



Chapter 1 - Introduction to Operations Management

Operations Management

by

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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:

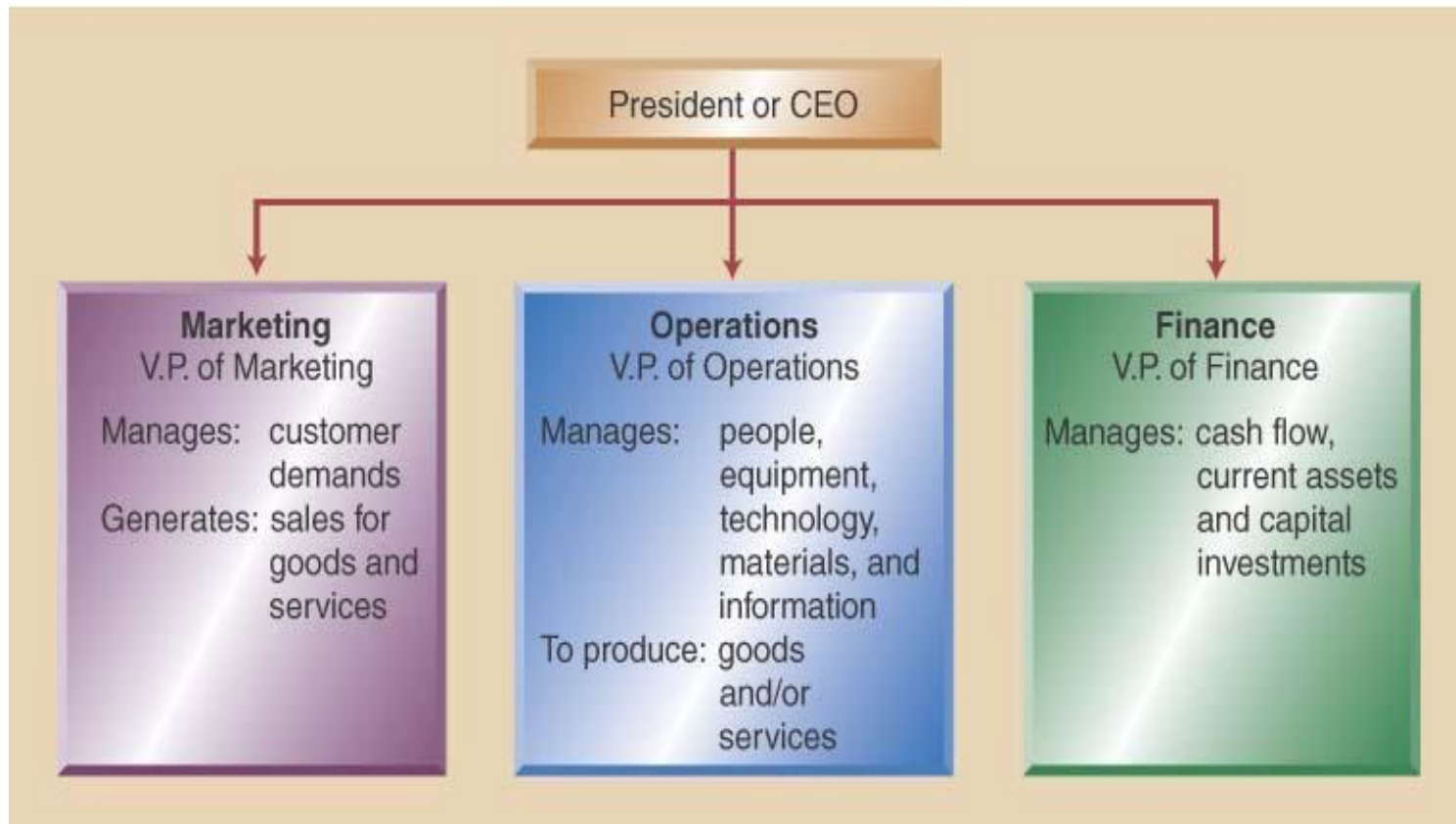
The *business function* responsible for **planning, coordinating, and controlling** the resources needed to produce products and services for a company



Operations Management is:

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

Typical Organization Chart

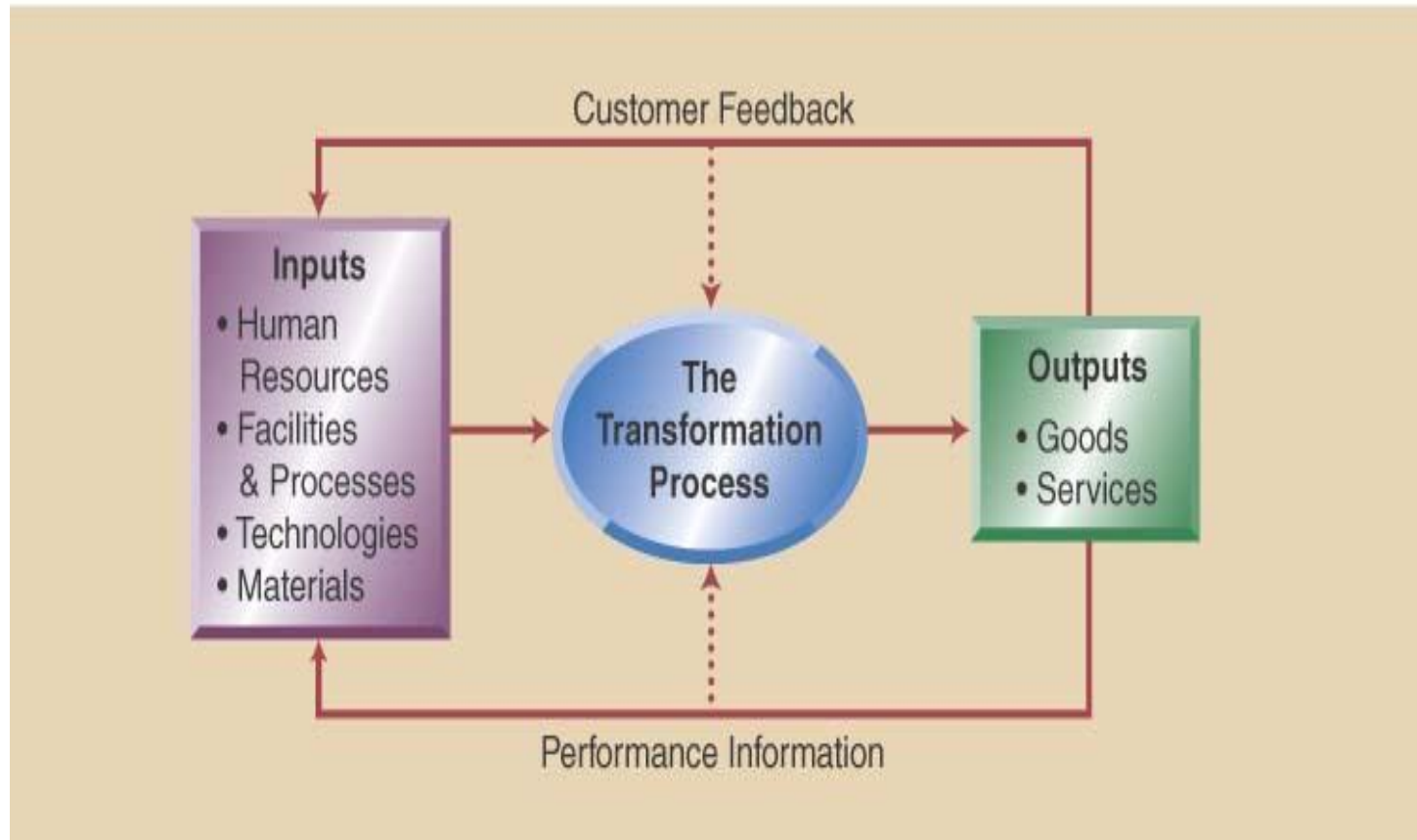




What is Role of OM?

- 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

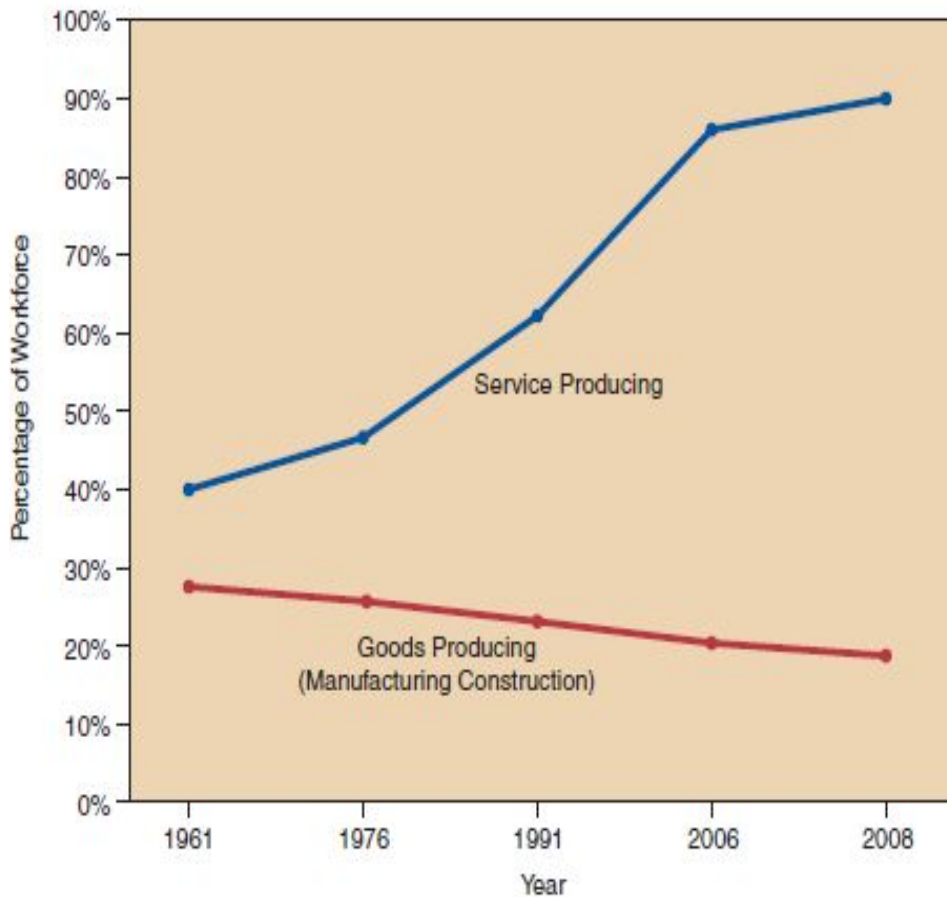
- Both use technology
- Both have quality, productivity, & response issues
- Both must forecast demand
- Both can have capacity, layout, and location issues
- Both have customers, suppliers, scheduling and staffing issues



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

Source: U.S. Department of Commerce



OM Decisions

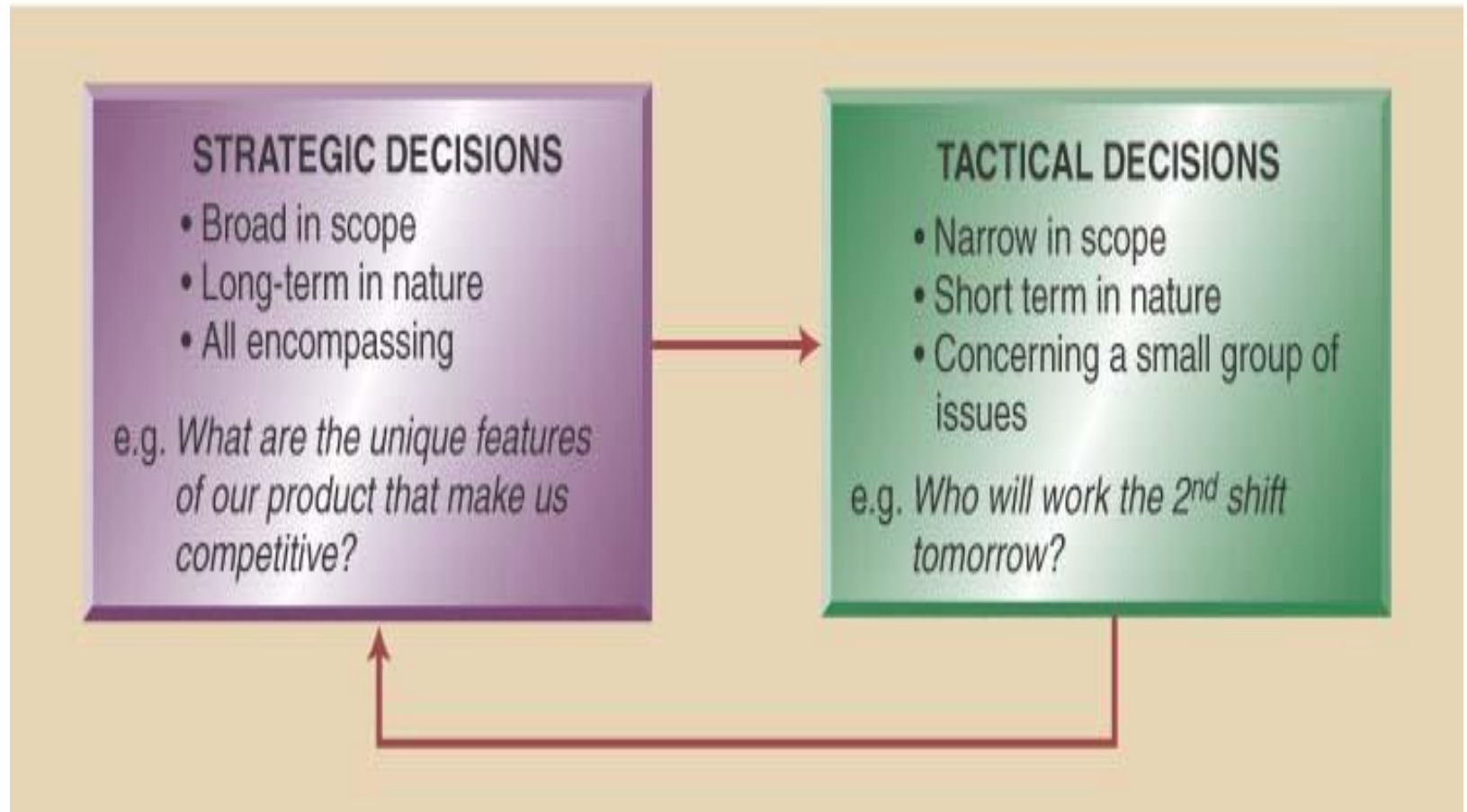
- All organizations make decisions and follow a similar path
 - First decisions very broad – Strategic decisions
 - Strategic Decisions – set the direction for the entire company; they are broad in scope and long-term in nature



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

OM Decisions



Plan of Book- Chapters link to Types of OM Decisions

Type of Decision	Operations Management Topic	Chapter
Strategic ↑ ↓ Tactical	Operations Strategy	Ch. 2
	Product Design and Process Selection	Ch. 3
	Supply Chain Management	Ch. 4
	Total Quality Management	Ch. 5 and 6
	Just-in-Time and Lean Systems	Ch. 7
	Forecasting	Ch. 8
	Capacity Planning and Location Analysis	Ch. 9
	Facility Layout	Ch. 10
	Work System Design	Ch. 11
	Inventory and Resource Planning	Ch. 12, 13, 14, and 15
	Scheduling Issues	Ch. 16 and 17



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

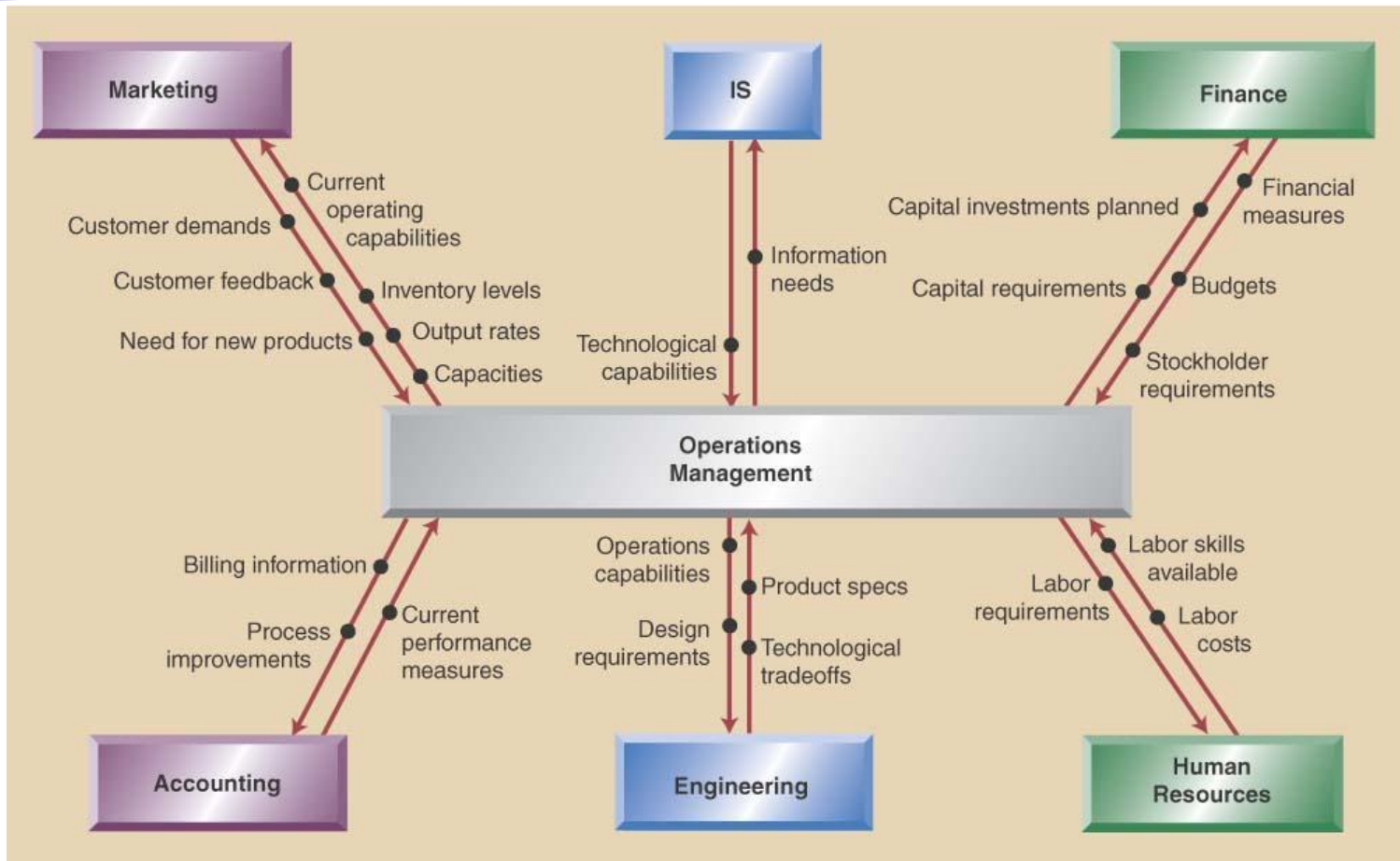
- Customers demand better quality, greater speed, and lower costs
- Companies implementing lean system concepts – a total systems approach to efficient operations
- Recognized need to better manage information using ERP and CRM systems
- Increased cross-functional decision making



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 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



The End

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