Chapter 1 – Basics of Operations Management

Operations Management

R. Dan Reid & Nada R. Sanders
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Learning Objectives

- Define and explain OM
- Explain the role of OM in business
- Describe the decisions that operations managers make
- Describe the differences between service and manufacturing operations
- Identify major historical developments in OM

Learning Objectives – con’t

- Identify current trends in OM
- Describe the flow of information between OM and other business functions

Operations Management is:

- A management function
- An organization’s core function
- In every organization whether Service or Manufacturing, profit or Not for profit

Operations Management is:

The business function responsible for planning, coordinating, and controlling the resources needed to produce products and services for a company

Typical Organization Chart
What is Role of OM?

- OM Transforms inputs to outputs
  - Inputs are resources such as
    - People, Material, and Money
  - Outputs are goods and services

OM’s Transformation Process

OM’s Transformation Role

- To add value
  - Increase product value at each stage
  - Value added is the net increase between output product value and input material value
  - Provide an efficient transformation
    - Efficiency - means performing activities well for least possible cost

Manufacturers vs Service Organizations

- **Services:**
  - Intangible product
  - Product cannot be inventoried
  - High customer contact
  - Short response time
  - Labor intensive

- **Manufacturers:**
  - Tangible product
  - Product is inventoried
  - Low customer contact
  - Longer response time
  - Capital intensive

Similarities for Service/Manufacturers

- Both use technology
- Both have quality, productivity, & response issues
- Both must forecast demand
- Both can have capacity, layout, and location issues
- Both have customers, suppliers, scheduling and staffing issues

Service vs Manufacturing

- Manufacturing often provides services
- Services often provides tangible goods
- Some organizations are a blend of service/manufacturing/quasi-manufacturing Quasi-Manufacturing (QM) organizations
- QM characteristics include
  - Low customer contact & Capital Intensive
Growth of the Service Sector

- Service sector growing to 50-80% of non-farm jobs
- Global competitiveness
- Demands for higher quality
- Huge technology changes
- Time based competition
- Work force diversity

OM Decisions

- All organizations make decisions and follow a similar path
- First decisions very broad - Strategic decisions
  - Strategic Decisions - set the direction for the entire company; they are broad in scope and long-term in nature

OM Decisions

- Following decisions focus on specifics - Tactical decision
  - Tactical decisions: focus on specific day-to-day issues like resource needs, schedules, & quantities to produce
  - are frequent
  - Strategic decisions less frequent
  - Tactical and Strategic decisions must align

Plan of Book - Chapters link to Types of OM Decisions

<table>
<thead>
<tr>
<th>Type of Decision</th>
<th>Operations Management Topics</th>
<th>Chapter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strategic</td>
<td>Quality Strategy (Ch. 3)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Process Design (Ch. 4)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Supply Chain Management (Ch. 5)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Just-In-Time and Lean (Ch. 6)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Inventory Management (Ch. 7)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Capacity Planning and Scheduling (Ch. 8)</td>
<td></td>
</tr>
<tr>
<td>Tactical</td>
<td>Facility Layout (Ch. 10)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Work Systems Design (Ch. 11)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Workforce and Human Resource Planning (Ch. 12, 13, 14, and 15)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Scheduling Issues (Ch. 16 and 17)</td>
<td></td>
</tr>
</tbody>
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Historical Development of OM

- Industrial revolution Late 1700s
- Scientific management Early 1900s
- Human relations movement 1930s-60s
- Management science 1940s-60s
- Computer age 1960s
- Environmental Issues 1970s
- JIT & TQM* 1980s

*JIT = Just in Time, TQM = Total Quality Management
Historical Development con’t

- Reengineering 1990s
- Global competition 1980s
- Flexibility 1990s
- Time-Based Competition 1990s
- Supply chain Management 1990s
- Electronic Commerce 2000s
- Outsourcing & flattening of world 2000s

For long-run success, companies must place much importance on their operations.

Today’s OM Environment

- Customers demand better quality, greater speed, and lower costs
- Companies implementing lean system concepts - a total systems approach to efficient operations
- Recognized need to better manage information using ERP and CRM systems
- Increased cross-functional decision making

OM in Practice

- OM has the most diverse organizational function
- Manages the transformation process
- OM has many faces and names such as;
  - V. P. operations, Director of supply chains, Manufacturing manager
  - Plant manager, Quality specialists, etc.
- All business functions need information from OM in order to perform their tasks

Business Information Flow

OM Across the Organization

- Most businesses are supported by the functions of operations, marketing, and finance
- The major functional areas must interact to achieve the organization goals

OM Across the Organization - con’t

- Marketing is not fully able to meet customer needs if they do not understand what operations can produce
- Finance cannot judge the need for capital investments if they do not understand operations concepts and needs
- Information systems enables the information flow throughout the organization
- Human resources must understand job requirements and worker skills
- Accounting needs to consider inventory management, capacity information, and labor standards
Chapter 1 Highlights

- OM is the business function that is responsible for managing and coordinating the resources needed to produce a company's products and services.
- The role of OM is to transform organizational inputs into company's products or services outputs.
- OM is responsible for a wide range of decisions, ranging from strategic to tactical.
- Organizations can be divided into manufacturing and service organizations, which differ in the tangibility of the product or service.

Chapter 1 Highlights – con’t

- Many historical milestones have shaped OM. Some of these are the Industrial Revolution, scientific management, the human relations movement, management science, and the computer age.
- OM is a highly important function in today's dynamic business environment. Among the trends with significant impact are just-in-time, TQM, reengineering, flexibility, time-based competition, SCM, global marketplace, and environmental issues.
- OM works closely with all other business functions.