

Master in Shipping and Sea Transports: Economics and Politics



**MANAGEMENT
of SHIPPING COMPANIES**

Departmentalisation of Shipping Companies

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Contents

- Introduction and definitions
- "The Structuring of Organizations" theory and its application to shipping
- Coordination mechanisms in Shipping
- Structure and departmentalisation
 - Criteria for departmentalisation
 - Traditional Structures vs Modern Structures

Learning Objectives

- **Understanding Fundamental Concepts:**
 - grasp the fundamental concepts related to shipping management, including key definitions and an overview of organizational components.
- **Analyzing Coordination Mechanisms:**
 - be able to analyze and differentiate various **coordination mechanisms** in the context of shipping. This includes understanding how hierarchical organization, direct supervision, and other coordination approaches contribute to effective shipping operations.
- **Comparing Organizational Structures:**
 - be capable of comparing **traditional** and **modern** structures in shipping management. This involves recognizing the strengths and limitations of each structure and understanding how they adapt to the evolving demands of the shipping industry.

Introduction to Departmentalisation

- **Departmentalisation** is the *division of work into specialized jobs and the organisation of these jobs into separate departments.*
- Each department typically focuses on specific tasks or aspects of the company's operations, and this division allows for a more organized and systematic approach to managing the diverse functions involved in the shipping industry.
- The **objectives** sought by departmentalisation are:
 - effective management
 - co-ordination
 - synergy and economies of scale
 - the effective use of resources
 - co-operation and job satisfaction on the part of employees.

In-class Question:

- Can you provide examples of departments present in a standard shipping company?

Introduction to Departmentalisation

Examples:

- ✓ **Operations Department:** Responsible for managing day-to-day activities related to vessel operations, including scheduling, routing, and cargo handling.
- ✓ **Technical Department:** Oversees the maintenance, repair, and technical aspects of the fleet, including the engine room, navigation equipment, and vessel upgrades.
- ✓ **Commercial Department:** Handles business development, customer relations, and chartering activities, negotiating contracts and ensuring profitable shipping operations.
- ✓ **Safety and Compliance Department:** Focuses on ensuring adherence to safety regulations, implementing safety protocols, and managing environmental compliance.
- ✓ **Finance and Accounting Department:** Manages financial transactions, budgeting, and financial reporting for the company, including payroll and invoicing.
- ✓ **Human Resources Department:** Handles recruitment, training, crew welfare, and other personnel-related functions.
- ✓ **Logistics Department:** Coordinates the transportation, storage, and distribution of goods, optimizing supply chain efficiency.
- ✓ **Information Technology (IT) Department:** Manages the company's IT infrastructure, communication systems, and data security.
- ✓ **Legal and Compliance Department:** Provides legal support, ensuring compliance with maritime laws and regulations, and handles contractual matters.
- ✓ **Marketing Department:** Develops and implements marketing strategies, promotional activities, and branding initiatives for the shipping company.

The Structuring of Organizations (Mintzberg, 1979)

- **Henry Mintzberg**, a renowned management theorist, proposed a comprehensive framework for understanding the basic parts of organizations in his seminal work "*The Structuring of Organizations*" published in 1979.
- Mintzberg identified five fundamental components, or "basic parts," that make up organizations:
 - **strategic apex**
 - **middle line**
 - **operating core**
 - **technostructure**
 - **support staff**

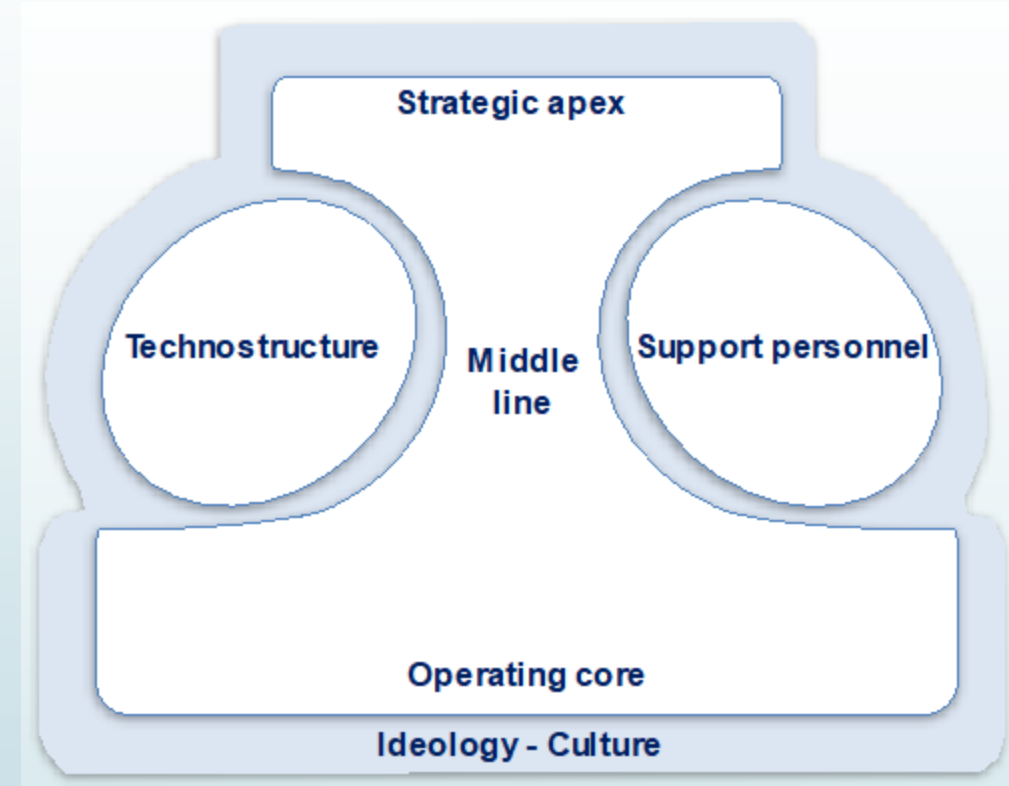


Figure 1. The five basic parts of organizations

The Structuring of Organizations (Mintzberg, 1979)

1. **Operating Core:** This is the heart of the organization, where the primary work is performed. It includes individuals directly involved in producing goods or delivering services. The operating core is essential for the organization's core functions and mission. (Marine officer, deck engineer)
2. **Strategic Apex:** Also known as the top management, the strategic apex is responsible for decision-making and overall strategic direction. It consists of top-level executives who set the organization's goals, policies, and strategies (Chief Executive Officer, Chief Operations Officer).
3. **Middle Line:** Connecting the operating core and the strategic apex, the middle line acts as a bridge between top management and the rest of the organization. Middle managers are responsible for translating the strategic decisions into actionable plans and ensuring they are carried out by the operating core (Port captain, operations manager).
4. **Technostructure:** This part focuses on standardizing processes and systems within the organization. It includes analysts, planners, and other specialists who design and control the standard operating procedures, rules, and norms that guide the work of the operating core (Naval Architect, Quality Assurance Specialist).
5. **Support Staff:** Comprising various support functions, this part assists the organization by providing services such as human resources, accounting, and legal support. Support staff helps to maintain the efficiency and effectiveness of the organization as a whole (HR Manager, Financial and Accounting Specialist).

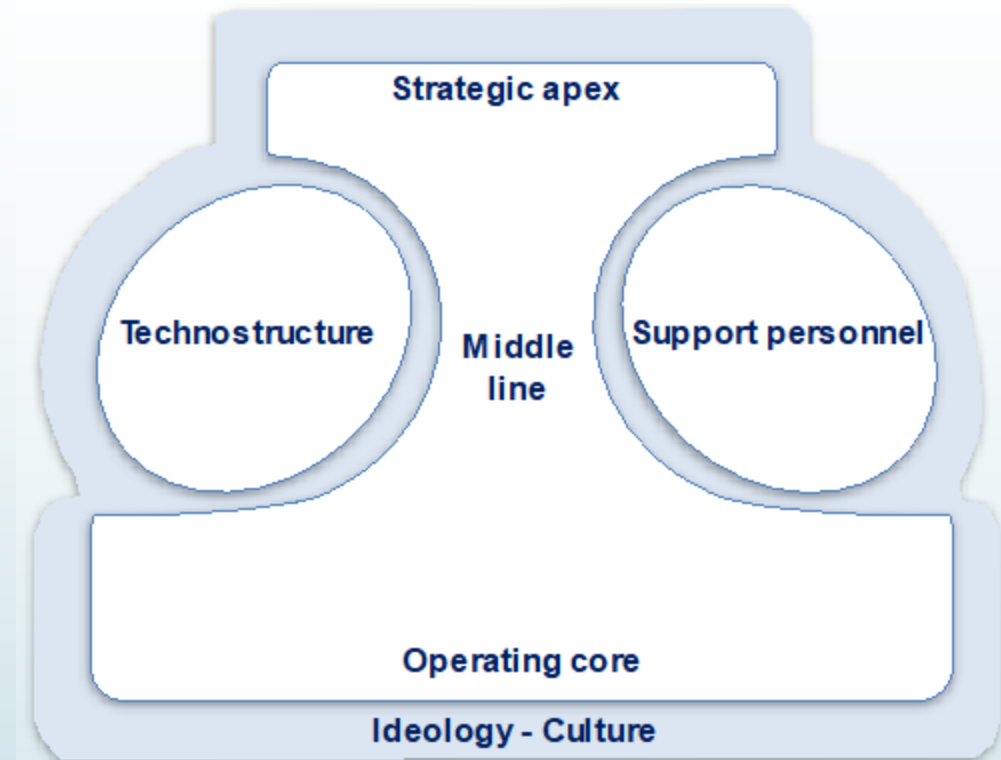


Figure 1. The five basic parts of organizations

- **Ideology-Culture** → it does not consist of people but it surrounds and penetrates all other parts

Discussion Question

Can you identify some basic roles of a ship or a shipping company based on Mintzberg's framework?

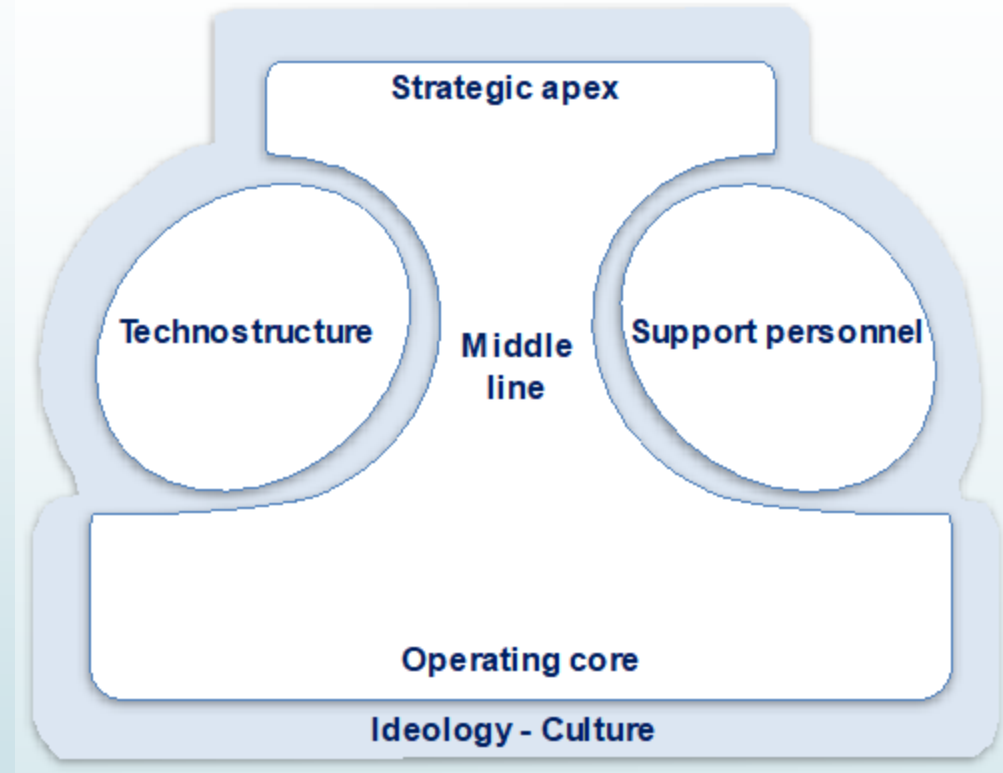


Figure 1. The five basic parts of organizations

Discussion Question

Can you identify some basic roles of a ship or a shipping company based on Mintzberg's framework?

Shipping Company roles:

Chief Executive Officer (CEO): The top executive responsible for the overall management and performance of the shipping company.

Finance and Accounting Staff: Handles financial transactions, bookkeeping, and other accounting functions.

Chief Operations Officer (COO): Oversees the day-to-day operations of the company, including fleet management and logistics.

Chief Financial Officer (CFO): Manages the financials of the company, including budgeting, financial reporting, and risk management.

Chief Commercial Officer (CCO): Leads the commercial strategy, including customer relations, marketing, and business development.

Fleet Manager: Responsible for the maintenance, scheduling, and efficient operation of the company's fleet of ships.

Port Captain: Coordinates ship movements in and out of ports, ensuring compliance with regulations and optimizing efficiency.

Chartering Manager: Manages the chartering of vessels, negotiating contracts with clients or charterers.

Marine Superintendent: Oversees the technical aspects of vessel operations, ensuring compliance with safety and regulatory standards.

Customer Service Representative: Acts as a liaison between the shipping company and its clients, addressing inquiries and resolving issues.

Environmental Compliance Specialist: Focuses on ensuring the company adheres to environmental regulations and sustainability practices.

Logistics Manager: Coordinates the transportation and distribution of goods, optimizing supply chain efficiency.

Human Resources Manager: Manages personnel matters, including recruitment, training, and crew welfare.

Legal Counsel/Maritime Lawyer: Provides legal advice on maritime law, contracts, and regulatory compliance.

Risk Manager: Assesses and manages risks related to the company's operations, including insurance and safety protocols.

Environmental Compliance Manager: Ensures the company adheres to environmental regulations and sustainability practices.

Information Technology (IT) Manager: Manages the company's IT infrastructure, including communication systems and data security.

Quality Assurance Manager: Monitors and ensures quality standards are maintained in all aspects of the company's operations.

Procurement personnel: Operates the sourcing and purchasing of equipment, supplies, and services.

Customer Service Representative: Acts as a liaison between the shipping company and its clients, addressing inquiries and resolving issues.

Finance and Accounting Staff: Handles financial transactions, bookkeeping, and other accounting functions.

Safety and Compliance Officer: Monitors compliance with safety and regulatory standards, implementing and maintaining safety protocols.

Discussion Question

Can you identify some the basic roles of a ship or a shipping company based on Mintzberg's framework?

Ship roles:

Master (Captain): The highest-ranking officer responsible for the overall operation and safety of the ship.

Chief Officer (First Mate): Second-in-command, responsible for navigation, cargo operations, and overall deck maintenance.

Second Officer: Assists the Chief Officer in navigation, cargo operations, and deck duties.

Third Officer: Responsible for navigation, safety equipment, and other deck duties.

Chief Engineer: In charge of the ship's engine room, propulsion systems, and maintenance of all machinery.

Second Engineer: Assists the Chief Engineer in managing the engine room and machinery.

Third Engineer: Responsible for specific engine room duties and maintenance.

Electrical Officer: Manages and maintains electrical systems on board the ship.

Boatswain (Bosun): In charge of the deck crew, responsible for general maintenance and upkeep of the ship's exterior.

Able Seamen (ABs): Deck crew members responsible for various tasks, including mooring, anchoring, and general maintenance.

Fitter/Motorman: Responsible for maintenance and repair of the ship's mechanical and engine systems.

Pumpman: Manages cargo loading and unloading operations, particularly related to liquid cargoes.

Chief Cook: In charge of the ship's galley and responsible for meal preparation.

Messman/Steward: Assists the Chief Cook and takes care of cleaning and other duties related to crew welfare.

Radio Officer: Handles communication equipment and ensures compliance with radio regulations.

Safety Officer: Oversees safety procedures, drills, and ensures compliance with safety regulations.

Medical Officer: Provides medical care to the crew and ensures health and safety standards are met.

Chief Steward: Manages the ship's catering department, including food provisioning and service.

Ordinary Seamen (OSs): Entry-level deck crew members who assist with various tasks as needed.

Coordination mechanisms of organisations (Mintzberg, 1979)

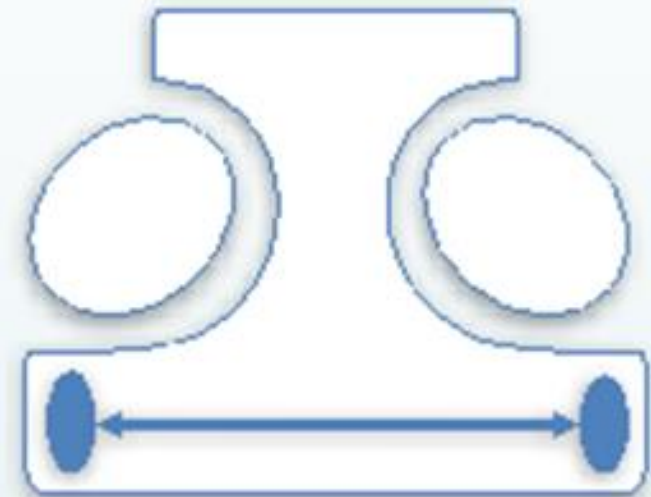
Mintzberg identified five fundamental ways through which **coordination** is achieved in organizations. These coordination mechanisms are:

1. Mutual Adjustment
2. Direct Supervision
3. Standardization of Work Processes
4. Standardization of outputs
5. Standardization of skills

Coordination mechanisms of organisations (Mintzberg, 1979)

- **Mutual Adjustment**

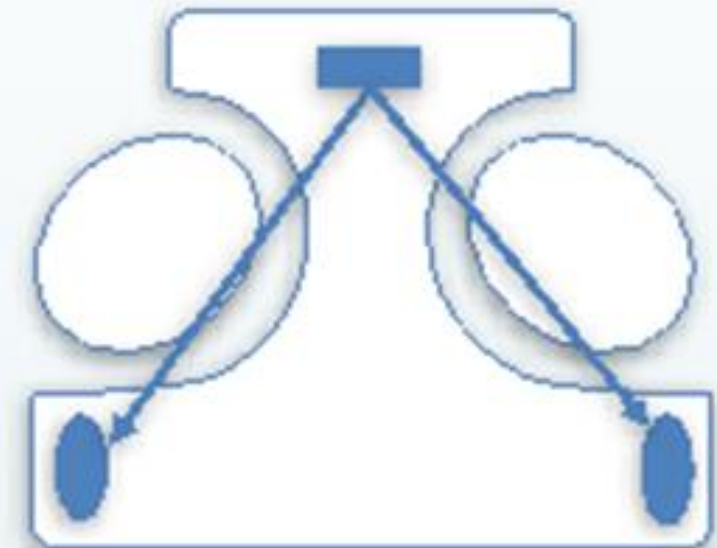
- **Description:** This mechanism relies on informal communication and collaboration among individuals or groups.
- It involves individuals adjusting their activities based on direct interactions and shared information.
- **Examples:**
 - In a small team working on a project, team members communicate regularly, make adjustments as needed, and collaborate to ensure the project's success.
 - The bridge crew communicates with the engine room to adjust ship speed and course based on changing weather conditions or unexpected obstacles.



A. Mutual Adjustment

Coordination mechanisms of organisations (Mintzberg, 1979)

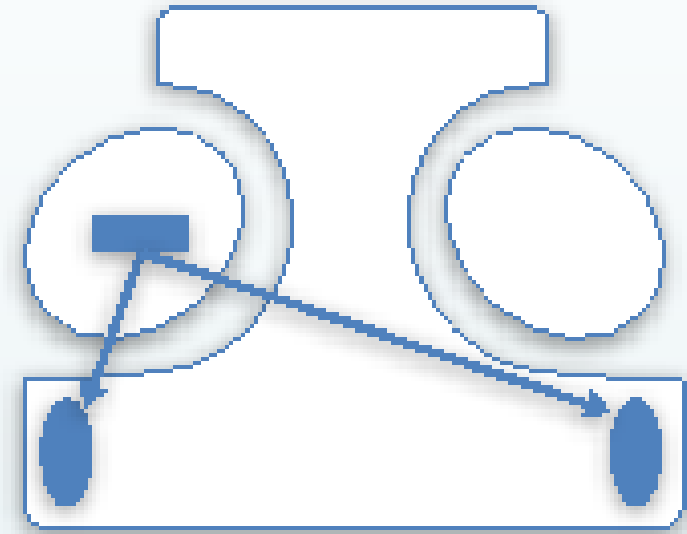
- **Direct Supervision:**
- **Description:** Coordination is achieved through a hierarchical structure with clear lines of authority.
- Managers supervise and direct subordinates to ensure that their activities align with organizational goals.
- **Example:** A manager overseeing a production line provides direct instructions to workers, monitoring their tasks and ensuring they adhere to established procedures.
- The captain provides direct instructions to the crew, overseeing navigation, safety protocols, and adherence to regulations.



A. Direct Supervision

Coordination mechanisms of organisations (Mintzberg, 1979)

- **Standardization of Work Processes:**
- **Description:** Coordination achieved by establishing and enforcing standardized procedures, rules, or guidelines for work activities.
- **Examples:**
 - In a manufacturing plant, standard operating procedures (SOPs) are developed and followed to maintain consistency in the production process.
 - The shipping company implements standardized procedures for cargo loading and unloading operations to ensure safety and efficiency.



A. Standardization of Work

Coordination mechanisms of organisations (Mintzberg, 1979)

- **Standardization of Outputs:**

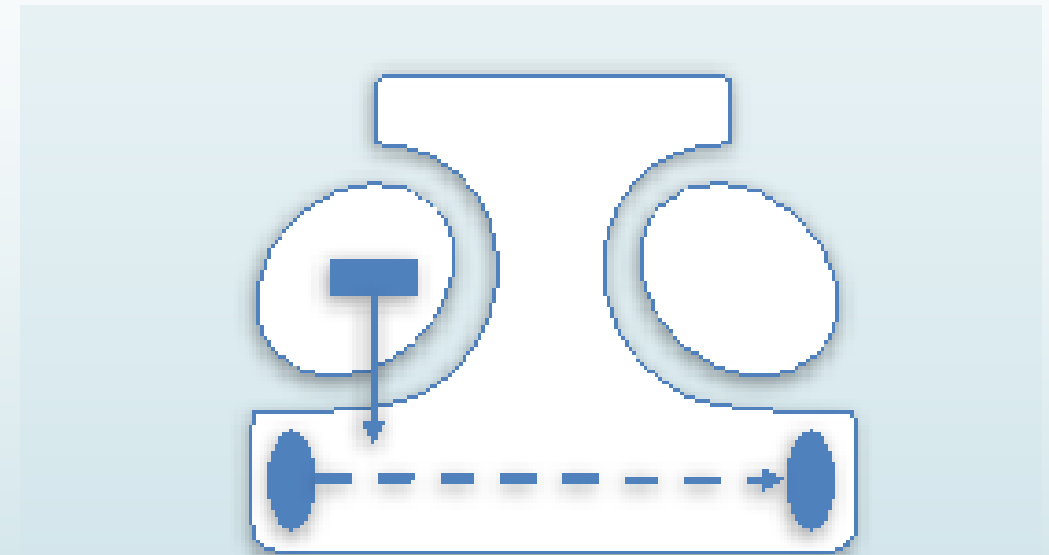
- **Description:** This mechanism focuses on the standardization of the final product or output.

- Organizations define specific criteria for the quality or characteristics of the output, and individuals or units work to meet these criteria.

- **Examples:**

- A software development team may adhere to specific quality standards for the final software product, ensuring that it meets predefined criteria.

- A shipping company establishes quality standards for the condition and documentation of cargo delivered to customers.

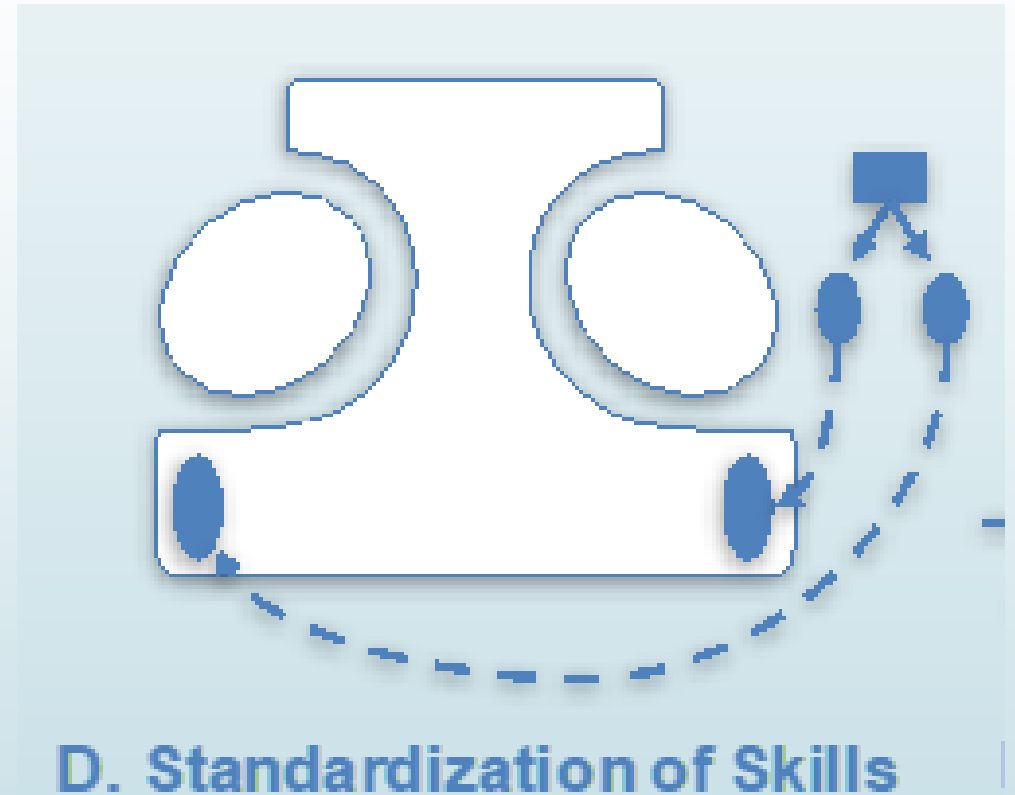


D. Standardization of Outputs

Coordination mechanisms of organisations (Mintzberg, 1979)

5. Standardization of skills and knowledge:

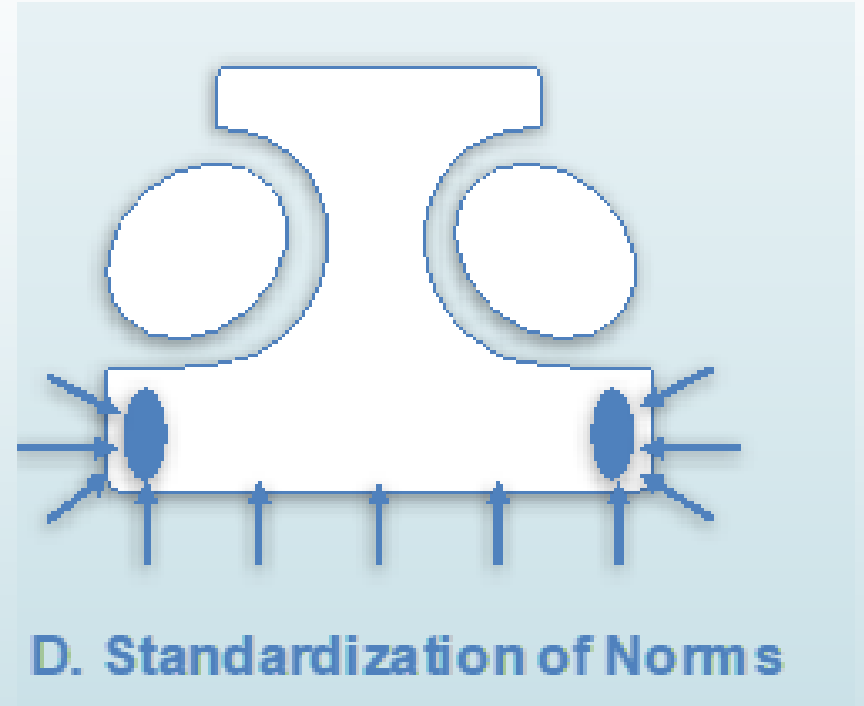
- **Description:** Coordination achieved by standardizing the skills and training of individuals. Employees possess the necessary qualifications and expertise to perform their roles effectively.
- **Example:**
 - In a professional services firm, such as a law or accounting firm, employees undergo standardized training to ensure they have the required skills and knowledge.
 - The crew members receive standardized training in safety procedures, emergency response, and navigation skills to ensure competency in their roles.



Coordination mechanisms of organisations (Mintzberg, 1979)

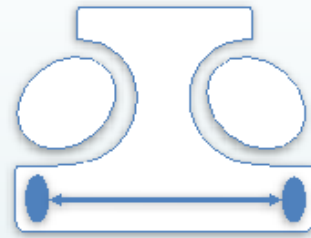
6. Standardization of norms:

- **Description:** Coordination achieved by establishing and enforcing norms or shared values within the organization. This involves creating a common understanding of acceptable behaviors and practices.
- **Example:** The shipping company promotes a safety culture where all employees share a common understanding of safety norms and adhere to established safety protocols. This includes reporting incidents, conducting regular safety drills, and prioritizing safety in decision-making.



Discussion Question

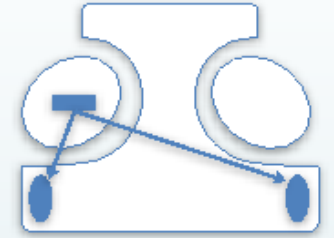
Can you identify alternative examples of different coordination mechanisms of a shipping company or a ship based on Mintzberg's analysis?



A. Mutual Adjustment



A. Direct Supervision



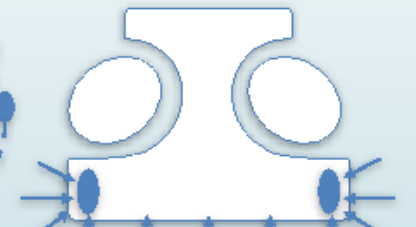
A. Standardization of Work



D. Standardization of Outputs



D. Standardization of Skills



D. Standardization of Norms

Examples of Coordination mechanisms of organisations (Mintzberg, 1979)

Mutual Adjustment:

- ✓ The deck crew collaborates with the maintenance team to adjust the ship's schedule for routine maintenance tasks.
- ✓ The captain and chief engineer collaborate to adjust engine speed and fuel consumption based on fuel efficiency goals.

Direct Supervision:

- ✓ The chief officer provides direct instructions to the crew during mooring operations to ensure proper and safe procedures are followed.
- ✓ The chief engineer directly oversees the engine room team, ensuring machinery is operating within specified parameters.

Standardization of Work Processes:

- ✓ The shipping company establishes standardized procedures for routine engine room maintenance tasks.
- ✓ The crew follows standardized protocols for emergency response drills to ensure consistent and effective procedures.

Coordination mechanisms of organisations (Mintzberg, 1979)

Standardization of Outputs:

- ✓ The shipping company sets quality standards for documentation accuracy in cargo manifests.
- ✓ Quality standards are set for the packaging and handling of hazardous materials during transportation.

Standardization of Skills:

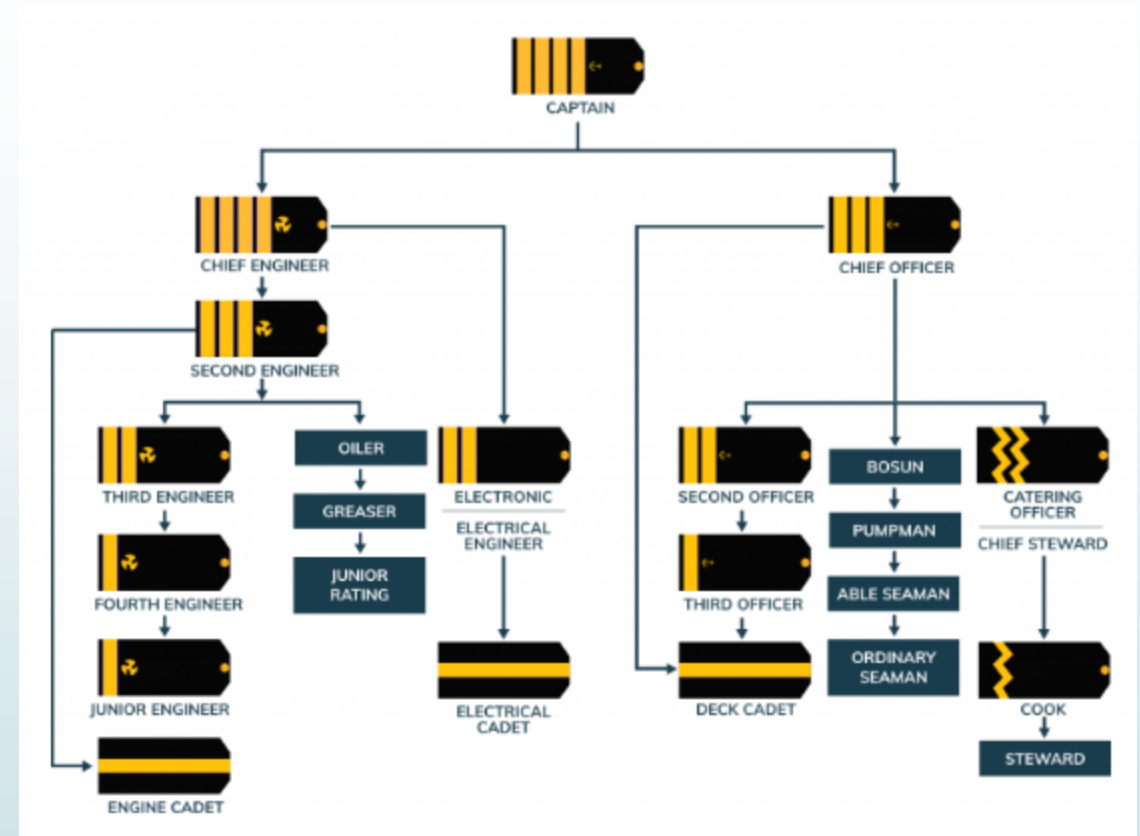
- ✓ Crew members undergo standardized training in navigation techniques to ensure competency.
- ✓ The navigation team receives standardized training on the use of electronic navigation systems.

Standardization of Norms:

- ✓ A safety-first norm is ingrained, with all employees expected to prioritize safety in decision-making and actions.
- ✓ A norm of environmental responsibility is promoted, with all employees expected to adhere to waste disposal and pollution prevention practices.

Coordination mechanisms in shipping companies

- Shipping companies are organizations that simultaneously depend on various coordination mechanisms."
- Ships rely upon hierarchical organisation, but their effective operation **cannot** be achieved in all conditions by direct supervision only



Discussion Question

- What **criteria** or factors should be considered when deciding how to **departmentalize** various functions and roles?
- Hint: Think about the challenges and benefits associated with the interdependence of tasks, different specialization, and efficient use of resources.

Criteria for departmentalization

- **Interdependence of jobs:** Jobs and processes or activities with a high level of interdependence are grouped in the same department so that their co-ordination is achieved.
- **Specialisation of jobs:** Jobs with the same or related specialisation are placed in the same department so that their effective management is achieved.
- **Best use of resources:** To avoid the squandering of resources, grouping is carried out in such a way as to favour the creation of synergies and the avoidance of overlapping between departments.

Criteria for departmentalization in Shipping Companies

The organizational structure chosen by a shipping company depends on (Frankel, 1982):

- the **kind of service** which the company provides (defined by the type of its vessels and the markets in which it is active)
- the **degree of ownership** of the vessels possessed by the company (owned + management or only management)
- the **method of management** the shipping company implements
- the **technology** which the shipping company incorporates in its operation
- the factors in the **external environment** which make specific demands or impose certain restrictions

Departmentalisation of shipping companies

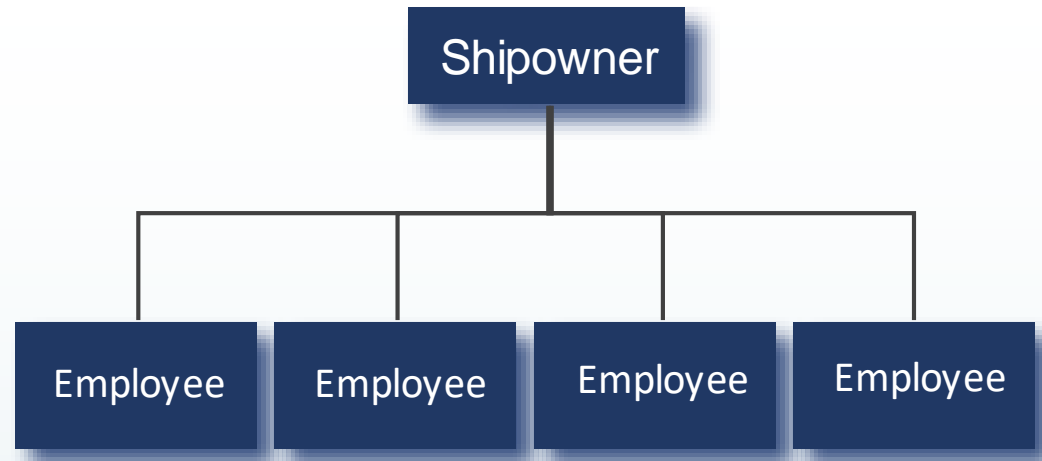
There are **traditional** and **innovative** approaches to departmentalisation reflecting different ways of making use of unity of command (Daft, 2008)

- **Traditional structures** which are based to a greater degree on the chain of command for the definition of departmental groupings and reporting relationships, in the hierarchy are included the functional, the divisional and the matrix structures.
- **Modern** structures are based on **teams and virtual networks** have emerged to meet organisational needs in the changing global environment.

Traditional Structures of departmentalization

- Simple Structure
- Functional Structure
- Divisional Structure
- Matrix Form
- Geographical

Simple structure



- Type of structure which **does not include departmentalisation**
- Adopted mostly by small firms at the early stage of their establishment
- The structure that exist before the existence of directors– the step before the adoption of functional structure
- Crucial factor for efficient operation: the number of employees. When the number increases, the need for employment of supervisors and the grouping of tasks/activities become apparent
- Example: In a small shipping company, the founder or owner might directly oversee and make decisions for all aspects of the business. This simple structure is common in smaller organizations where there is little formalization of roles and a direct line of authority.

Simple structure

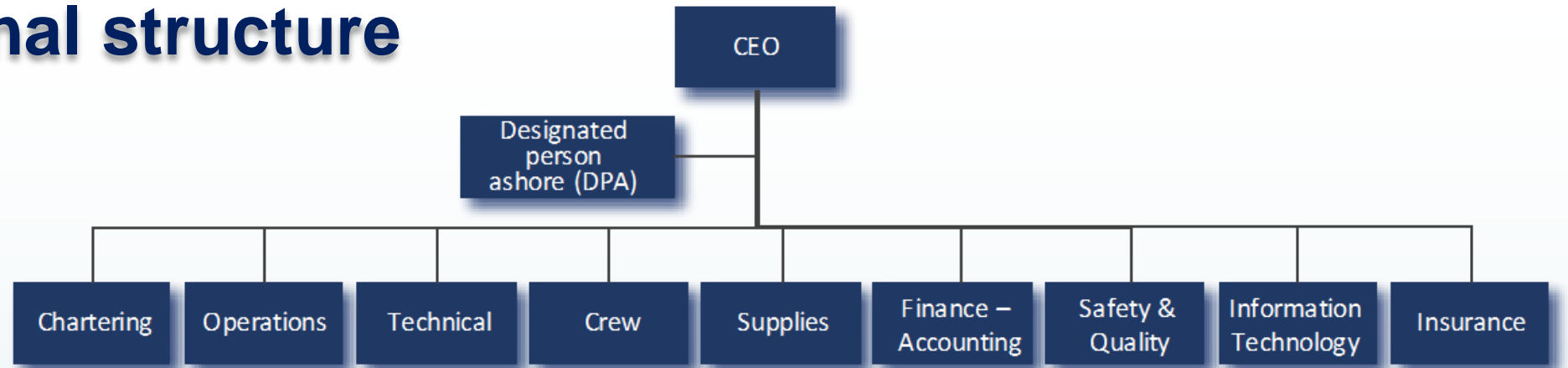
Advantages

- Flexibility: Adaptable to changes; quick, centralized decision-making.
- Clear Authority: Simple reporting structure; clear decision-making roles.

Disadvantages

- Limited Specialization: Hinders specialization as the organization grows.
- Scalability Challenges: Struggles with growth; leadership burden increases.
- Decision Bias: Centralized power risks biases; lacks diverse perspectives.
- Leader Dependency: Relies heavily on leader's skills and availability.
- Limited Formalization: Lacks consistent policies, risking unpredictability.

Functional structure



- **Functional Structure:** Activities are grouped on the basis of **their functional specialisation (Jobs)** related to the same process are located in the same department
- Implemented by companies active in markets with a stable operating environment and develop a few services which do not change over time
- The extent of departmentalisation depends upon the size and the volume of work and the number of the personnel of the company
- In large-size companies with this structure, each function is organised in an independent department.
- In companies with smaller fleets, some functions are likely to be incorporated with others and to be carried out within the same department
- The traditional form of organisation in shipping companies, mostly of bulk shipping
- Can be effective because it brings together personnel with the same specialisation, ensuring at the same time their unification at the top level of the hierarchy

Functional structure

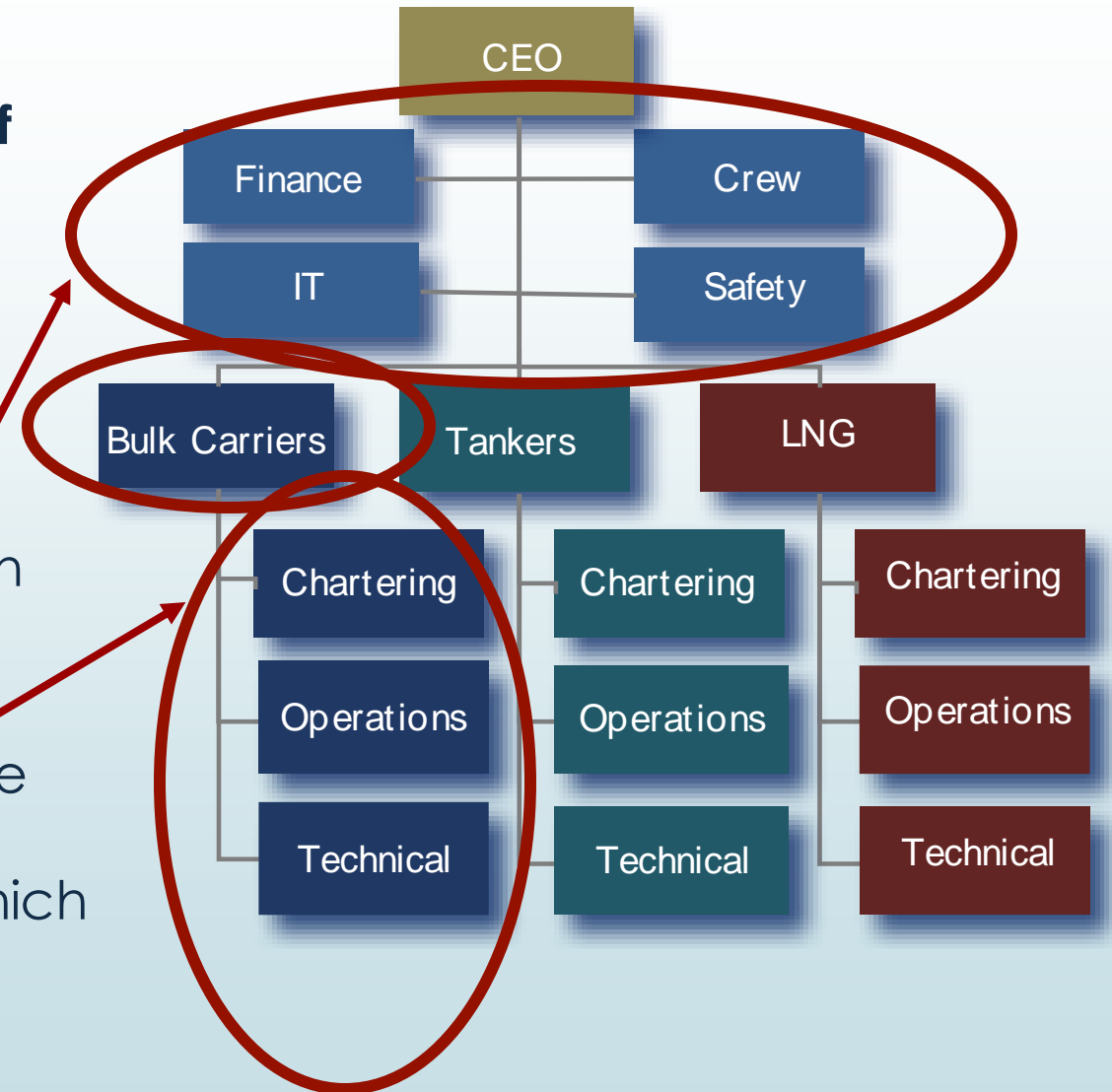
- Example: A shipping company may have functional departments such as Operations, Finance, Human Resources, and Marketing. Each department is specialized in its function, and employees within each department focus on tasks related to their specific expertise.
- **Advantages**
 - Allows for central control
 - in-depth approach to operational issues
 - development of specialisation in the personnel.
- **Disadvantages**
 - concentration of the personnel on the aims of their department at the expense of the overall objectives of the company
 - horizontal communication can be challenging
 - employees with high specialisation cannot have overall supervision of the company's processes
 - difficulty in adaptation to changes in the environment.

Divisional structure

Divisional Structure: The fleet is divided into groups, depending upon **the specialisation of the vessels**, and each group constitutes a division (outflow-based departmentalization)

Each division is organised in the light of its needs, using entrepreneurial resources in common with other divisions

- Within each division, those processes which involve the management of the ship and require specialisation in relation to each type, are organised in a department, while the support or executive processes are organised in independent departments which serve all the division of activity.



Divisional structure

Example: The shipping company may have divisions based on the types of cargo or services offered, such as Container Shipping Division, Bulk Shipping Division, and Passenger Cruise Division. Each division operates as a semi-autonomous unit with its own set of functions and resources.

Advantages

- it makes possible rapid changes in an unstable environment
- permits each division to engage in the necessary modifications in order to adjust to these changes
- facilitates co-ordination between the various processes within each division
- contributes to personnel development by overall supervision,
- promotes control
- reinforces the concentration of management on strategic issues
- encourages initiative and autonomy in employees.

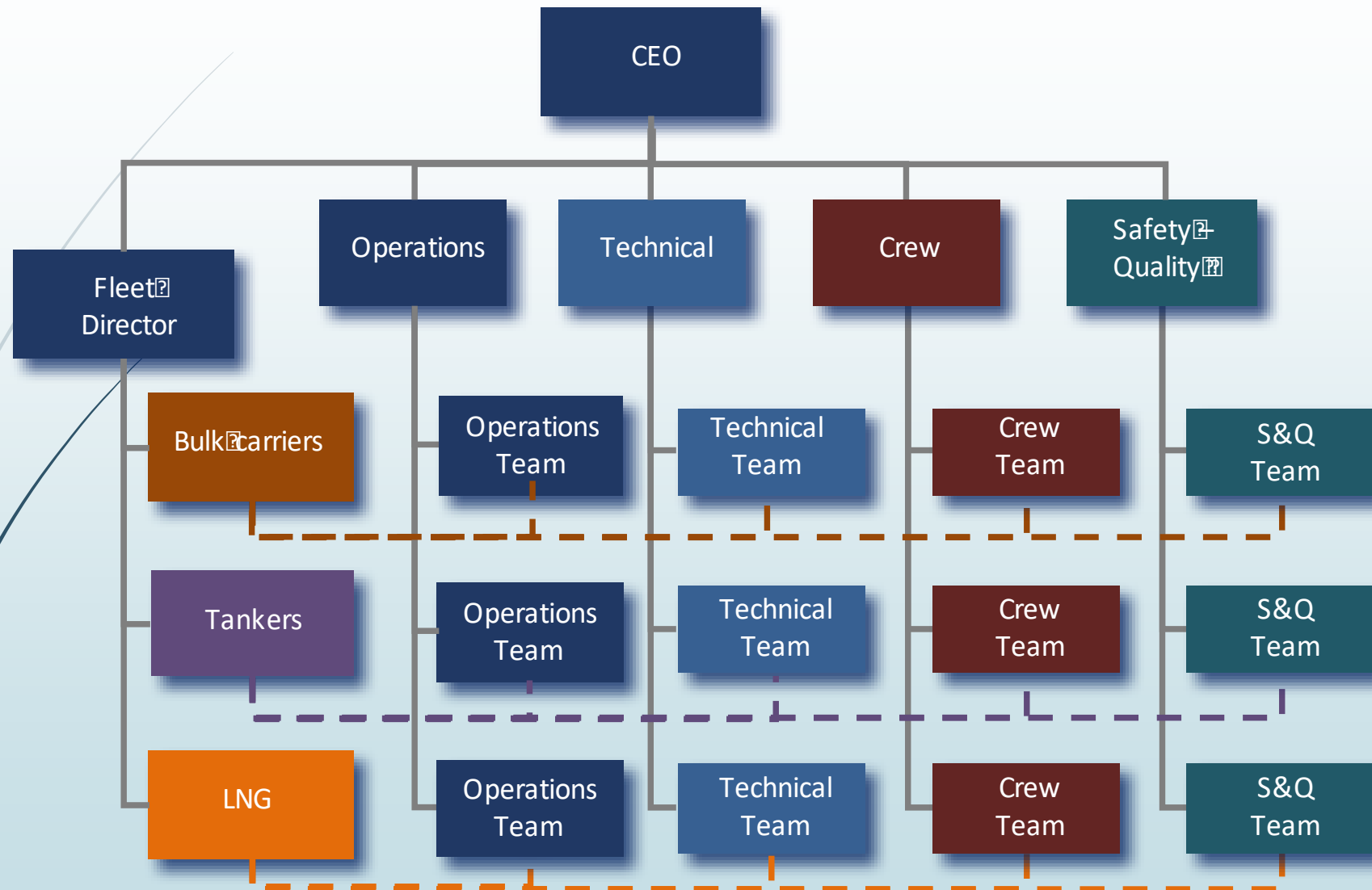
Disadvantages

- increased cost of implementation (lost economies of scale) in the line departments and leads to the existence of many employees with the same duties
- the probability of poor coordination and conflict between the divisions over claims on the entrepreneurial resources
- the addition of a further level of management and the elimination of in-depth knowledge and technical specialisation on the part of employees.

Matrix structure

- Matrix Structure: Combination of the forms of functional and divisional structures.
- Includes vertical and horizontal lines simultaneously.
- System of **dual command and responsibility** is created.
- Each employee reports to two superiors at the same time: to the head of the division of his specialisation and to the person responsible for the function at which he works.
- Important in shipping, as it allows for the co-ordination of specialisations both at the level of operations and at that of activity (Frankel, 1982).
- Suitable for bulk cargo shipping companies, which operate in a dynamic and uncertain environment.
- Example: The shipping company may adopt a matrix structure where employees report both to functional departments (e.g., Operations, Finance) and project teams focused on specific initiatives (e.g., New Vessel Acquisition Project, Route Optimization Project). This structure allows for a balance between functional expertise and project-focused collaboration.

Matrix structure



Matrix structure

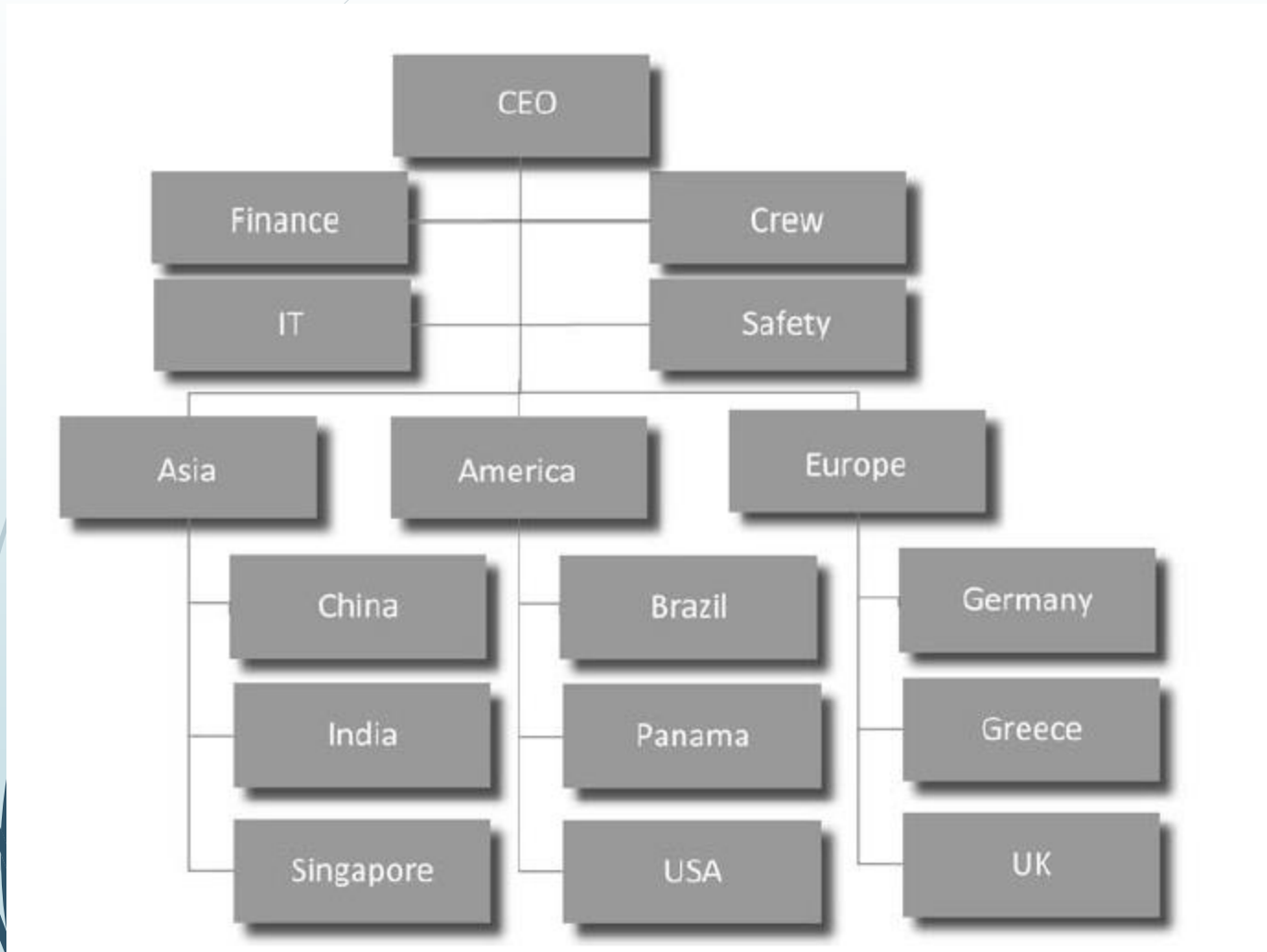
- **Advantages**

- good use of specialised personnel and equipment,
- motivation, flexibility and adaptability, encouragement of co-operation and the exchange of ideas and knowledge,
- limited need for hierarchical control,
- personnel development and initiative
- creation and diffusion of knowledge
- encouragement of innovations.

- **Disadvantages**

- possible confusion among employees
- time-consuming procedures in the taking of decisions and in the resolution of disputes and the effort which is called for to retain a balance of power.

Geographical Structure



- **Geographical structure** is a form of departmentalisation based on the region in which a company operates and is active.
- Rationale: concentrating all the activities within a region in one structure.
- Suitable for companies which maintain activities at many geographical points, the central co-ordination of which is not always effective
- Suitable for shipping companies that maintain networks of agents in many of the world's ports.

Geographical Structure

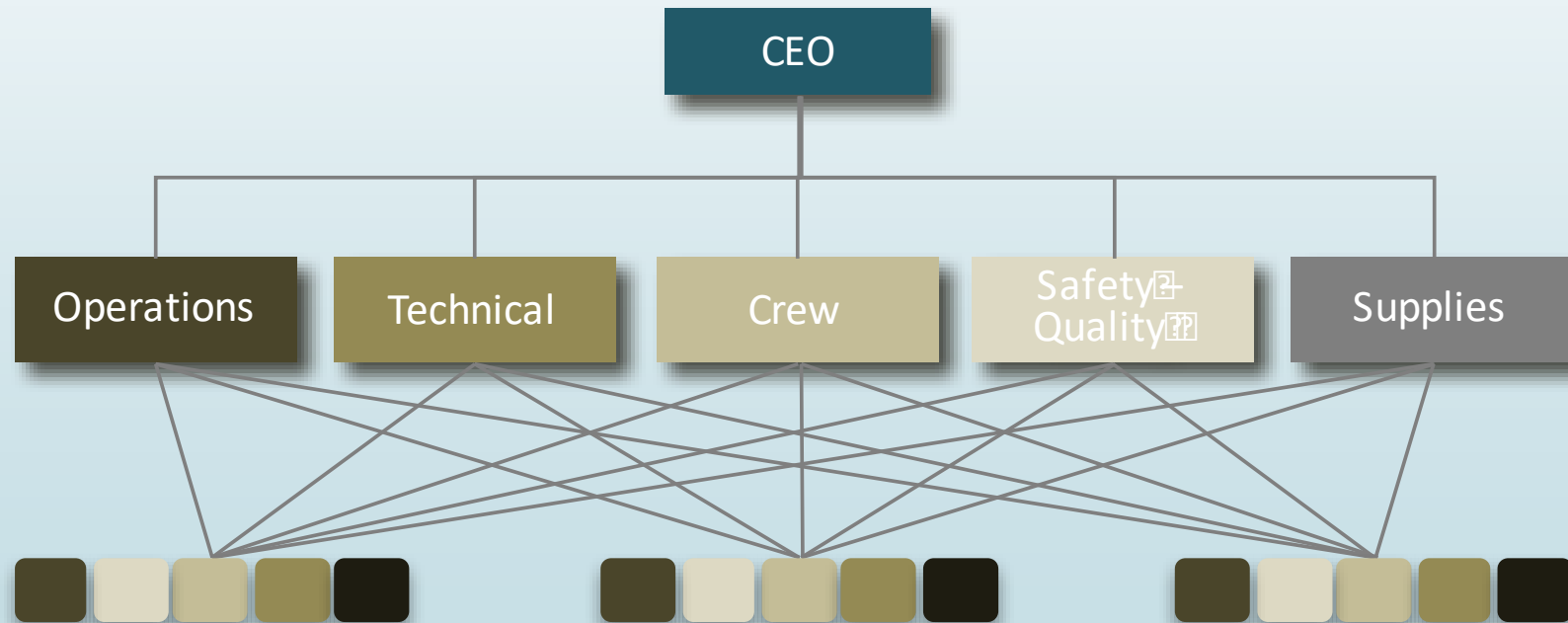
- Example: If the shipping company operates in multiple regions or countries, it might organize its structure based on geography. For instance, there could be departments for North America, Europe, Asia-Pacific, each handling the unique challenges and opportunities in their respective regions.
- **Advantages**
 - **Efficient Resource Allocation:** Geographical structures enable organizations to allocate resources more efficiently by tailoring them to the demands and opportunities present in each region. This can lead to optimized supply chains and distribution networks.
 - **Regulatory Compliance:** Managing operations based on geographical locations allows organizations to better navigate and comply with regional regulations and legal requirements, which can vary significantly
 - **Cultural Sensitivity:** A geographical structure enables organizations to consider and respond to cultural differences in various regions.
- **Disadvantages**
 - precludes the employment of economies of scale, since it leads to the presence of many employees with the same duties in different geographical regions.

Modern Structures of departmentalization

- Team approach
- Network approach

Team approach

- Creation of teams made up of employees in different specializations composed in such a way **as to respond to the needs of the internal customers**, that is, the ships
- Reduction of hierarchy levels and limitation of the functional departments
 - Increases the adaptability of the organisations,
 - improves the co-ordination between the operational specialisations, and
 - contributes to the appropriate utilisation of the human resource
- Retain the power to make decisions on the problems which they are called upon to resolve

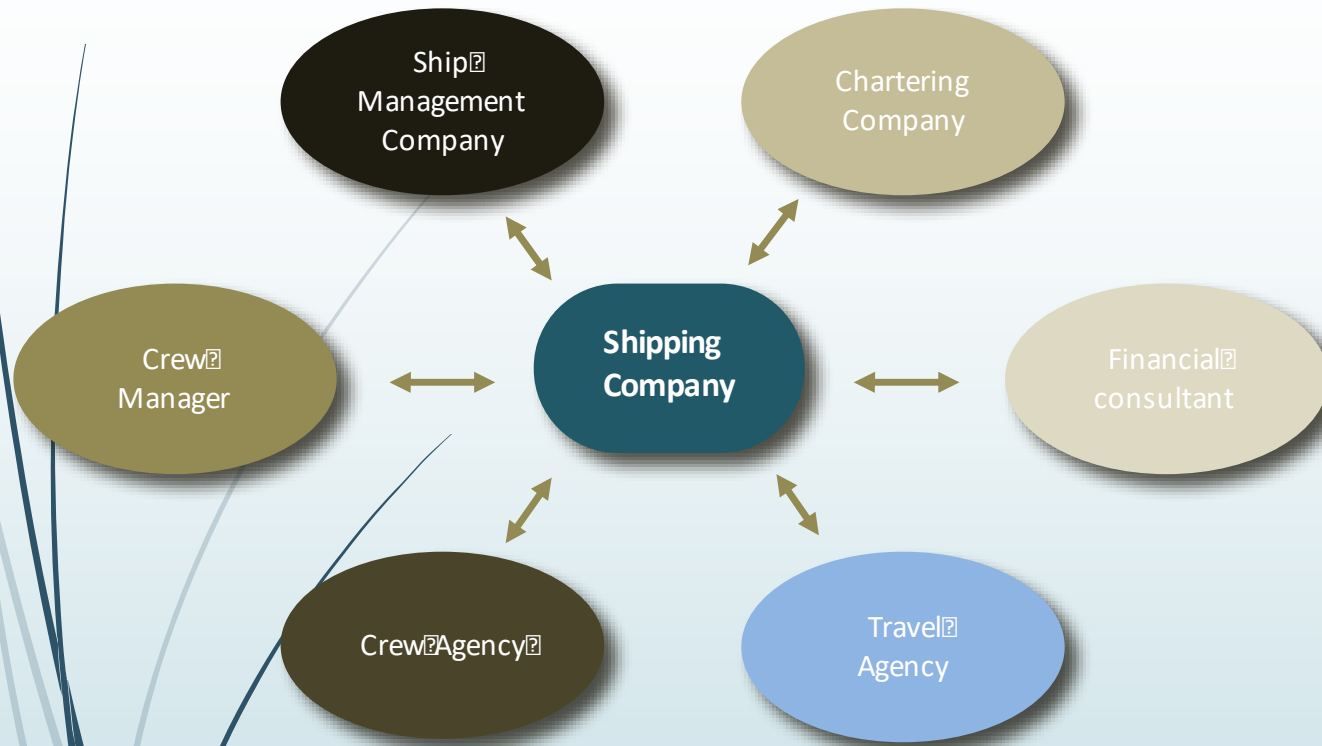


Team approach - Disadvantages

► Challenges:

- Communication Issues: Collaboration may suffer from poor information sharing, leading to misunderstandings or lack of coordination.
- Conflict Resolution: Differing priorities and opinions can hinder decision-making and create tensions.
- Resource Duplication: Lack of task coordination may lead to inefficiencies and higher costs.
- Team Dependency: Success relies heavily on team dynamics; conflicts or poor collaboration can hurt performance.
- Limited Specialization: Teams may lack the deep expertise needed in specialized fields like maritime regulations or logistics.

Network structure



- Extends the importance of co-ordination and collaboration beyond the boundaries of the company
- Implemented by companies which **entrust to other companies** in the same group or to external associates many of their management processes and retain a small-size structure which has a co-ordinating role
- Provides the company with the maximum flexibility and makes it possible for it to concentrate more effectively on the processes and functions which it considers crucial for its competitiveness

- Likely to lead to a reduction of the control over the processes which it commits to external associates
- Crucial factor for the effectiveness of network is the electronic interconnection between the partners

Network approach - Disadvantages

- ▶ **Coordination Complexity:** Ensuring cohesive collaboration across independent entities can be challenging.
- ▶ **Lack of Centralized Control:** Decentralized decision-making may delay timely responses in critical situations.
- ▶ **Risk of Inconsistency:** Different processes across network nodes can reduce efficiency and service quality.
- ▶ **Dependency on Partners:** Success hinges on reliable external partners; failures can disrupt the entire network.
- ▶ **Security Concerns:** External collaborations may risk sensitive information, particularly in shipping.

Combination of forms of structure

From an analysis of shipping companies that the basic combinations implemented are the following:

- The combination of structures by function and by division.
- The combination of structures by function and matrix organisation.
- The combination of structures by division, by function, and by teams.
- The combination of structures by function, by division, and by geographical region.

Discussion Questions

Which coordination mechanisms, as described by Mintzberg, are most suitable for dynamic and unpredictable environments like shipping?

What are the key trade-offs between traditional and modern departmentalization structures in shipping companies?

In a team-based or network structure, how can shipping companies overcome challenges like resource duplication and dependency on partners?

What factors should shipping companies prioritize when choosing a departmentalization structure?

Conclusion

- Hierarchical organization provides stability but is not universally the best choice.
- A strategic blend of coordination mechanisms enhances adaptability and efficiency.
- Departmentalization structures must align with the operational demands and industry challenges.
- Successful shipping companies combine traditional and modern approaches, using flexibility and innovation to navigate evolving challenges while maintaining stability.