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University of London




# EBU5608 Product Development and Management

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## Topic 14 - Introduction to Management



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# Agenda

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- **Management**
  - Definition
  - The 3Es – Efficiency, Effectiveness and Equity
  - The roles of a manager
  - Management Theories

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# The big question

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- Why do you think engineers should study management?

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# The big question

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You need to study this to

- Understand the basic **concepts** and principles of management
- Build your business **vocabulary**
- Develop your workplace **skills**
- Learn about various forms and functions of technology **organisations**
- Appreciate today's business **careers**



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## Management and managers


- What **is** management?
- What do managers **do**?
- What **skills, styles** and **capabilities** do they need?
- How do managers **learn** and develop?
- Why **study** management as a discipline?
- Can management **theories** enhance learning and enlighten **practice**?

What do you think?  
Give us your views



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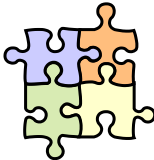
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## Management: a process


**Management** is a process of achieving organisational **objectives** within a changing environment, by **balancing** efficiency, effectiveness and equity, obtaining the **most** from limited resources, and working with and through **people**.

Let's look at those a little more...

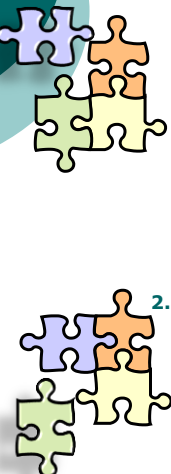


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## Management: a process - objectives and balance



1.

Achieving organisational **objectives** within a changing **environment**

- An objective is a **target** or aim to be striven for
- In this course, you'll find out that an organisation, or an individual, is more successful if they seek outcomes that are both **challenging** and **achievable**
- Managers, especially senior managers, spend a great deal of their time, learning about the changing **environment**


2.

**Balancing** efficiency, effectiveness and equity

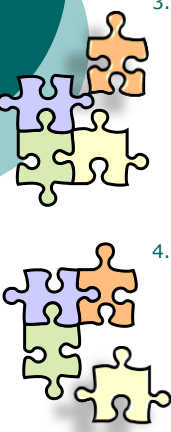
- we'll look at these later

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## Management: a process - resources & people



3.

Obtaining the most from limited **resources**

- Recognizing that resources are limited is more than a question of using them most **efficiently**
- Where materials are scarce, **innovation** may be needed
- This means **adapting** products or processes to use fewer or alternative resources


4.

Working with and through **people**

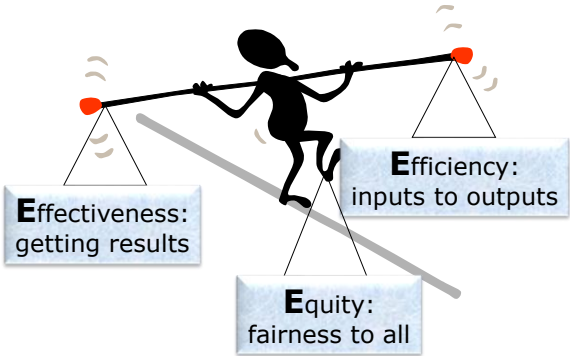
- Management is primarily a **social** process, often defined as 'getting things done through people'
- There's a danger of presenting management as a set of **techniques**, such as for optimising plans, but eventually, **people** put all plans into effect

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## Balancing the 3 Es



**Effectiveness:**  
getting results


**Efficiency:**  
inputs to outputs

**Equity:**  
fairness to all

Trying to achieve 3 Es of the management balance is a dilemma. Success against one criterion is often at the expense of another



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## The 3 Es - Efficiency

- **Efficiency** is a measure of how well input resources are transformed into outputs
- For example:
  - Washing machine suppliers state that their washing machine can save energy
  - By using less water/electricity, their washing machine can wash more loads than other brands for the same cost
- Similarly, a more efficient **factory** can produce more goods from less labour and/or raw material




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## The 3 Es - Effectiveness

- **Effectiveness** is an assessment of how far a stated **objective** is achieved
- Often, a focus on **'getting the job done'** is important, e.g. when managing a **crisis**
- War, the ultimate crisis, requires leaders who believe in 'winning at all costs'
- But even in such circumstances, good generals consider how to **conserve** and **deploy** their resources




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## The 3 Es – Effectiveness or Efficiency?

- A leader's **overemphasis** on effectiveness leads to a **loss** of efficiency
  - Resources are **wasted**
- On the other hand, **too much** stress on efficiency may mean that the task may **not** get done at all
- The right **balance** is a management decision



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## The 3 Es - Equity

- **Equity** is the third ingredient of the mixture of Es
- This concerns the **fair distribution** of outputs among recipients
- Many **public** and **not-for-profit** organisations place equity at the core of their objectives
- Can you think of examples?

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## Business vs. non-profit organisations



### Business

- An individual or organization that tries to earn a profit by providing products that satisfy people's needs
- Examples are IBM and Coca-Cola




### Non-profit organisation

- Provides products, especially services, for some purpose other than profits
- Examples are
  - Religious/social – such as The Salvation Army
  - Colleges & universities – such as QMUL



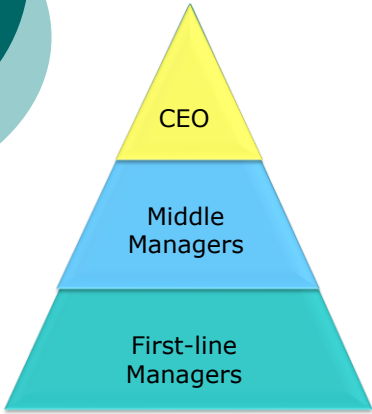
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## Looking at managers - management levels



CEO

Middle Managers


First-line Managers

- There are 3 basic management levels in most organisations
- Top-level management
  - president, executive vice president
- Middle managers
  - chief engineer, division head etc
- First-line managers
  - foreman, supervisor, section chief

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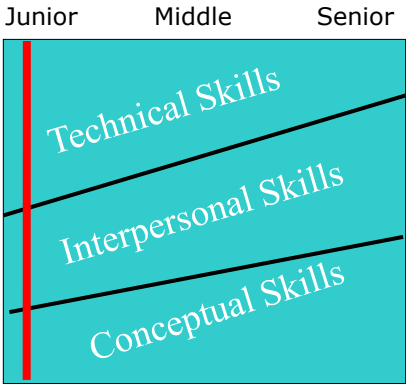
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## Looking at managers - skills



Junior      Middle      Senior

Technical Skills

Interpersonal Skills

Conceptual Skills

Management Skills Composition


- The higher you move up in management
  - less technical skills are required
  - but more interpersonal and conceptual skills are needed

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# Managerial Roles (What Managers Do)


- The roles of managers fall into 3 groups
  - Interpersonal
  - Informational
  - Decisional



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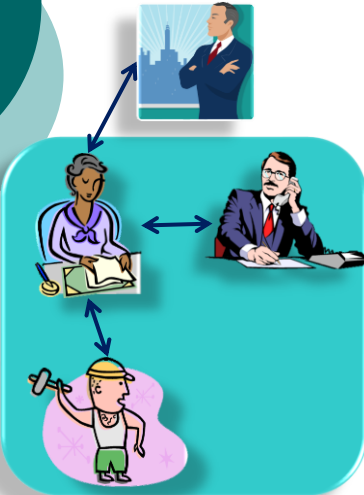
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# Managerial roles - interpersonal role




- **Figurehead** role
  - Handles outward relationships
  - Embodies legal authority; leads formal duties, e.g. signing documents, accepting visitors
- **Leader** role
  - Downward relationships
  - Motivates others to do their jobs
- **Liaison** role
  - Horizontal relationships in company

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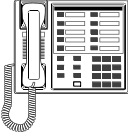

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## Managerial roles

### - informational role


- **Monitor** Role
  - Collects information about internal operations and external events
- **Disseminator** Role
  - Transforms information internally to everybody in organization (like a telephone switchboard)
- **Spokesman** Role
  - Public relations



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## Managerial roles

### - decisional role


- **Entrepreneurial** Role
  - Initiates changes, assumes risks, transforms ideas into useful products
- **Disturbance Handler** Role
  - Deals with unforeseen problems and crises
- **Resource Allocator** Role
  - Distributing resources
- **Negotiator** Role
  - Bargains with suppliers, customers etc in favour of their enterprise



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# Management

## - is it an art or a science?

- Management has a body of specialised knowledge
- This knowledge need not to be obtained in formal disciplined programs
- The study of management involves an interplay between theory and practice




Management is somewhere between art and science



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# Theories in management

- Descriptive** theories - the world as it **is**
  - e.g. 'multinational enterprises **usually** have decentralised personnel functions'
- This makes **no judgement** and recognises that there is never a best way that applies in all cases


- Prescriptive** theories - the way the world **ought** to be
  - e.g. 'multinational enterprises **should** decentralise their personnel functions'
- This tells all organisations in a particular category **what is best**

Many managers prefer to be prescriptive

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## Summary

- Management is a process of achieving organisational **objectives** within a changing **environment**, by balancing **efficiency**, **effectiveness** and **equity**, obtaining the most from **limited resources**, and working with and through **people**.
- There are 3 basic management levels in most organisations
  - Top-level management
  - Middle managers
  - First-line managers
- The roles of managers fall into 3 groups
  - Interpersonal
  - Informational
  - Decisional

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## Questions?



Go to [www.menti.com](https://www.menti.com) to post your questions



# Mentimeter

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# References

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