

Skillbook

What Is Operations Management?

Strategy
Skills



Mindtools

What Is Operations Management?

Skillbook

This Skillbook is published by Mind Tools Ltd.
21 Young Street, Edinburgh, Scotland, EH2 4HU.

Copyright © Mind Tools Ltd, 2025.
All rights reserved.

Version 4.0.

This Skillbook is protected by international copyright law.
You may use it only if you are a Mindtools member or have
received it under corporate license.

If you have any queries, please contact us at
mtecustomerservices@mindtools.com.

Contents

1.	Introduction	1
2.	The Basics of Operations Management	2
3.	Operations Management Decisions	5
4.	Operations Managers	11
5.	Key Points	15

1. Introduction

The operations department is an essential part of any business. Whether you're manufacturing products, distributing goods or providing services, this team does the work of the business by transforming inputs (raw materials or information) into outputs (finished goods or services), and delivering them to customers.

Some people view operations as dull and process-related, and prefer to concentrate on more “glamorous” areas of business. However, the operations team influences every part of an organization, and it plays a driving role in most daily decisions. Along with the sales and marketing teams, it delivers the revenue a business needs to survive and thrive.

Many top executives have an operations background. This is because operations managers understand intimately how to meet client needs, and they have a detailed understanding of what the company can and cannot do.

Human resources, marketing, engineering, logistics, and finance decisions are all influenced by operational needs. And, whether an organization has a dedicated department or not, operations decisions are made regularly by managers across the organization.

In this **Skillbook**, we'll explore operations management and we'll look at how it supports the growth and development of an organization as a whole.

In around one hour, we'll cover:

- The fundamental role of operations.
- The skills required to be an effective operations manager.
- The challenges of operations management.

2. The Basics of Operations Management



Operations management deals with the production and delivery of the goods and services that we use every day, either as consumers or as businesses.

In the past, people associated operations solely with manufacturing, but today it refers to the direction and control of the processes that transform inputs into finished goods and services in all sorts of business, from manufacturing companies to consultancies and coffee shops.

Operations management is essential across all sectors. It is the process by which you manage people, capital and material effectively, whether you make snowboards, produce steel, or provide banking services or air travel support. In the service sector, the person in charge of a call center or the vice-chancellor of a university might not be called an “operations manager,” but that is essentially their role.

The Operations Management System

Operations management is part of a larger production system. You have inputs (people, capital and purchased materials and services) on one side, transformation operations in the middle, and outputs (finished goods and services) on the other side.

This is shown in Figure 1, below:

Figure 1: Operations Management System



The type of transformation varies, as do the specific inputs and outputs.

For example, in a manufacturing company, the transformation may be a physical change from raw materials to a finished product. In a university, it is the education of students. And at an airline, it involves moving passengers from one location to another. The facilities, machines, technology, people, and materials needed in these examples vary, and the result is a different product or service, but there is still an operations system in place.



Action:

Think about the operations function in your organization. What are the inputs, transformations and outputs? Write these in the table, below.

Inputs	Transformations	Outputs

The scope of the operations that create these transformations is considerable, and it will usually involve a number of sub-departments that support the core production activities.

These may include:

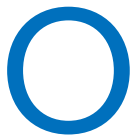
- Purchasing.
- Logistics/transportation.
- Facilities management.
- Maintenance.
- Inventory and storage.

The outputs that customers are supplied with can be anything from physical products, such as fruit and vegetables, to pure services such, as counseling. They can be any combination of these.

For example, restaurants provide food and drink (products), and they also provide a pleasant place to eat and the attention of waiting staff (services). And when you buy an iPhone®, you probably also use services such as iTunes®.



3. Operations Management Decisions



Operations managers make three types of decisions:

- Strategic decisions.
- Design decisions.
- Operating decisions.

Strategic Decisions

Strategic decisions are those that affect an organization's future:

- What are its competitive priorities? Does it focus on cost, speed, quality, reliability, design innovation, customization, or breadth of range?
- How will it position itself?
- How will it add value and create competitive advantage?
- How will the quality of outputs be controlled?

In some organizations, operations management is a core part of the business strategy, and it is essential for creating competitive advantage. For instance:

- The McDonald's® operational strategy maximizes the throughput of people needing to be fed, and it minimizes production costs.
- Customers at IKEA® collect, transport and construct their own goods, which minimizes staffing costs. Its shop is also its warehouse, so facilities are efficiently managed as well.
- Southwest Airlines, based in the U.S., has enjoyed success as a low-cost flight operator by focusing on "short-hop" commuter routes and predominantly using only one type of aircraft, to minimize its maintenance and operating costs.



Action:

Think about the transformations you listed earlier. Which ones are key to the strategic choices that your organization has made? How does the transformation create competitive advantage or benefit to the customer? Write these in the table on the next page.

Key Transformation	Competitive Advantage/Customer Benefit

Design Decisions

Design decisions relate to the production system that an organization has chosen. Managers have to decide how operations can be designed to meet performance objectives. For example:

- What types of input from workers and other key resources are needed?
- What are the capacity requirements?
- Where should facilities be located?
- How should the facility be laid out?
- What do departments need to collaborate on to ensure high quality outputs?
- How should jobs be designed?
- What role should technology play in the process?
- How should processes operate?

For example, car manufacturers may use quick-release fixings on their machines, so that they can rapidly change over the dies used to press the bodywork parts for different models. They may also use standardized parts wherever possible, to reduce the number of different inventory items that they have to hold, as well as the number of tool changes needed to fit them.

Rail passengers can buy tickets online, and print them at home or collect them from a self-service machine at the station. This reduces the number of sales staff needed, as well as cutting queuing time for passengers.

Operations design decisions need to balance costs and benefits, and they should consider production volume and the relationship between the fixed and variable costs of making the item in question.

For example, since the rise of digital publishing, most book publishers simply buy in printing services. And an increasing number of publishers will only print books digitally when they receive an order (print on demand), which reduces storage and printing equipment costs.



Action:

Identify some design decisions that relate to the transformation process at your organization. For instance, how is your facility laid out? How is technology used in your operations? Write your examples in the table, below.

Transformation Process	Design Decision/Decisions

Operating Decisions

Operating decisions impact the day-to-day running of an organization. Here, it's essential to consider questions such as:

- How should inventory be managed? What type of inventory system should be used?
- How are materials managed, purchased and distributed?
- How should staff be organized?
- How are supply levels forecast and delivered?
- How are suppliers chosen and managed?
- How should work be prioritized?
- What can you do to prevent, and recover from, failures or disasters?

Remember, too, that performance improvement is an underlying focus of operations management. Thinking of ways to make operations run more smoothly, faster, more efficiently, and more cost effectively is key to creating and sustaining competitive advantage.



Action:

Identify some of the operating decisions that your organization has made for each of its transformations from inputs into outputs. For instance, what inventory or scheduling system is used? Use the table, below.

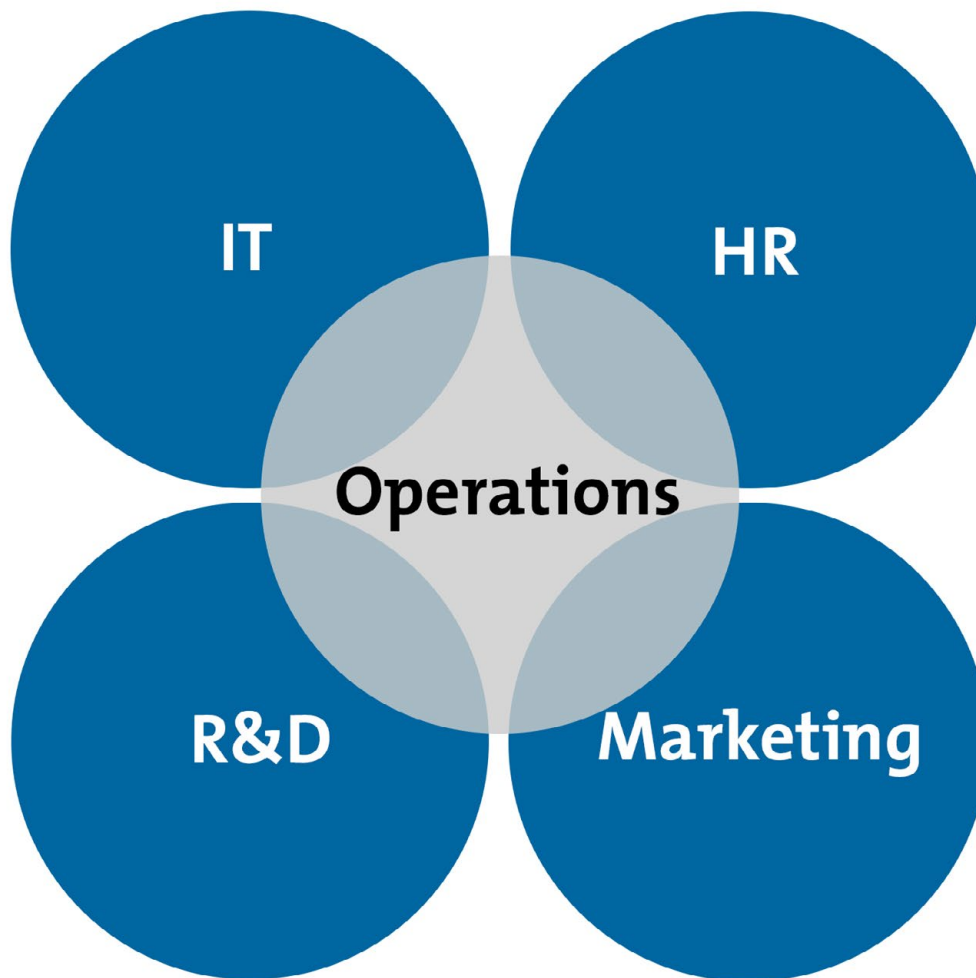
Transformation	Operating Decision/Decisions

Cross-Functional Operations

With all of the activity that goes on in the operations department, it's easy to see why operations management depends heavily on cross-functional coordination.

In many organizational structure diagrams, operations is shown in the middle, with the other functional areas arranged around it. Alternatively, you might see a Venn diagram with the other functions overlapping some part of operations, as shown in Figure 2 on the next page.

Figure 2: Cross-Functional Operations



Illustrating this, if the operations department comes up with a way to improve delivery times and lower costs, the rest of the organization has to adopt the associated quality and process requirements. Finance needs to adapt management information systems to report on key result areas; human resources must ensure that there are enough people with the right skills to implement the operational vision; and marketing and operations must work together to make sure that the market knows about the improved delivery times. Cross-functional teamwork is imperative for operations success.




Action:

Think about the cross-functional role of operations in your organization. How do different teams interact with this department? What decisions do you make together, and how does operations impact the work that you do? Write your findings in the table on the next page.

Department/Activity	Nature of the Interaction

4. Operations Managers

perations managers, or those who make operational decisions, are often at the center of strategic decision making. Their decisions determine not only how products and services will be produced, but also how customers will receive them. Creating a great customer experience is ultimately what generates profit and sustains the organization.

Operations managers plan, direct or coordinate the operations of companies or public and third sector organizations. Their duties include formulating policies, managing daily operations, and planning the use of materials and human resources. However, their role is too diverse to be classified in any one area of management or administration, such as personnel, purchasing or administrative services.

As well as requiring strong technical knowledge of specific industry issues, effective operations managers need the following general skills and abilities:

- A thorough understanding of materials and/or resource planning.
- Excellent decision-making skills, and an understanding of the tools associated with this.
- Confidence in making uncertain or risky decisions.
- Good numerical abilities, as there are many calculations and formulae involved in optimizing the design of processes and systems.
- Strong interpersonal skills, and the ability to work effectively with other departments to coordinate activity and share information.
- Good leadership, as operational decisions have to be carried out across the organization.
- Good financial acumen, as many decisions have a cost component, and key information comes from the finance department.
- Knowledge of project management skills like scheduling, analyzing probabilities and diagramming.

The fact that operations acts as a hub for other functional areas means that the people in this role learn about all aspects of the business, and they develop a keen appreciation for how they can all come together to achieve extraordinary performance.

Action:



Think about your organization's operations people. What skills make them most effective? What can you learn from them and/or develop in yourself to improve your understanding of the business? Write your answers in the table on the next page.

Skills and Qualities of Effective Operations Managers	Things I Can Learn From Them

Challenges Facing Operations Managers

Ever since Henry Ford introduced the revolutionary production line concept to manufacture the Model T car, operations management has been driven forward by big new approaches, which are often highly formalized.

In manufacturing operations, Just-In-Time and quality systems like Total Quality Management (TQM) were hot topics for many years. Business Process Reengineering was popular in service industries in the 1990s, followed by a technology-driven focus on supply chain management.

Since then, Radio Frequency Identification (RFID) technology has become reliable enough to be widely adopted for inventory tracking and management, and Six Sigma has become widespread as a way to improve quality.

Organizations can take advantage of new materials and innovations, such as 3D printing. Also, as services and support have moved online, new ideas around “lean startup,” Minimum Viable Products, “Build Measure Learn,” and Agile Project Management are transforming key areas.

All of these developments are simply new ways to create value for customers and profit for organizations in a changing environment.

Some of the key challenges facing most operations managers include:

- **Building closer relationships with suppliers.** Supply chains require careful coordination to ensure that an organization has the materials it needs, when it needs them. The field of supply chain management changes quickly, as organizations adapt to the changing cost of inputs, the number of suppliers, and the competition for resources.
- **Emphasis on service in operations management.** This is no longer an add-on to the manufacturing function, and many companies are using service as a key profit center. For example, Apple® is no longer simply a personal computer manufacturer; it now provides Apple TV, Apple Arcade, and Apple Music, as well as the Genius Bar® expert tech support service.
- **Ecological concerns.** Operations managers need to consider consumer demands for ecologically friendly practices, and relevant legislation, as well as changes in fuel and power costs. They are continually seeking new ways to reduce both the cost of inputs and the environmental impact of their organizations. This could include cutting packaging or switching to sustainable types of cardboard; reducing energy and water usage; or sourcing raw materials locally to limit their organization’s carbon footprint.
- **Ethical production practices.** Socially aware consumers are demanding that products are manufactured fairly, and that human rights are upheld by suppliers all over the world. Users of sweatshop labor have been targeted and even boycotted over these types of issues. In the U.K., in particular, food producers are under pressure to ensure that poultry and other animals have a high quality of life, even if this leads to increased costs.
- **Advances in communications and production.** Recognizing and preparing for how new technological developments can benefit the way operations works is a key consideration for operations managers as they try to predict the future. For example, new materials and new technologies like 3D printing are changing the way in which things are designed and made, and managers need to keep up to date with the opportunities that these offer.



Action:

Think about how these challenges have changed the way your organization does business and operates. What operational challenges do you foresee for your organization? Write these in the table on the next page.

Operational Changes	Operational Challenges

5. Key Points

It goes without saying that organizations need sound operations management. Sometimes their operations will be the source of their competitive advantage (for example, IKEA and Amazon).

At other times, effective operations management is an essential foundation for an alternative source of advantage. (Buzzfeed®, for example, needs efficient production processes and an eye-catching, up-to-date website, but it's the community contributors and the viral nature of its content that gives it its edge.)

With the pressures of a highly competitive global economy, organizations need to find ever more effective and efficient ways to satisfy increasingly demanding consumers. As a functional area, operations supports corporate strategy, and it works with other functions to design, produce and deliver products and services.

Operations involves high-level strategic decisions such as competitive positioning, as well as more tactical and operational decisions like designing processes, managing inventory and monitoring quality. Whatever operations people are involved in, their work impacts the whole organization.

The people that work in this area need to understand the business and the product intimately. They also need to scan the environment regularly for new developments and influences that could potentially impact supply and demand.

Operations management is at the heart of an organization – it's an exciting and vibrant place to be. It's always changing, always challenging, and certainly never boring!

Trademark Information

The following are trademarks: Amazon (see amazon.com); BuzzFeed (see buzzfeed.com); Genius Bar (see apple.com); IBM (see ibm.com); IKEA (see ikea.com); iPhone and iTunes (see cisco.com, but used under license by apple.com); and McDonald's (see mcdonalds.com).