Operations Management in Manufacturing and Service Industries
Chapter Objectives

1. Define operations management, discuss role of the operations manager, and decisions in planning production process
2. Describe types of facility layouts
3. Identify activities of operations manager
4. Explain PERT/Gantt charts
5. Explain technology in manufacturing
6. Distinguish service from manufacturing operations in product delivery and managing
Operations Management

• “...consists of all ________ involved in transforming a product idea into a _________ product, as well as those involved in planning and controlling the _________ that produce goods and services.”
The Transformation Process
Manufacturing

• “…manufacturers…perform the same basic function: to transform resources into finished goods.”

Operations Management:

1. Production Planning
2. Production Control
3. Quality Control
Planning: Production Method Decisions

- Make-To-Order
- Mass Production
- Mass Customization
Facilities Decisions

- Site Selection
  - Close to suppliers, customers, or both
  - Supply of skilled workers
  - Quality of life
  - Resource costs
  - Business climate

- Capacity Planning

- Layout Planning
• “...how equipment, machinery, and people will be arranged to make the production process...efficient...”
Process Layout

- Fur-cutting
- Stuffing and sewing
- Dressing
- Shipping
Product Layout

Combining and whipping → Sugar-added coloring → Molding → Detailing → Wrapping and shipping
Materials Management

“...encompass(es)... activities: purchasing, inventory control, and work scheduling.”
Purchasing And Supplier Selection

- Purchasing
- Supplier Selection
- E-Purchasing
- Electronic Data Interchange
Inventory Control

Just- ___- _____

Material _______________ Planning

____________________ Resource Planning
Work Scheduling

1 Master Production Schedule

1 _______ Charts

1 ________ Charts
Lot size: 100 bears

All activities are scheduled to begin at their earliest start time.

- **Completed work**
- **Work to be completed**
Technology Of Goods Production

- Computer-Aided Design
- Computer-Aided Manufacturing
- Computer-Integrated Manufacturing
- Flexible Manufacturing Systems
Differences Between Manufacturers and Service Providers

- Intangibility
- Customization
- Customer Contact

Operational Efficiency...Important (to both)
Service Provider Decisions

What services/goods to offer?
How provide services?
Where to locate business and what will it look like?
How to forecast demand for services?
Operations Planning

✶ Operations Processes
  • Make-To-Order
  • Make-To-Stock

✶ Facilities
  • Site Selection
  • Size/Layout
  • Capacity Planning
Managing Operations

- Scheduling
- Inventory Control
Quality

• “...the totality of features and characteristics of a product or service that bear on its ability to satisfy stated or implied needs.”
Quality Management
Or Assurance- TQM

Customer ____________
Employee Involvement
__________ Improvement
  • Statistical Process Control
  • B __________
International __________ Standards
  • ISO 9000
  • ISO 14000
Outsourcing

• “...having outside vendors manufacture the actual product.”
Outsourcing

• Manufacturing

• Service