

INTRODUCTION TO OPERATIONS MANAGEMENT

OPERATIONS AND PRODUCTIVITY

OUTLINE

- ❑ Global Company Profile
- ❑ What Is Operations Management?
- ❑ Organizing to Produce Goods and Services
- ❑ The Supply Chain
- ❑ Why Study OM?
- ❑ What Operations Managers Do

Company Profile

Sony is a global manufacturer of audio, video, communications and information technology products for consumer and professional markets.

Company Profile

With its music, pictures, game and online businesses, the company is uniquely positioned to be one of the world's leading digital entertainment brands, offering an outstanding portfolio of exciting multimedia content.



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Sony Europe is a subsidiary of Sony Corporation with Corporate Headquarters located at the Sony Center am Potsdamer Platz in Berlin. Its role is to manage and develop the company's electronics business across Europe.

Vision

To create exciting new digital entertainment experiences for consumers by bringing together cutting-edge products with latest generation content and services.

Mission

Sony is committed to developing a wide range of innovative products and multimedia services that challenge the way consumers access and enjoy digital entertainment. By ensuring synergy between businesses within the organisation, Sony is constantly striving to create exciting new worlds of entertainment that can be experienced on a variety of different products.

Boosting Sony's Electronics Business

A key focus for Sony is to strengthen its all-important electronics business and maintain market leadership in high profile areas such as televisions, digital imaging, home video equipment and portable audio. To achieve this, Sony is pursuing three corporate initiatives:

- The Customer Viewpoint Initiative emphasises the importance to staff of viewing Sony, its products and services from a customer perspective.
- The Technology Nr. 1 Initiative focuses on reinforcing Sony's cutting-edge technologies in the areas targeted for maximum investment of resources, including televisions, home video equipment, digital imaging equipment and Walkman®.
- The 'Genba' Initiative aims at strengthening frontline operations ('genba' in Japanese) such as design locations, manufacturing facilities and sales offices.

Company Profile

Discover the HD World



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Sony delivers thrilling digital entertainment experiences by capitalising on the synergy between its electronics business, content creation capabilities and movie, music, mobile and computer games interests. As a world leader in high definition, Sony already offers an exciting range of broadcast and consumer HD products, as well as content assets that are driving the industry towards HD digitization.

Sony is the only company that can deliver complete, end-to-end solutions for today's HD World. We provide the tools for our customers to create, edit, store, share and enjoy High Definition content. Sony Pictures and Sony Computer Entertainment create movies and games that maximise the full power and potential of HD while independent film makers and programme producers are encouraged to realize their unique creative vision in full Sony HD.



Blu-ray Disc will also be a key driver of Sony's HD business. This high capacity, next-generation optical disc format is supported by leading companies in every major industry and offers vast potential for content creators to develop a new generation of HD entertainment experiences.



MANAJEMEN OPERASIONAL

Kegiatan untuk menciptakan nilai produk baik berupa barang maupun jasa melalui proses transformasi input menjadi output.

berlaku untuk berbagai macam produsen barang seperti elektronik, garmen, otomotif, demikian pula berlaku juga bagi produsen jasa seperti media masa, hiburan, pendidikan, konsultan.

Krajewsky & Ritzman, (2002) mendefinisikan Operations Management merupakan pengarahan dan pengawasan proses yang mengubah bentuk input menjadi barang dan jasa (output)

Operations Management (OM) adalah serangkaian aktivitas untuk menciptakan nilai dalam bentuk barang dan jasa melalui transformasi input menjadi output. Aktivitas merupakan proses atau sekumpulan kegiatan yang memerlukan satu atau lebih dari input, merubah dan menambah nilai pada input tersebut, sehingga dapat memberikan satu atau lebih output bagi pelanggan. Input terdiri atas sumber daya manusia (tenaga kerja), modal (peralatan dan fasilitas), pembelian bahan baku dan jasa, tanah dan energi. Sedangkan outputnya adalah barang dan jasa.

WHAT IS OPERATIONS MANAGEMENT?

Production is the creation of goods and services

Operations management (OM) is the **set of activities** that **create value** in the form of goods and services by **transforming inputs into outputs**

Produksi (*production*) merupakan sebuah penciptaan barang dan jasa.

Manajemen operasi (*operations management—OM*) merupakan serangkaian aktivitas yang menciptakan nilai dalam bentuk barang dan jasa dengan mengubah masukan menjadi hasil.

ORGANIZING TO PRODUCE GOODS AND SERVICES

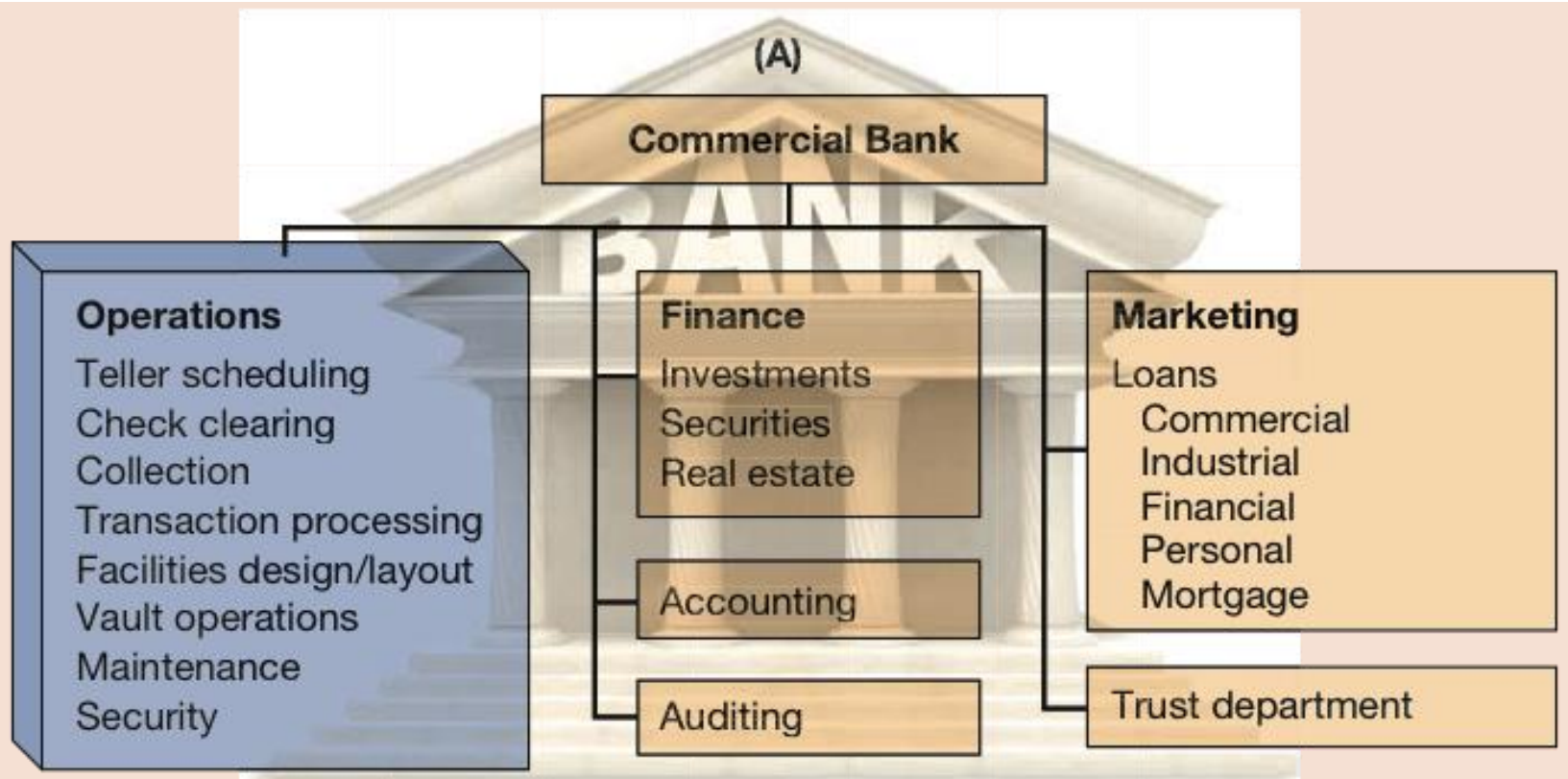
Essential functions:

1. **Marketing** – generates demand
2. **Production/operations** – creates the product
3. **Finance/accounting** – tracks how well the organization is doing, pays bills, collects the money

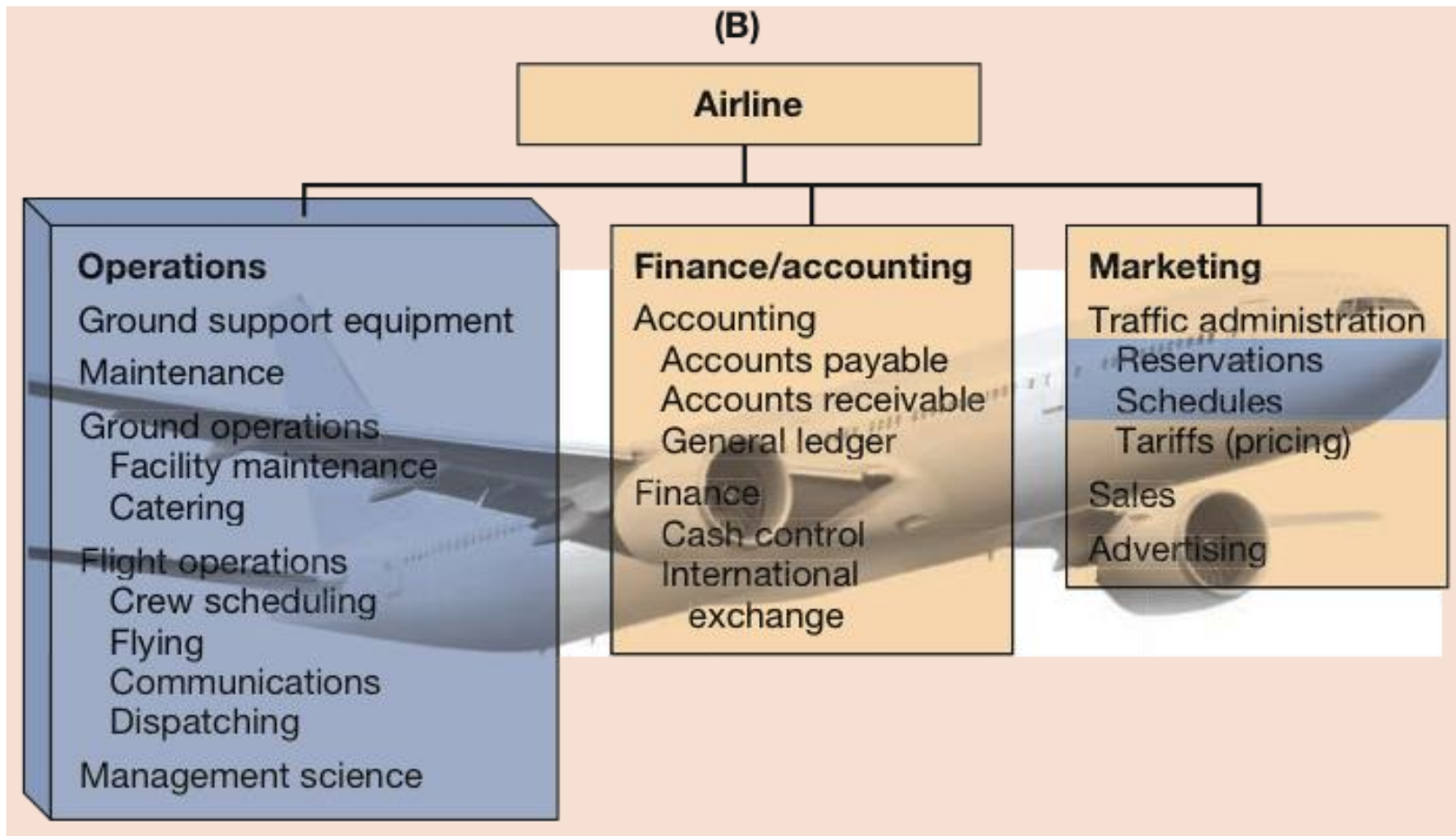
Semua organisasi melakukan tiga fungsi untuk menciptakan barang dan jasa

1. Pemasaran, Megenerates Permintaan.
2. Produksi/operasi, yang menciptakan produk.
3. Finansial/akuntansi, melihat seberapa baik kinerja organisasi, pembayaran tagihan, dan pengumpulan uang.

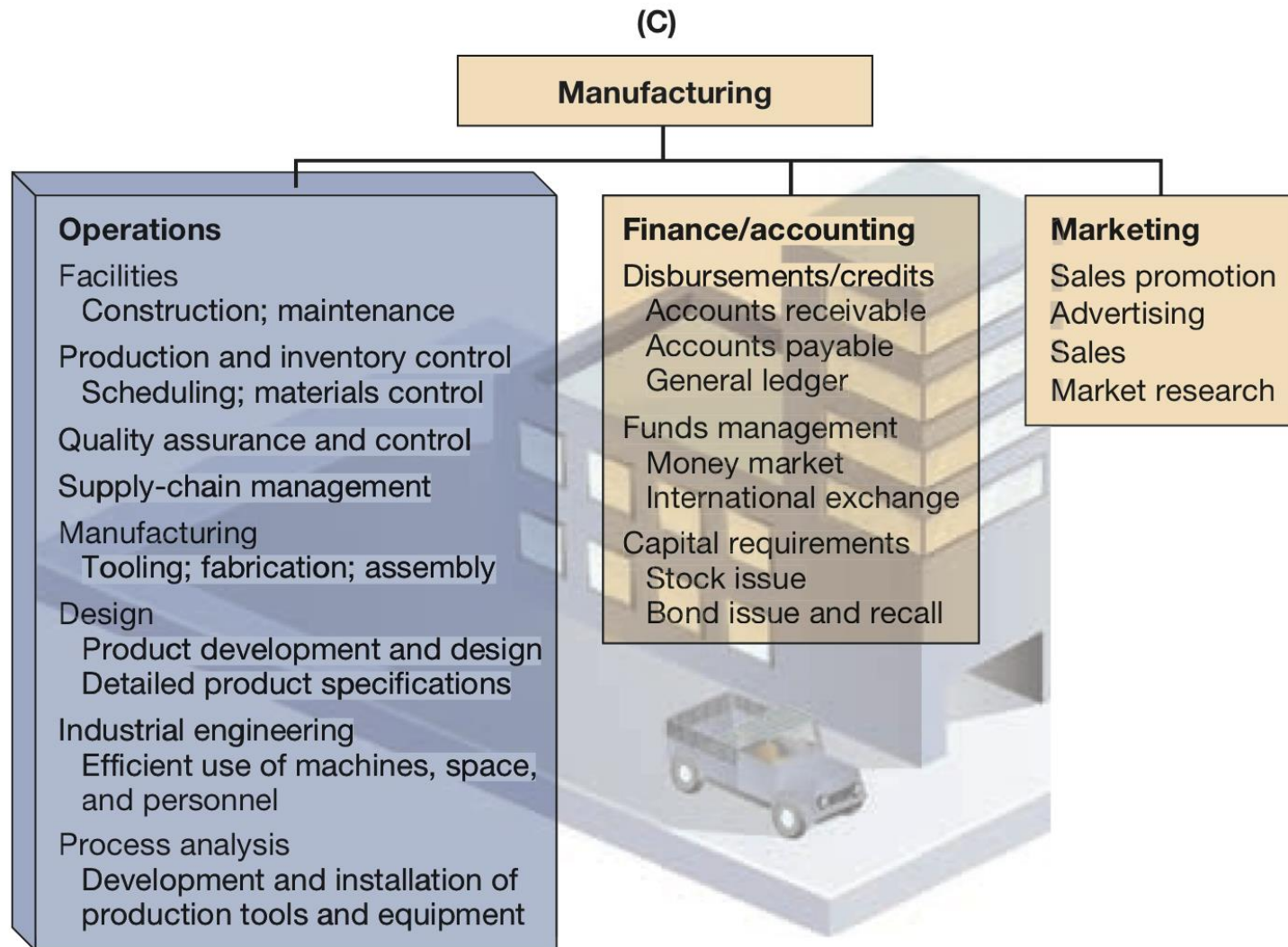
ORGANIZATIONAL CHARTS



ORGANIZATIONAL CHARTS



ORGANIZATIONAL CHARTS



THE SUPPLY CHAIN



A global network of organizations and activities that supply a firm with goods and services



Members of the supply chain collaborate to achieve high levels of customer satisfaction, efficiency and competitive advantage.



Farmer



Syrup
producer



Bottler



Distributor



Retailer

WHY STUDY OM?

1. **OM is one of three major functions** of any organization; we want to study how people organize themselves for productive enterprise
2. **We want (*and need*) to know** how goods and services are produced
3. **We want to understand** what operations managers do
4. OM is such a **costly part of an organization**

OPTIONS FOR INCREASING CONTRIBUTION

TABLE 1.1

		MARKETING OPTION	FINANCE /ACCOUNTING OPTION	OM OPTION
	CURRENT	INCREASE SALES REVENUE 50%	REDUCE FINANCE COSTS 50%	REDUCE PRODUCTION COSTS 20%
Sales	\$100,000	\$150,000	\$100,000	\$100,000
Cost of goods	-80,000	-120,000	-80,000	-64,000
Gross margin	20,000	30,000	20,000	36,000
Finance costs	-6,000	-6,000	-3,000	-6,000
Subtotal	14,000	24,000	17,000	30,000
Taxes at 25%	-3,500	-6,000	-4,200	-7,500
Contribution	\$ 10,500	\$ 18,000	\$ 12,750	\$ 22,500

What Operations Managers Do

Basic Management Functions

- Planning
- Organizing
- Staffing
- Leading
- Controlling



Operations Management merupakan salah satu fungsi utama dalam setiap perusahaan, Oleh karena itu ada 10 keputusan strategis Operations Management yang terdiri:

- 1. Design of goods and services**
- 2. Managing quality**
- 3. Process and capacity design**
- 4. Location strategy**
- 5. Layout strategy**
- 6. Human resources and job design**
- 7. Supply-chain management**
- 8. Inventory management**
- 9. Scheduling**
- 10. Maintenance**

Keputusan Strategis

1. Desain barang dan jasa

- Mendefinisikan apa yang dibutuhkan dari operasi
- Desain produk menentukan kualitas, keberlanjutan, dan sumber daya manusia

2. Mengelola kualitas

- Tentukan ekspektasi kualitas pelanggan
- Menetapkan kebijakan dan prosedur untuk mengidentifikasi dan mencapai kualitas itu

Keputusan Strategis

3. Desain proses dan kapasitas

- Bagaimana barang atau jasa diproduksi?
- Mengkomitmenkan manajemen pada teknologi, kualitas, sumber daya, dan investasi tertentu

4. Strategi lokasi

- Kedekatan dengan pelanggan, pemasok, dan talenta
- Mempertimbangkan biaya, infrastruktur, logistik, dan pemerintah

Keputusan Strategis

5. Strategi tata letak

- Integrasikan kebutuhan kapasitas, tingkat personel, teknologi, dan inventaris
- Tentukan aliran bahan, orang, dan informasi yang efisien

6. Sumber daya manusia dan desain pekerjaan

- Merekrut, memotivasi, dan mempertahankan personel dengan bakat dan keterampilan yang dibutuhkan
- Bagian integral dan mahal dari total desain sistem

Keputusan Strategis

7. Manajemen rantai pasokan

- Mengintegrasikan rantai pasokan ke dalam strategi perusahaan
- Tentukan apa yang akan dibeli, dari siapa, dan dalam kondisi apa

8. Manajemen persediaan

- Keputusan
- Optimalkan dengan mempertimbangkan kepuasan pelanggan, kemampuan pemasok, dan jadwal produksi

Keputusan Strategis

9. Penjadwalan

- jadwal
- Memanfaatkan personel dan fasilitas sambil memenuhi permintaan pelanggan

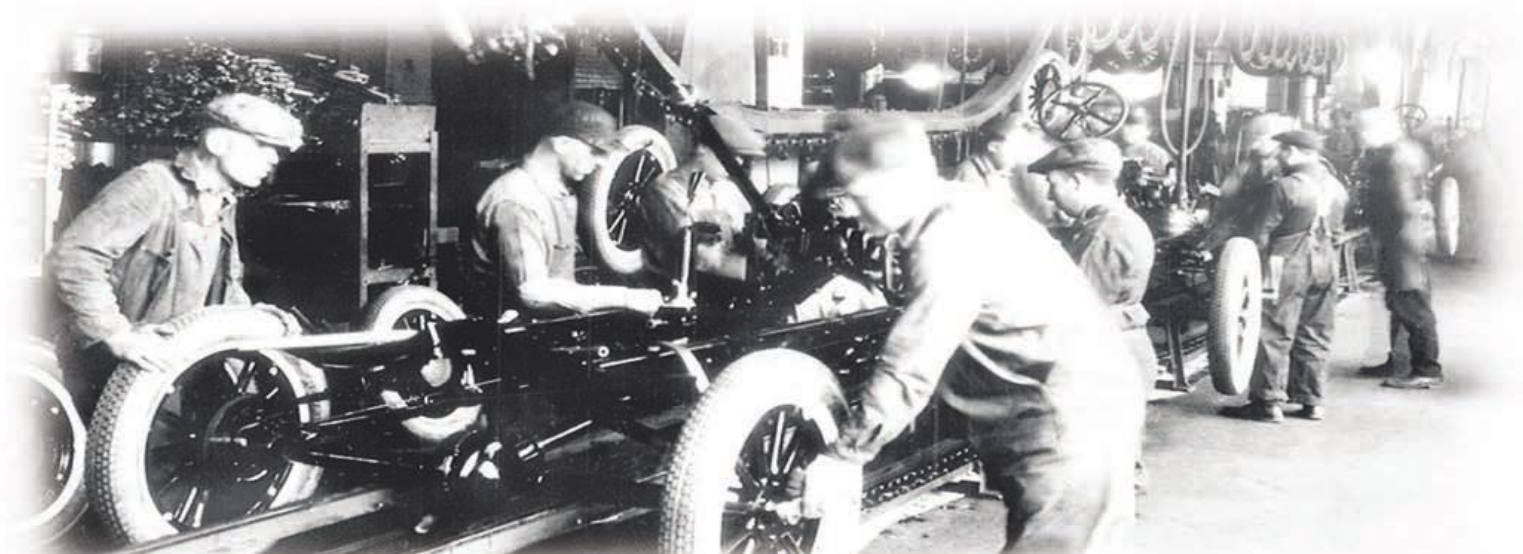
10. Pemeliharaan

- Pertimbangkan kapasitas fasilitas, permintaan produksi, dan personel
- proses

WHERE ARE THE OM JOBS?

- Technology/methods
- Facilities/space utilization
- Strategic issues
- Response time
- People/team development
- Customer service
- Quality
- Cost reduction
- Inventory reduction
- Productivity improvement

Significant Events in OM



Cost Focus	Quality Focus	Customization Focus	Globalization Focus	
<p>Early Concepts 1776–1880</p> <ul style="list-style-type: none"> Labor Specialization (Smith, Babbage) Standardized Parts (Whitney) <p>Scientific Management Era 1880–1910</p> <ul style="list-style-type: none"> Gantt Charts (Gantt) Motion & Time Studies (Gilbreth) Process Analysis (Taylor) Queuing Theory (Erlang) 	<p>Mass Production Era 1910–1980</p> <ul style="list-style-type: none"> Moving Assembly Line (Ford/Sorensen) Statistical Sampling (Shewhart) Economic Order Quantity (Harris) Linear Programming PERT/CPM (DuPont) Material Requirements Planning (MRP) 	<p>Lean Production Era 1980–1995</p> <ul style="list-style-type: none"> Just-in-Time (JIT) Computer-Aided Design (CAD) Electronic Data Interchange (EDI) Total Quality Management (TQM) Baldrige Award Empowerment Kanbans 	<p>Mass Customization Era 1995–2005</p> <ul style="list-style-type: none"> Internet/E-Commerce Enterprise Resource Planning International Quality Standards (ISO) Finite Scheduling Supply Chain Management Mass Customization Build-to-Order 	<p>Globalization Era 2005–2020</p> <ul style="list-style-type: none"> Global Supply Chains Growth of Transnational Organizations Instant Communications Sustainability Ethics in a Global Workforce Logistics

Figure 1.4

CERTIFICATIONS

- ❑ APICS, the Association for Operations Management
- ❑ American Society for Quality (ASQ)
- ❑ Institute for Supply Management (ISM)
- ❑ Project Management Institute (PMI)
- ❑ Council of Supply Chain Management Professionals
- ❑ Charter Institute of Purchasing and Supply (CIPS)

THE HERITAGE OF OM

- ▶ Division of labor (Adam Smith 1776; Charles Babbage 1852)
- ▶ Standardized parts (Whitney 1800)
- ▶ Scientific Management (Taylor 1881)
- ▶ Coordinated assembly line (Ford/ Sorenson 1913)
- ▶ Gantt charts (Gantt 1916)
- ▶ Motion study (Frank and Lillian Gilbreth 1922)
- ▶ Quality control (Shewhart 1924; Deming 1950)

THE HERITAGE OF OM

- ▶ Computer (Atanasoff 1938)
- ▶ CPM/PERT (DuPont 1957, Navy 1958)
- ▶ Material requirements planning (Orlicky 1960)
- ▶ Computer aided design (CAD 1970)
- ▶ Flexible manufacturing system (FMS 1975)
- ▶ Baldrige Quality Awards (1980)
- ▶ Computer integrated manufacturing (1990)
- ▶ Globalization (1992)
- ▶ Internet (1995)

Eli Whitney

Lahir 1765; meninggal 1825

Pada tahun 1798, menerima kontrak pemerintah untuk membuat 10.000 musket

Menunjukkan bahwa peralatan mesin dapat membuat suku cadang standar dengan spesifikasi yang tepat

Musket parts dapat digunakan di *musket* apa pun

Frederick W. Taylor

Lahir 1856; meninggal 1915

Dikenal sebagai 'bapak manajemen ilmiah'

Pada tahun 1881, sebagai chief engineer untuk Midvale Steel, mempelajari bagaimana tugas dilakukan

- Memulai studi gerak dan waktu pertama

Prinsip efisiensi yang dibuat

Prinsip Taylor

Manajemen Harus Mengambil Lebih Banyak Tanggung Jawab untuk:

1. Mencocokkan karyawan dengan pekerjaan yang tepat
2. Memberikan pelatihan yang tepat
3. Menyediakan metode dan alat kerja yang tepat
4. Menetapkan insentif yang sah untuk pekerjaan yang harus diselesaikan

Frank dan Lillian Gilbreth

Frank (1868-1924); Lillian (1878-1972)

Tim teknik suami dan istri

Metode pengukuran kerja yang dikembangkan lebih lanjut

Menerapkan metode efisiensi ke rumah dan 12 anak mereka!

Buku dan Film: : “Cheaper by the Dozen,”
“Bells on Their Toes”

Henry Ford

Lahir 1863; meninggal tahun 1947

Pada tahun 1903, didirikan Ford Motor Company

Pada tahun 1913, pertama kali menggunakan jalur perakitan bergerak untuk membuat Model T

Produk yang belum selesai dipindahkan oleh konveyor melewati stasiun kerja

Pekerja yang dibayar sangat baik untuk tahun 1911 (\$5/hari!)

W. Edwards Deming

Lahir 1900; meninggal 1993

Insinyur dan fisikawan

Dikreditkan dengan pengajaran metode kontrol kualitas Jepang di pasca-WW2

Statistik yang digunakan untuk menganalisis proses

Metodenya melibatkan pekerja dalam keputusan

Operasi Barang dan Jasa

Jasa – Kegiatan ekonomi yang biasanya menghasilkan produk tidak berwujud (seperti pendidikan, hiburan, penginapan, pemerintah, keuangan, dan layanan kesehatan)

Operasi Barang dan Jasa

- Produsen menghasilkan produk berwujud, jasa seringkali tidak berwujud
- Kegiatan operasi seringkali sangat mirip
- Perbedaan tidak selalu jelas
- Beberapa layanan murni

DIFFERENCES BETWEEN GOODS AND SERVICES

CHARACTERISTICS OF SERVICES	CHARACTERISTICS OF GOODS
Intangible: Ride in an airline seat	Tangible: The seat itself
Produced and consumed simultaneously: Beauty salon produces a haircut that is consumed as it is produced	Product can usually be kept in inventory (beauty care products)
Unique: Your investments and medical care are unique	Similar products produced (iPods)
High customer interaction: Often what the customer is paying for (consulting, education)	Limited customer involvement in production
Inconsistent product definition: Auto Insurance changes with age and type of car	Product standardized (iPhone)
Often knowledge based: Legal, education, and medical services are hard to automate	Standard tangible product tends to make automation feasible
Services dispersed: Service may occur at retail store, local office, house call, or via internet.	Product typically produced at a fixed facility
Quality may be hard to evaluate: Consulting, education, and medical services	Many aspects of quality for tangible products are easy to evaluate (strength of a bolt)
Reselling is unusual: Musical concert or medical care	Product often has some residual value

PRODUCTIVITY CHALLENGE

Productivity is the ratio of outputs (goods and services) divided by the inputs (resources such as labor and capital)

The objective is to improve productivity!

*Important Note!
Production is a measure of output only
and not a measure of efficiency*

Tantangan Produktivitas

- **Produktivitas** (*productivity*) merupakan rasio hasil (barang dan jasa) dibagi dengan masukan (sumber daya, seperti buruh dan modal).
- Produksi yang tinggi berarti memproduksi lebih banyak unit, sementara produktivitas yang tinggi berarti memproduksi unit secara efisien.

$$\text{Produktivitas} = \frac{\text{Unit yang dihasilkan}}{\text{Masukan yang digunakan}} \quad (1-1)$$

- **Produktivitas faktor tunggal** —Mengindikasikan rasio dari satu sumber daya (masukan) terhadap barang dan jasa yang dihasilkan (hasil).
- **Produktivitas multifaktor** —Mengindikasikan rasio dari banyak atau semua sumber daya (masukan) terhadap barang dan jasa yang dihasilkan (hasil).

Tantangan Produktivitas (Lanjutan)

Produktivitas multifaktor

$$\text{Produktivitas} = \frac{\text{Hasil}}{\text{Buruh} + \text{Bahan} + \text{Energi} + \text{Modal} + \text{Lain-Lain}} \quad (1-2)$$

Permasalahan pengukuran dalam produktivitas adalah:

- (1) kualitas mungkin dapat berubah,
- (2) elemen eksternal dapat mengganggu, dan
- (3) unit ukuran yang tepat mungkin kurang tersedia.

- Variabel produktivitas
- Masyarakat

TANTANGAN BARU DALAM MANAJEMEN OPERASI

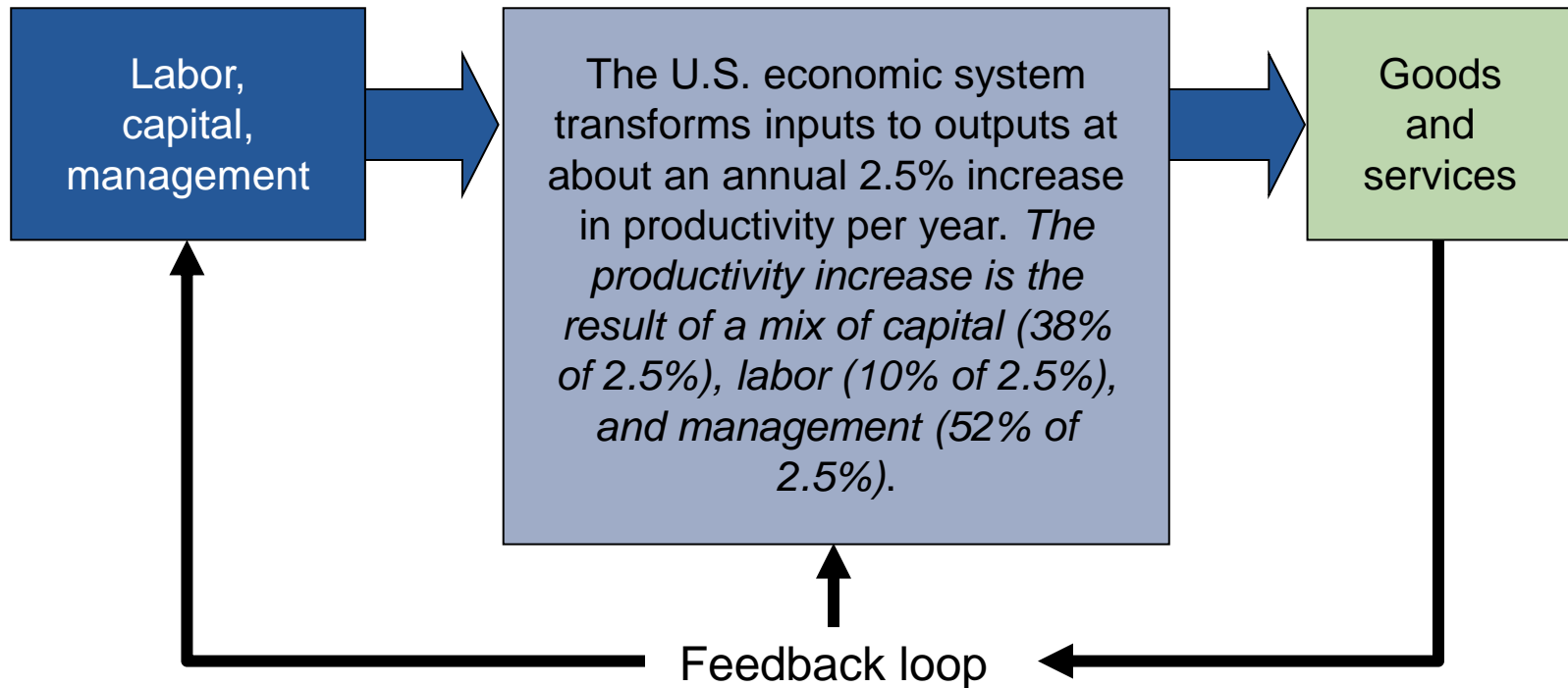
- Fokus global , kolaborasi internasional
- Rekanan rantai pasokan, ventura bersama, aliansi
- Keberlangsungan, produk ramah lingkungan, daur ulang, penggunaan ulang
- Pengembangan produk yang cepat, kolaborasi desain
- Kustomisasi massal; produk yang dikustomisasi
- Kinerja *just-in-time*, ramping, peningkatan yang berkelanjutan
- Pemberdayaan karyawan, pengayaan pekerjaan.

THE ECONOMIC SYSTEM

Inputs

Transformation

Outputs



Tantangan Saat Ini di OM

Globalisasi

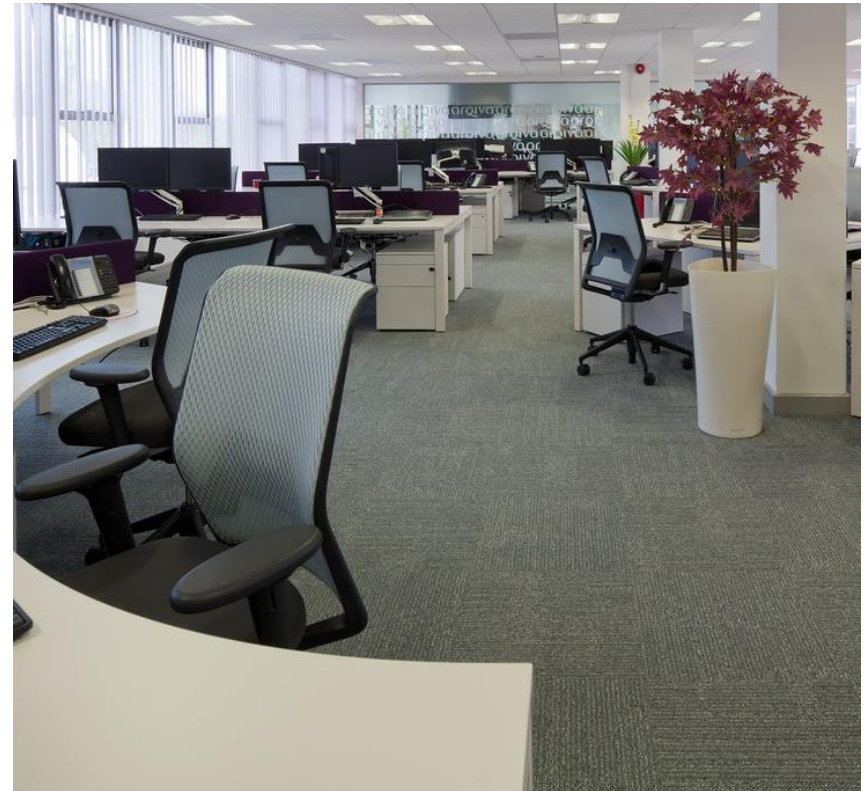
Kemitraan rantai pasokan

Keberlanjutan

Pengembangan produk yang cepat

Mass customization

Lean operations (Operasi ramping)



Etika, Tanggung Jawab Sosial, dan Keberlanjutan

Tantangan

Stakeholders

Mereka yang memiliki kepentingan dalam suatu organisasi, termasuk pelanggan, distributor, pemasok, pemilik, pemberi pinjaman, karyawan, dan anggota masyarakat .

Mengembangkan
yang aman

Latih, la
tempat kerja yang aman

Hormati komitmen pemangku kepentingan