

Course OGE | IOGE
Organizational Design and Management
Introduction to Organizational Design and Management

Organizational Structure and Design

(FEV 2025)

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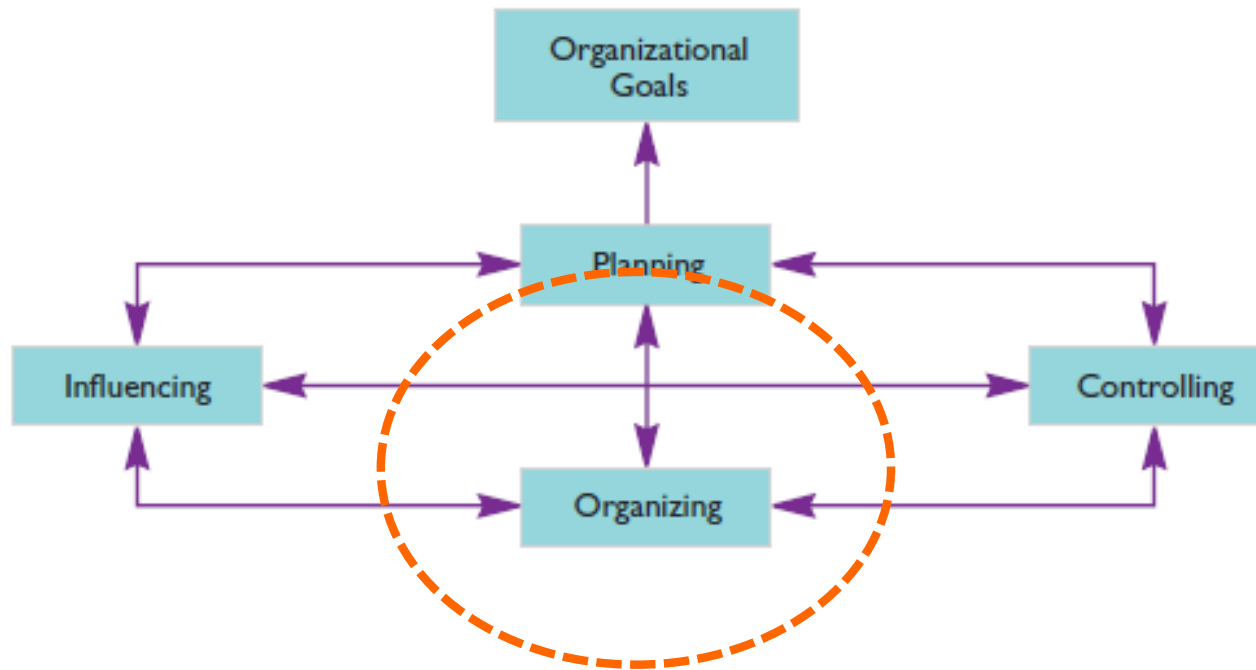
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The contents presented here has been collected from different sources (Books: Organizational theory, design and change (Gareth R.Jones); Modern Management (Certo); Managment and Organizations (Robbins Coultler) and lectures notes from several origins). Several additions, modifications and updates have been made by Américo Azevedo (ala@fe.up.pt) in order to support the learning process defined in the context of OGE program .

After studying this class, you should be able to:

1. Understand the Mechanistic and Organic models of organizational design
2. Understand the complexities of determining appropriate organizational structure
3. Understand the distinction between vertical and horizontal differentiation
4. Understand the span of control and the factors that influence its appropriateness
5. Explain the different patterns of organizational structures configuration
6. Explain the advantages and disadvantages associated with the different types of organizational configurations

Remembering the Four Activities of Management



The formal arrangement of jobs within an organization.

shaping and aligning all the components of an enterprise in their context towards the achievement of an agreed mission

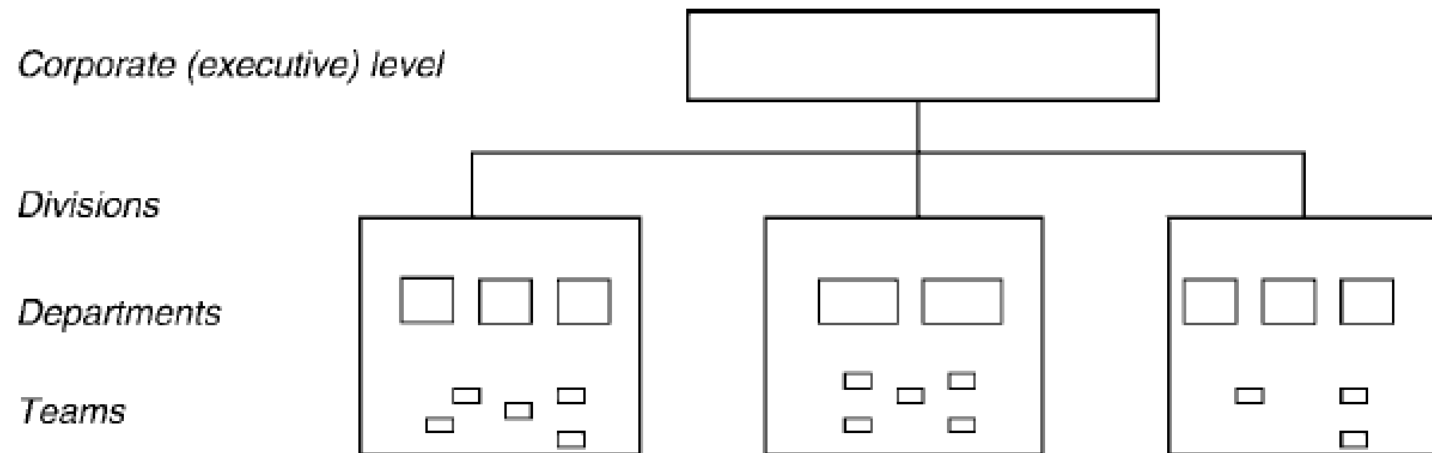
Organizational design

- Organizational design is the process of creating and implementing an organization's structure and systems to achieve its strategic goals.
- It's crucial for aligning company structure with strategy, environment, and technology.

The Challenge in creating an organizational structure is to decide how to group people and jobs into work units

Organizational Design involves two complementary problems

1. how to partition a big task into smaller subunit tasks, and
2. how to coordinate these smaller subunit tasks so that they fit together to efficiently realize the bigger task and organizational goals.



Mechanistic and Organic Approaches (I)



- ☐ Rigid hierarchical relationships
- ☐ Fixed duties
- ☐ Many rules
- ☐ Formalized communication channels
- ☐ Centralized decision authority
- ☐ Taller structures

This approach works well in stable environments and for organizations that prioritize efficiency and predictability



- ☐ Collaboration (both vertical and horizontal)
- ☐ Adaptable duties
- ☐ Few rules
- ☐ Informal communication
- ☐ Decentralized decision authority
- ☐ Flatter structures

This approach is suited for dynamic environments and organizations that need to adapt quickly

mechanistic model vs organic model

Benefits of the mechanistic model include:

- Stability and consistency in operations
- Clear expectations for employees
- Cost efficiency through specialization
- Effective management through established protocols

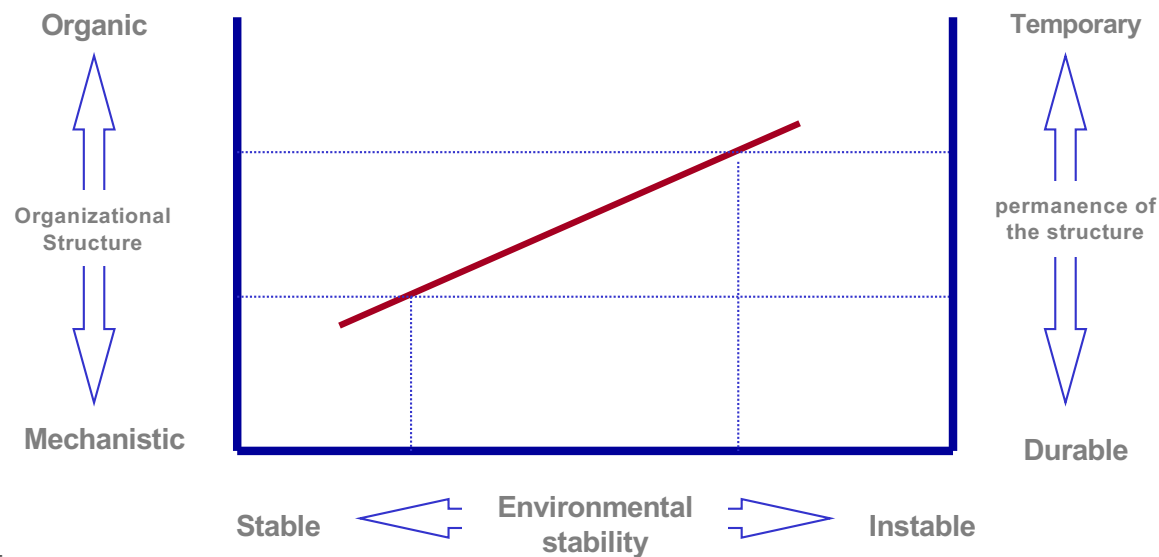
Benefits of the organic model include:

- Flexibility to respond to market changes
- Enhanced creativity and innovation
- Improved employee satisfaction and development
- Rapid problem-solving capabilities

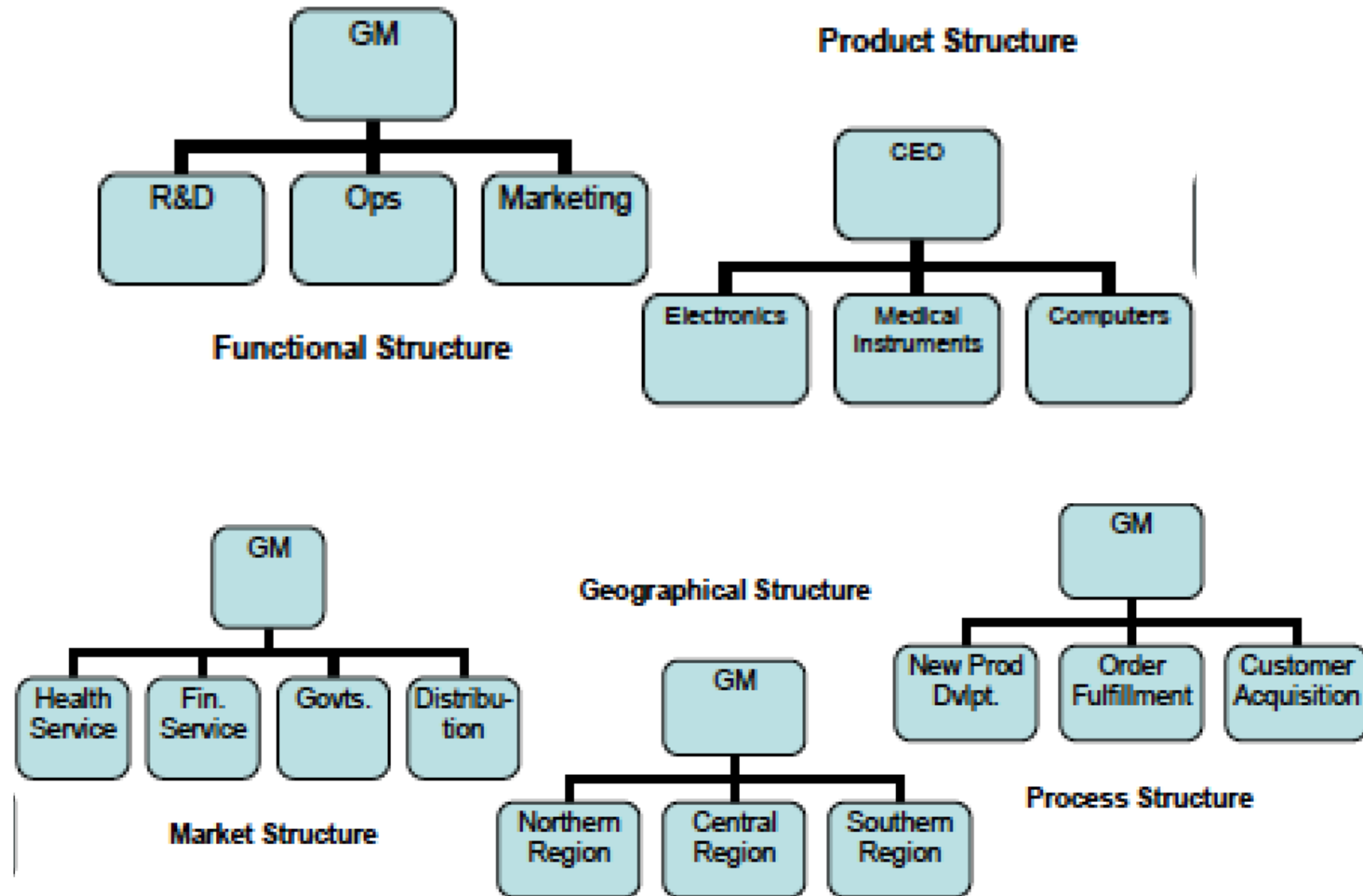
Environmental Uncertainty and Organizational Structure



| Mechanistic Structure | Organic Structure |
|-----------------------------|-------------------------------|
| Simple structure | Complex structure |
| Low differentiation | High differentiation |
| Low integration | High integration |
| Centralized decision making | Decentralized decision making |
| Standardization | Mutual adjustment |



Basic organizational structures



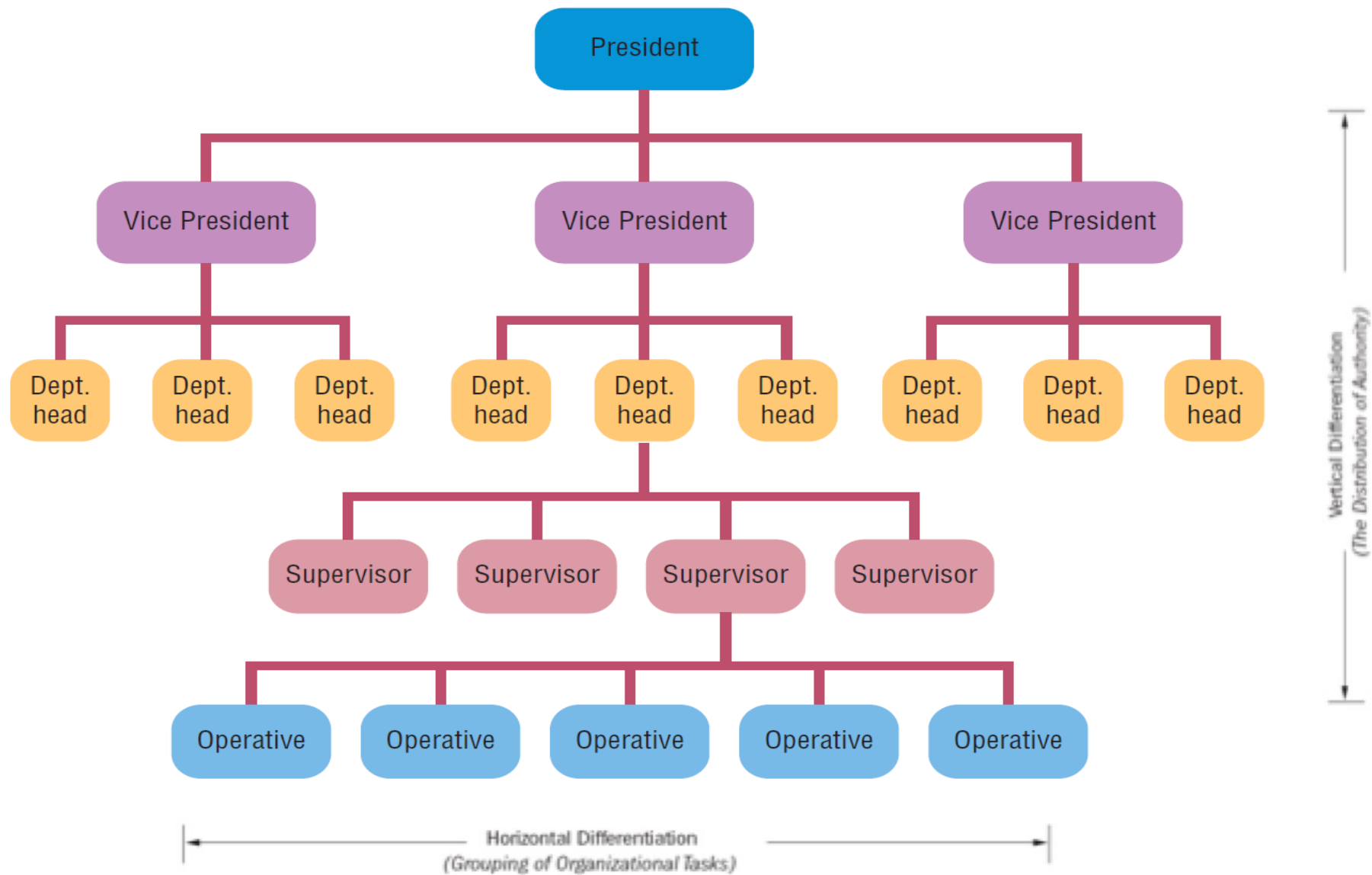
Differentiation is the process by which an organization allocates people and resources to organizational tasks

- The process of establishing and controlling the degree of specialization in the organization (division of labor)
- Establishes the **task** and **authority relationships** that allow the organization to achieve its goals
- In a simple organization, differentiation is low because the division of labor is low
 - One person or a few people perform all organizational tasks
- In a complex organization, differentiation is high because the division of labor is high

Vertical and Horizontal Differentiation

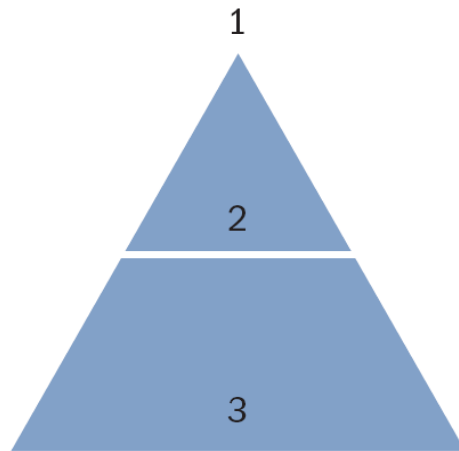
- Vertical differentiation:
 - The way an organization designs its **hierarchy of authority** and creates reporting relationships to **link organizational roles and subunits**
 - The **vertical** hierarchy shows the chain of command
- Horizontal differentiation:
 - The way an organization groups organizational tasks (ex. functions and divisions)
 - The **horizontal** differentiation shows the different jobs or work specialization

Vertical and Horizontal Differentiation: example

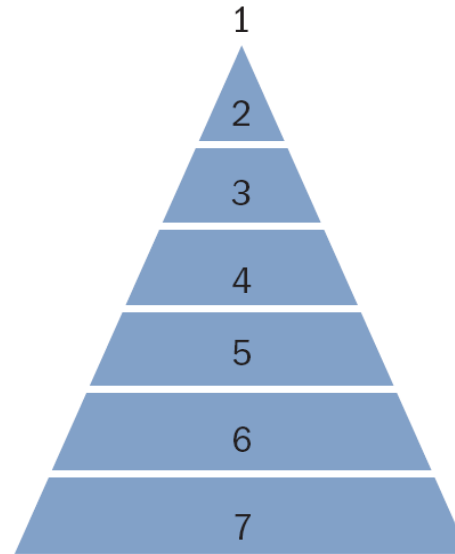


Flat and Tall Organizations

A. Flat Structure



B. Tall Structure



- **Flat organization:** Has few levels in its hierarchy relative to its size
- **Tall organization:** The hierarchy has many levels relative to the size of the organization

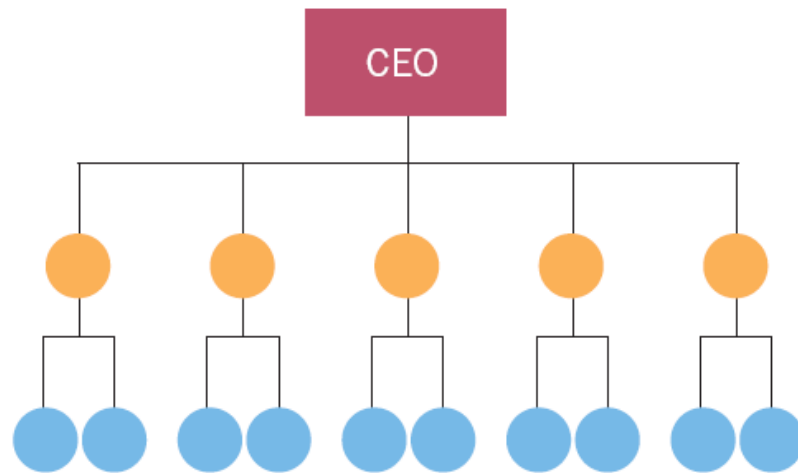
The choice between a more vertical or horizontal structure depends on factors such as organisation size, industry, and strategic objectives. Larger companies and those in highly regulated sectors tend to adopt more vertical structures, while startups and creative industries often opt for more horizontal structures.

Span of Control (SoC)

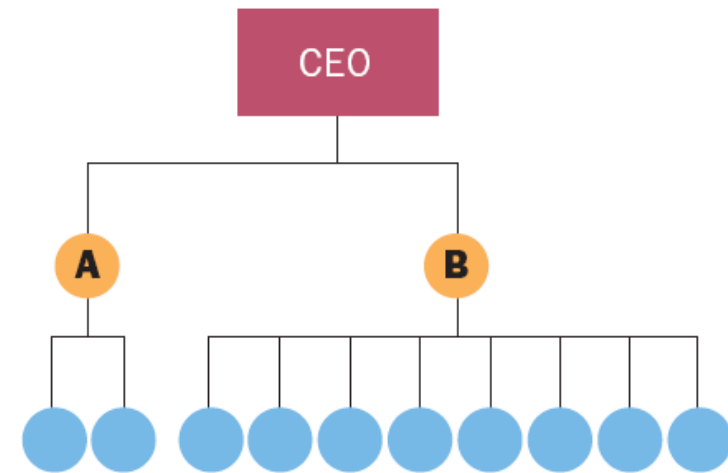
the number of subordinates or direct reports a supervisor is responsible for

The number of employees who can be effectively and efficiently managed by a manager

A.



B.



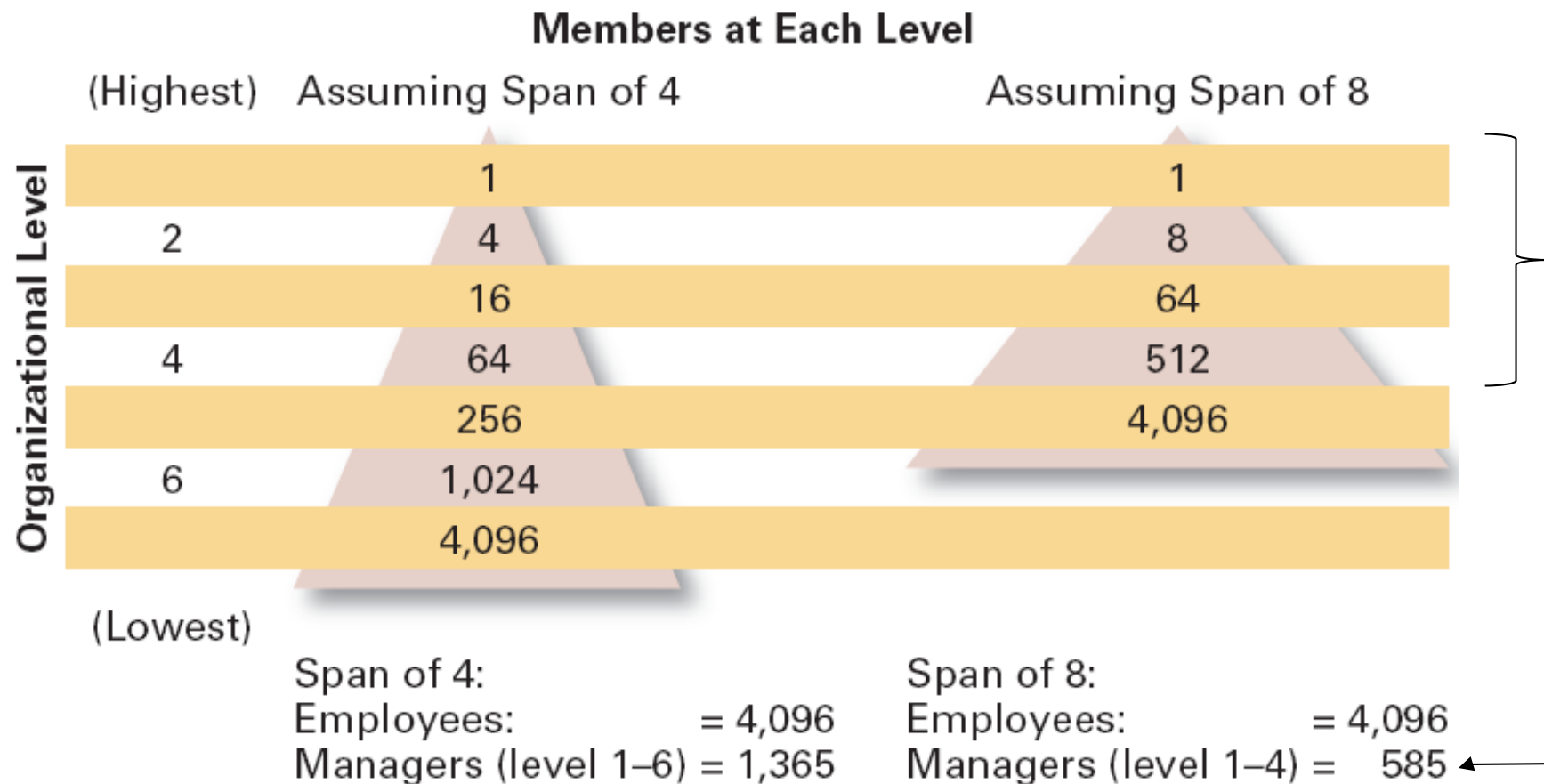
The span for an entire organization can be calculated as:

$$\text{SoC} = \frac{\text{Total Number of Employees}}{\text{Total Number of Managers}}$$

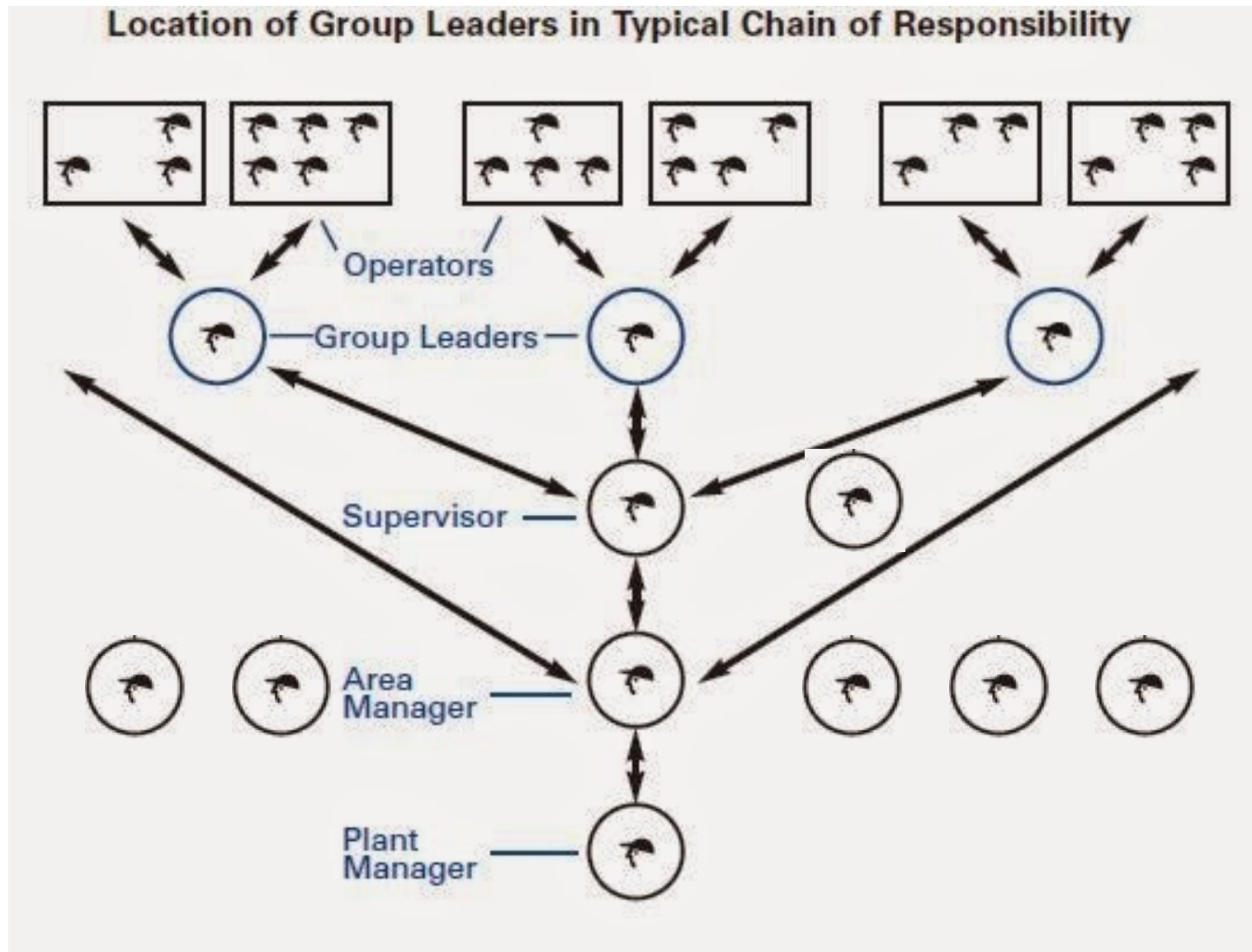
$$\text{SoC} = \frac{\text{Total Number of Employees (including managers)}}{\text{Total Number of Managers}}$$

$$\text{SoC} = \frac{\text{Total Number of Non-Managerial Employees}}{\text{Total Number of Managers}}$$

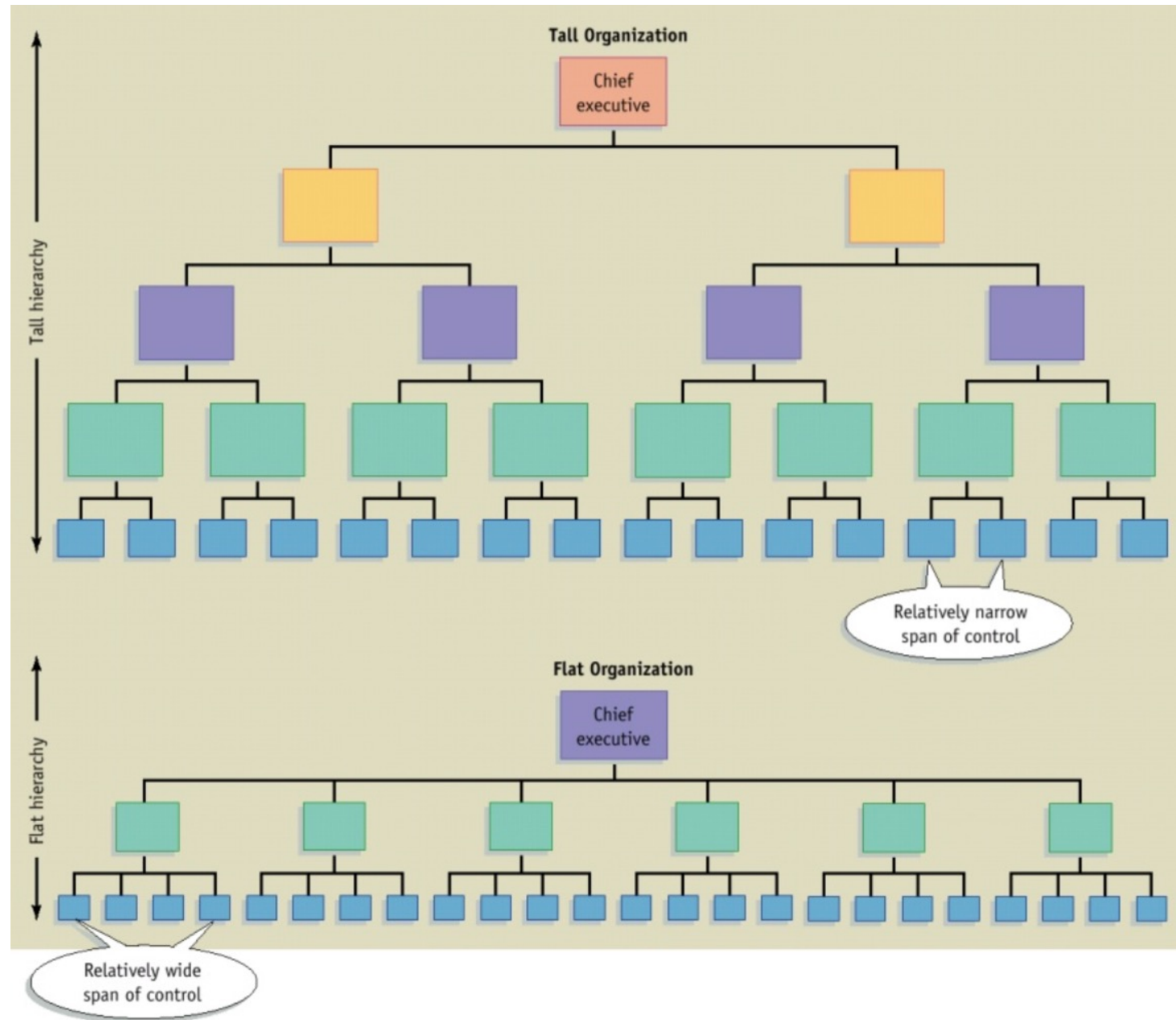
Contrasting Spans of Control



Example



Contrasting Spans of Control (II)



Spans of Control (II)

- Dependent on
 - Skills and abilities of the manager
 - Employee characteristics
 - Characteristics of the work being done
 - Similarity of tasks
 - Complexity of tasks
 - Physical proximity of subordinates
 - Standardization of tasks

If the span is too wide, the manager loses control over subordinates and cannot hold them accountable for their actions

| Factor | Factor Has Tendency to Increase Span of Management When – | Factor Has Tendency to Decrease Span of Management When – |
|----------------------------|---|---|
| 1. Similarity of functions | 1. Subordinates have similar functions | 1. Subordinates have different functions |
| 2. Geographic contiguity | 2. Subordinates are physically close | 2. Subordinates are physically distant |
| 3. Complexity of functions | 3. Subordinates have simple tasks | 3. Subordinates have complex tasks |
| 4. Coordination | 4. Work of subordinates needs little coordination | 4. Work of subordinates needs much coordination |
| 5. Planning | 5. Manager spends little time planning | 5. Manager spends much time planning |

narrow span of control

Advantages

1. Closer supervision and better control over subordinates.
2. The nature of work is usually complicated.
3. Effective communication between the subordinates and their manager.
4. Better relationships between managers and subordinates

Disadvantages

1. Higher costs due to more management layers
2. Too much control over employees might hamper their original talent and creativity.
3. Extended hierarchy of control results in a long time in decision-making.
4. More layers in the hierarchy of management.

wide span of control

Advantages

1. In a wide span of control, subordinates are more independent.
2. Fewer layers in the hierarchy of management.
3. The nature of work is repetitive.
4. Cost-effective due to fewer managers needed

Disadvantages

1. Ineffective management.
2. Increased workload on managers.
3. Less communication between managers and subordinates reduces the control of the manager.
4. Risk of manager burnout due to overseeing many employees

The average Span of Control (SoC) varies by industry, organizational structure, and management style

Low SoC (5–7) – Tall Hierarchies

- Seen in **government, military, and complex industries.**
- Allows **more control and supervision.**
- Increases bureaucracy but ensures **tight oversight.**

Moderate SoC (8–15) – Balanced Approach

- Found in **most corporate settings and manufacturing.**
- Provides a balance between **control and efficiency.**
- Works well when **employees need some autonomy but also managerial guidance.**

High SoC (15–25) – Flat Hierarchies

- Common in **startups, agile environments, and customer service industries.**
- Encourages **decentralization and autonomy.**
- Managers **focus on strategy rather than micromanaging.**

Integration: the process of coordinating the different parts of an organization

- Seeks to achieve unity among individuals and groups
- Vertical integration
 - Rules and procedures
 - Plans and schedules
- Horizontal integration
 - Liaison roles
 - Task forces
 - Integrator position

Elements of Organizational Design

- Work Specialization (division of labor: low / high)
- Departmentalization (breaking up the organization in coherent units)
- Chain of Command and Unit of Command
- Span of control (less / more)
- Centralization and decentralisation
- Formalisation

Chain of Command and Unity of Command

- **Chain of Command** - refers to the formal line of authority, communication, and responsibility within an organisation
 - The continuous **line of authority** that extends from upper levels of an organisation to the lowest levels of the organisation and clarifies who reports to who.
- **Unit of Command principle**
 - The concept that a person should **have one boss** and **should report only to that person** (a subordinate should have only one supervisor);
 - Adopting a unity of command structure has several advantages for both managers and employees: **Clarity, Efficiency, Accountability, Morale**

Factors Affecting the Shape of the Hierarchy

- Centralization

- As the hierarchy becomes taller and the number of managers increases, communication and coordination problems grow....solution to this...

- Decentralization

- The authority to make significant decisions is delegated to people throughout the hierarchy, not concentrated at the top

Authority, Responsibility and Accountability



- Authority

- The power or right to give orders, make decisions, and enforce obedience. Authority is the right or power assigned to a manager in order to achieve certain organizational objectives.

- Responsibility

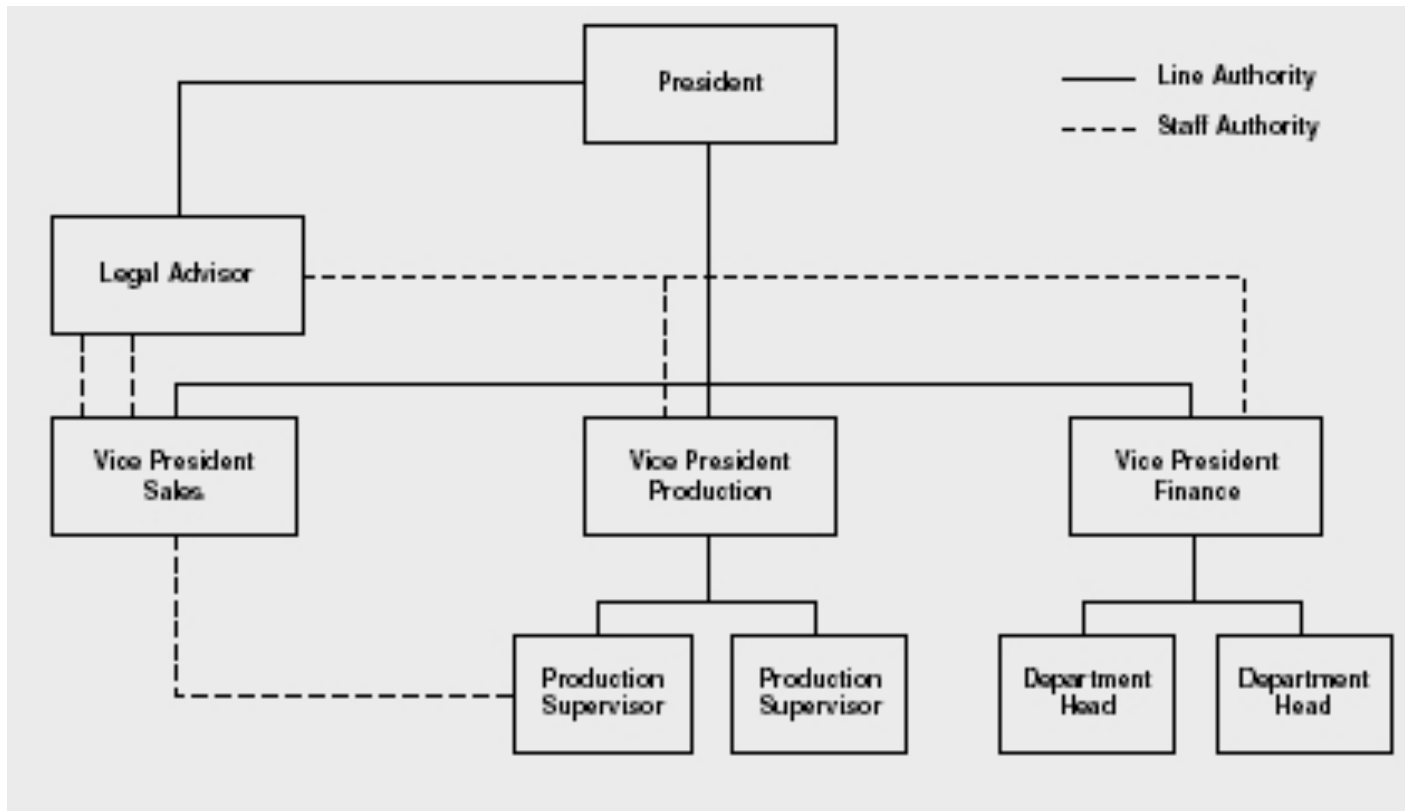
- Responsibility is defined as an obligation to perform or complete the assigned task. It is the duty of the subordinate to complete the delegated task adequately.
- Responsibility can be shared but not delegated

- Accountability

- Required or expected to justify actions or decisions; every employee and manager is accountable for the job assigned to him.
- Accountability can neither be shared nor delegated

-
- Authority grants power, responsibility involves task fulfilment, and accountability ensures answerability for results.
 - A manager with authority to assign a project is responsible for its completion and accountable to superiors for its success.
 - Authority can be delegated, responsibility can be shared but not delegated, and accountability can neither be shared nor delegated
 - Example: A manager can delegate the authority to approve minor expenses to a supervisor.
 - Example: A team may share responsibility for a project, but each member retains their individual responsibility.
 - Example: A CEO is accountable to the board of directors for the company's performance, even if they have delegated specific tasks.

Line and Staff Authority



Line – direct control of the work of subordinates by hiring, discharging, evaluating, and rewarding them

Staff – Staff authority is the right to advise or counsel those with line authority. For example, human resource department employees help other departments by selecting and developing a qualified workforce.

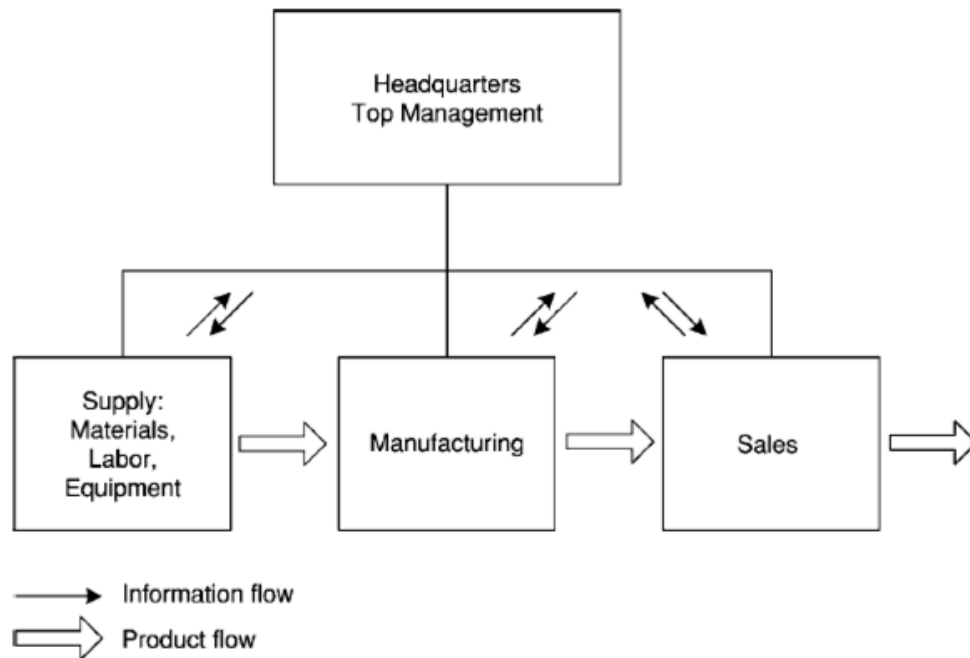
While line authority maintains the core operational structure, staff authority enhances decision-making through specialised expertise.

The first decision in creating an organizational structure is to decide how to group people and jobs into work units

- Some common bases for grouping jobs together:
Function; Product; Customer; territory
- Traditionally organizational structures are classified in following main categories:
 - Functional
 - Divisional
 - Matrix
 - Hybrid

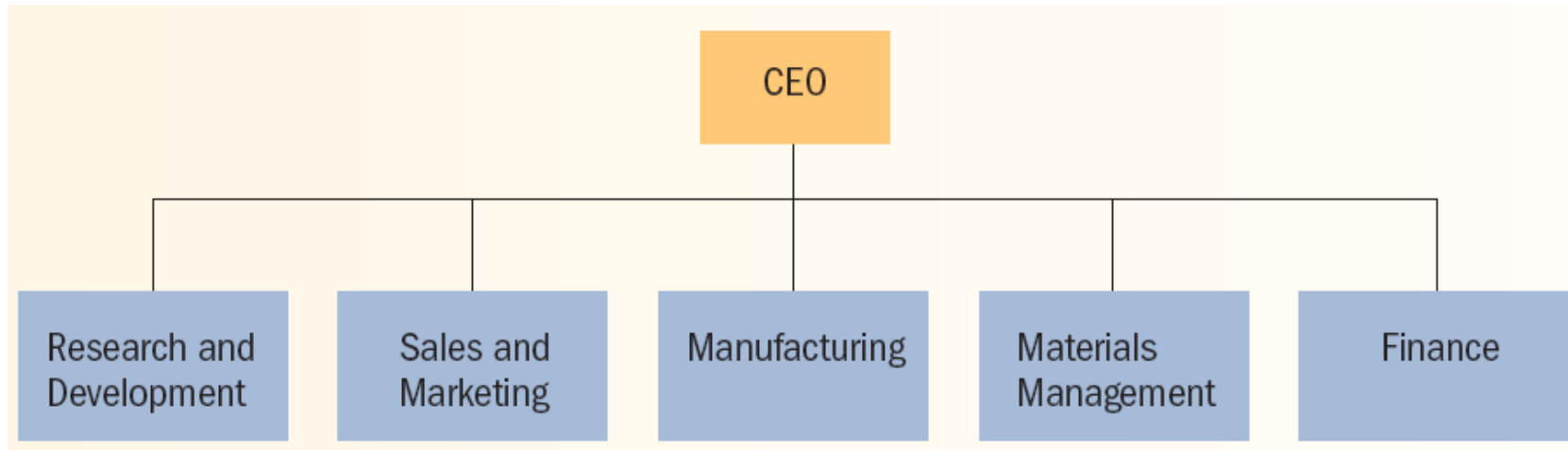
Functional Structure

similar tasks are grouped together



- People performing similar tasks are grouped together
- Members of functional departments share skills, technical expertise, and responsibilities
- Functional structure is appropriate if the organization:
 - Limits itself to producing a small number of similar products
 - Produces those products in one or a few locations
 - Sells them to only one general type of client or customer

Advantages of a Functional Structure



- Provides people with the opportunity to learn from one another and become more specialized and productive
- People who are grouped together by common skills can supervise one another and control each other's behavior
- People develop norms and values that allow them to become more effective at what they do

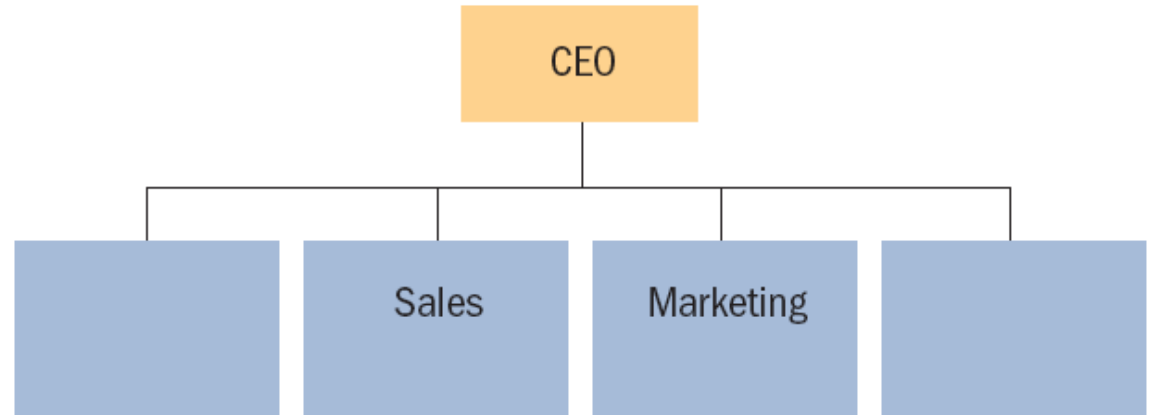
Improving Integration in a Functional Structure

Problems

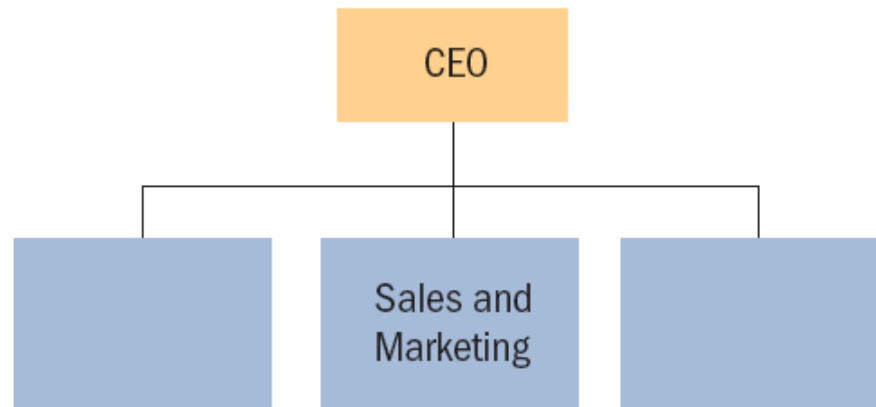
- Communication problems
- Measurement problems
- Location problems
- Customer problems
- Strategic problems

Managers can solve control problems by redesigning the functional structure to increase integration between functions

A. Before



B. After



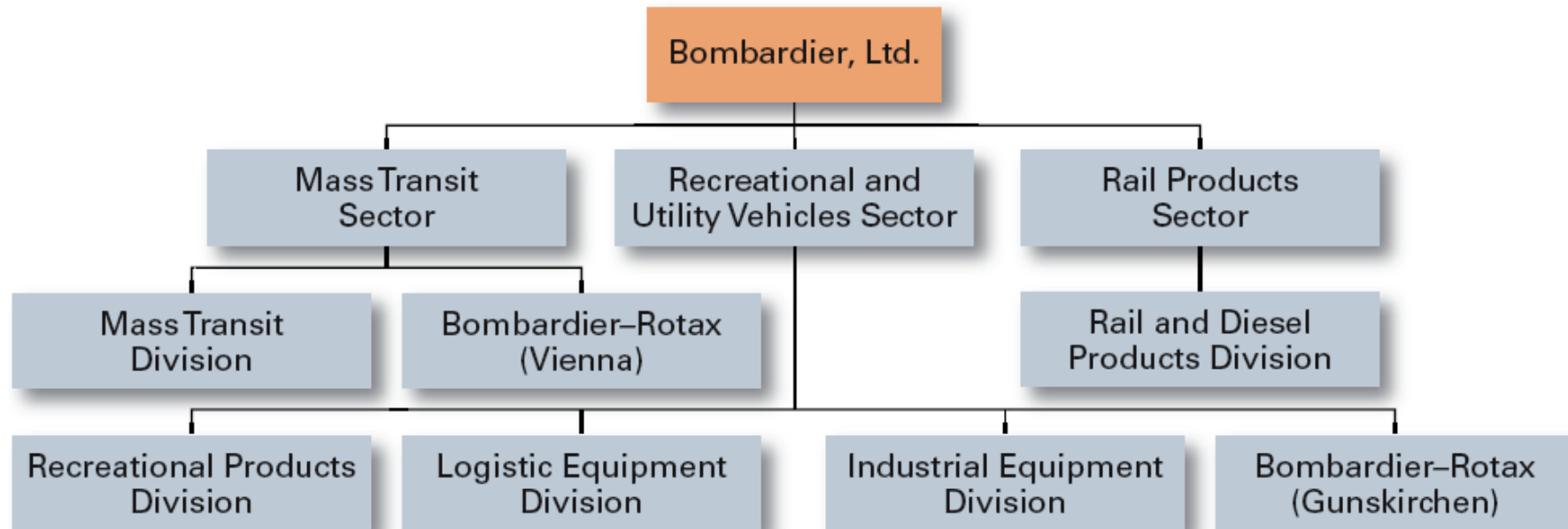
Divisional Structure

is important because it allows companies to grow through diversification

- Organizations most commonly adopt the divisional structure to solve control problems that arise with too many products, regions, or customers
- In a divisional structure people, jobs, and activities are together based on:
 - product produced or service provided
 - process
 - customer or client served
 - geographic area
- They have a complete structure and are separate from the headquarters

Strengths: Focuses on results—division managers are responsible for what happens to their products and services.
Weaknesses: Duplication of activities and resources increases costs and reduces efficiency.

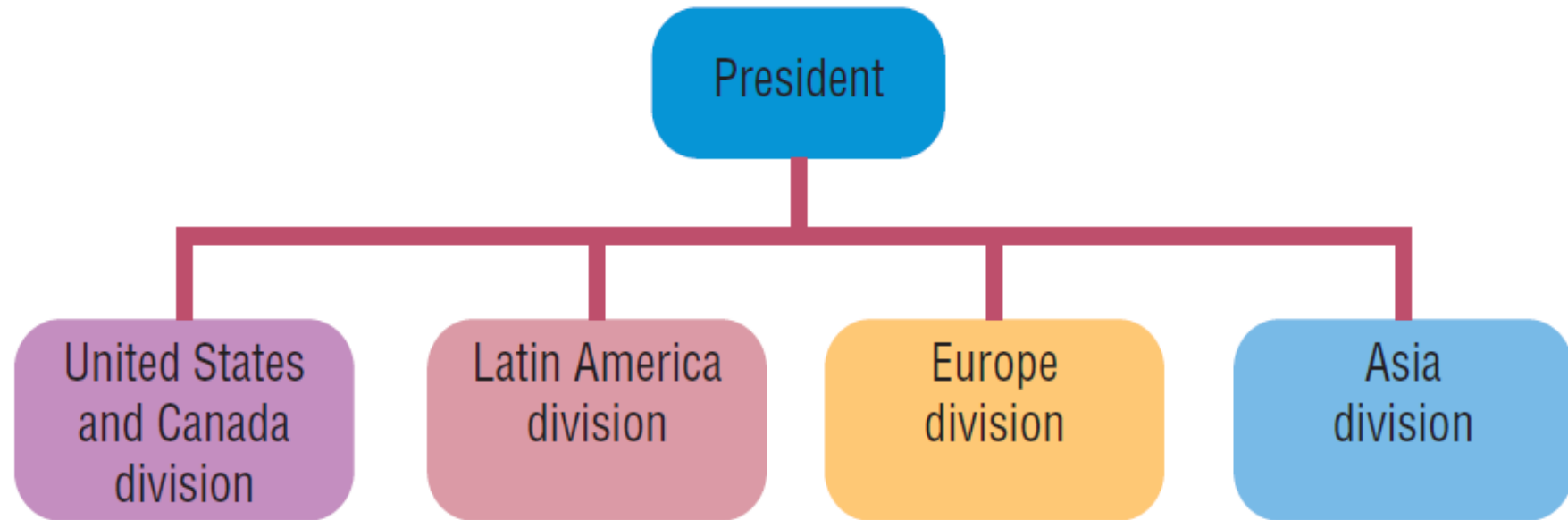
Divisional Structure: product-based



- + Allows specialization in particular products and services
- + Managers can become experts in their industry
- + Closer to customers
- Duplication of functions
- Limited view of organizational goals

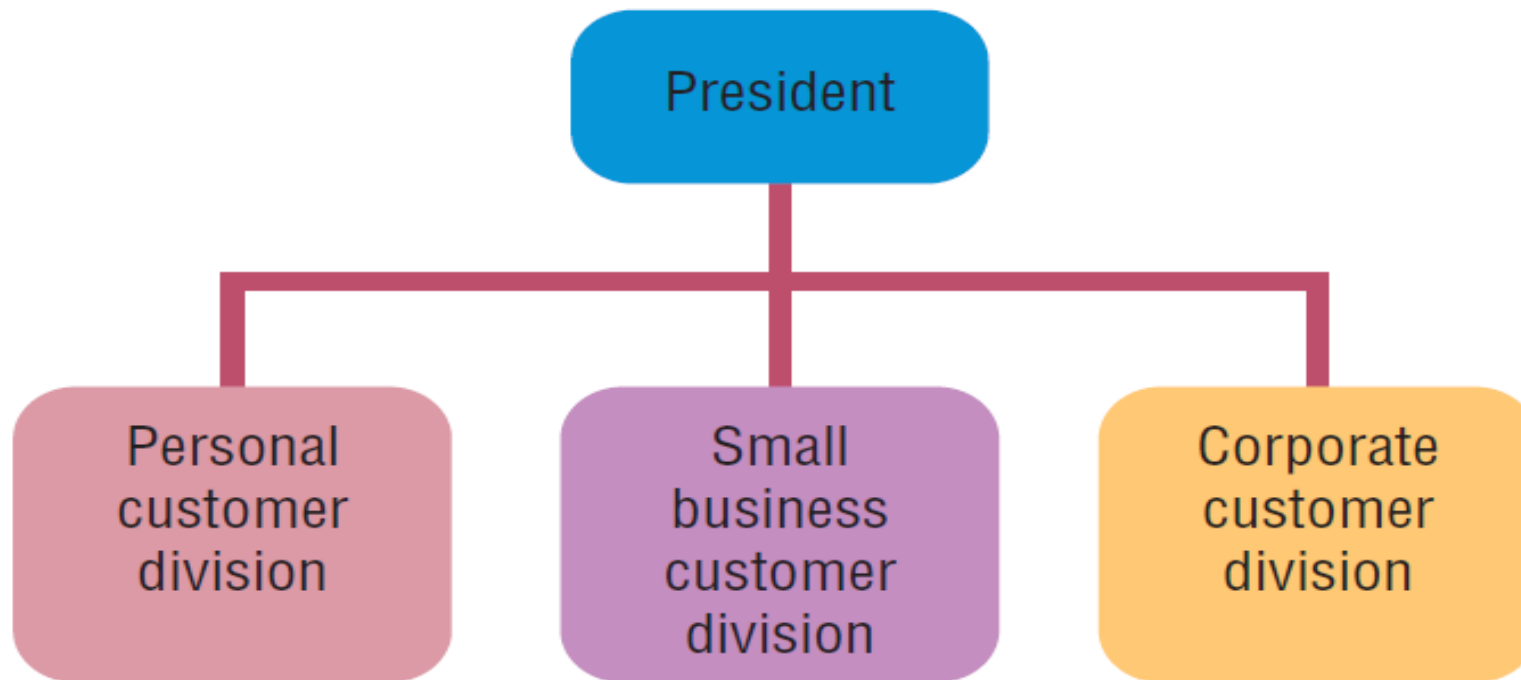
Each product division
uses the services of the
central support function

Divisional Structure: Geographic-Based Structure



- Advantages
 - More effective and efficient handling of specific regional issues that arise
 - Serve needs of unique geographic markets better
- Disadvantages
 - Duplication of functions
 - Can feel isolated from other organizational areas

Divisional Structure: Customer-Based Structure



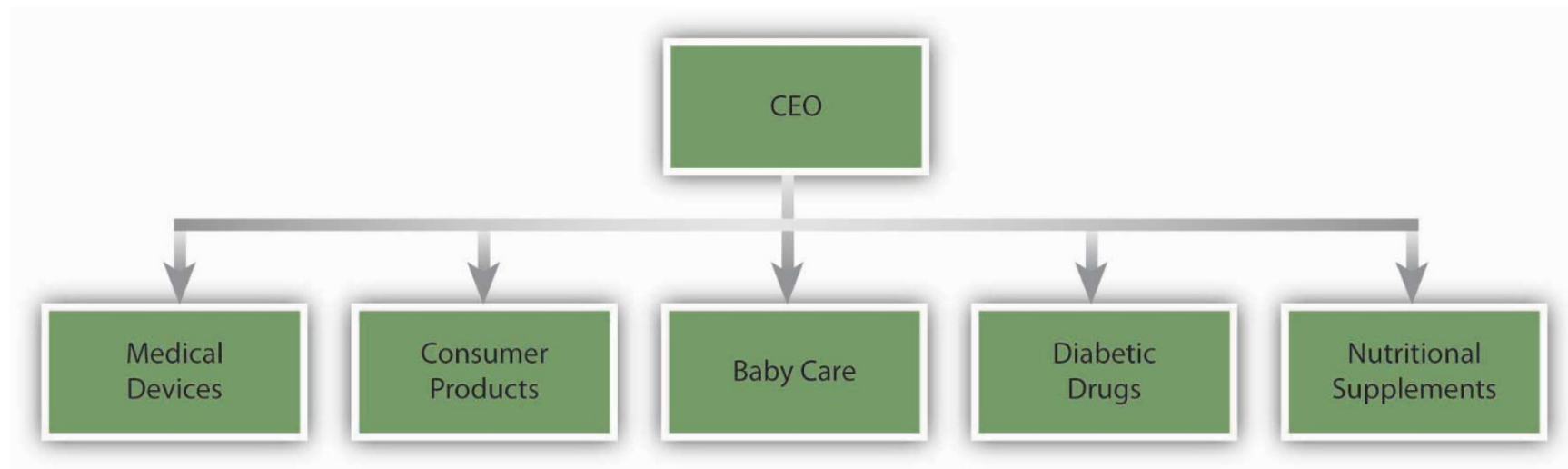
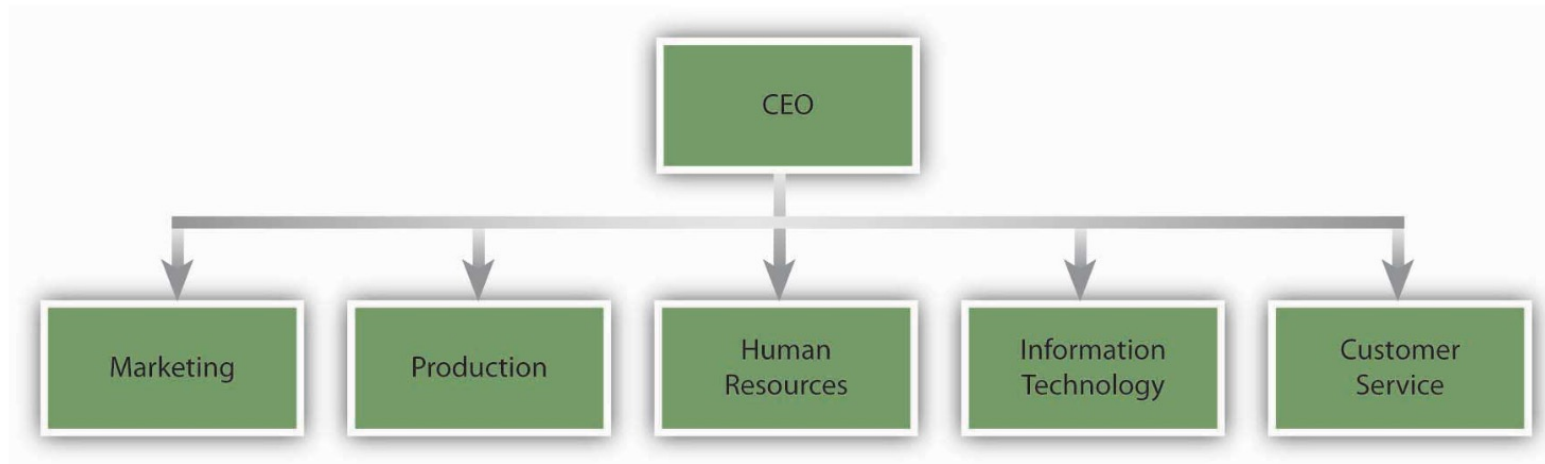
- + Customers' needs and problems can be met by specialists
- Duplication of functions
- Limited view of organizational goals

Disadvantages of a Multidivisional Structure

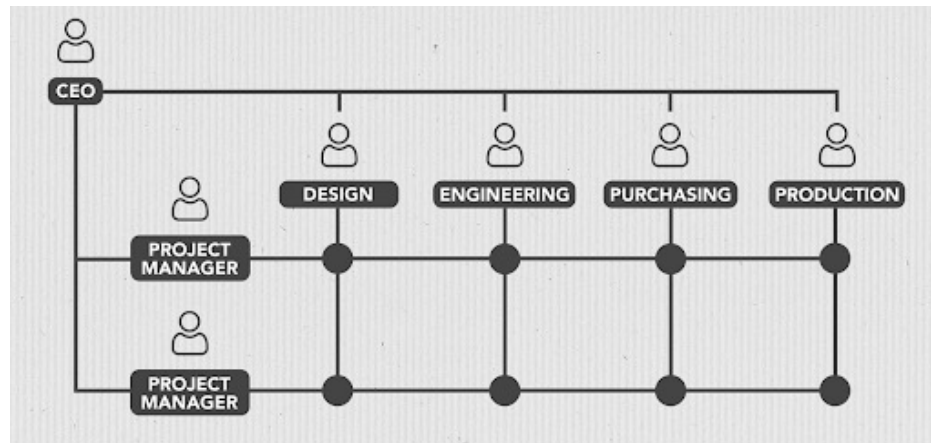
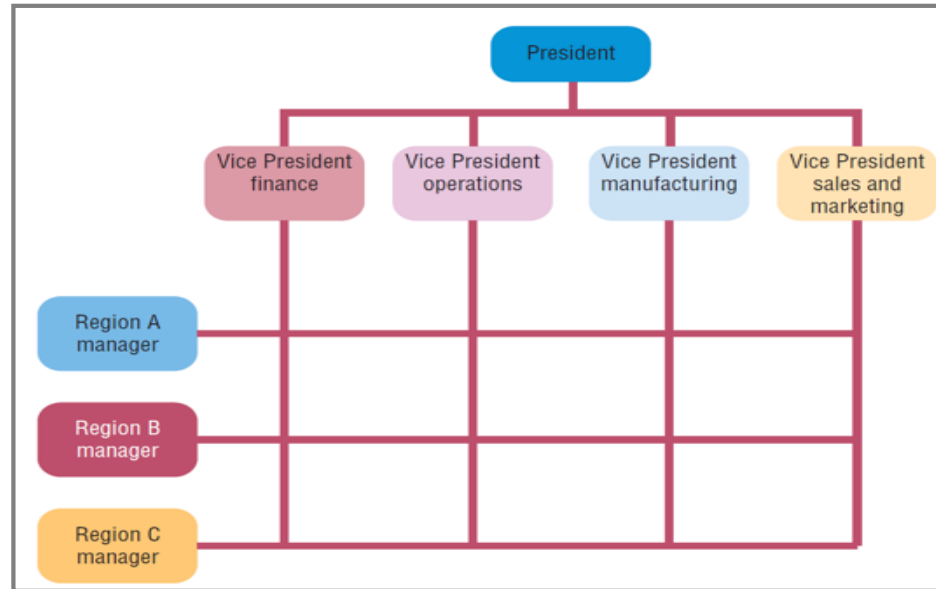
- the company has duplicated business functions. Each unit operates separately and has its own business function.
 - For example, each has a marketing function. Thus, to fill positions in the marketing department, companies must recruit more people.
- Business unit managers have an interest in their operation area. So, they don't think about other business units
- Managing the corporate-divisional relationship
- Coordination problems between divisions
- Bureaucratic Costs
- Communication Problems

Example

Pharmaceutical Company with a Functional Departmentalization Structure and with a Divisional Departmentalization Structure



Matrix Organization Structure



- Combines the functional and divisional structures
- The people belong to two formal groups at the same time, a functional group and a project team (they report to two supervisors)
- Matrix structures allow cross-functional teams to share expertise and information quickly to solve problems

Advantages and disadvantages of a Matrix Structure

Advantages

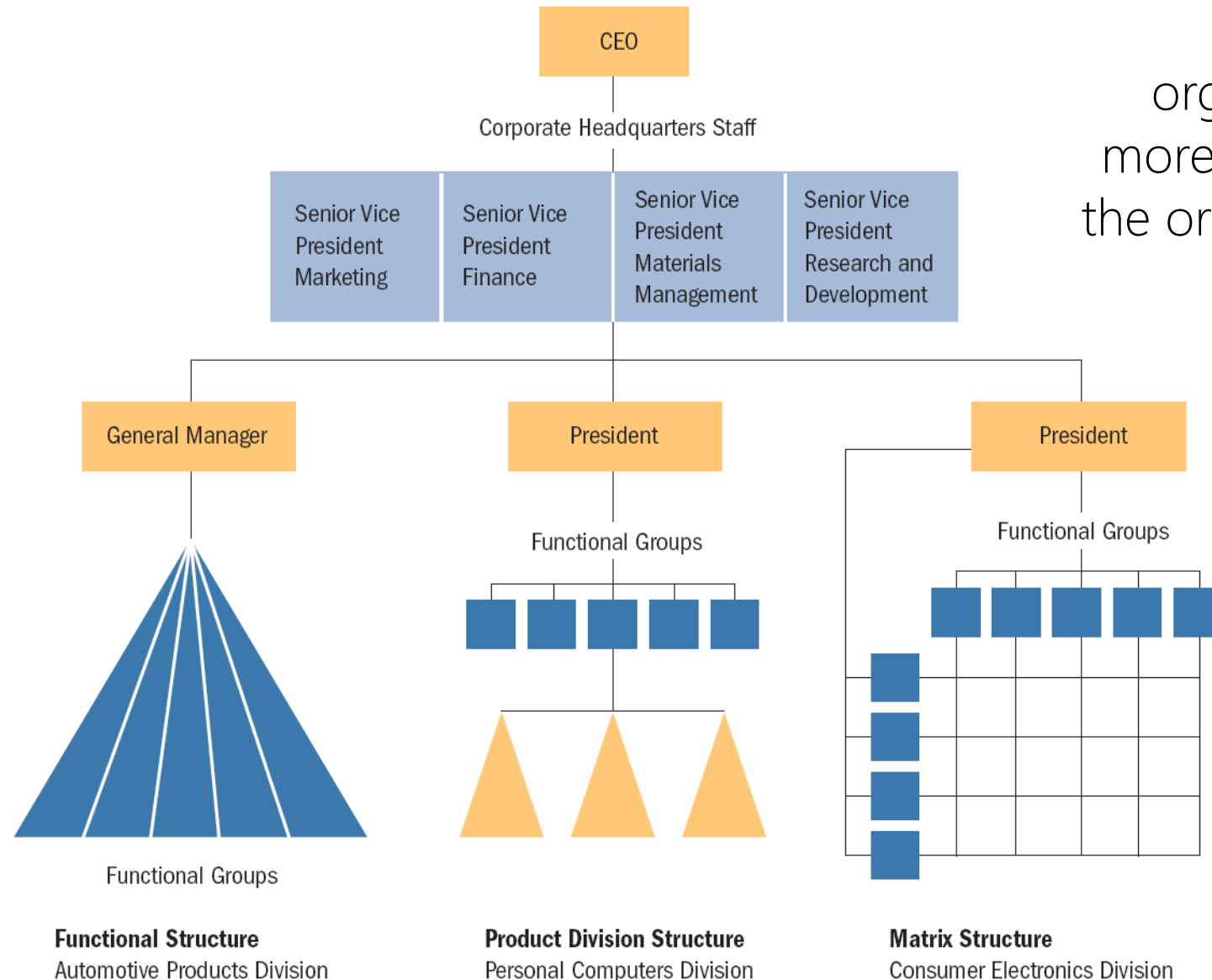
- The use of cross-functional teams reduces functional barriers and subunit orientation
- Opens up communication between functional specialists
- The matrix enables an organization to maximize its use of skilled professionals, who move from product to product as needed
- The dual functional and product focus promotes concern for both cost and quality

Disadvantages

- The lack of a clearly defined hierarchy of authority can lead to conflict between functions and product teams over the use of resources
- People are likely to experience a vacuum of authority and responsibility
- Matrix lacks a control structure that leads employees to develop stable expectations of one another

Hybrid structure: combines different types of structure

The larger the organization, the more likely it is that the organization will use a hybrid structure



Organizational Structures

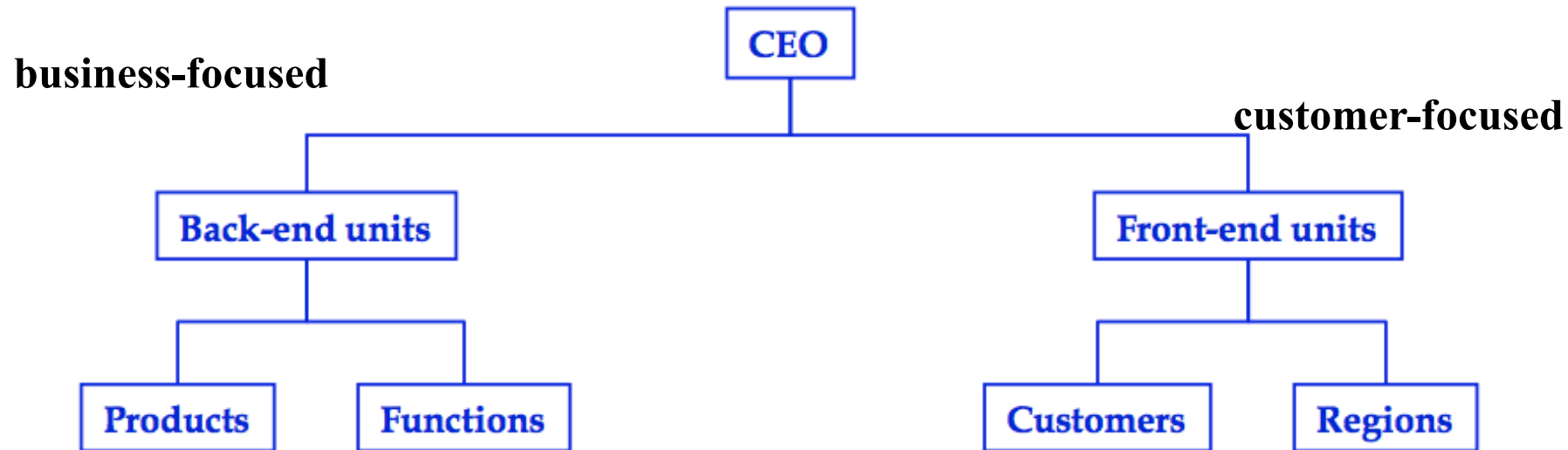
| STRUCTURE | FUNCTIONAL ORGANIZATION | DIVISIONAL ORGANIZATION | MATRIX ORGANIZATION | PROCESS ORGANIZATION |
|-----------------------------|--|---|---|--|
| ORGANIZATIONAL CHART | <pre> graph TD CEO[CEO] --> RD[R & D] CEO --> Mkt[Marketing] CEO --> Prd[Production] </pre> | <pre> graph TD CEO[CEO] --> PD1[Product Division 1] CEO --> PD2[Product Division 2] CEO --> PD3[Product Division 3] </pre> | <pre> graph TD CEO[CEO] --> HR[Human Resources] CEO --> Fin[Finance] HR --> PD1[Product Division 1] HR --> PD2[Product Division 2] Fin --> PD1 Fin --> PD2 </pre> | <pre> graph TD CEO[CEO] --> Mkt[Marketing] CEO --> RD[R & D] Mkt -.-> CP1[Core Process 1] Mkt -.-> CP2[Core Process 2] RD -.-> CP1 RD -.-> CP2 </pre> |
| STRENGTHS | <ul style="list-style-type: none"> - Economies of scale within functions are achievable. - Specific know-how and competencies can be developed. - The organization can attain functional goals. - Appropriate for companies with one or a few products | <ul style="list-style-type: none"> - Suited to rapid changes in an unstable environment - Generates greater customer satisfaction due to clear responsibility for product and points of contact - Allows high coordination among different functions - Enables business units to adapt to differences in products, regions, and customers - Suited to large companies with several products - Decentralized decision-making | <ul style="list-style-type: none"> - Gives the organization the coordination needed to respond to diversified demand from customers - Allows for flexible management of human resources among various products - Complex decisions can be made and the organization can adapt to sudden changes that typify very unstable environments. - Know-how and competencies, in terms of both functions and products, can be developed. - Appropriate for medium sized organizations with several products | <ul style="list-style-type: none"> - Allows the organization to respond with flexibility and speed to the changing needs of customers - Focuses everyone's attention on producing and distributing value to the customer - Gives every employee a broader vision of organizational goals - Encourages teamwork and collaboration - Improves quality of life for employees by giving them the chance to share responsibilities, decisions, and results |
| WEAKNESSES | <ul style="list-style-type: none"> - Responds slowly to environmental changes - May result in decision-making bottlenecks, hierarchical overload - Little horizontal coordination among various departments - Negligible results in terms of innovation - Centers on a narrow view of corporate goals | <ul style="list-style-type: none"> - No economies of scale within functions - Little coordination among various product lines - No specific know-how or competencies are developed. - Integration and standardization among various product lines proves very difficult. | <ul style="list-style-type: none"> - Dual authority leads to confusion and frustration among employees. - Intense employee training is needed to develop solid interpersonal relationship skills. - Time-consuming: involves frequent meetings sessions to resolve conflicts. - It doesn't work if people don't adopt strong horizontal and collegial interpersonal relationships rather than vertical ones. - Major effort is required to maintain the balance of power. | <ul style="list-style-type: none"> - Determining the core process is difficult and time-consuming. - Organizational culture, division of labor, managerial philosophy, information and reward systems all must be changed. - Traditional managers could object when they have to give up power and authority. - Considerable effort in training personnel to work in very horizontal team environments is required. - Development of specific know-how and competencies may be limited. |

Adapted from Richard L. Daft, *Organization Theory and Design*, 2001

When is organization design most appropriate?

- The **business strategy** has changed
 - internal factors(e.g., introducing a new product or entering a new market) or
 - external factors (e.g., competitor actions, industry trends, introduction of disruptive technology)
- The organization **is under-performing**
 - poor alignment of the structure, e.g. lack of coordination between interdependent work units, excessive conflict, unclear roles/responsibilities, poor work flow, reduced responsiveness/flexibility, and poor resource allocation.
- The organization is experiencing **strong growth**
- There has been a change in **leadership**
 - New leaders frequently use organization design as an initiative to shake-up or transform the organization.

Others alternatives: Front-Back Organization



Suppliers such as IBM, Accenture, and Procter & Gamble have formed multi-functional, multi-business, multi-country customer-facing units.

This front-back model allows these companies to achieve global scale with their businesses and local adaptation and customization for their customers.

| Structure | Strengths | Weaknesses |
|------------|--|--|
| Front-Back | <ul style="list-style-type: none">• An alternative way (in addition to Matrix) to optimize on multiple dimensions at once (e.g., products, functions, customers, regions)• Often suited to large, complex organizations | <ul style="list-style-type: none">• Very complex to manage (needs top-down management from CEO and Executive Committee combined with lateral coordination throughout organization) |

The Spotify Model

is a people-driven, autonomous approach for scaling agile that emphasizes the importance of culture and network



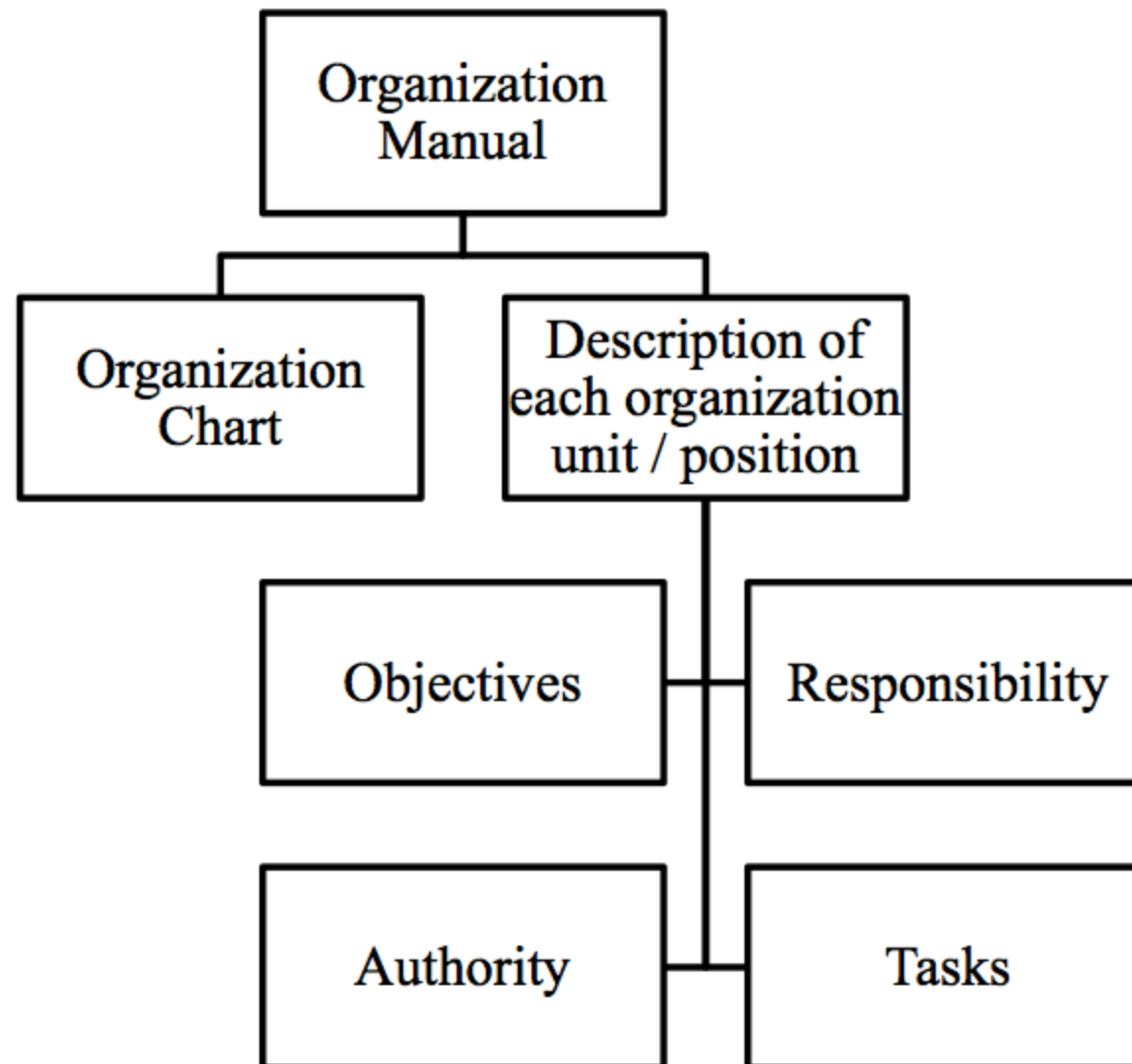
Squads are cross-functional, autonomous teams (typically 6-12 individuals) that focus on one feature area. Each Squad has a unique mission that guides the work they do, an agile coach for support, and a product owner for guidance.

Tribes help build alignment across Squads and typically consist of 40 - 150 people in order to maintain alignment. When multiple Squads coordinate within each other on the same feature area, they form a Tribe.

Chapters Even though Squads are autonomous, it's important that specialists (e.g. Javascript Developer, DBAs) align on best practices. Chapters are the family that each specialist has, helping to keep engineering standards in place across a discipline.

Guild Team members who are passionate about a topic can form a Guild, which essentially is a community of interest.

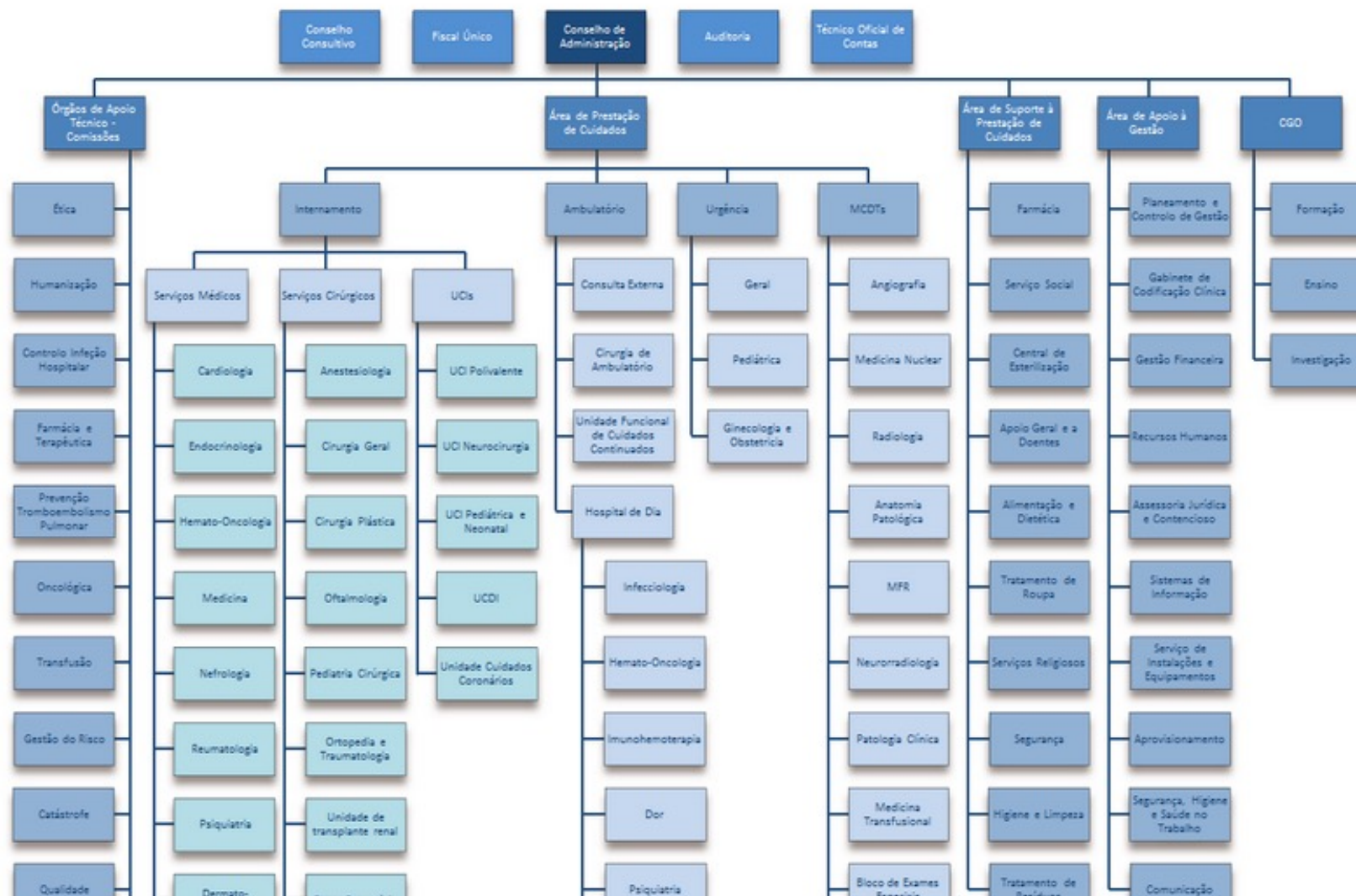
The Organization Manual / Functions manual



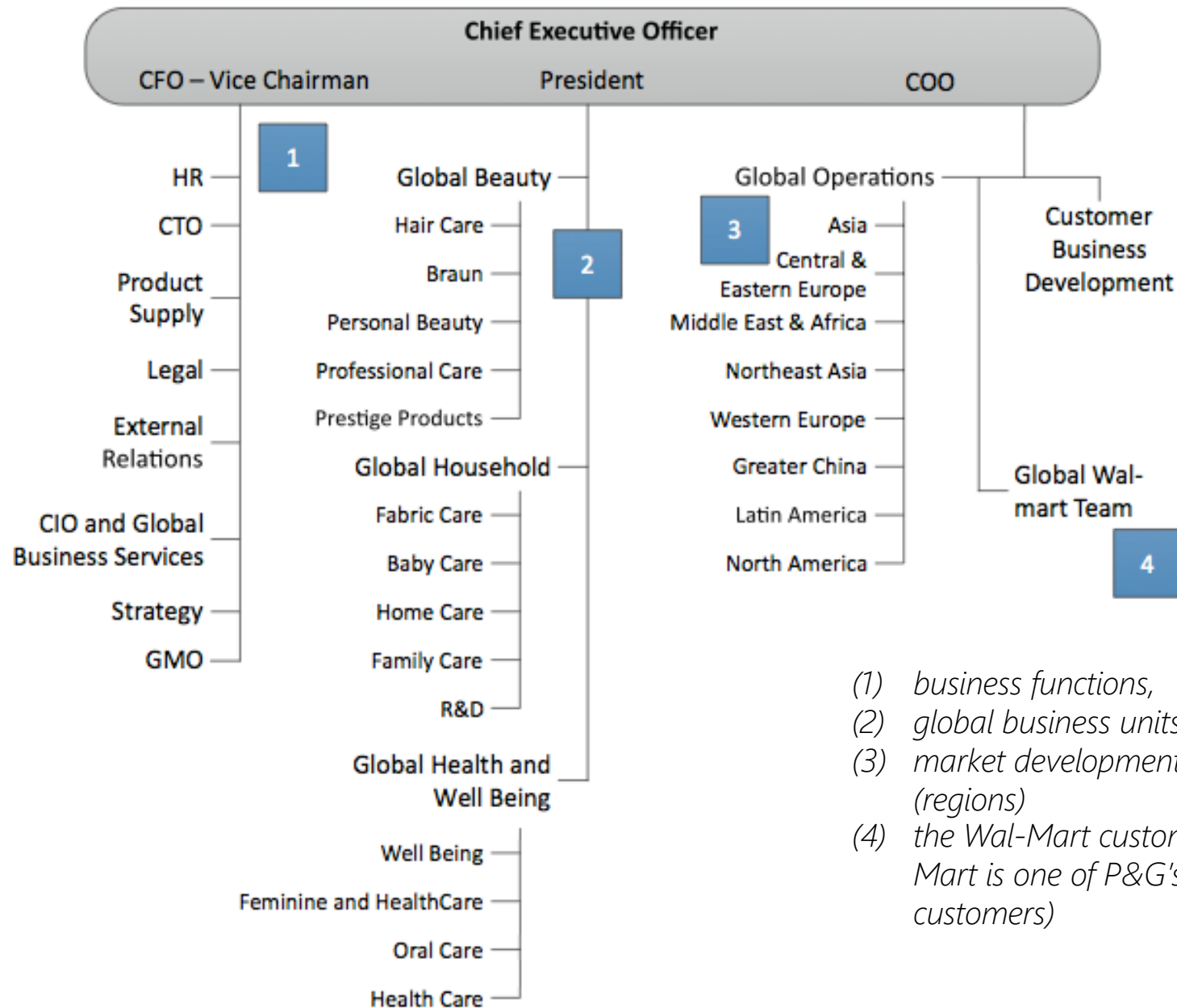


Examples of Organizations Chart

Hospital Garcia de Orta, EPE

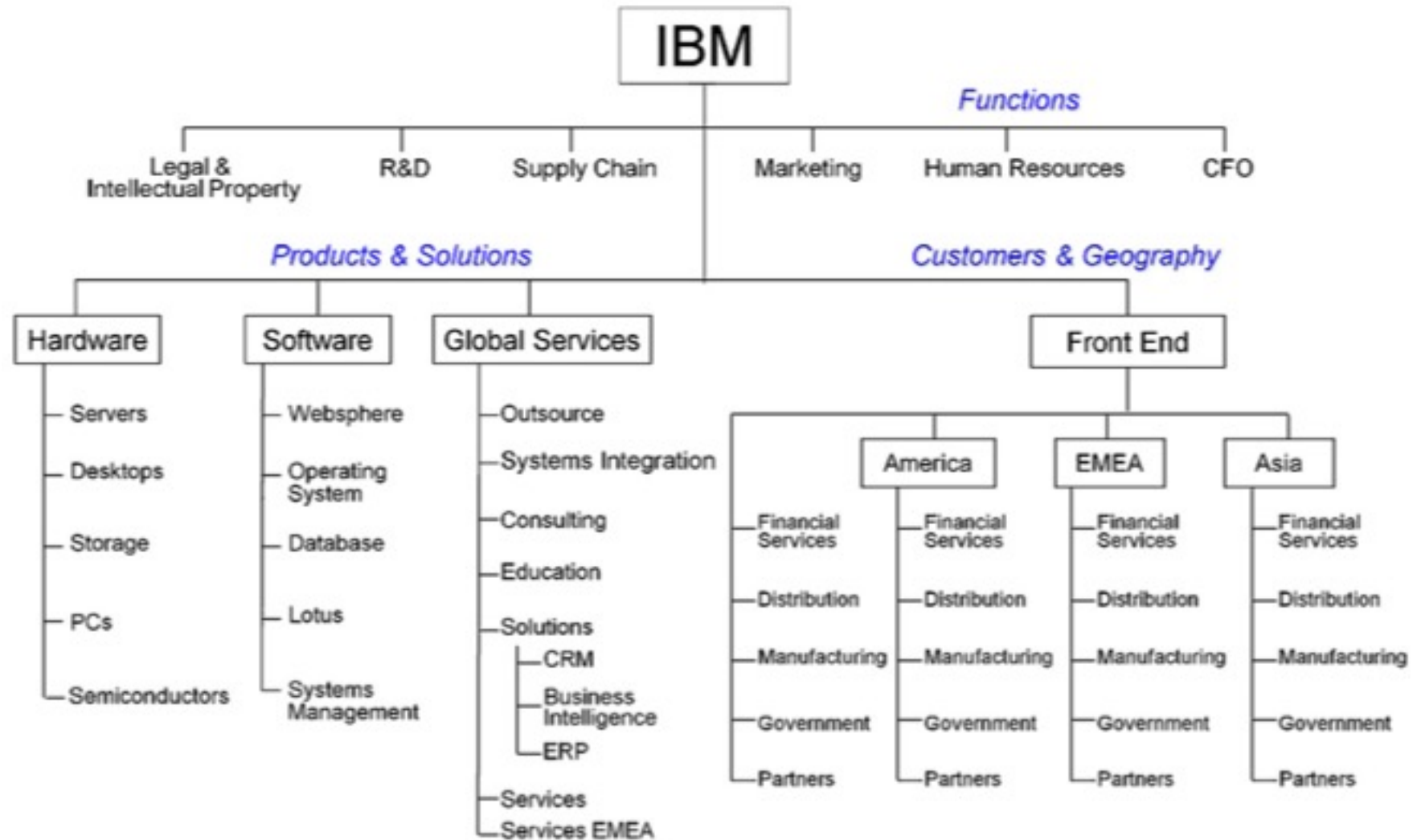


The Four-Dimensional Structure (Ex. Procter & Gamble)



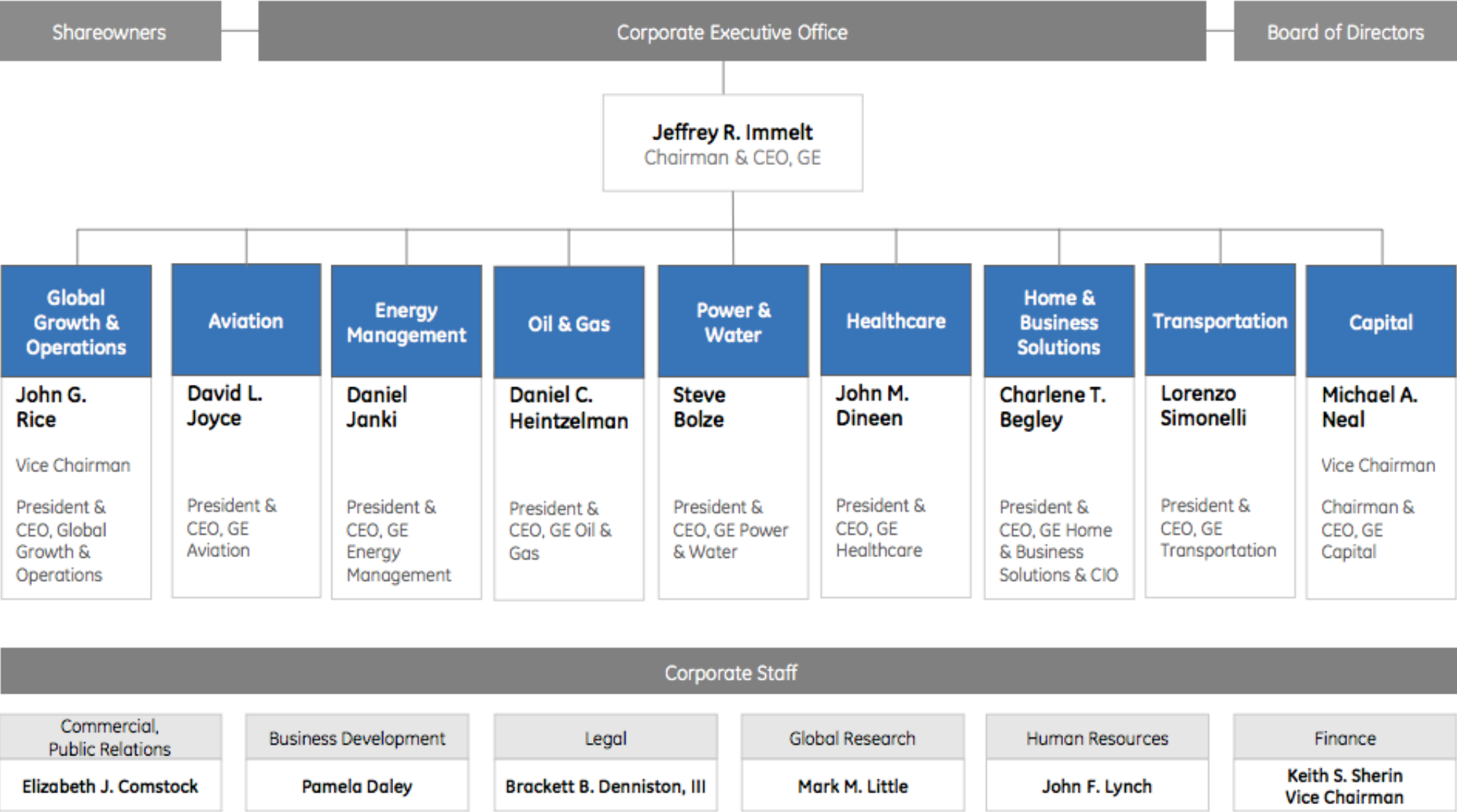
- (1) business functions,
- (2) global business units,
- (3) market development organizations (regions)
- (4) the Wal-Mart customer team (Wal-Mart is one of P&G's many large customers)

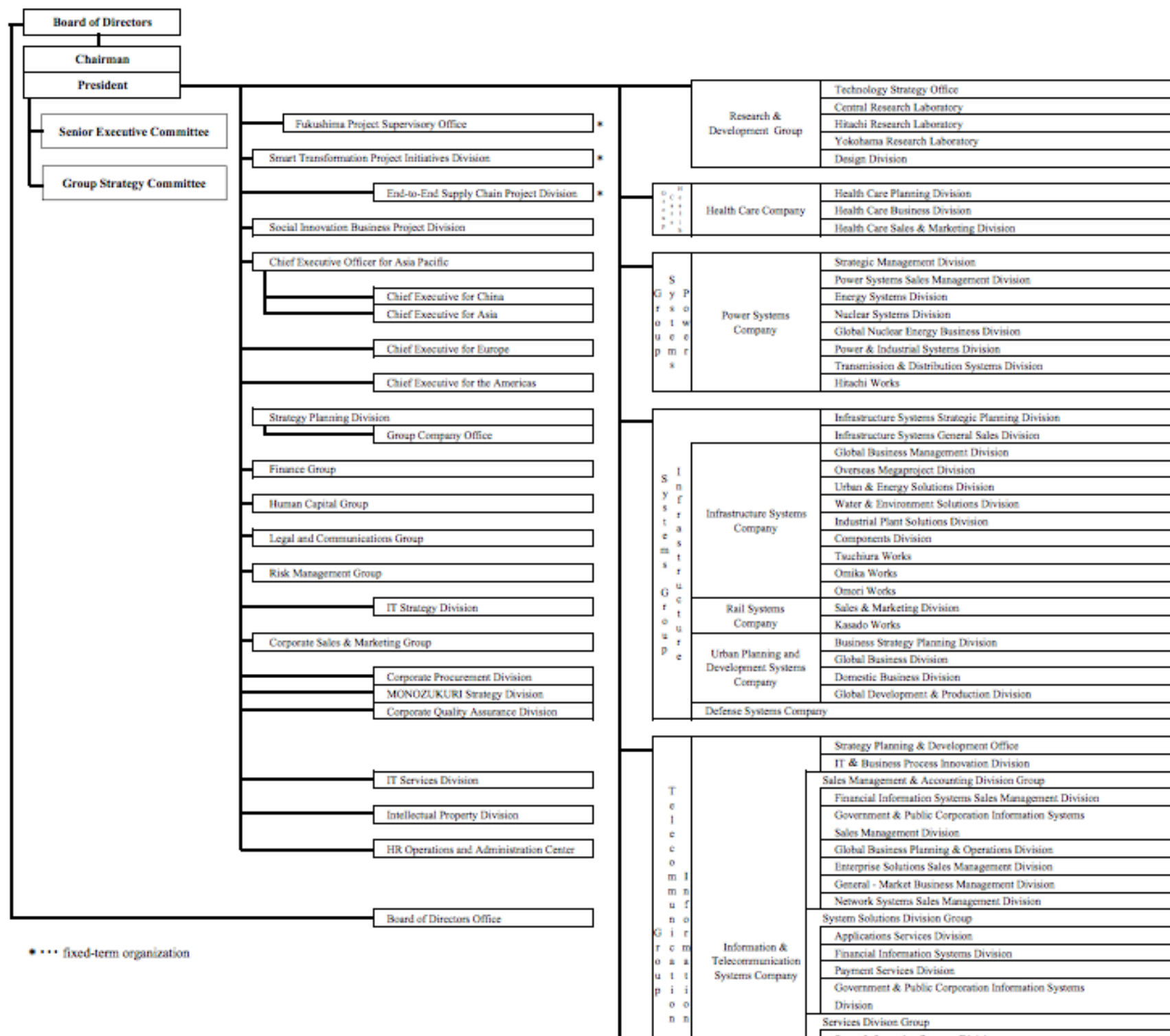
IBM's Multi-Dimensional Structure



GE Company Organization Chart

UPDATED OCTOBER 2012

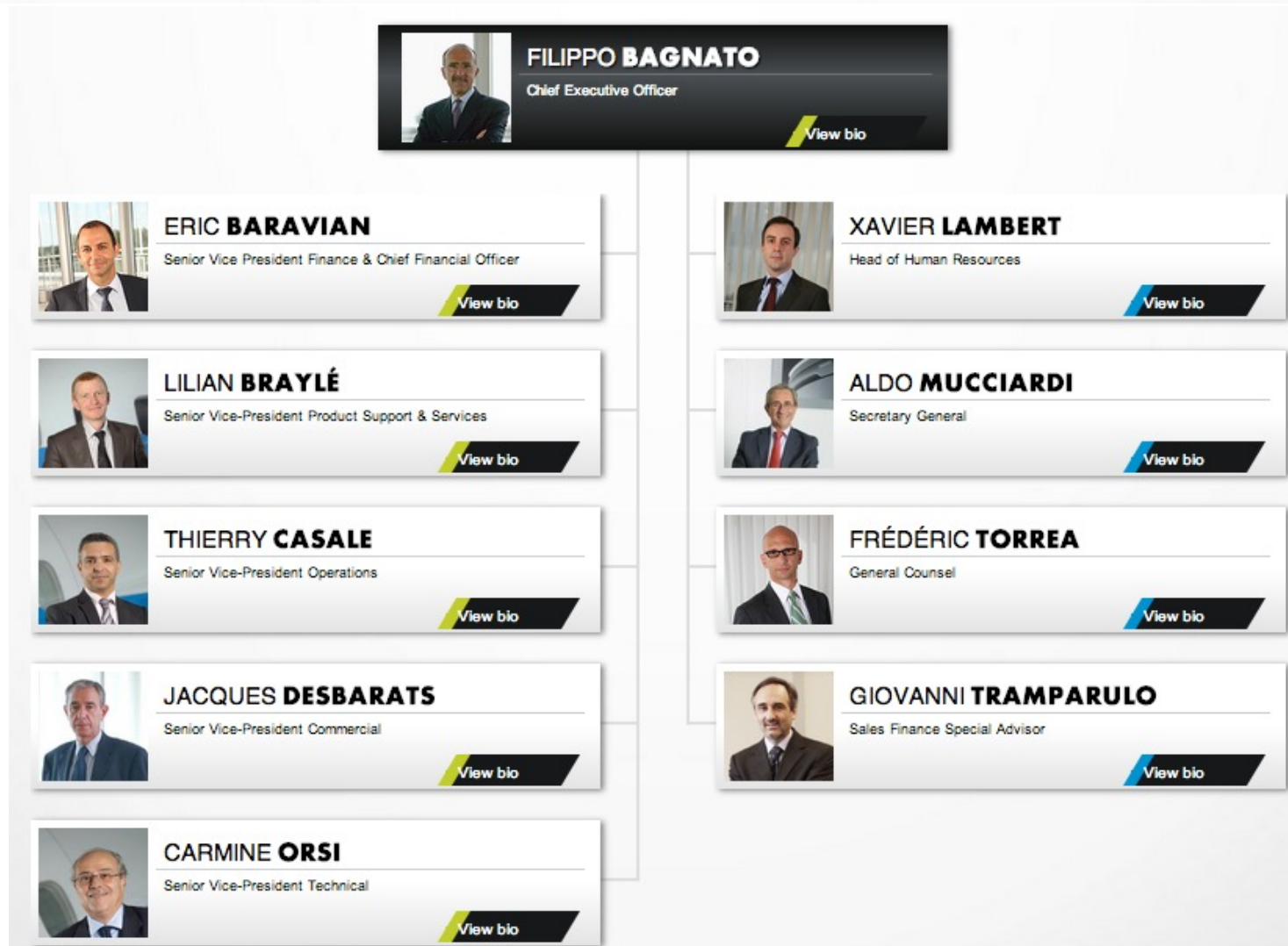




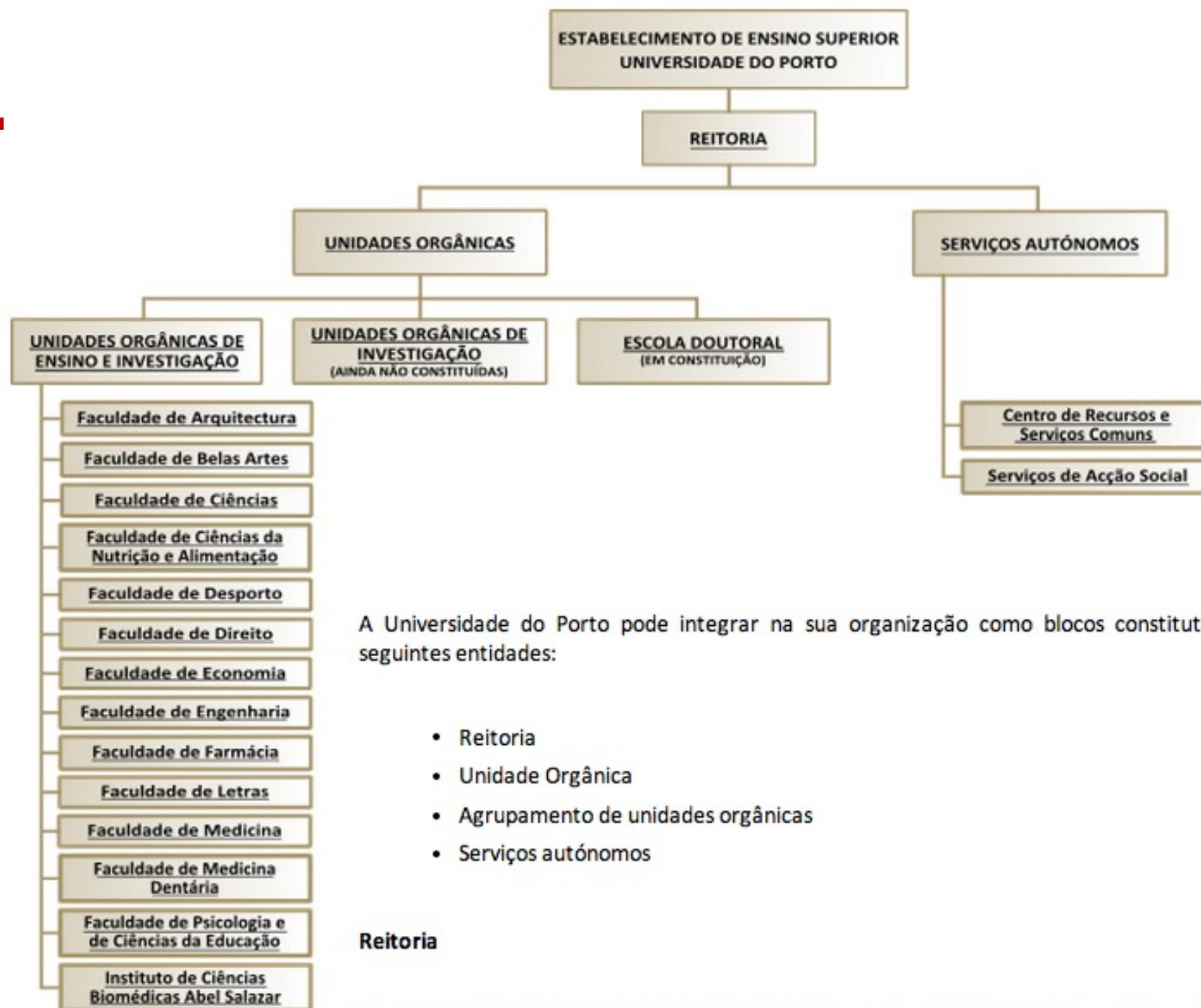
* ... fixed-term organization

ATR

ATR is one of the world's leading aerospace companies and the largest manufacturer of regional aircraft. Headquartered in Toulouse, South of France, **ATR** employs nearly 1000 people across Europe, with major operations in the Blagnac and St Martin areas of the Midi Pyrénées region. Total company revenues for 2011 were over US\$1.3 billion.







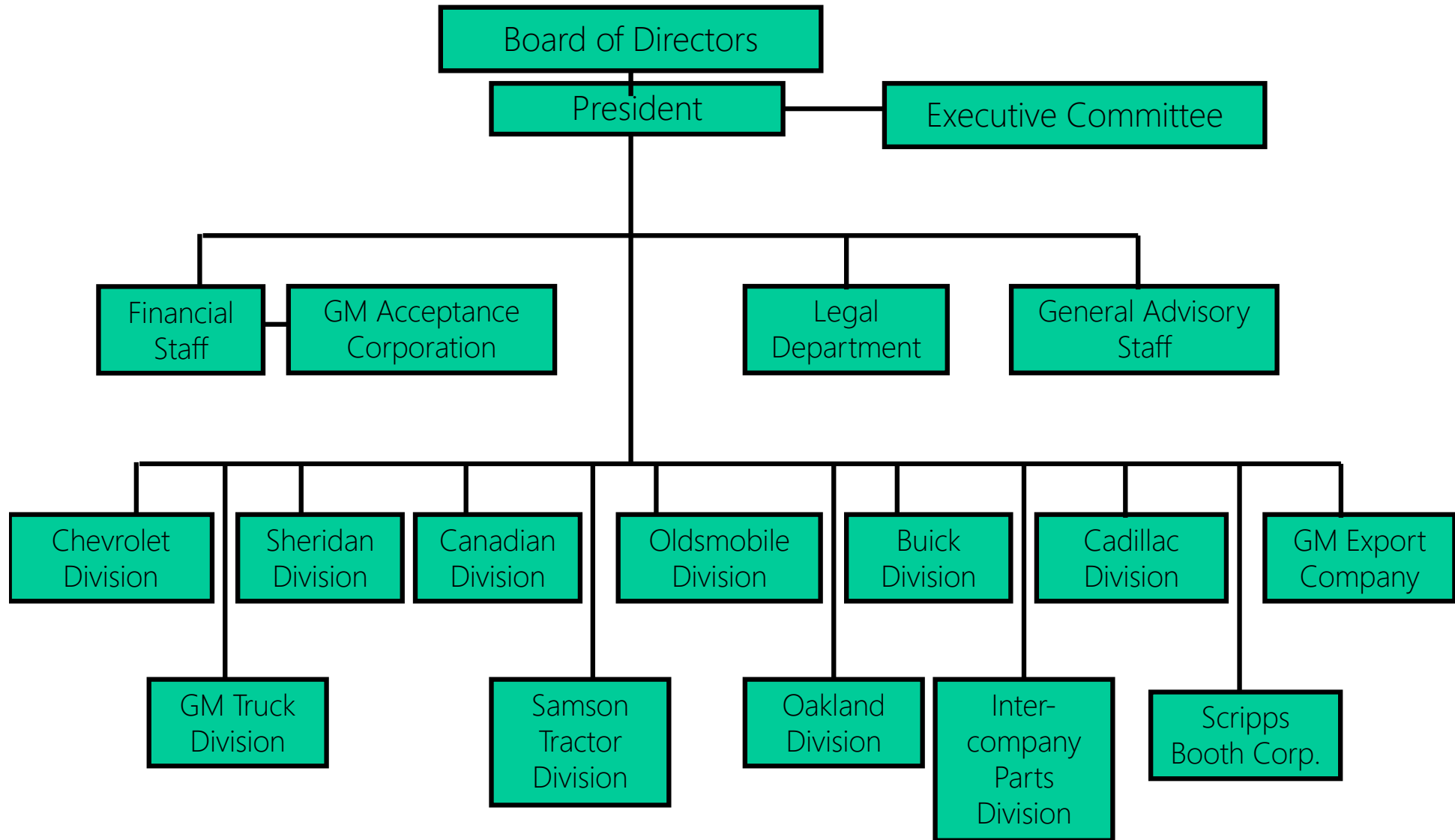
A Universidade do Porto pode integrar na sua organização como blocos constitutivos as seguintes entidades:

- Reitoria
- Unidade Orgânica
- Agrupamento de unidades orgânicas
- Serviços autónomos

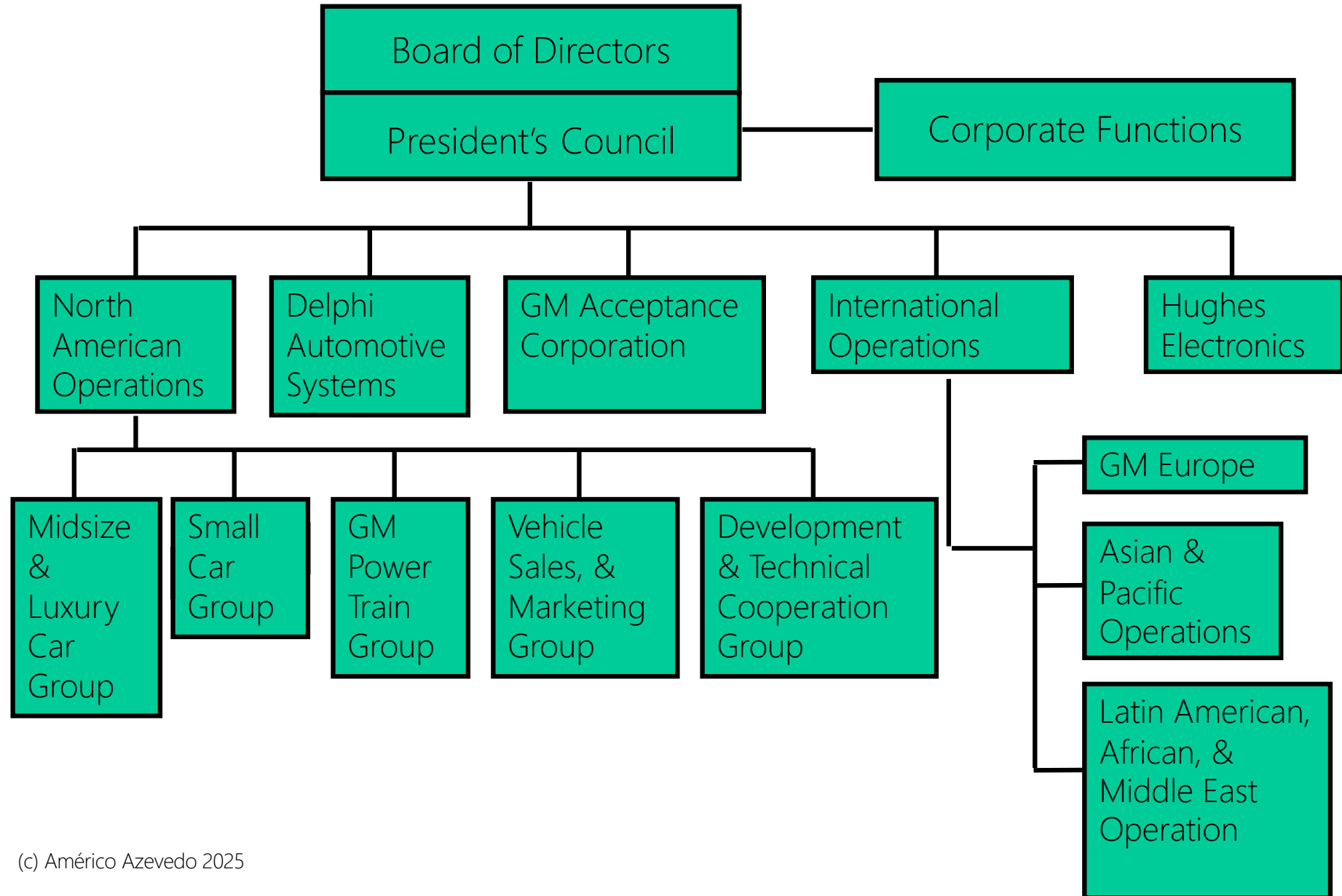
Reitoria

A Reitoria é o núcleo central da organização da Universidade do Porto e integra todos os órgãos de governo central.

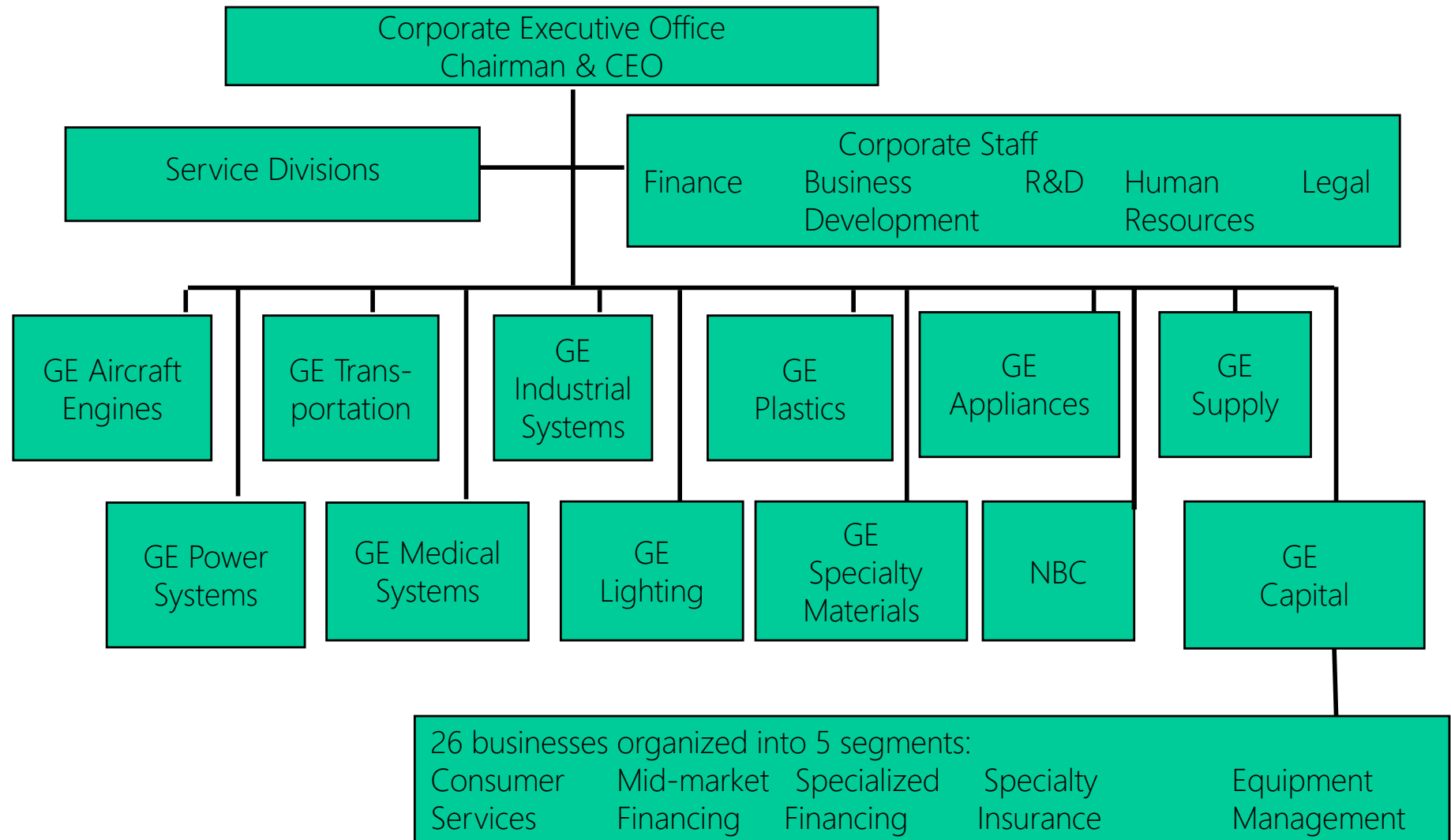
General Motors' Organization Structure, 1921



General Motors' Organization Structure, 1997



General Electric's Organization Structure, 2002



Mobil Corporation, 1997

