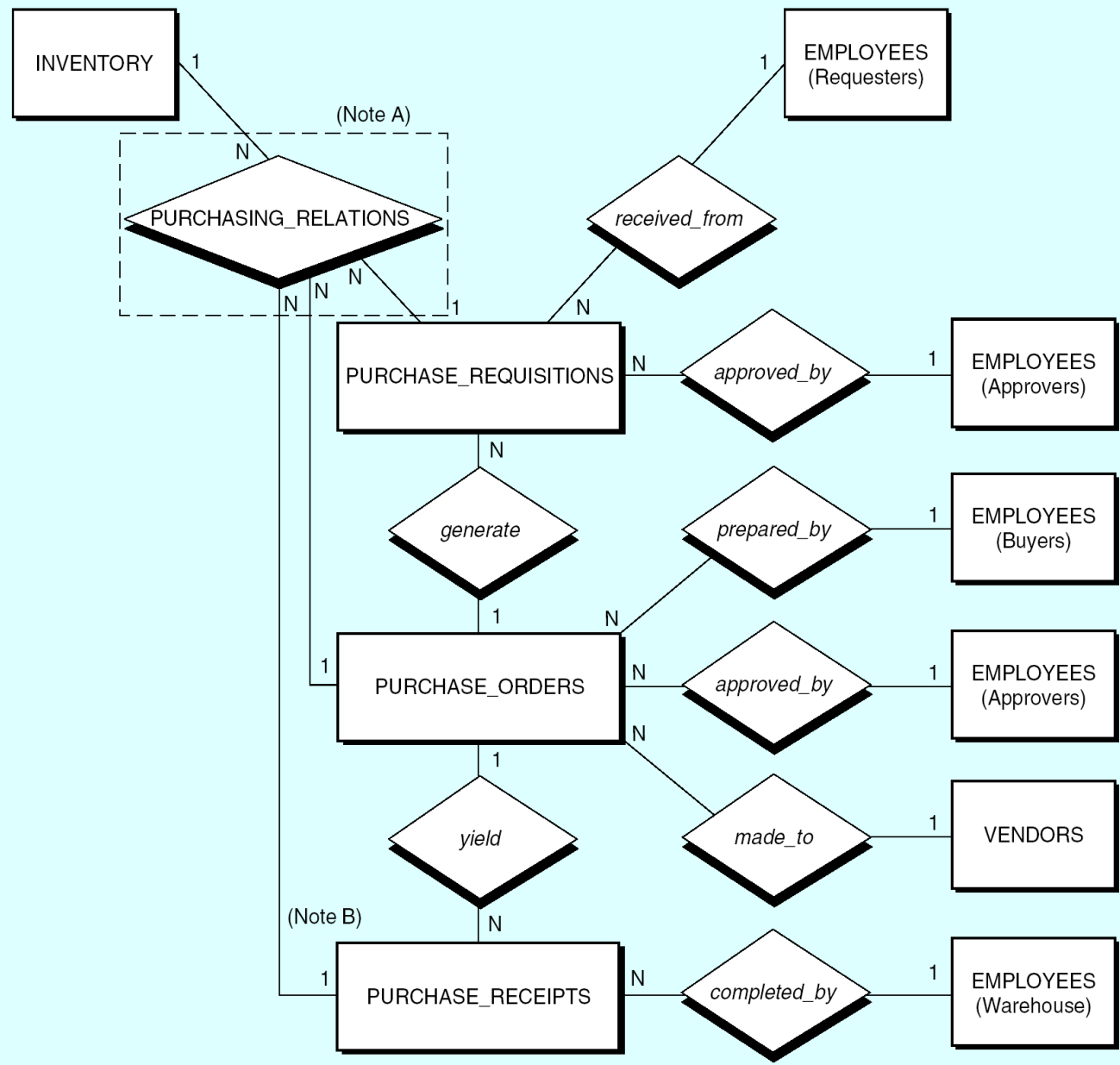


Data Stores Used in the Purchasing Process

- Inventory master data
 - A record of each item stocked or regularly ordered
- Vendor master data
 - Stores information about approved vendors including vendor performance
- Purchase requisition data
 - Data on all purchase requisitions
- Purchase order master data
 - Open PO information including status of items on order
- Purchase receipts data
 - Lists items received

ER diagram

Purchasing



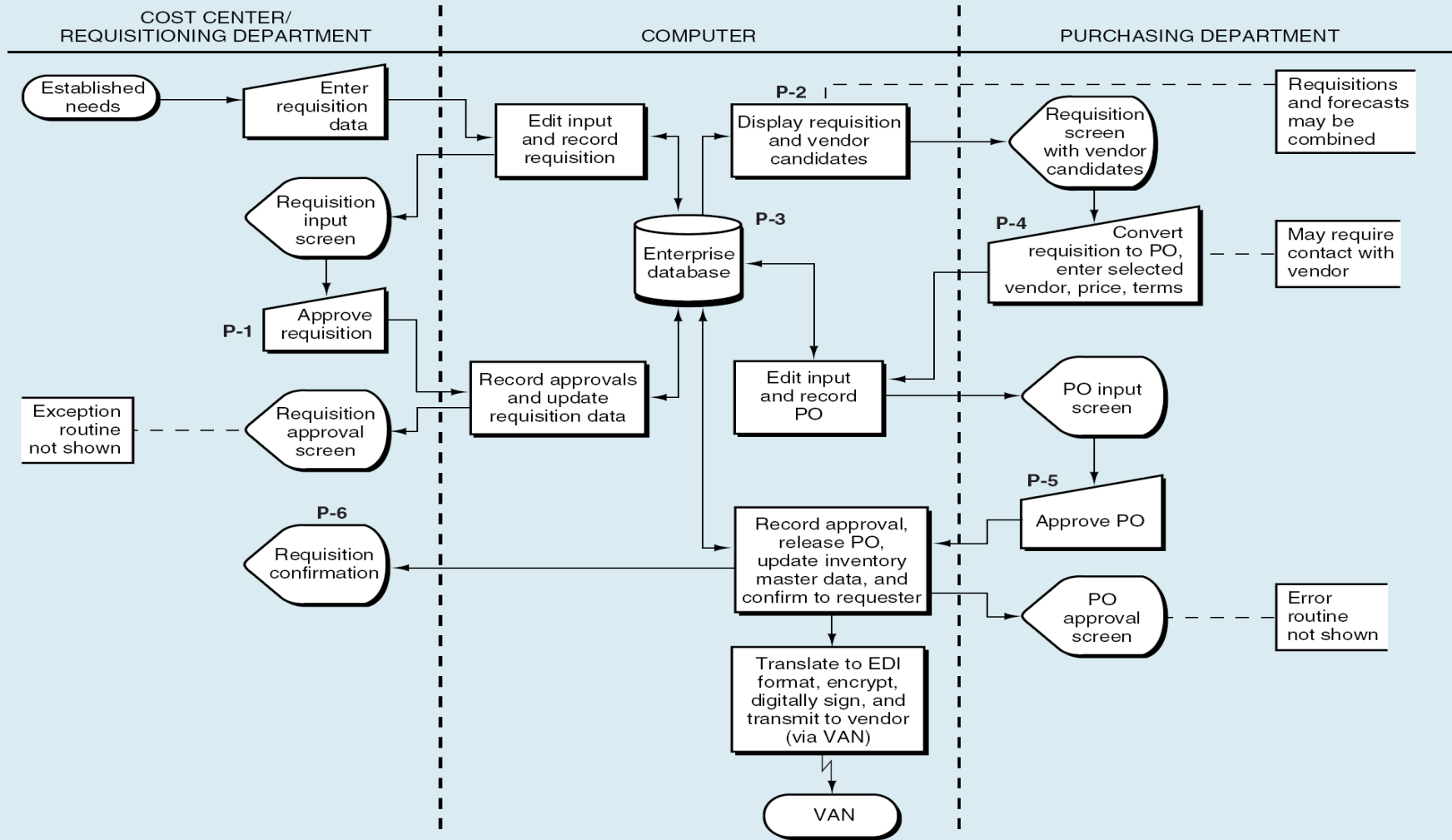
NOTES, for simplicity, we assume that:

A—See page 455 for an explanation of the box around PURCHASING_RELATIONS and why the model is not fully normalized.

B—There are no partial receipts of any line item on a PO.

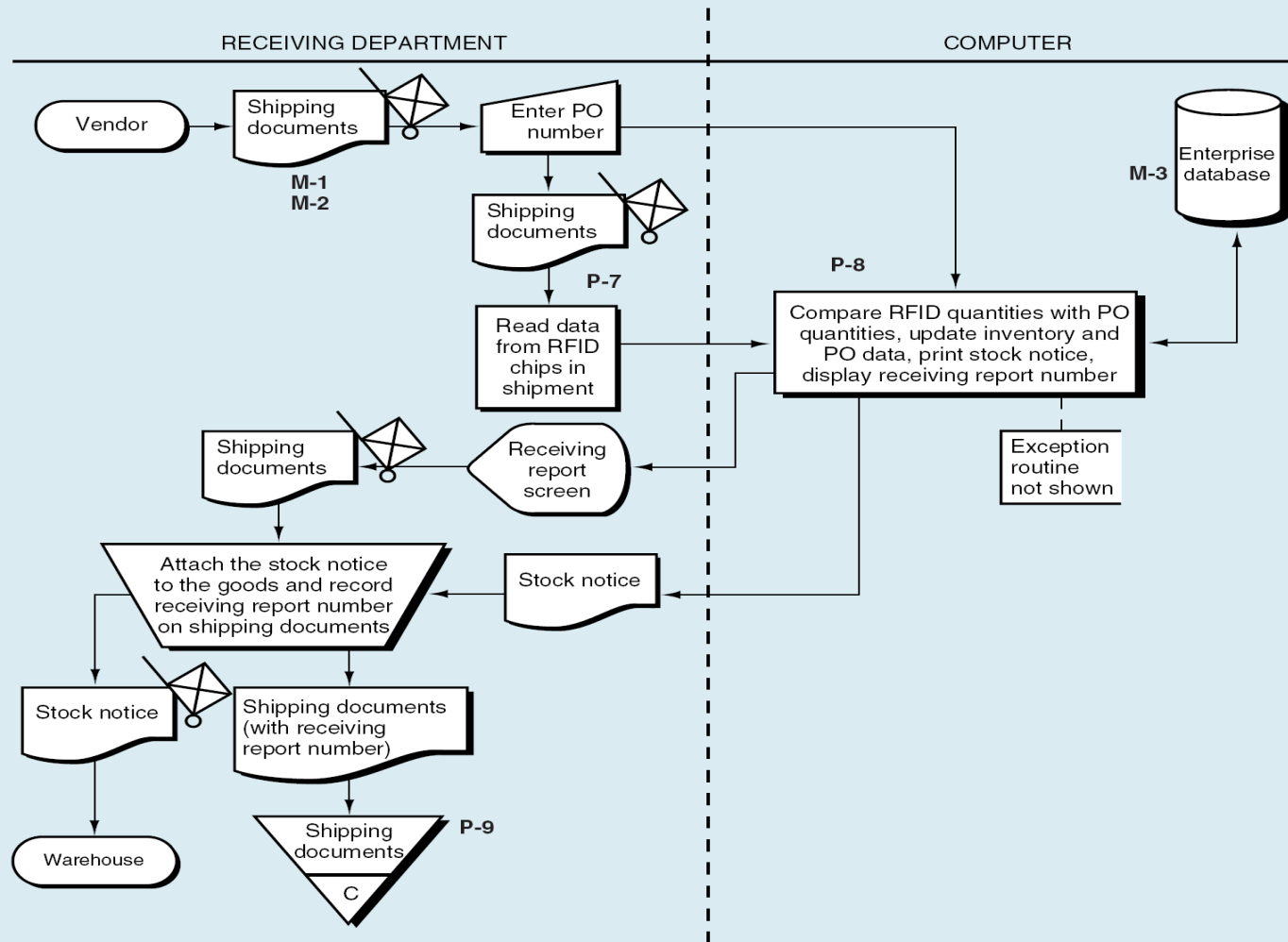
Purchasing Process Systems Flow Chart

FIGURE 12.12 Purchasing Process—Systems Flowchart



Purchasing Process Systems Flow Chart, Cont'd.

FIGURE 12.12 Purchasing Process—Systems Flowchart (*continued*)





Q & A



The Accounts Payable/ Cash Disbursement (AP/CD) Process

Enterprise Resource Planning

Process Definitions and Functions

- The accounts payable/cash disbursements (AP/CD) process is an interacting structure of people, equipment, methods, and controls that is designed to accomplish the following primary functions:
 1. Handle the repetitive work routines of the accounts payable department and the cashier
 2. Support the decision needs of those who manage the accounts payable department and cashier
 3. Assist in the preparation of internal and external reports

AP/CD Horizontal Perspective

Vendor

VP Finance

Controller

Treasurer

1.Invoice

Accounts payable

3a.Payment
request
(voucher)

4b.Payment
notice

3b.Payment
Request notice

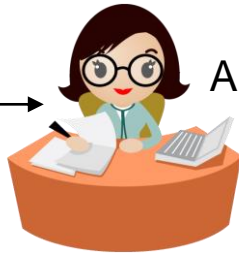
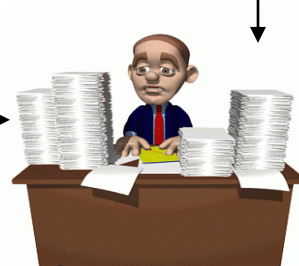
2.Accounts
Payable notice

4a.Payment

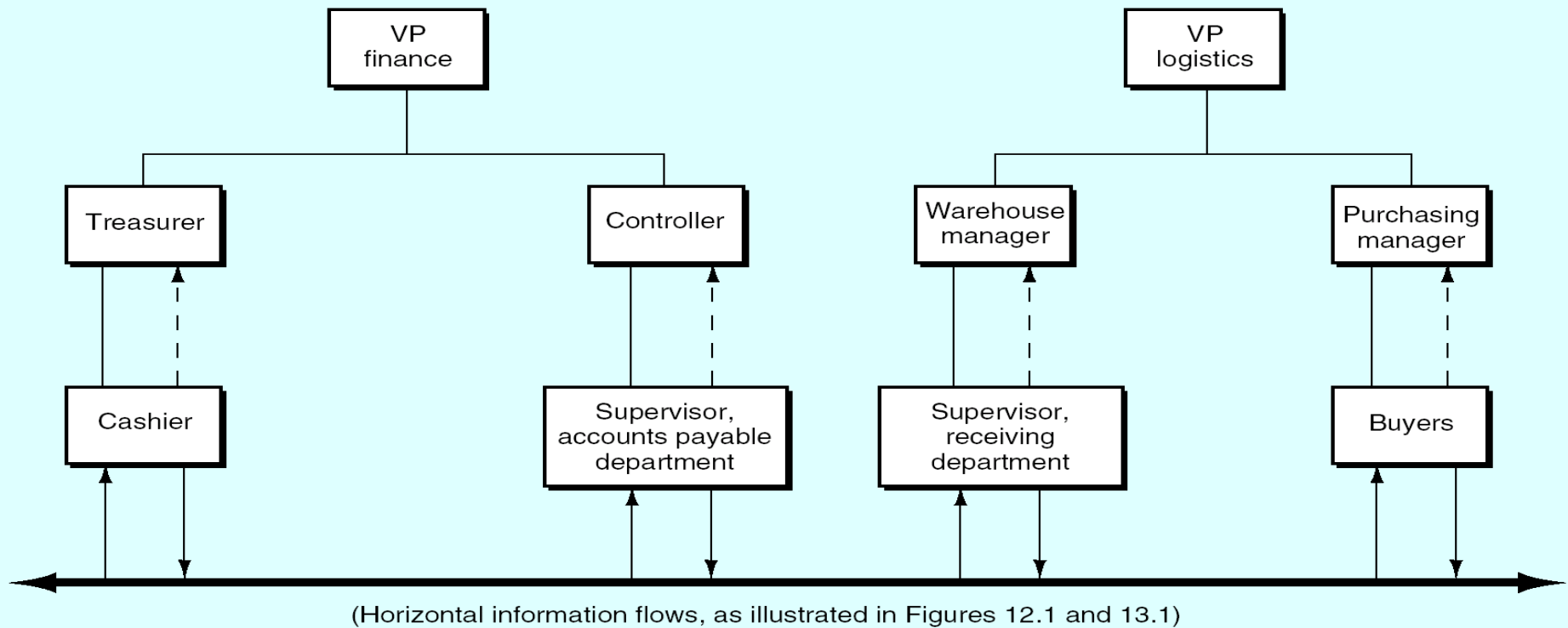
Payment
notice

Cashier

General ledger



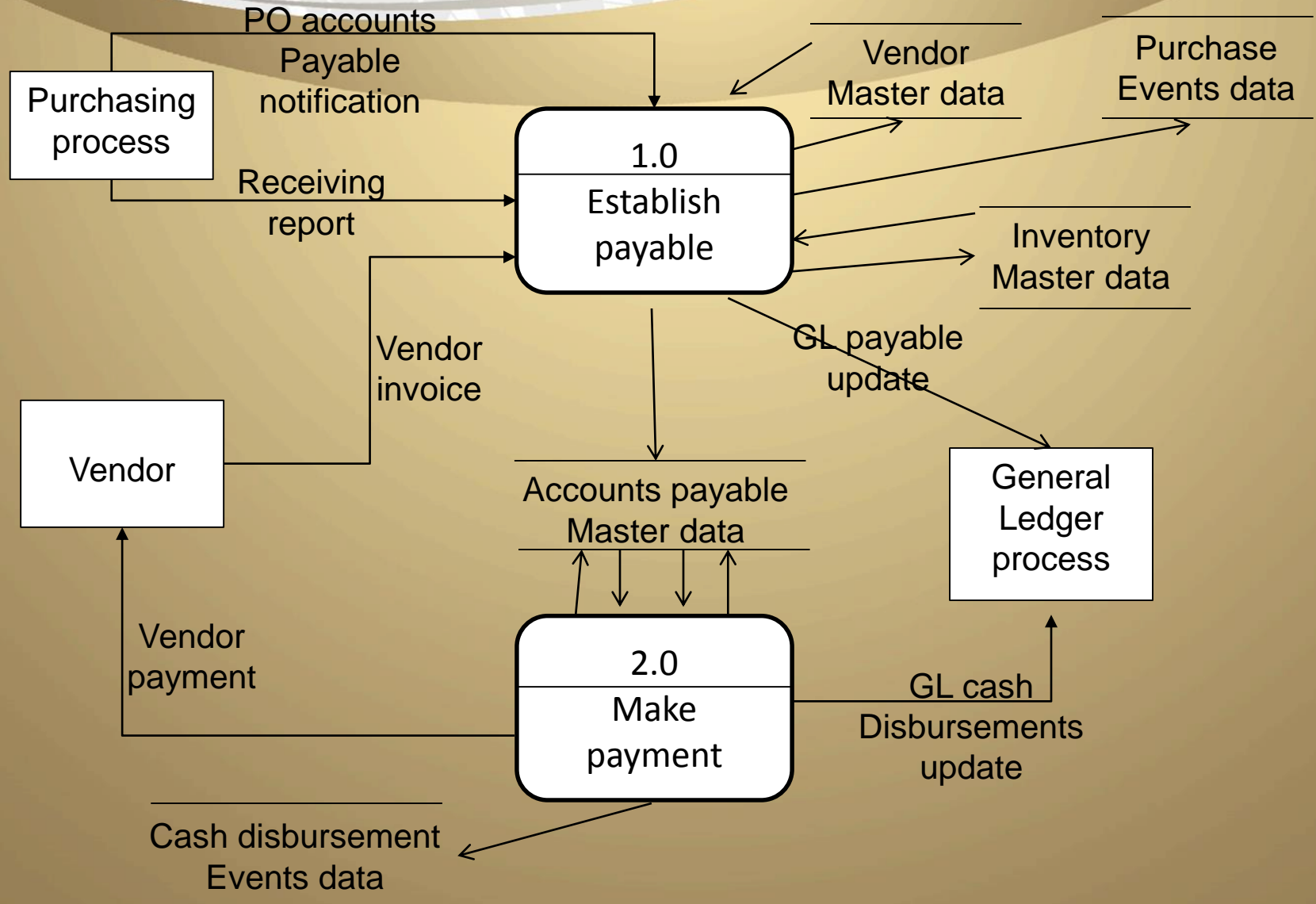
Vertical perspective-AP/CD



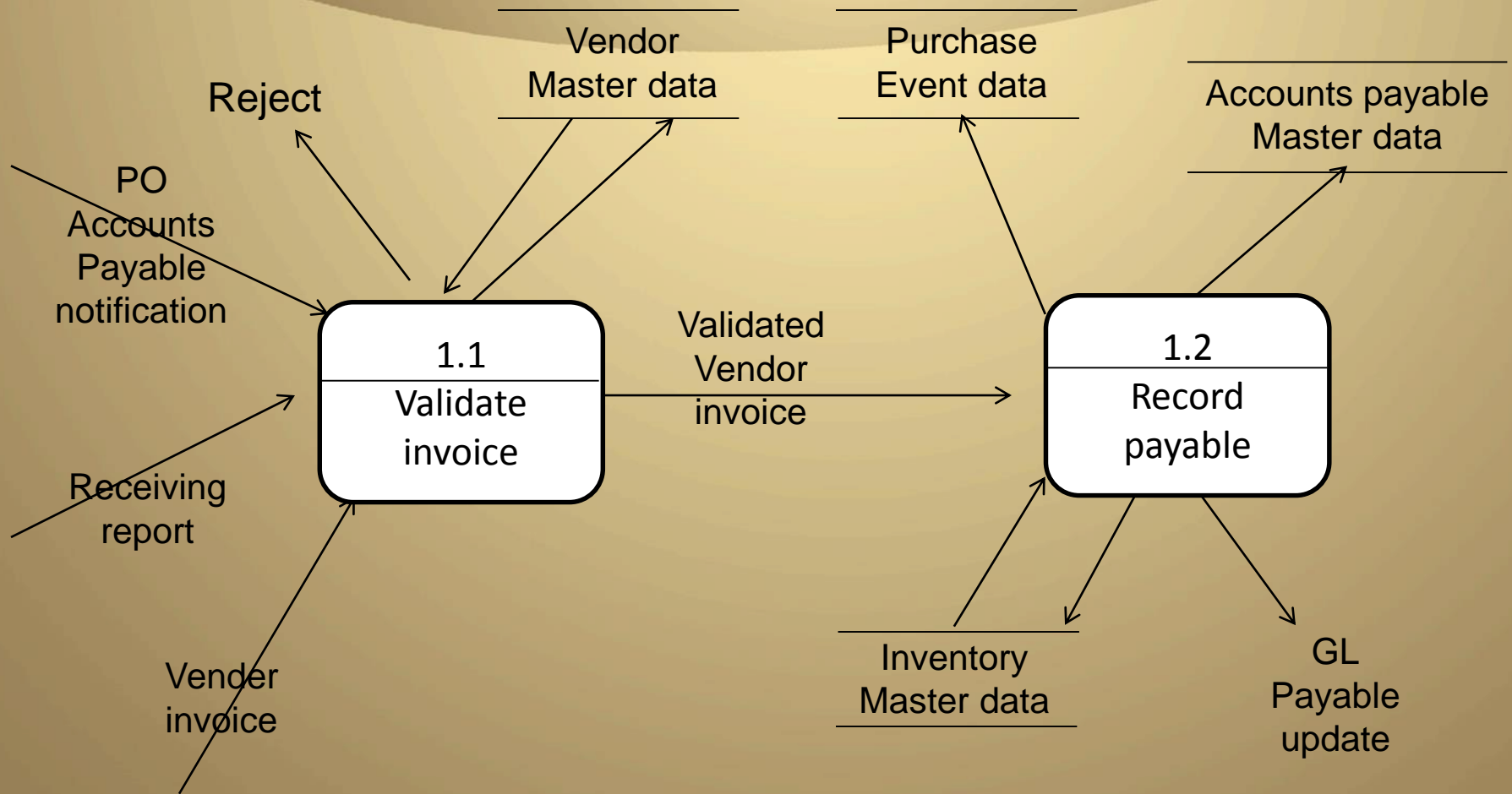
NOTES:

1. This figure represents a partial organization chart for the finance and logistics functions.
2. The broken lines represent vertical information flows (often in the form of management reports) based on data captured or generated by the purchasing and AP/CD processes.

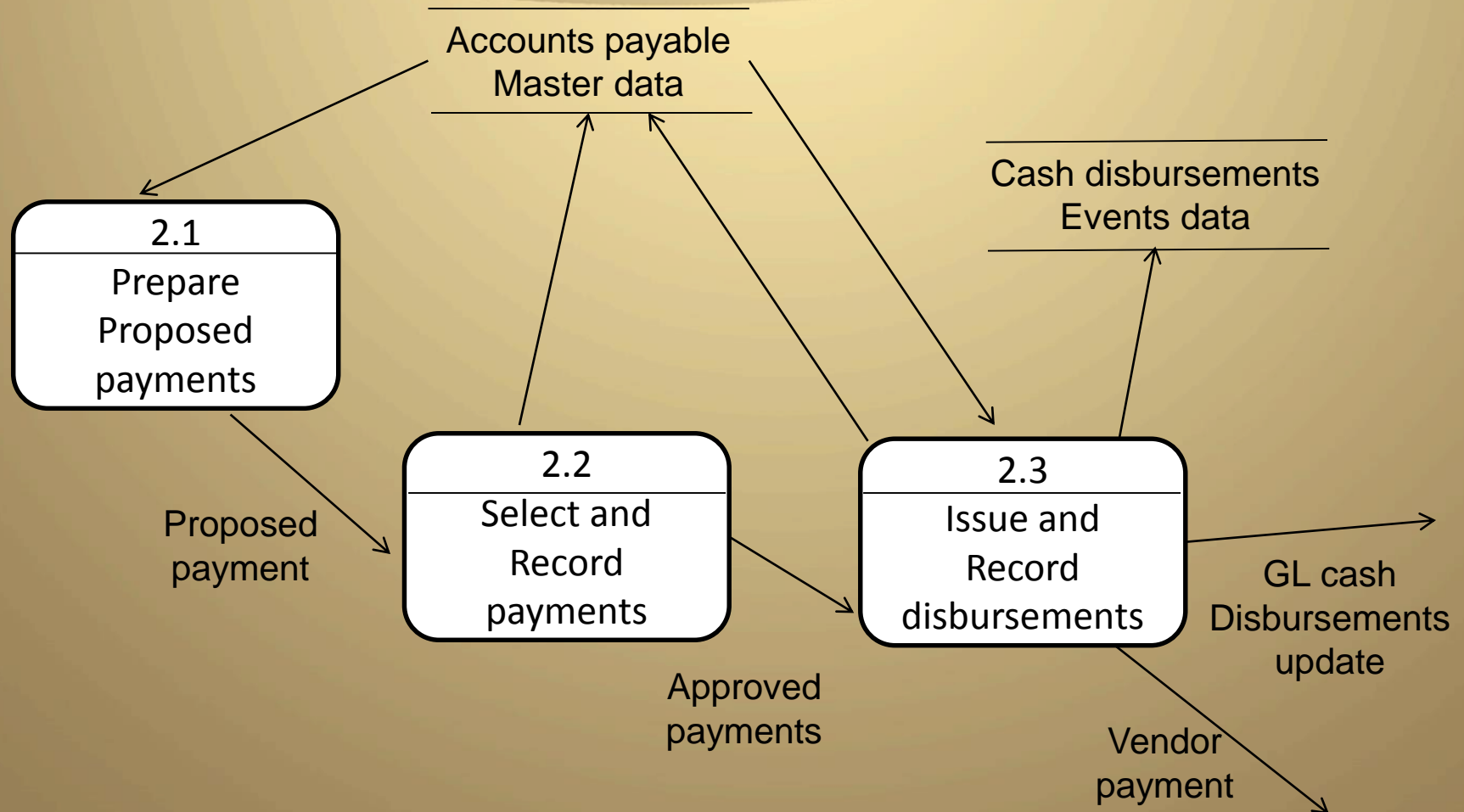
The AP/CD Process: Level 0 Diagram



AP/CD Process Diagram 1: Validate Invoice



AP/CD Process Diagram 2 Make Payment



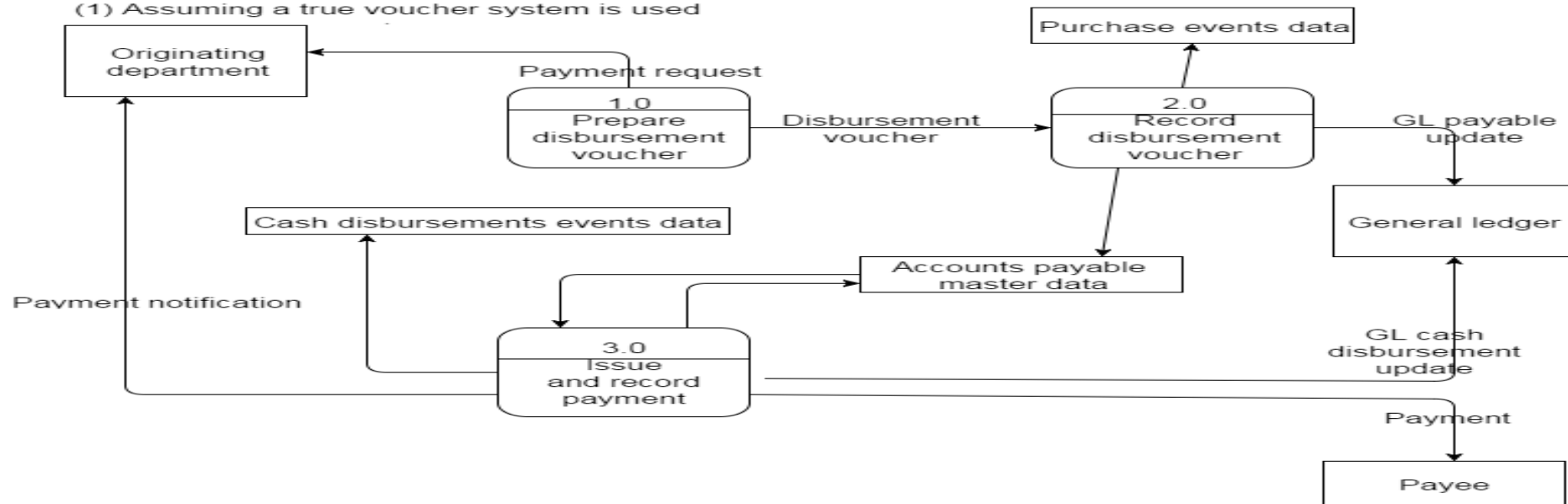
Processing Non-Invoiced Disbursements

- In some cases disbursements are not invoiced, e.g., freight bills, rent, payroll, etc.
- The handling of non-invoiced disbursements depends on whether or not a voucher system is used
- A voucher system prepares a voucher for every expenditure from payroll to purchases of raw materials

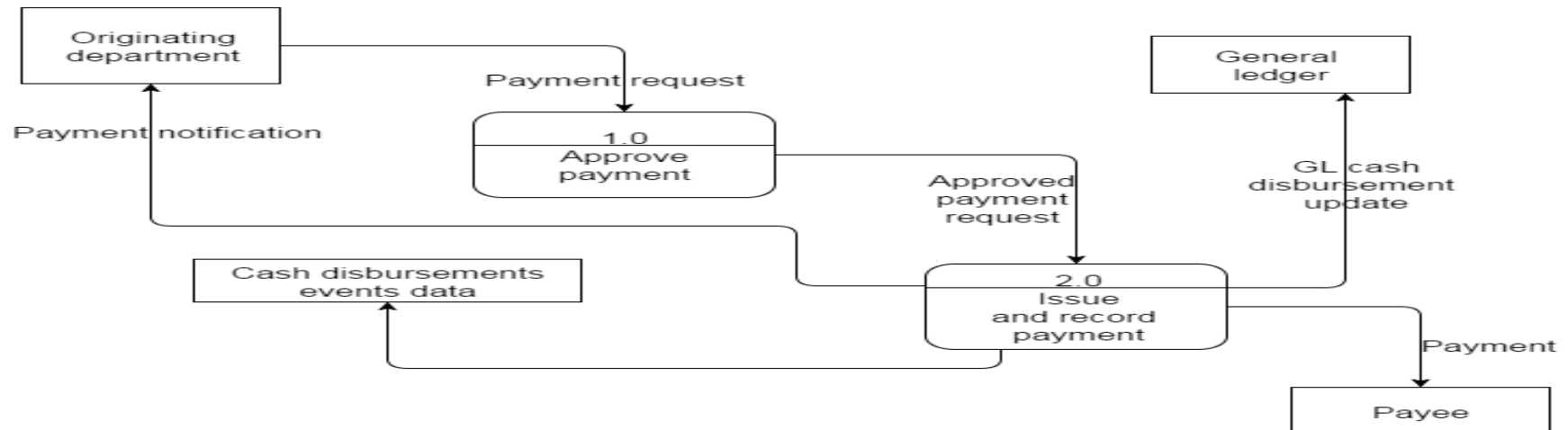
AP/CD Level 0 Data Flow Diagram

Processing Non-Invoiced Disbursements

(1) Assuming a true voucher system is used



(2) Assuming a nonvoucher system is used :



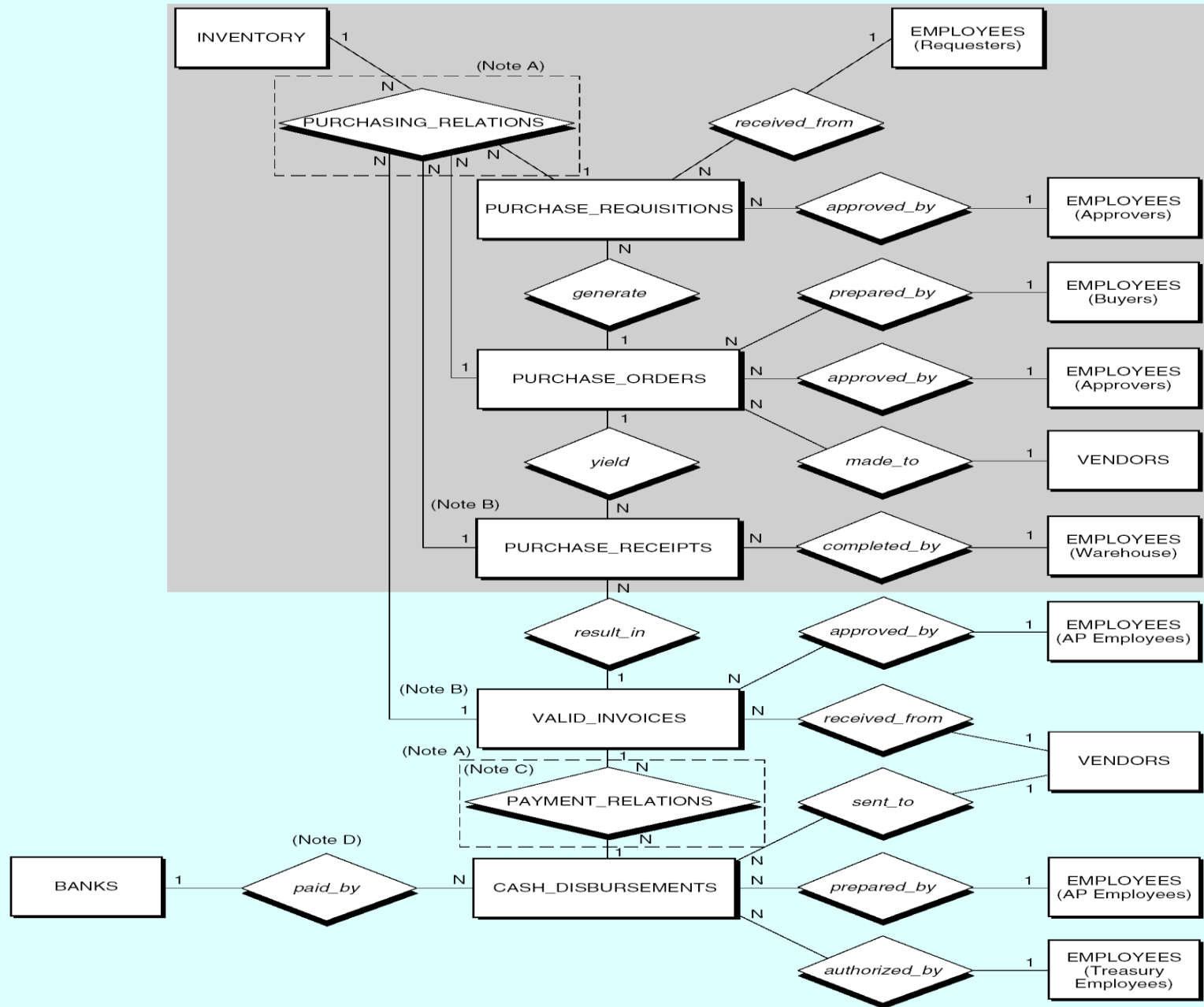
Logical Data Descriptions for the AP/CD Process

- Accounts payable master data. This data store is a repository of all unpaid vendor invoices
 - The data design should consider how the data will be processed when the cash manager is deciding what payments to make
 - For example, the manager may want to merge vendor invoices so that the total amount due each vendor can be accumulated
 - Alternatively, the manager might want to select specific invoices for payment

Logical Data Descriptions for the AP/CD Process, Cont'd.

- Cash disbursements data. The purpose of this data is to show, in chronological sequence, the details of each cash payment made.
 - Each record in this data normally shows the date the payment is recorded, vendor identification, disbursement voucher number (if a voucher process is used), vendor invoice number and gross invoice amount, cash discount taken on each invoice, net invoice amount, check amount, and check number.

Entity-
Relationship (E-
R) Diagram
(*Partial*) for the
AP/CD Process

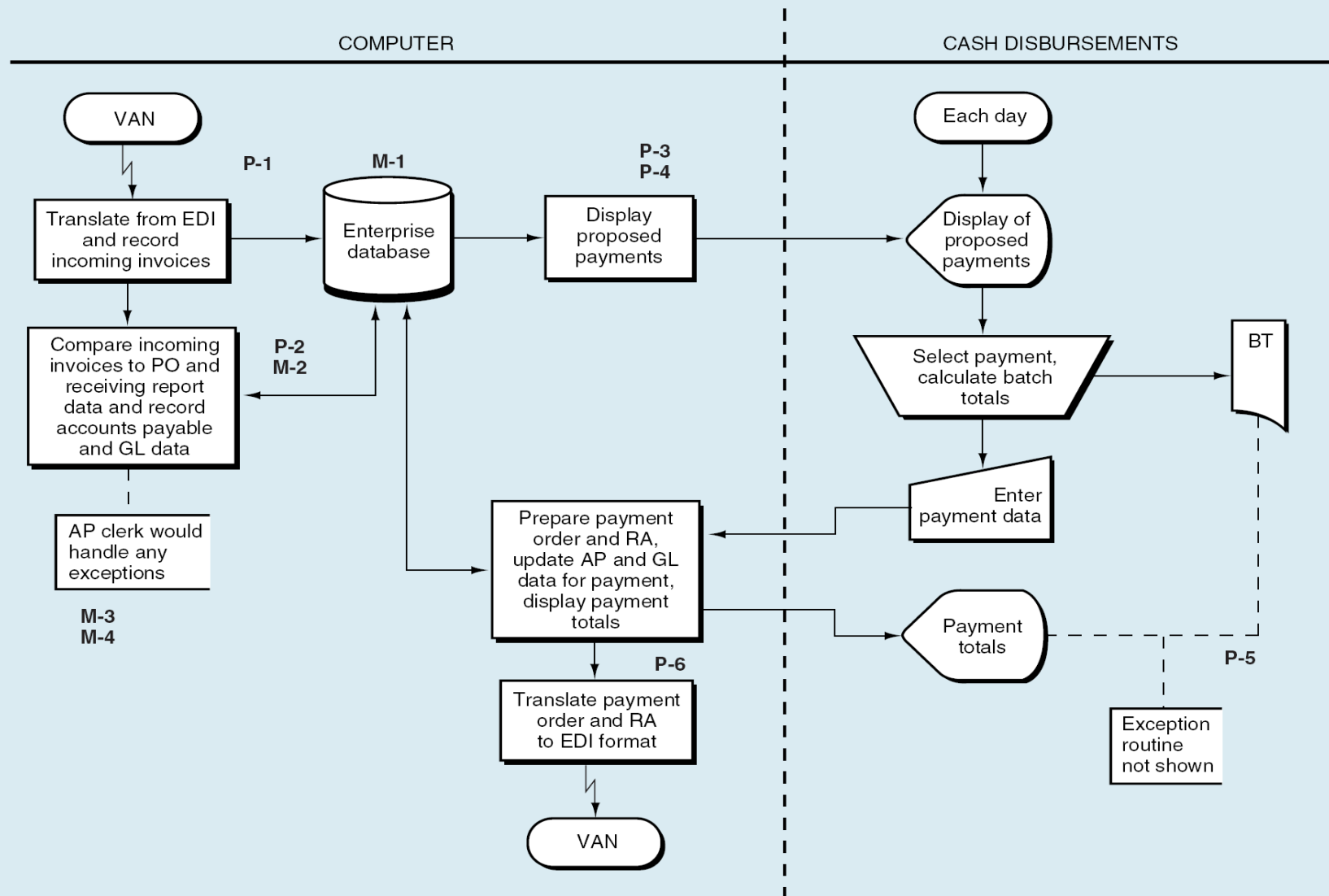


Technology Trends and Developments

- E-invoicing - the processing of invoices in electronic form
 - Scan documents
 - Use purchasing cards (p-cards)
 - Invoices can be submitted electronically
- E-payments - the electronic submission of payments
 - *EDI* and *XML*-based technologies
 - Settled through the *ACH* network, wire transfer, or credit card

AP/CD Process: Systems Flowchart

FIGURE 13.10 AP/CD Process—Systems Flowchart



Purchase Returns and Allowances

- In some cases defective goods may be returned or an allowance made for non-conforming items
 - This *exception routine* usually begins at the point of inspecting and counting the goods or at the point of *validating* vendor invoices
 - Purchaser transmits a debit memo to the vendor requesting the account adjustment
 - The vendor responds with a credit memo indicating the authorized account adjustment

A group of seven business professionals in a meeting, shown as light gray silhouettes against a background of a grid pattern, likely a window or screen. They are positioned at the top of the slide, above the main title.

Q&A