The Order Entry/Sales(OE/S) Process

Enterprise Resource Planning

Introduction

- The order entry/sales (OE/S) process includes the first four steps in the order-to-cash process SQ = เสนอราคา
  - pre-sales activities กิจกรรมที่เกิดขึ้นก่อนการขาย ตั้งแต่การแลกนามบัตร การทำโปรโมชั่น การสำรวจต่างๆ ทุกๆกิจกรรม
  - sales order processing S/O ใบสั่งขาย เอา P/O ไปใส่ในระบบ -- การตลาด แผนกผลิต สั่งซื้อ คลังสินค้า จัดส่ง ต้องรู้ P/O
  - picking and packing the goods ไปเอามากองหน้าคลังสินค้า ยังไม่ของอยู่ในระบบ แค่ย้ายทีอยู่มัน ตัดจำนวนสินค้าในระบบด้วย ถ้าของออกจากคลังสินค้าไป ถือว่ามีภาษีทันที
  - shipping ถ้าไม่ใช้บริษัทขนส่ง -- ความรับผิดชอบกับของจะเป็นของเราก่อนถึงมือลูกค้า
- Billing and processing the customer payment, are described in Chapter 11, the billing/accounts receivable/cash receipts process

Process Definition and Functions

The primary function of the OE/S process is to create information flows that support the following:

1. Repetitive work routines of the sales order department, the credit department, and the shipping department
2. Decision needs of those who manage various sales and marketing functions

Horizontal View OE/S

Customer

VP Marketing

VP Finance

ทุนจดทะเบียน = เป็นหนี้ได้เท่าไหร่

VP Logistics

Sales order department

Credit department

Warehouse

1.Customer order

2.Credit request

3.Credit approval

4a.acknowled gement

4b.Picking ticket

5.Complete picking ticket

ใบนี้ให้คลังสินค้าหยิบของออกมารอส่ง

4c.Sales order

4d.Sales order

B/AR/CR

5b.Shipping notice

5d.Shipping notice

5c.Shipping notice

5a.Shipping notice

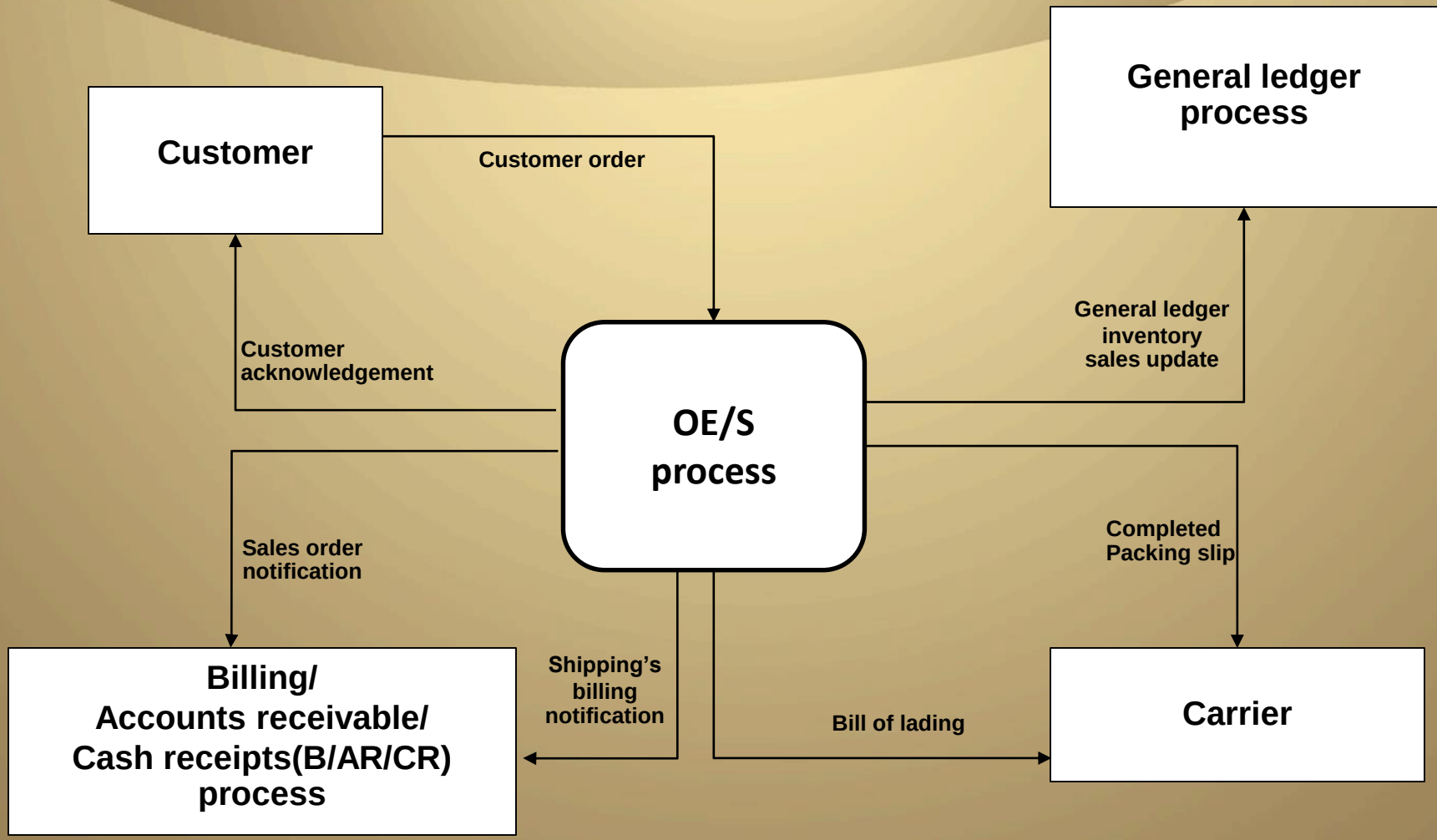
Shipping department

General ledger

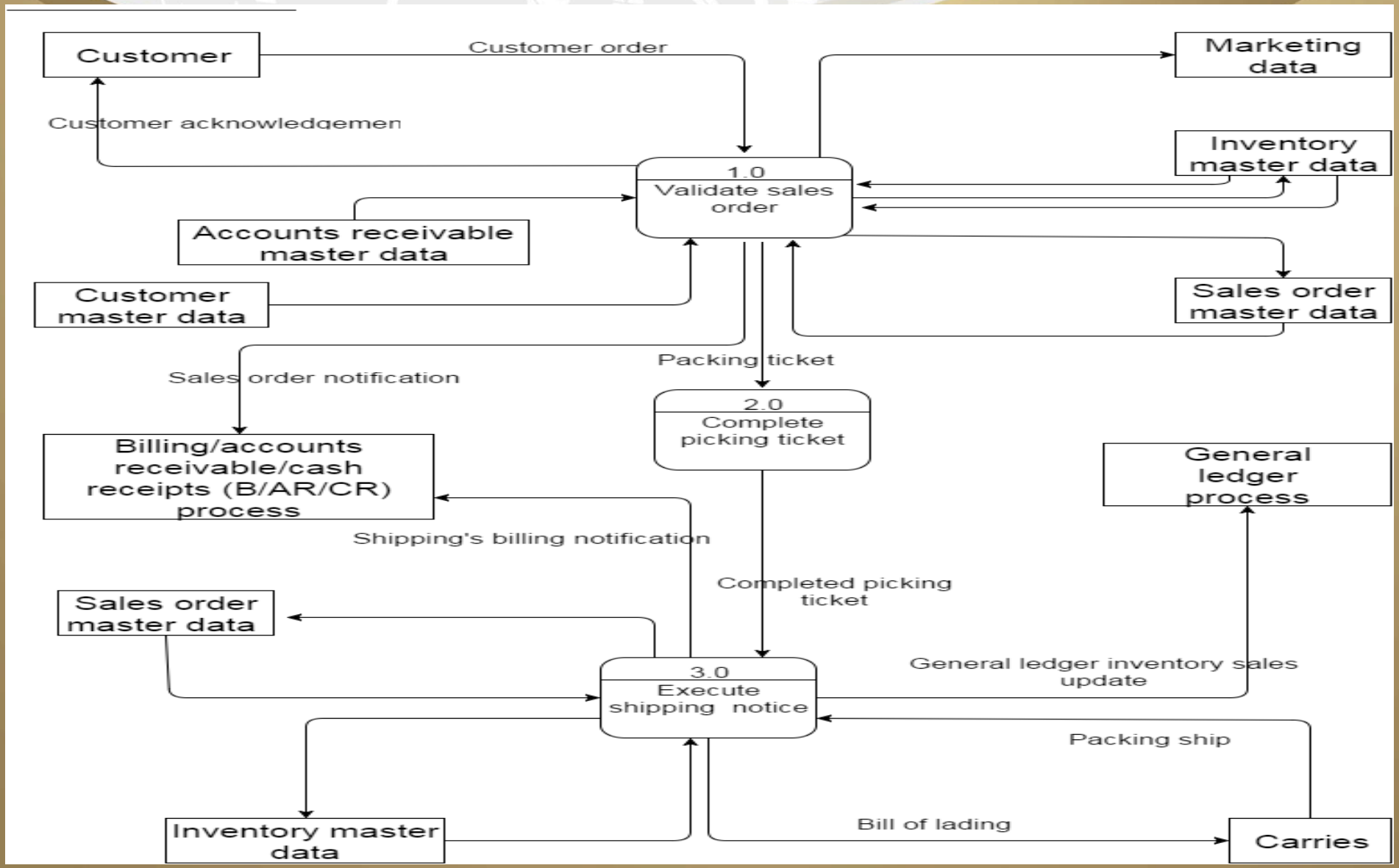
Carrier

The OE/S Process Context Diagram

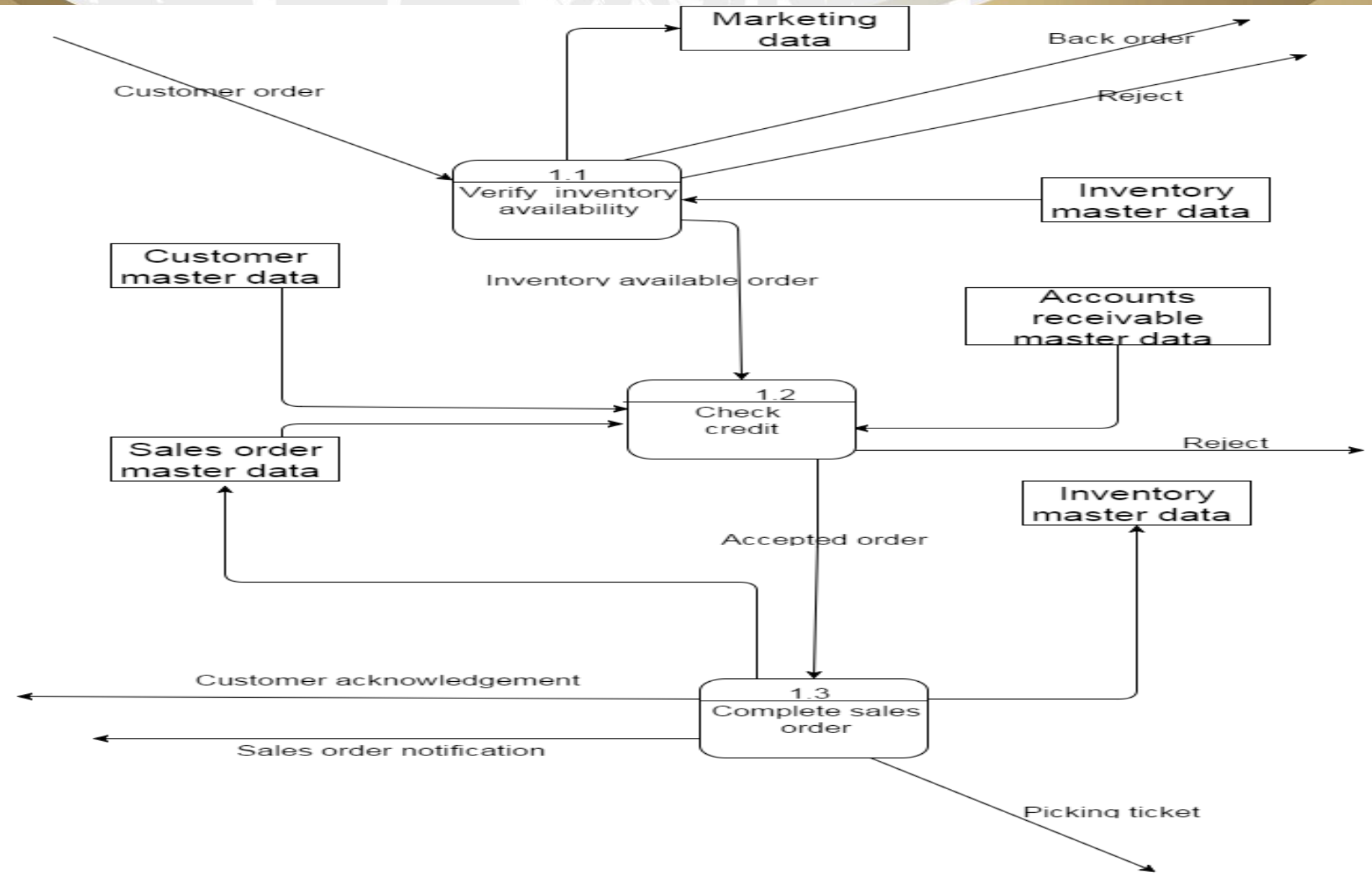
ลูกค้าทีมีความยืดยุ่นสูง -- รับเหมาก่อสร้าง



OE/S Level Zero DFD



OE/S Level 1 DFD: Validate Sales



Level 1 DFD: Validate Sales Order

1.1 **Verify inventory available**

- Triggered by a customer order
- Inquiry of inventory master file to check inventory availability

ทำตามสัญญาที่ตกลงกันไว้ เช่น เวลาการส่งของ

- "Available to promise (ATP)" can be complicated
- Facilitated by an *enterprise system* that can look worldwide within the organization and up and down the supply chain to determine when goods can be delivered
- If a sufficient level of inventory is on hand to satisfy the request, the order is forwarded for further processing, as depicted by the data flow "Inventory available order"
- If a customer orders goods that are not in stock, process 1.1 runs a special back order routine
- Record demographic and other info in marketing data store

Level 1 DFD: Validate Sales Order

1.2 **Check credit**

- Process 1.2 establishes the customer's existence and then approves credit
- With an *enterprise system* one record should exist for each customer, wherever he or she is located and from whatever parts of the organization he or she makes purchases
- This allows an organization to readily determine the amount of credit available to that customer worldwide
- Without this central database a customer could incur multiple receivable balances that in total exceed an amount the selling organization considers desirable

Level 1 DFD: Validate Sales Order

1.3 Complete sales order

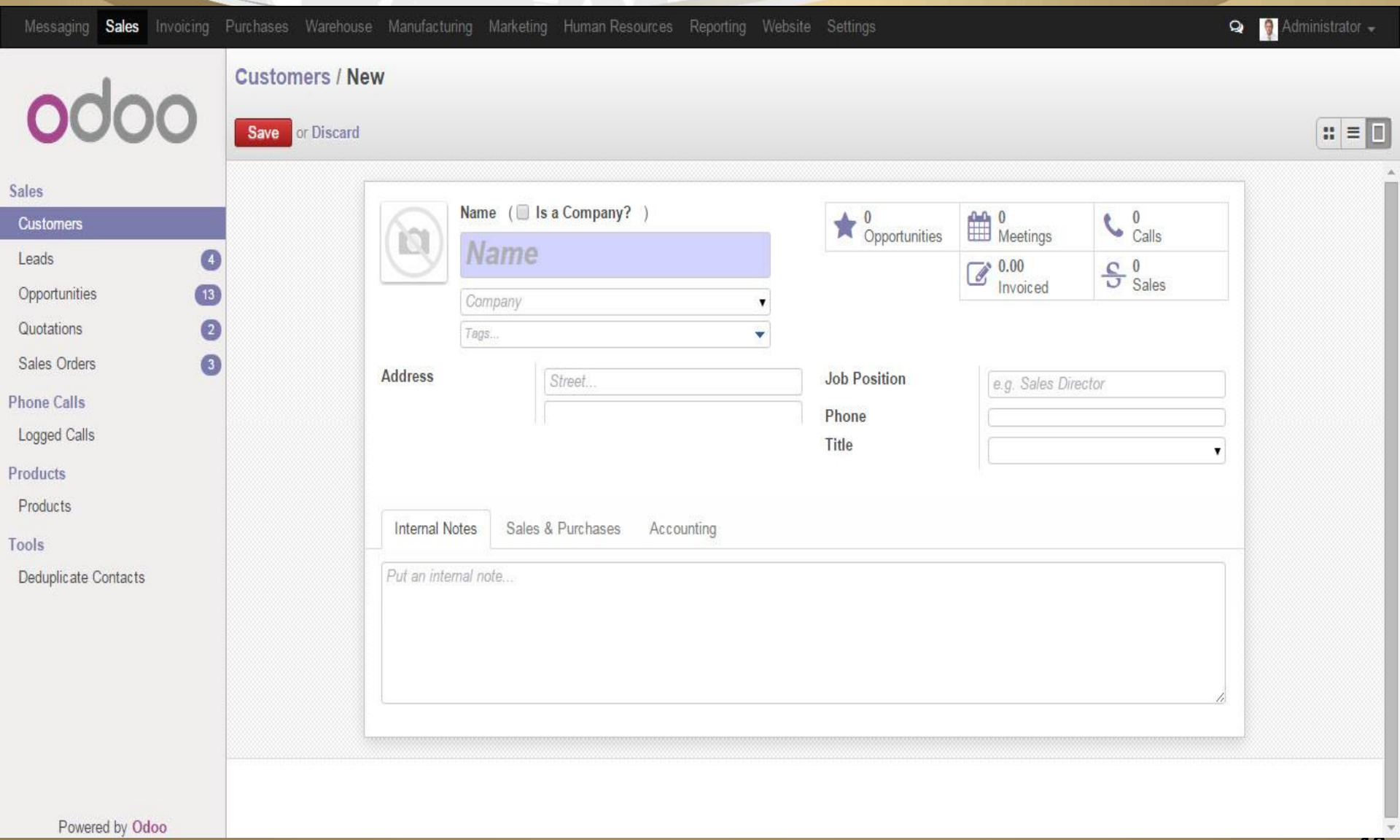
- process 1.3 receives an accepted order from process 1.2.
- It then completes the order by adding price information, from the inventory master data
- As noted earlier, this could be a complicated calculation based on who and where the customer is and if the item is to be discounted
- Then, process 1.3 performs the following activities simultaneously:
  - Updates the inventory master data to allocate the quantity ordered to the sales order
  - Updates the sales order master data to indicate that a completed sales order has been created
  - Disseminates the sales order

Level 1 DFD-Dissemination data flows:

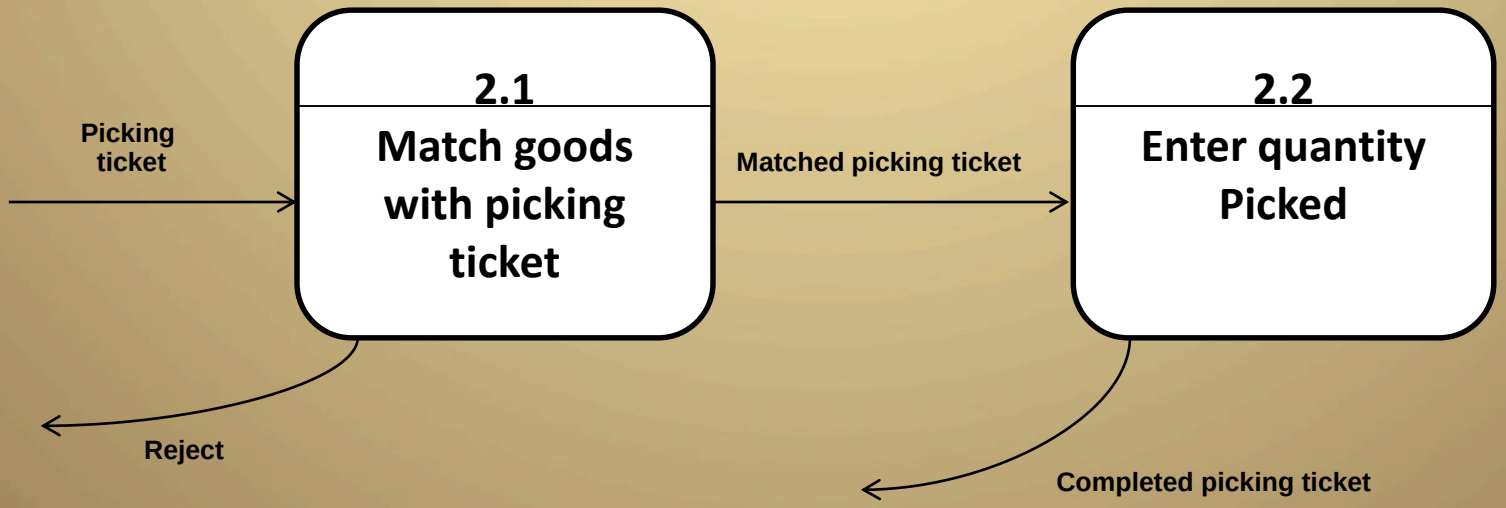
Validate Sales Order

- A **picking ticket** authorizes the warehouse to "pick" the goods from the shelf and send them to shipping
  - The picking ticket identifies the goods to be picked and usually indicates the warehouse location
- A **customer acknowledgment** is sent to the customer to notify him or her of the order's acceptance and the expected shipment date
- A **sales order notification** is sent to the billing department to notify them of a pending shipment
  - this could take many forms including a message received on a computer screen or a report of pending shipments

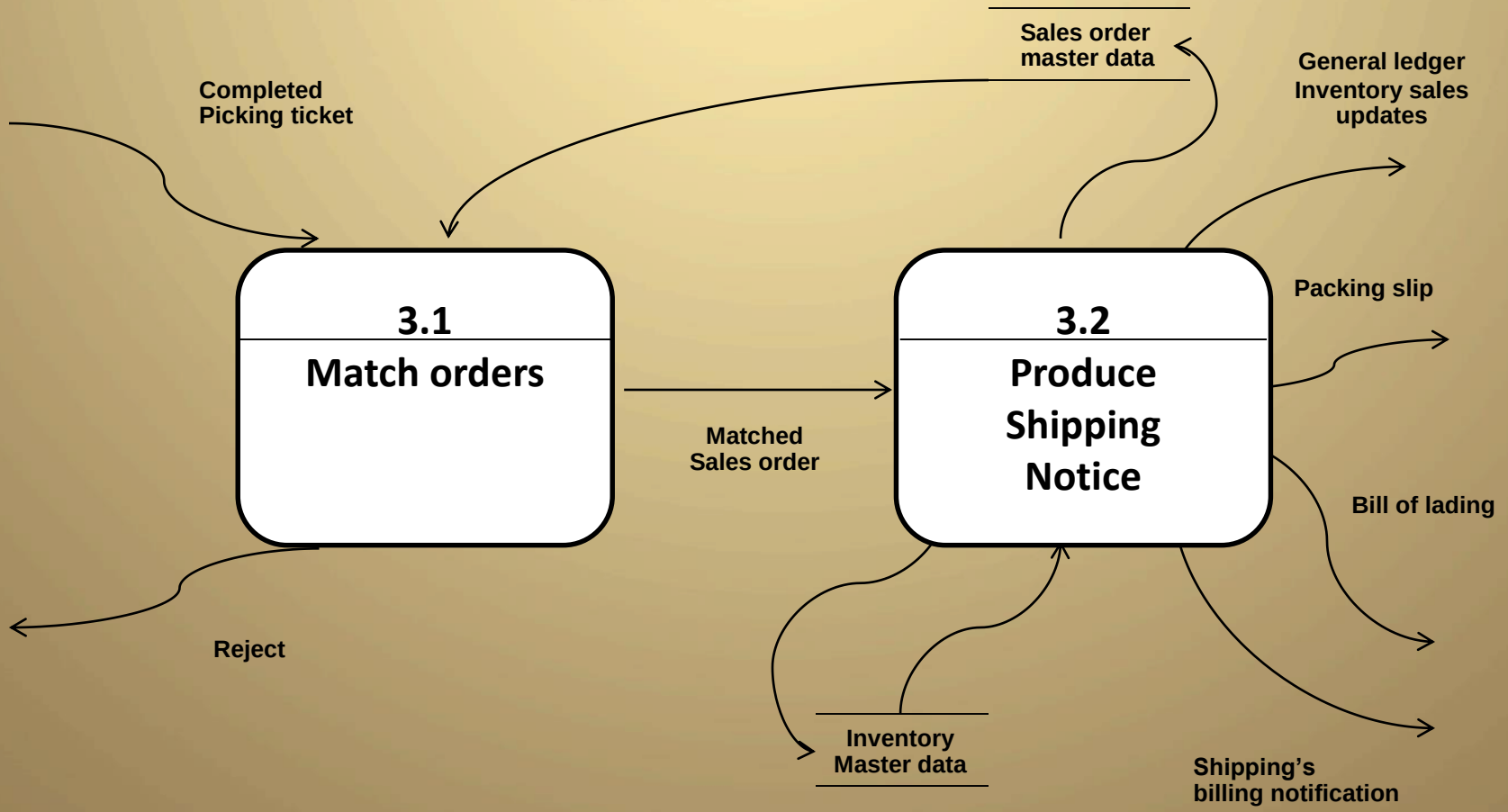
Screen Odoo: Sale module



Level 1 DFD: Complete Picking Ticket



Level 1 DFD: Execute Shipping Notice



Level 1 DFD-Dissemination of Data Flows: Execute Shipping Notice

- **Shipping's billing notification** (to notify billing to begin the billing process)

- **Bill of lading**, a contract between the shipper and the carrier in which the carrier agrees to transport the goods to the shipper's customer
  - The carrier's signature on the bill of lading, and/or the customer's signature on some other form of receipt, substantiates the shipment

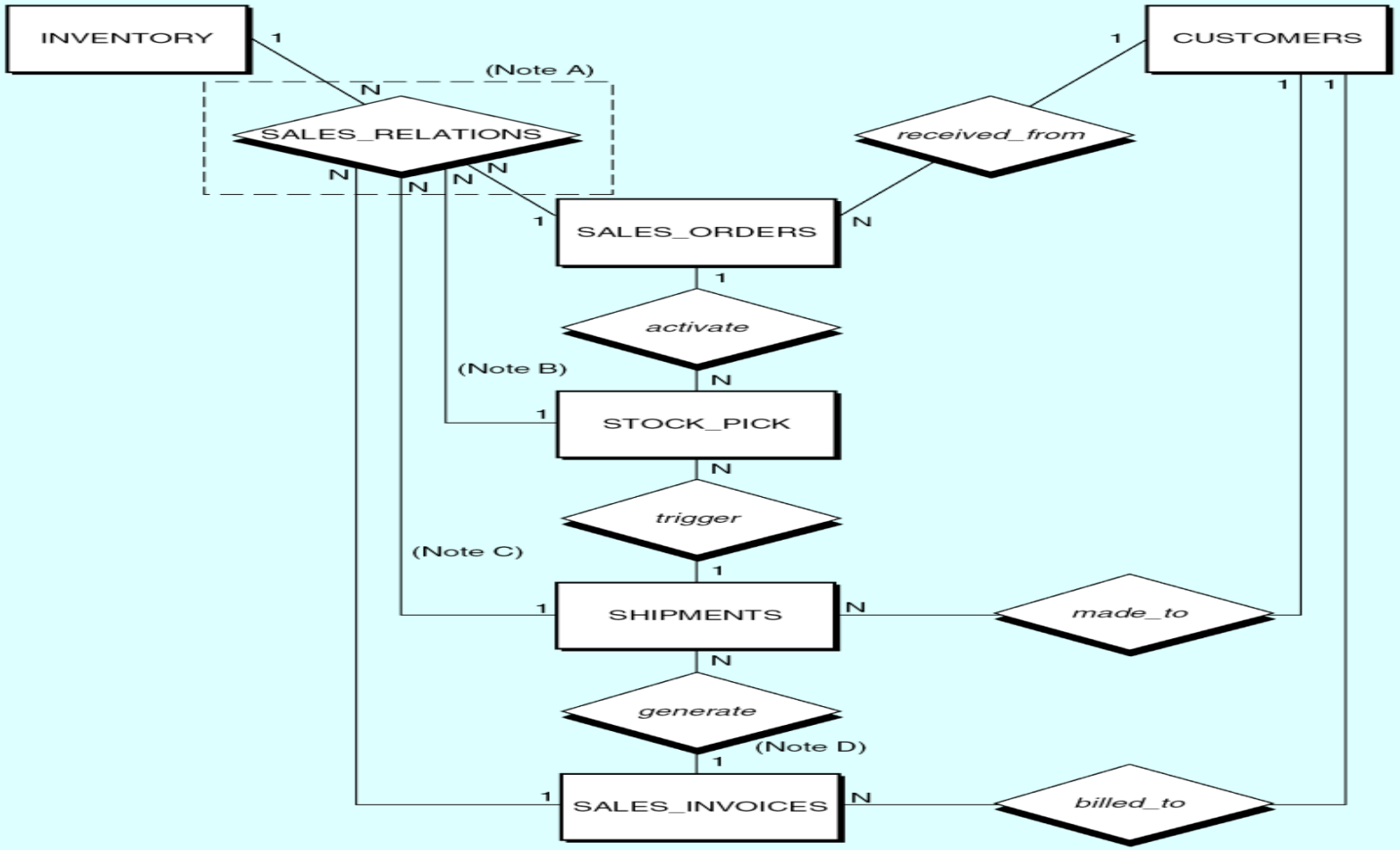
- A **packing slip** is attached to the outside of a package and identifies the customer and the contents of the package

- **General ledger inventory sales update** to notify the general ledger process that inventory has been sold and the cost of goods sold has increased

OE/S Data Stores

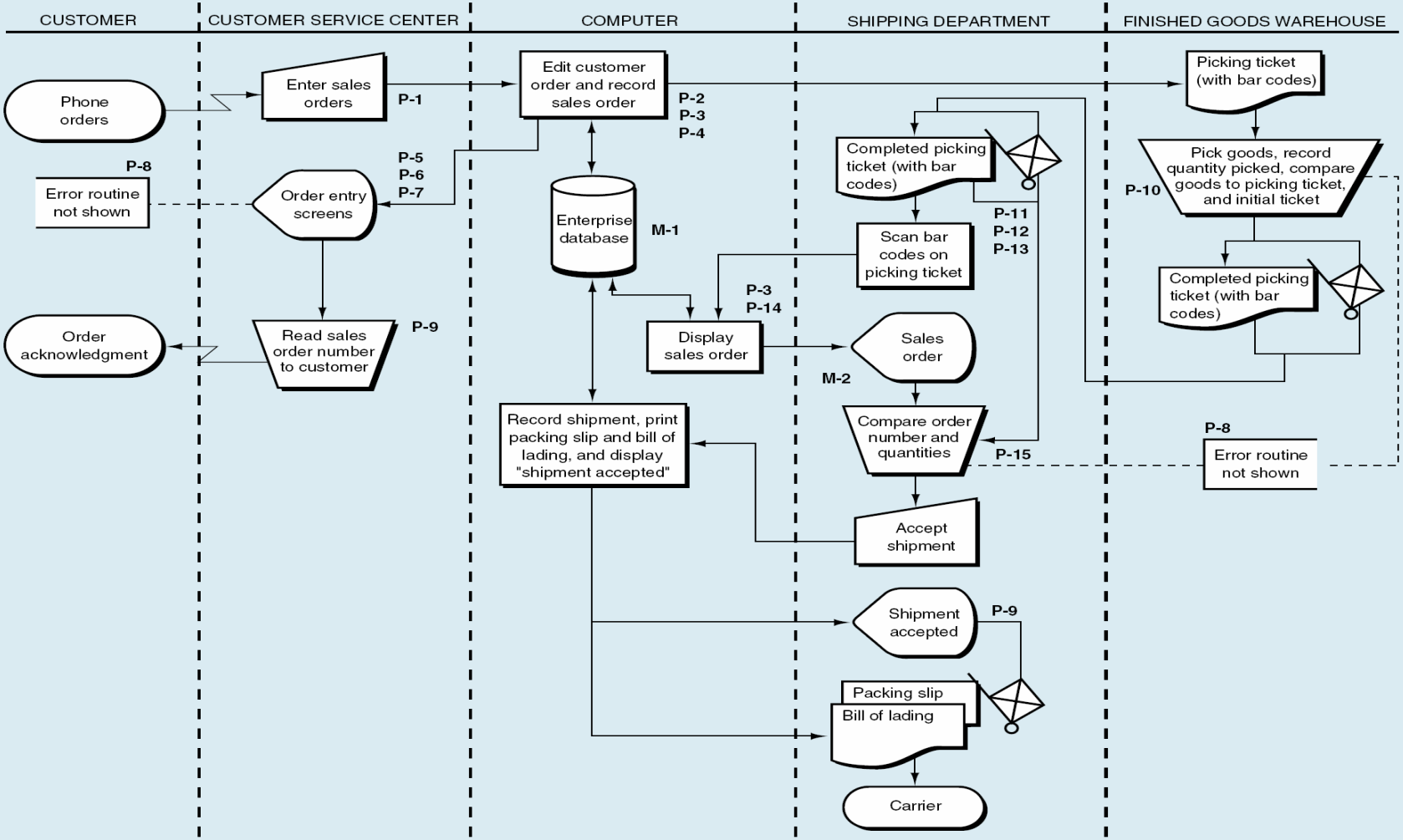
- Marketing data
- Customer master data
- Sales order master data
- AR master data
- Inventory master data

Entity-Relationship Diagram for OE/S Process



NOTES, for simplicity, we assume that:
A—See page 368 for an explanation of the box around SALES_RELATIONS and why the model is not fully normalized.
B—All goods ordered are picked (no partial picks).
C—All goods picked are shipped (no partial shipments).
D—All shipments are invoiced in full (no partial invoices).

The OE/S Process Flowchart



Global e-Business

- E-Business systems are broken into two categories: buy-side and sell-side
  - Buy Side
    - Buy-side systems use the Internet to automate and manage corporate vendors and purchases.
    - The predominant technology in this area is *electronic data interchange* (*EDI*)
  - Sell Side
    - Sell-side systems are designed to allow a company to market, sell, deliver, and service goods and services to customers throughout the world via the Internet
    - Sell-side applications can handle both B2B and B2C business transactions
    - One facet of sell-side systems is known as *customer relationship management (CRM)* applications

CRM Systems

- Better customer service means happier customers and yields greater sales—particularly repeat sales
- CRM systems are designed to manage all the data related to customers, such as marketing, field service, and contact management data
  - CRM has become the focus of ERP vendors who realize the need to tap into this growing market and to integrate CRM data with the other data already residing within the ERP system's database
- At the same time, the software supports the organizing and retrieving of information on historical sales activities and promotions planning
  - This facilitates the matching of sales promotions with customers' buying trends
  - The buzzword in CRM is "segmentation," the grouping of customers into categories based on key characteristics
- Customer/Sales data is being stored in terabyte-sized databases and analyzed

Automated Data Entry

- **Bar code readers** are devices that use light reflection to read differences in bar code patterns in order to identify a labeled item

อ่านตัวอักษร

- **Optical character recognition** is similar to *bar code readers* work, but recognize a pattern of handwritten or printed characters

QR CODE

- **Scanners** are input devices that capture printed images or documents and convert them into electronic digital signals that can be stored on computer media

Digital Image Processing

- **Digital image processing systems** are computer-based systems for capture, storage, retrieval, and presentation of images of real or simulated objects
- The following briefly describes the major steps in a typical digital image processing system
  - In the *input* stage, *scanners* are generally used to capture images or documents
  - A clerk uses a PC or workstation to retrieve the image of a source document
    - In addition to screen output, images also may be printed
  - After a document has been input, additional processing may take place.
    - Additional data related to the document might be added, or someone might act on data contained in, or associated with, the document
    - Retrieval and processing capabilities may be incorporated into existing applications
    - Linking these images in an *enterprise system* makes accessibility greater and easier and information can readily be distributed throughout the organization to where it is needed

Q&A