

Project Management

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Aims

- ▶ A study of contemporary project management
- ▶ Tools and their application
- ▶ Principles and techniques
- ▶ Dynamics of projects
- ▶ Methods and tools
- ▶ Planning, costing, cost control, risk and quality
- ▶ Organisation structure

Learning Outcomes

- ▶ Demonstrate a systematic understanding of how projects are structured, the environments in which projects can be delivered and their governance
- ▶ Research and apply and evaluate how project lifecycles can aid successful projects, planning and scoping for their success
- ▶ Research evaluate and critically discuss various issues and theoretical project leadership models and how these aid communication, schedule, risk and quality management.

Introduction to Projects

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- ▶ “A project is a unique, transient endeavour, undertaken to achieve planned objectives, which could be defined in terms of outputs, outcomes or benefits. A project is usually deemed to be a success if it achieves the objectives according to their acceptance criteria, within an agreed timescale and budget.” - APM
- ▶ A project is performed by people, constrained by limited resources, planned, executed and controlled

Introduction to Projects

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- ▶ What is project management?
- ▶ “Project Management is the discipline of initiating, planning, executing, controlling and closing the work of a team to achieve specific goals and meet specific success criteria”.- PMI
- ▶ “Project management is the application of processes, methods, knowledge, skills and experience to achieve the project objectives. ” - APM
- ▶ Project Management is the application of knowledge, skills, tools and techniques to project activities in order to meet or exceed stakeholder needs and expectations; balancing scope, time, cost and quality.
- ▶ Stakeholders who have differing needs and expectations
- ▶ Identified requirements(needs) and unidentified requirements

Introduction to Projects

The core components of project management are:

- ▶ defining the reason why a project is necessary;
- ▶ capturing project requirements, specifying quality of the deliverables, estimating resources and timescales;
- ▶ preparing a business case to justify the investment;
- ▶ securing corporate agreement and funding;
- ▶ developing and implementing a management plan for the project;
- ▶ leading and motivating the project delivery team;
- ▶ managing the risks, issues and changes on the project;
- ▶ monitoring progress against plan;
- ▶ managing the project budget;
- ▶ maintaining communications with stakeholders and the project organisation;
- ▶ provider management;
- ▶ closing the project in a controlled fashion when appropriate.

Introduction to Projects

- ▶ What is a project method?

Introduction to Projects

- ▶ What is a project method?
- ▶ A method is an approach that helps to give a bit of structure to what you are doing and then helps you do the job

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- ▶ Project management is concerned with managing discrete packages of work to achieve objectives. The way the work is managed depends upon a wide variety of factors.
- ▶ The scale, significance and complexity of the work are obvious factors: relocating a small office and organising the Olympics share many basic principles but offer very different managerial challenges.

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- ▶ A good distinguishing factor is often to look at the nature of the objectives. Objectives may be expressed in terms of outputs (such as a new HQ building), outcomes (such as staff being relocated from multiple locations to the new HQ), benefits (such as reduced travel and facilities management costs) or strategic objectives (such as doubling the organisation's share price in three years).

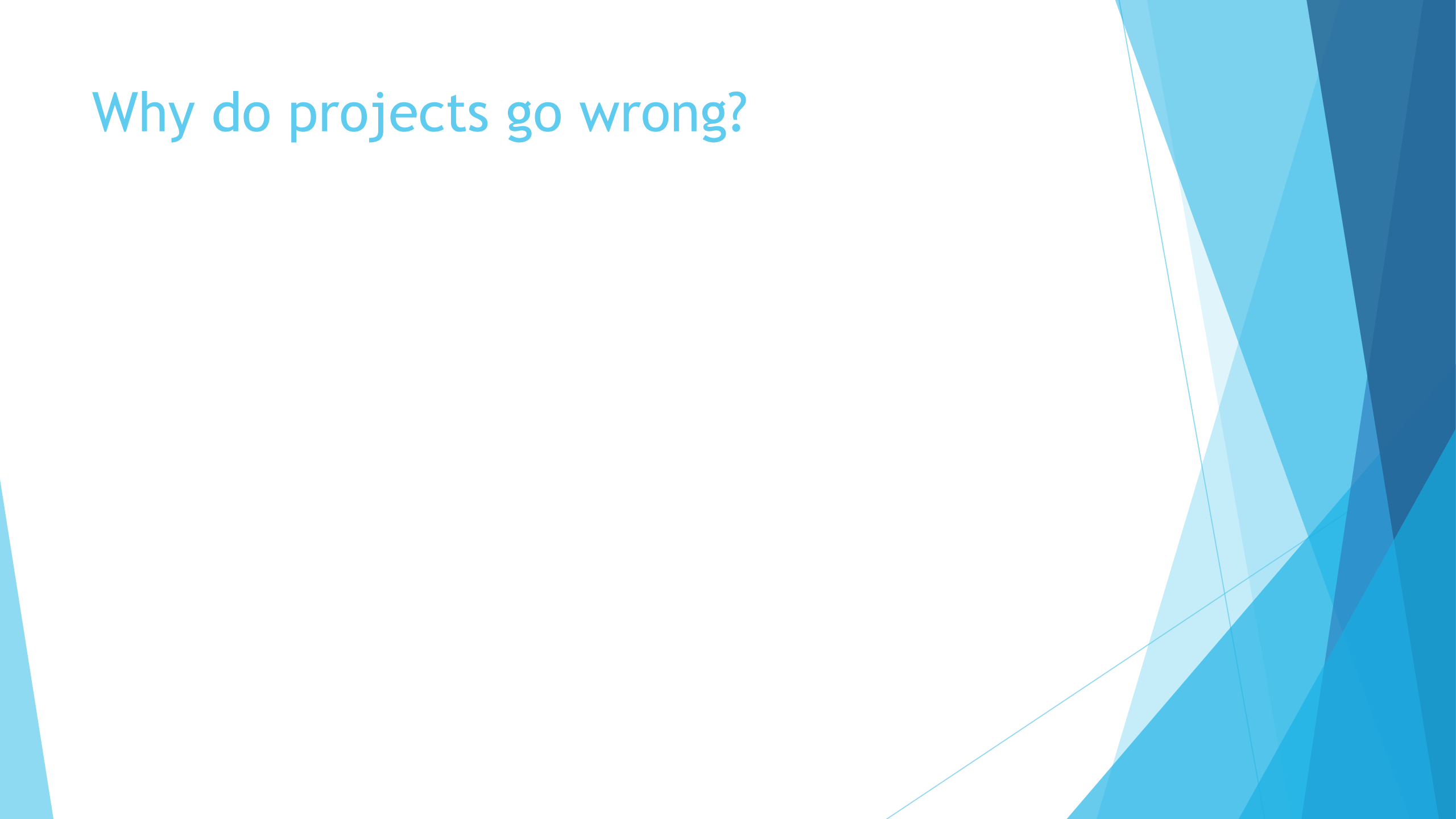
Why do we use project management?

- ▶ Produce something new or altered: tangible or intangible
- ▶ Have a finite timespan: a definite start and end
- ▶ Likely to be complex in terms of work or groups involved
- ▶ Require the management of change
- ▶ Require the management of risks

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- ▶ Investment in effective project management will have a number of benefits to both the host organisation and the people involved in delivering the project. It will:
 - ▶ provide a greater likelihood of achieving the desired result;
 - ▶ ensure efficient and best value use of resources;
 - ▶ satisfy the differing needs of the project's stakeholders.

Why do projects go wrong?



Why do projects go wrong?

- ▶ No clear objectives
- ▶ Unrealistic finance
- ▶ Unrealistic staffing
- ▶ Poor communications
- ▶ Poor planning
- ▶ No effective progress monitoring
- ▶ Unclear scope
- ▶ No change control
- ▶ No risk management
- ▶ Project not actually sensible

How do we prevent these things going wrong?

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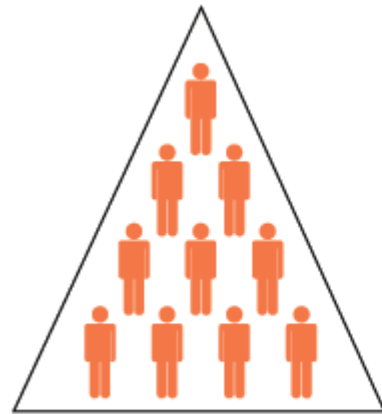
- ▶ Lack of planning - PLAN
- ▶ Lack of clear objectives - SET SMART OBJECTIVES AND GO NO FURTHER
TILL THESE OBJECTIVES ARE CLEAR AND AGREED
- ▶ Lack of risk management - DO RISK MANAGEMENT
- ▶ Lack of a business case or project justification
 - ▶ - DON'T START THE PROJECT UNTIL YOU HAVE A
GOOD BUSINESS CASE THAT DEMONSTRATES THE
PROJECT IS WORTH DOING
- ▶ Lack of change control - DO SOME CHANGE CONTROL
- ▶ etc, etc!!!

Structure of organisations and projects

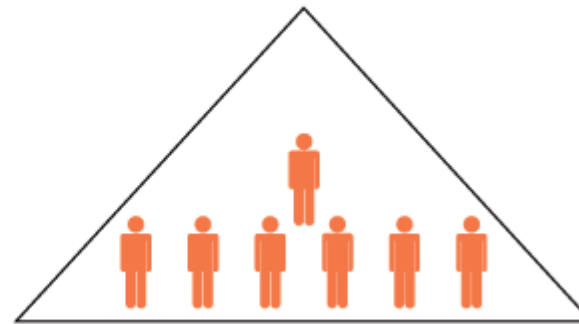
- a) Different purposes of Organisations
- b) Different Structures organisations adopt
- c) Forms of the organisation and functional boundaries of the organisation - externalisation, shared service centres(SSC) and business process outsourcing(BPO)

Types of structure

- ▶ Flat, Hierarchical, Spider
- ▶ Centralised or local control
- ▶ Outsourcing of services
- ▶ Local or global



Organisation A



Organisation B

Flat organisations

Flat Structure

A flat organization refers to an organization structure with few or no levels of management between management and staff level employees. The flat organization supervises employees less while promoting their increased involvement in the decision-making process.



Advantages of Flat Organisations

- ▶ Greater communication between management and workers.
- ▶ Better team spirit as fewer management layers increase interaction between employees on different levels (layers).
- ▶ Less bureaucracy and easier decision making
- ▶ Fewer management layers may reduce costs as managers cost more than non managers. Also employees at higher levels in the organisation expect to be paid more than those on lower levels.
- ▶ It elevates the employees' level of responsibility in the organization.
- ▶ It removes excess layers of managements improves the coordination and speed of communication between employees.
- ▶ Fewer levels of management encourage an easier decision-making process among employees.
- ▶ Eliminating the salaries of middle management reduces an organization's budget costs.

Disadvantages of Flat Organisations

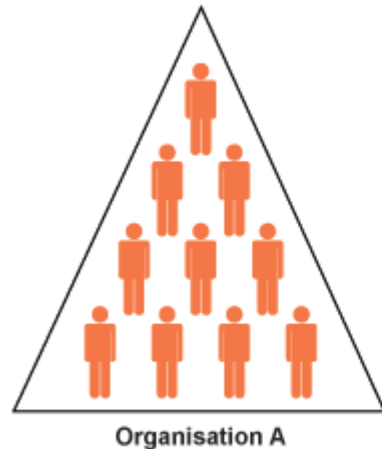
- ▶ Employees may have more than one manager as there are a number of managers at the same level in the organisation
- ▶ May hinder the growth of the organisation especially if managers have wide spans of control.
- ▶ Structure limited to small organisations such as partnerships, co-operatives and private limited companies.
- ▶ Lack of layers may reduce opportunities for high level strategic management. Employees often lack a specific boss to report to, which creates confusion and possible power struggles among management.
- ▶ •Flat organizations tend to produce a lot of generalists but no specialists. The specific job function of employees may not be clear.
- ▶ •Flat structure may limit long-term growth of an organization; management may decide against new opportunities in an effort to maintain the structure.
- ▶ •Larger organizations struggle to adapt the flat structure, unless the company divides into smaller, more manageable units.

Tall Organisations



Hierarchical Structure

A hierarchical organization follows the layout of a pyramid. Every employee in the organization, except one, usually the CEO, is subordinate to someone else within the organization. The layout consists of multiple entities that descend into the base of staff level employees, who sit at the bottom of the pyramid. A small number of people have power.



Advantages of Hierarchical Structure

- ▶ There is a narrow span of control ie each manager has a small number of employees under their control. This means that employees can be closely supervised.
- ▶ There is a clear management structure.
- ▶ The function of each layer will be clear and distinct. There will be clear lines of responsibility and control.
- ▶ Clear progression and promotion ladder
- ▶ •Employees recognize defined levels of leadership within the organization; authority and levels of responsibility are obvious.
- ▶ •Opportunities for promotion motivate employees to perform well.
- ▶ •Hierarchical structures promote developing employees as specialists. Employees may narrow their field of focus and become experts in specific functions.
- ▶ •Employees become loyal to their departments and look out for the best interest of their area.

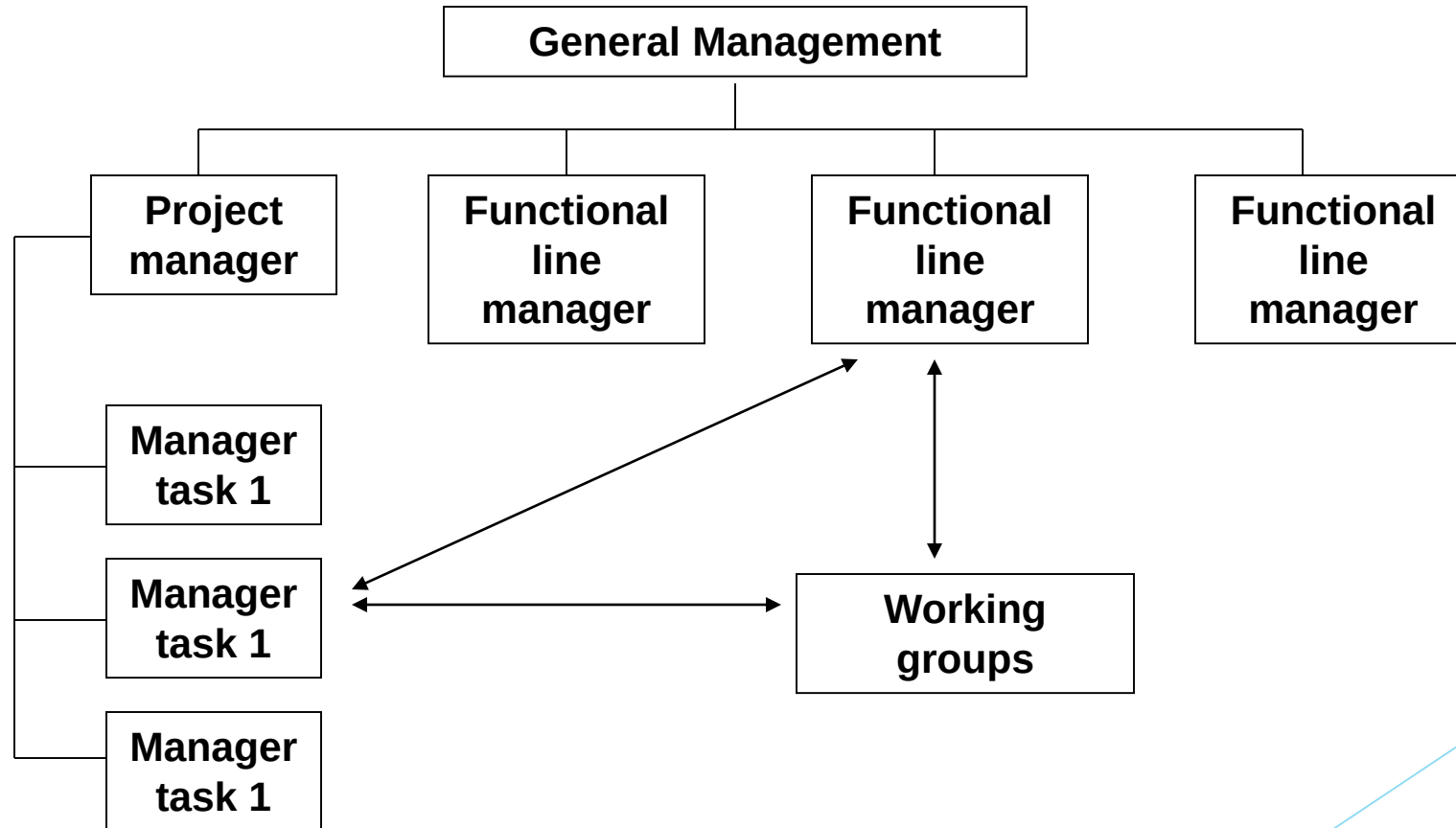
Disadvantages of Hierarchical Structure

- ▶ Communication across different departments tends to be less effective than in flat organizations.
- ▶ •Rivalry between departments may inflame as each department makes decisions that benefit its own interests rather than the organization's as a whole.
- ▶ •Increased bureaucracy often hinders an organization's speed to change. Increased time may be required to respond to clients.
- ▶ •Salaries for multiple layers of management increase an organization's costs.
- ▶ The freedom and responsibility of employees (subordinates) is restricted.
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- ▶ Decision making could be slowed down as approval may be needed by each of the layers of authority.
- ▶ Communication has to take place through many layers of management.
- ▶ High management costs because managers are generally paid more than subordinates. Each layer will tend to pay its managers more money than the layer below it.

Structure of organisations and projects

FUNCTIONAL ORGANISATION	• Large batch & mass production firms. • Mechanistic/hierarchical management. • Functional depts. (e.g. R&D, production, sales) carry out repetitive tasks to maintain high volume.
MATRIX ORGANISATION	• Integrates project & functional resources • Business functions carried out within projects & along functional lines • Two-dimensional supervision – project members report to project manager and line manager.
PROJECT-BASED ORGANISATION	• Project carries out all business functions normally performed by functional depts. • Report to project manager rather than line manager. • Adaptive, organic structures - cope with unusual, complex or changing projects.

Matrix organisation



Advantages of Matrix based organisation

Strengths

- performing routine tasks
- achieving economies of scale
- coordinating cross-project and cross-functional resources(Loaning employees)
- facilitating company wide technical development - allows for specialization that can increase depth of knowledge
- promoting organisation-wide learning - allows to share information more easily across boundaries

Disadvantages of Matrix based structure

Employees can get confused - conflicting loyalties
Priorities not always clear.

To overcome this it is essential for line manager and project manager to communicate

Advantages of Project based organisation

Eg 3M, Canon, Intel

Strengths

- Innovative 'organic', adaptive form

- Creates and recreates organisational structures around the demands of each project and each major customer

- Copes with emergent properties in production, project risks and uncertainties

- Good at integrating different types of knowledge and skills

- Responds flexibly to client needs

Disadvantages of Project Structure

Can work against the interests of corporate strategy

- strategies for learning & innovation cut across project interests
- isolation from the organisation results in lack of regular reporting

Project tracking at corporate level is vital to achieving business goals

- but senior management - often do not know enough about project based organisations

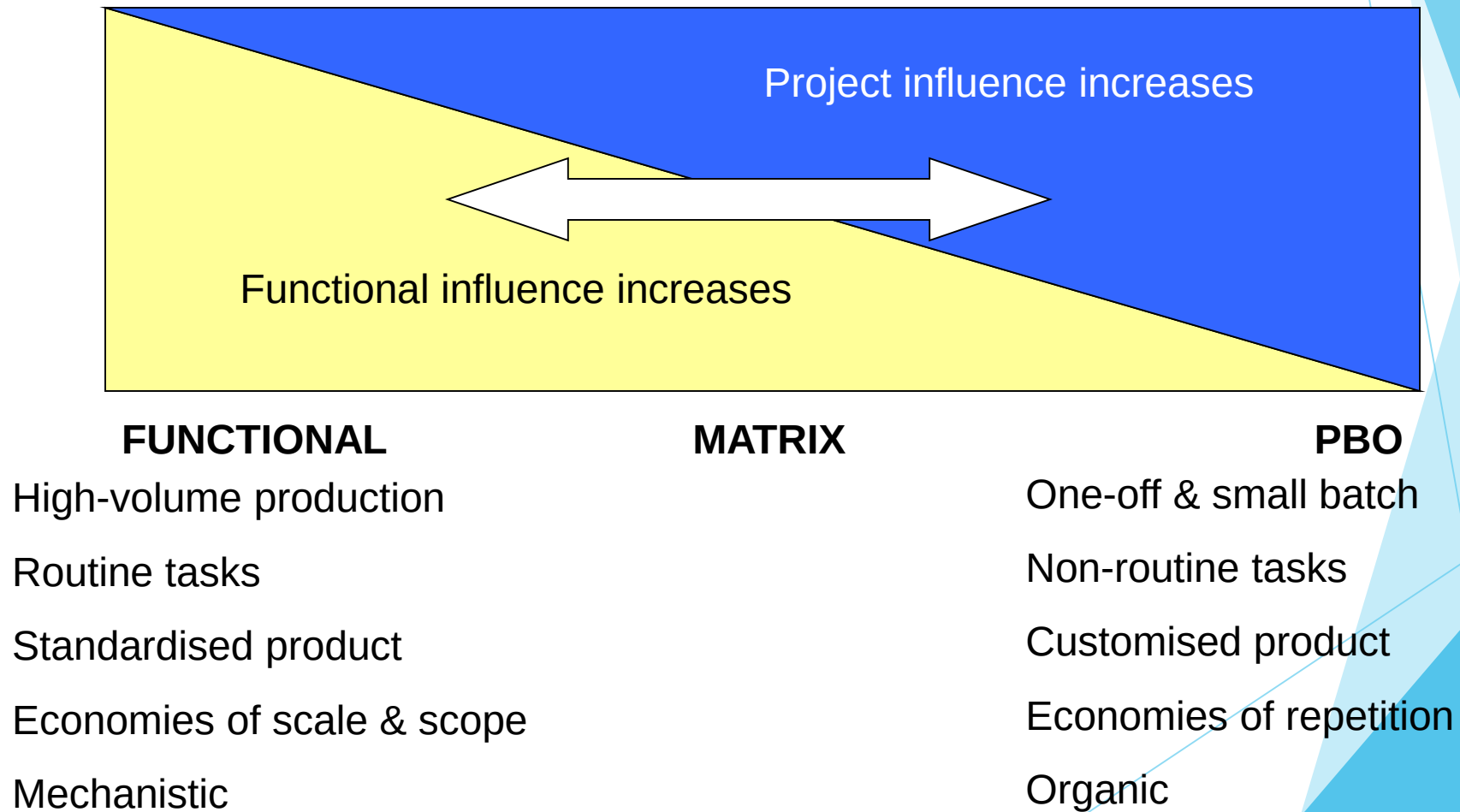
Spider Web Structure

Eg. Richard Branson - Virgin, many small businesses,
One central boss (the spider) sitting in the middle of the web of links
and making all the decisions

Strengths:

- The boss knows everything that is going on - well informed to make the best decisions
- Power comes from the centre, links on all levels. Can act quickly and bypass obstructive people once you are given power.
- Weaknesses:
- Bosses are bypassed, chaos (no-one knows which authority they have and over whom)
- Accountability - praise / blame
- Sycophancy is rampant
- Spider overworked - what happens if sick?

Functional-project continuum



Matrix used for more routine
standardised projects

Project based for more complex
projects and new markets

Structure of organisations and projects a

- ▶ Ownership - private sector, public sector
- ▶ Motive - for profit, non-profit
- ▶ Mission and vision, shared values and beliefs
- ▶ Creating value for stakeholders
- ▶ Control and coordination of resources to achieve goals and outcomes
- ▶ Efficient production of goods and services
- ▶ Facilitating innovation

Structure of organisations and projects b

- ▶ Organizational configuration (Mintzberg)-technical core, technical support, administrative support, top and middle management
- ▶ Organisational configuration, contextual dimensions, the effect of technology, environment, culture
- ▶ Structural dimensions, influence of size, formalisation, specialisation, organisation type eg sole-trader, partnership, company, multinational
- ▶ Structural organisation- functional, divisional, matrix, geographical

The Swiss food company Nestle is the most foreign orientated company in the world - 87% of its assets, 97% of its workers and 98% of its sales are outside its borders

The Roles

Mintzberg published his Ten Management Roles in his book, "Mintzberg on Management: Inside our Strange World of Organizations," in 1990.

- ▶ The ten roles are:
- ▶ Figurehead.
- ▶ Leader.
- ▶ Liaison.
- ▶ Monitor.
- ▶ Disseminator.
- ▶ Spokesperson.
- ▶ Entrepreneur.
- ▶ Disturbance Handler.
- ▶ Resource Allocator.
- ▶ Negotiator.

The roles sit in 3 categories

Category	Roles
Interpersonal	Figurehead Leader Liaison
Informational	Monitor Disseminator Spokesperson
Decisional	Entrepreneur Disturbance Handler Resource Allocator Negotiator

Structure of organisations and projects c

- ▶ Closed and open systems
- ▶ Vertical and horizontal structures
- ▶ Outsourcing
- ▶ Alliances
- ▶ Virtual network structure

Structure of organisations and projects

- ▶ Different types of organisational structures
- ▶ Roles and responsibilities of project stakeholders

Structure of organisations and projects

- ▶ Different types of organisational structures
- ▶ Roles and responsibilities of project stakeholders:
 - ▶ Sponsor
 - ▶ Customer
 - ▶ User
 - ▶ Seller
 - ▶ Business partner
 - ▶ Organizational groups
 - ▶ Functional managers
 - ▶ Other: government regulator, consultant

Relationships-

between internal and external sources of governance, regulation and professional behaviour

- ▶ Purpose and principles of good corporate governance, the ethical responsibilities of the organisation and individuals and ways of achieving corporate social responsibility

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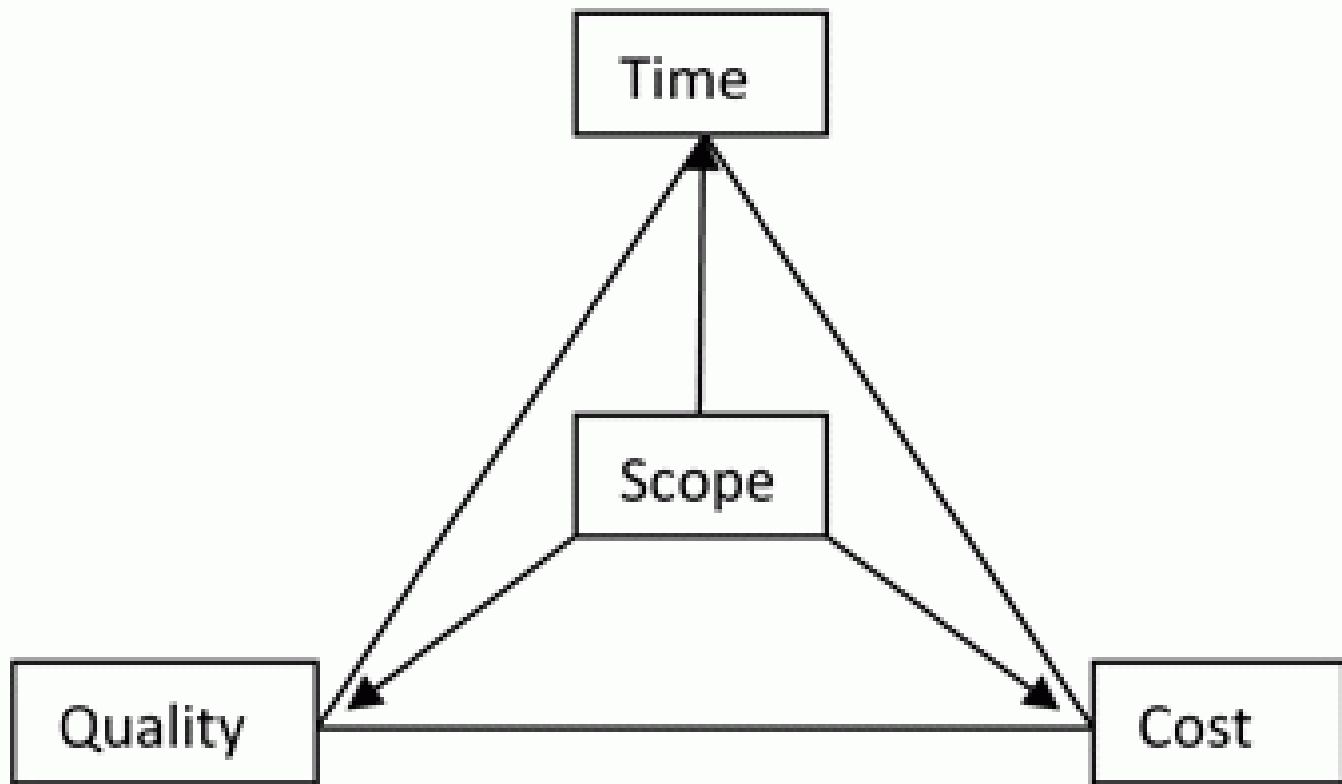
between internal and external sources of governance, regulation and professional behaviour

- ▶ Purpose and principles of good corporate governance, the ethical responsibilities of the organisation and individuals and ways of achieving corporate social responsibility
- ▶ Data Protection Act - information regarding specific people
- ▶ Freedom of Information Act - general information, statistics etc.

External factors

- ▶ Stakeholders
- ▶ Government
- ▶ Regulations
- ▶ Corporate social responsibility
- ▶ Role of institutions

The Time-Quality-Cost Triangle (The Iron Triangle)



Question

- ▶ Some cite the Iron Triangle (Time Cost Quality) as the central part of project management.
- ▶ It is criticised by others as a blinkered view of limited value.
- ▶ Justify the use of the iron triangle of factors in managing projects.

Key Figures in Management Theory

- further reading

- ▶ F.W.Taylor (1856-1915) Time and Motion/ industrialist and contemporaries, Frank and Lilian Gilbreth- Therbligs - science of manual tasks
- ▶ Henri Gantt - another contemporary of Taylor who devised piece rate and Gantt charts
- ▶ Henri Fayol (1841-1925)- principles of management/ mining engineer and his disciple Lyndall.F. Urwick - 10 principles published 1952
- ▶ Weber 1864-1920 - social scientist - theory of organisations
- ▶ Mintzberg 1979 The Structuring of Organisations

Stake holders - Role

- ▶ The term 'Stakeholder' is a broad term that applies to:
- ▶ People inside the organisation, but usually outside of the project team, who are in some way affected by the project. Typically Stakeholders will be users of the output from a project or benefit from its introduction. They may also have to change their role, function or method of working as users of new systems, processes or products.
- ▶ Stakeholders might also be external customers and suppliers, as they might be directly affected by the changes resulting from a project.
- ▶ Stakeholders could include those who identified the need for project activity.

Who are the Stakeholders?

- ▶ Customers and users
- ▶ Project Sponsor
- ▶ Executive steering committee
- ▶ Project Management Office
- ▶ Organisation managers
- ▶ Vendors
- ▶ Consumers
- ▶ Government/legislative committees
- ▶ Technology or business user groups

Roles and Responsibilities of Stakeholders

- ▶ Ensuring the project fits with the strategy for their area of business
- ▶ Providing detailed requirements and a financial plan
- ▶ Committing the necessary resources
- ▶ Taking ownership of appropriate deliverables
- ▶ Keeping abreast of the project progress and cascading information to those who need to know
- ▶ Establish training and support requirements
- ▶ Identify and resolve projects issues and risks especially those associated with managing change during transition phase
- ▶ Communicating through life of project
- ▶ Project Closure - analysis of delivery against plan, budget, strategic objectives. Sign off and accept the project

How to define the roles and responsibilities

- ▶ Step 1
- ▶ Identify end users. These are the customers who will buy the results of the project. They were probably the inspiration for the project, but they often get overlooked once work is under way. They have the role of final approval -- they either pay for the end product or they don't. They have few responsibilities during the project, and all the responsibility when it is completed. They determine if it has value. Remain aware that your project may have more than one type of customer. For example, if you sell to wholesalers, you could consider them a customer, because they have to buy the product. Then they sell to the final customer.
- ▶ Step 2
- ▶ Determine who qualifies as a sponsor. A sponsor has authority over the project. Sponsors are lenders and investors. They have a major stake in the outcome of the project and may take on the role of advisor to protect their investments.

How to define the roles and responsibilities

- ▶ Step 3
- ▶ Examine your support. Your support people are vendors and sellers who supply you with the goods and services you need to complete the project. This category can include subcontractors and consultants. Your support people have the role of contributing ideas and material to your project, but they are not responsible for how well you use their input.
- ▶ Step 4
- ▶ Categorize the doers. The doers are people like the project manager and the project team. These people do the actual work on the project. They take on the roles of creating each phase of the project, solving problems as work progresses, and monitoring the quality of the work while in process. These people take ultimate responsibility for the effectiveness of the project.
- ▶ Step 5
- ▶ Decide who are the overseers. These are usually senior executives. They also may take on the role of advisor. They are ultimately responsible for how well the project contributes to the company's success. You will find yourself justifying the decision you make on the project to the executives charged with oversight.