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EBU5608 Product Development and Management

Topic 14 - Introduction to Management

Agenda

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

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The big question

○ Why do you think engineers should study management?

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The big question

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

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

What do you think?
Give us your views

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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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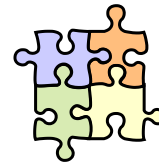
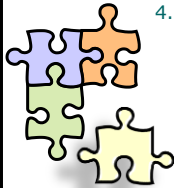# Management: a process - objectives and balance

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

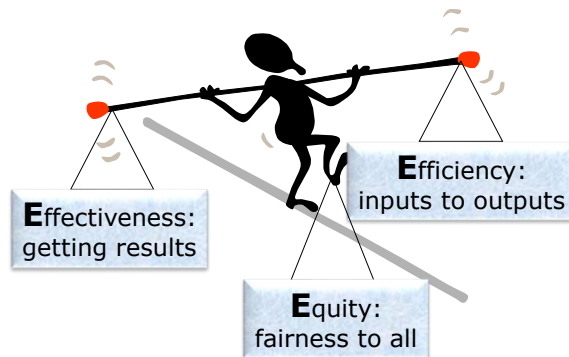EBU5608   7
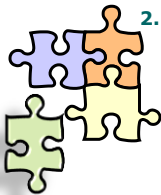
Management: a process - resources & people

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
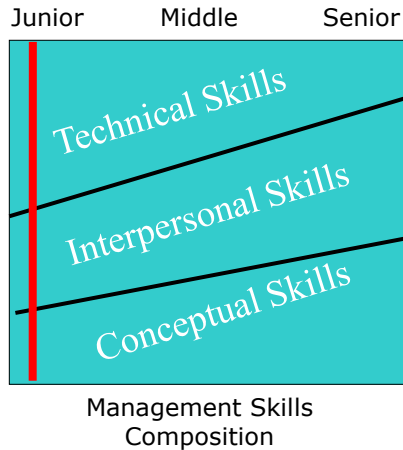 - Colleges & universities – such as QMUL

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Looking at managers
- 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
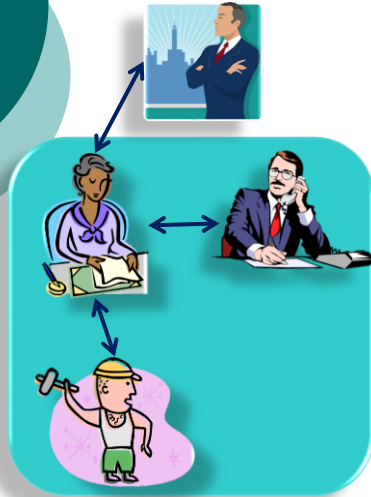   interpersonal and
    conceptual skills
    are needed

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Managerial Roles
(What Managers Do)

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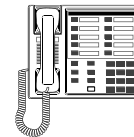 - Decisional

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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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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

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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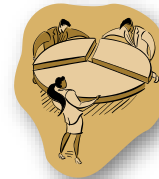
Management
- is it an art or a science?

○ 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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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

Questions?
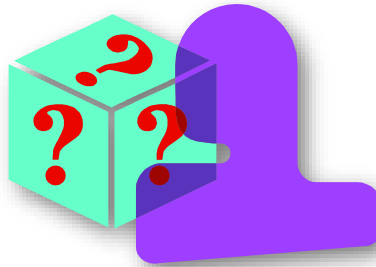
Go to www.menti.com to post your questions

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References

1. Adapted from *Management*, S. P. Robbins and M.A. Coulter, 14th Edition, 2018, Pearson, Chapter 1
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5. Adapted from e-Business Technologies, Craig Van Slyke, France Belanger,2003, Wiley, pg. 25
6. .. Pg. 24
7. Mintzberg, H (1989), *Mintzberg on Management*, Free Press, New York, NY.

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