2. Structure and Management of IT Organizations

IT5206 - Professional Practice

Level III - Semester 5

Overview

In this lecture, different types of organizations, and the role of organizations, the structure and management of IT organizations are described in detail.

Different types of organizational models as well as structuring principles and how to set up those structures in practice are also described.

Intended Learning Outcomes

At the end of this lesson, you will be able to;

- Understand what an organization is

- Different ways in which an organization can become a legal entity

- Situations in which the different types of legal entity are appropriate

- What a limited company is and why it is the preferred legal form for a commercial organization

- Recognize how organizations are structured

Intended Learning Outcomes

At the end of this lesson, you will be able to;

- Suggest alternative possible structures and identify their advantages and disadvantages

- Understand the effect of organizational structure on individual employees

4

List of sub topics

2.1 What is an Organization?

    2.1.1 Different types of Organizations

        2.1.1.1 Sole Traders

        2.1.1.2 Partnerships

        2.1.1.3 Cooperatives

        2.1.1.4 Limited Companies

    2.1.2 Constitution of an Organization

    2.1.3 Directors of a Company

    2.1.4 Structure of a Company

        2.1.4.1 Functional units of an organization

        2.1.4.2 Depth of Structure

        2.1.4.3 Centralization

2.2 Organizational Models

    2.2.1 Organic Model

    2.2.2 The bureaucratic model

    2.3.3 Matrix Management

List of sub topics

2.3 Structuring Principles

       2.3.1 Function based Structure

       2.3.2 Geography based Structure

       2.3.3 Product Line Structure

       2.3.4 Structure by Market Sector
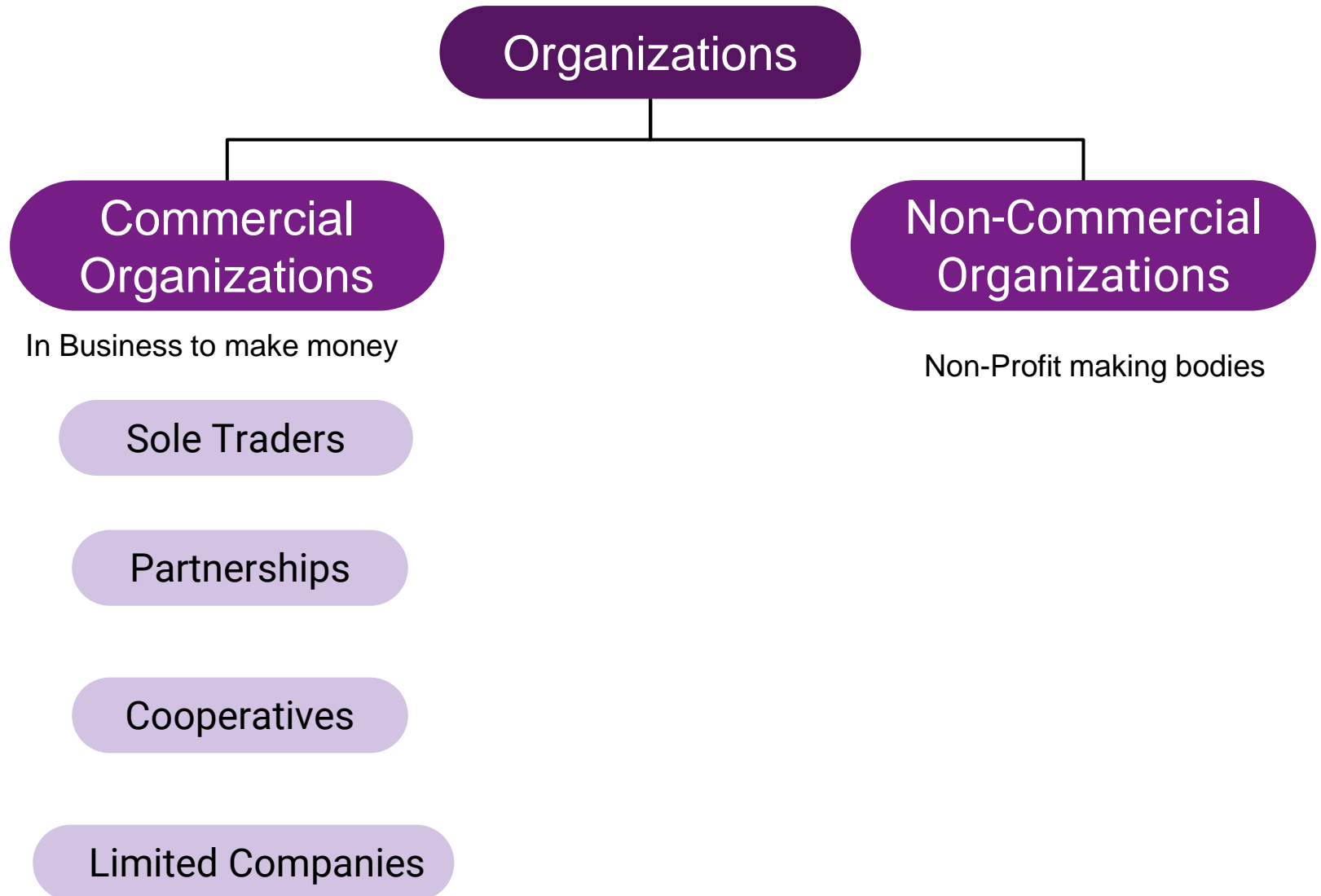
       2.3.5 Structure by Technology

2.4 Setting up Structure in Practice

2.5 Management Issues in IT

2.1 What is an Organization?

- **An organization**: group of people working together in a formal way

    ex: Schools and Colleges, Hospitals, Banks

- Organizations need to have a legal existence

- Reflecting on the different procedures used to set up an organization, and the different ways in which they are governed, organizations can be of different types

2.1.1 Different Types of Organizations

Organizations

Commercial Organizations

In Business to make money

Non-Commercial Organizations

Non-Profit making bodies

Sole Traders

Partnerships

Cooperatives

Limited Companies

2.1.1.1 Sole Traders

- A sole trader: an individual who runs their own business

- No legal formalities to become a sole trader
  - Can become a sole trader simply by starting to run a business

- Sole trader is personally liable for all the debts of the business so that all the trader's assets, including the family home, are at risk if the business fails

- Therefore it is usually wise, for a sole trader to carry on business as a limited company

2.1.1.2 Partnerships

- A group of people carrying on a business with a view of making profits (and if the business is not a limited company)

- When in a partnership,

  - Liability of partners is unlimited

  - Partners are jointly and severally responsible for the partnership's liabilities

- Mainly used in professions such as the law, medicine or architecture

- Difficult to make changes in the ownership

2.1.1.3 Cooperatives

- User-owned and user-controlled businesses formed to benefit a group of members

- Important in fields such as agriculture

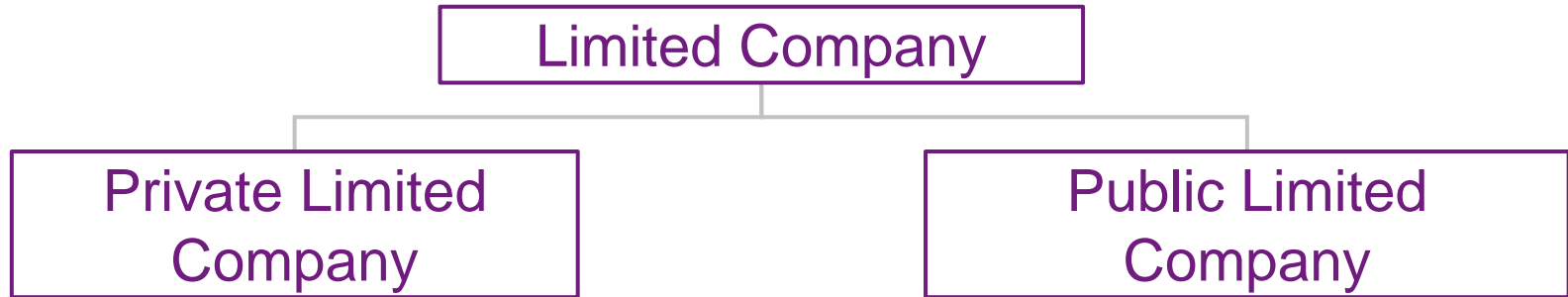- Unusual in the information systems industry

2.1.1.4 Limited Companies

- Companies can be limited or unlimited

- In an unlimited company the shareholders are personally liable for all the company's debts

- This type of companies are very rare

- A limited company may be limited by shares or by guarantee

- Commonest form of commercial organization is the limited company

- Also the most suitable form of organization for most businesses

2.1.1.4 Limited Company Contd.

- Three principles that are fundamental to the concept of a limited company:

  1. It is a legal person, completely separate from the people who work in it or the people who own it

  2. The ownership of the company is divided into a number of shares. These shares can be bought and sold individually

  3. Owners of the Company are not liable for the payment of any debts or other liabilities of the Company. Shareholders can only lose up to the amount they invested when purchasing their shares

2.1.1.4 Limited Company Contd.

- There are two main types of limited company

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              ┌─────────────────────────────┐
              │      Limited Company         │
              └─────────────────────────────┘
                 │                        │
    ┌────────────────────────┐  ┌────────────────────────┐
    │    Private Limited     │  │     Public Limited     │
    │       Company          │  │        Company         │
    └────────────────────────┘  └────────────────────────┘
```

- Not allowed to offer its shares to the public

- Name must end with the word Limited or the abbreviation "Ltd"

- Can offer its shares for sale to the public

- Name must end with the word "Public Limited Company" or the abbreviation "PLC"

2.1.2 Constitution of an Organization

- All companies must have a written constitution in order to be registered

- Constitutions consists of two documents:
  - The memorandum - controls its external relations
  - Articles of association - state how its internal affairs are to be run

- Apart from these documents there may also be a shareholders' agreement

2.1.3 Directors of a Company

- Directors are elected by the shareholders to run the company on their behalf
    - In **small companies** - shareholders may actually be directors or at least be in regular contact with them

    - In **large public companies** - shareholders have very little opportunity to influence the directors

- Directors have considerable powers
    - In a large company with many shareholders, the effective "democratic control" is very weak.

2.1.4 Structure of a Company

- Tasks that have to be carried out in an organization must be identified and an agreement must be reached as to who will do what

- **Organization Structure -** How the work is shared and how tasks and people are grouped together in an organization

- Structure of an organisation will vary from an organisation to organisation

2.1.4.1 Functional units of an organization

- **Production / Operations** - activities that directly contribute to creating the products or services that the company sells

- **Quality Management** - ensure that quality of the products and services produced is maintained at the agreed level

- Sales and Marketing - selling the product,and activities involved in making potential customers aware of the products the business can offer

- **Finance and Administration** - paying bills, looking after funds, paying employees and so on

- **Research and Development** - how can the company do better the things that it already does and what other things might it profitably be doing?

2.1.4.2 Depth of Structure

- Depth of an organizational structure is the number of layers in the structure

- Not all parts of the structure will have the same number of layers

- Structure of organizations with large numbers of employees will usually be deeper

- Depth of the structure depend on the number of people reporting directly to each manager
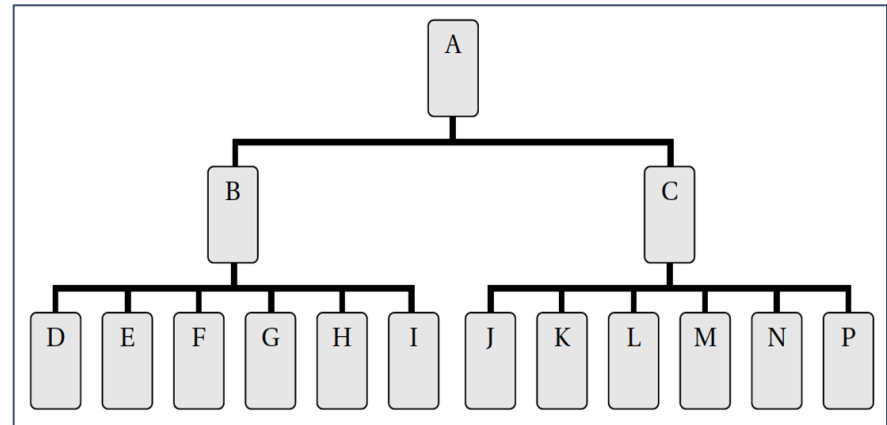 - Sometimes known as the 'manager's span of control'

2.1.4.2 Depth of Structure
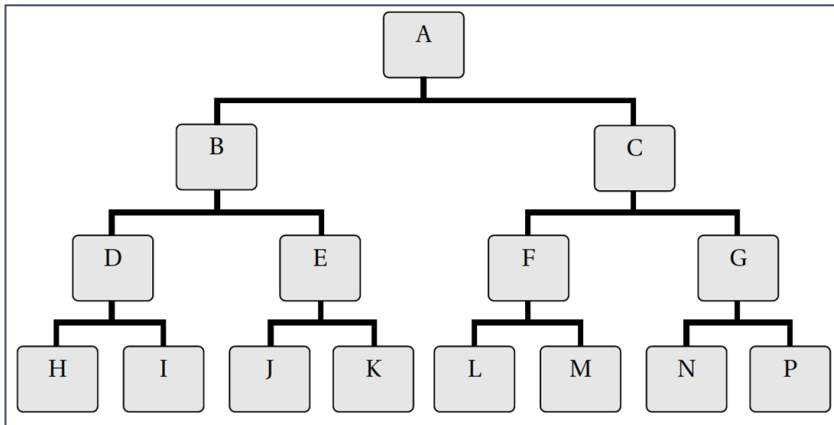
15 people organized into a four-level structure

15 people organized into a three-level structure

- Each manager's span of control is two

- Four layers in the structure

- People at the bottom of the structure (such as H), have to pass through two managers (B and D in the case of H) before reaching the head of the organization (A)

- Each manager's span of control is six

- Number of layers is reduced to three

- People at the bottom of the structure only have to pass through one manager to reach A

2.1.4.3 Centralization

- Organizations may be centralized or decentralized

- In a **centralized company,**
  as much power as possible is kept at the top of the company, with delegation only when essential

- In a **decentralized company,**
  as much power and control as possible is delegated to the lowest level

- Decentralization - commonly found in high-technology companies, where there is plenty of talent at lower levels

- Centralization - common in large manufacturing companies and other long-established organizations

- Flexible centralization - rules and practices are laid down centrally, but modifying them is accepted in specific cases with reasonable arguments

2.2 Organizational Models

- The most common models of structuring organisations are
  - Organic Model
  - The bureaucratic model
  - Matrix Management

2.2.1 The Organic Model

- Flexible workplace with a horizontal mode of communication

  - **Horizontal communication** - employees share their responsibilities in groups and teams and interact with different departments, managers and colleagues to complete work successfully

- Characteristics of the Organic Model:

  - Cross functional teams

  - Free flow of information

  - Wide span of control

  - Decentralization

  - Low formalization

2.2.2 The Bureaucratic Model

- Employees or members of an organization having specialized tasks or functions that only they can perform

- Applicable to larger organizations or organizations that have more complex operations

- Characteristics of Bureaucratic Model:
  - High specialization
  - Rigid departmentalization
  - Governed by precise rules
  - Clear chain of commands
  - High formalization
  - Hierarchical structure (can be represented as a tree)
  - Recruitment is based on qualifications
  - Employees are protected against arbitrary dismissal
  - Promotions are based on seniority and achievement

2.2.3 The Matrix Management

- The most common form of this type of structure is managers, employees and groups are **departmentalized based on their functions and on the products** of their respective departments

- Accepts that individuals may be responsible to more than one manager

- Characteristics of the Organic Model:

  - Individuals, regardless of which part of the organization they belong to, have to report to different departments

  - Collaboration

  - Response to change is faster

2.3 Structuring Principles

- There are many different ways of grouping together tasks and activities that are carried out in an organization

- Previously discussed organizational models are NOT mutually exclusive

- Different parts of the organization are likely to reflect different ways of producing a structure

- Structures produced by the different criteria may be combined in a matrix structure

2.3.1 Function based Structure

- The most commonest type of structure to be found in medium-sized companies is shown below
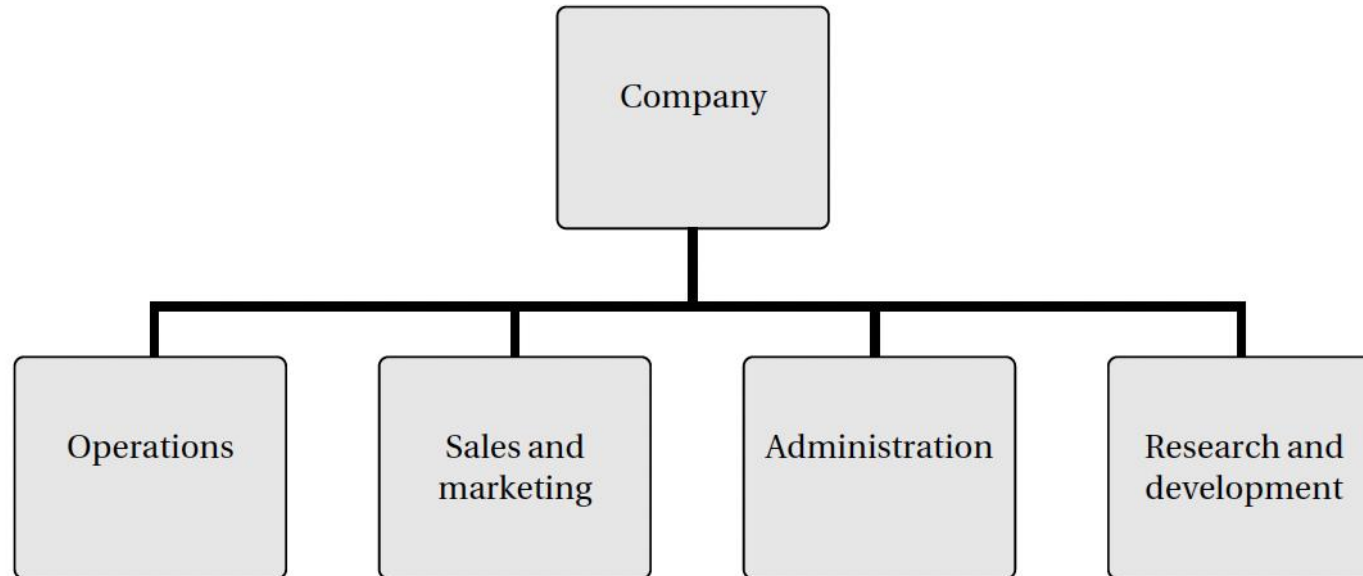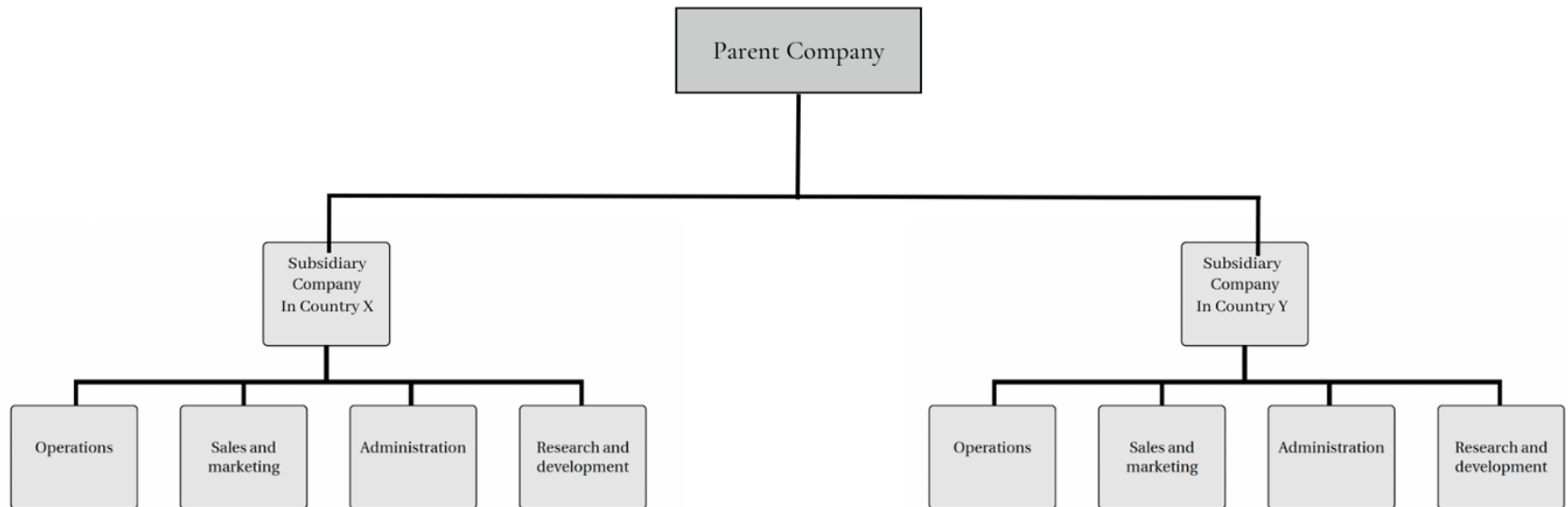

Function based structure

Ref 1 - Page 38

2.3.1 Function based Structure

- Function based structure - A structure based on functions carried out in the organization

  - **Operations Division** - activities that are the primary purpose of   the organization

  - **Administration Division** - efficient and effective organisation of people, information, and other resources to achieve organisational objectives

  - **Sales and Marketing** - activities involved in making potential customers aware of the products the business can offer

  - **Research and Development** - developing new products or services, or developing new ways to deliver them

2.3.2 Geography based Structure

- Geography based structure - Grouping activities together on a geographical basis

Geography based structure

Ref 1 - Page 38

2.3.2 Geography based Structure

- Multinational companies that operate in a number of different countries usually have geographical elements in their structure

- In order to operate effectively in a country, they need a permanent presence there

- They can become a legal personality in the form of a subsidiary company registered in the country but owned by the parent

- Subsidiaries are subject to the laws of the countries in which they are registered

2.3.3 Product Line Structure

- Product line structure - based around the different types of product that an organization produces

- Organizing themselves into operational divisions according to the products and service they produce

    Ex : A Company that produce and market a piece of software often organize themselves into three main operational divisions: development and maintenance of the software, consultancy, and training

    Since the operational divisions are formed based on the services provided by the company it can be considered as this company has a product line structure

2.3.4 Structure by Market Sector

- Structure by market sector - based on the different market sectors to which its customers or prospective customers belong

- Very popular within the software industry

- **Advantage** - both sales and technical staff, are likely to be familiar with customers' problems and each division can identify its potential customers

- **Disadvantages** -
  - one division may be unaware of technological expertise that exists in another division and it will lead to
    $\rightarrow$ inefficient use of resources through unnecessarily hiring additional specialists

  - by continuing to concentrate on its traditional areas, company will miss new opportunities and will stagnate

2.3.5 Structure by Technology

- Not sufficiently 'customer-focused'

- Concentrate on selling the technologies that they have rather than finding out what the customer needs

- **Problems with the structure**
  - Several different technologies are required to meet a specific customer's need

  - Applications cannot be said to require specific technologies

  - Many competent employees having expertise which runs across a number of technologies

  - Difficult for sales and marketing staff to predict which potential clients will need which technology

2.4 Setting up a Structure in Practise

- Organization of any size will have a structure that includes elements of several of the different types of structures discussed earlier in the slides (Refer Example - Ref 1 - Page 43 - 44)
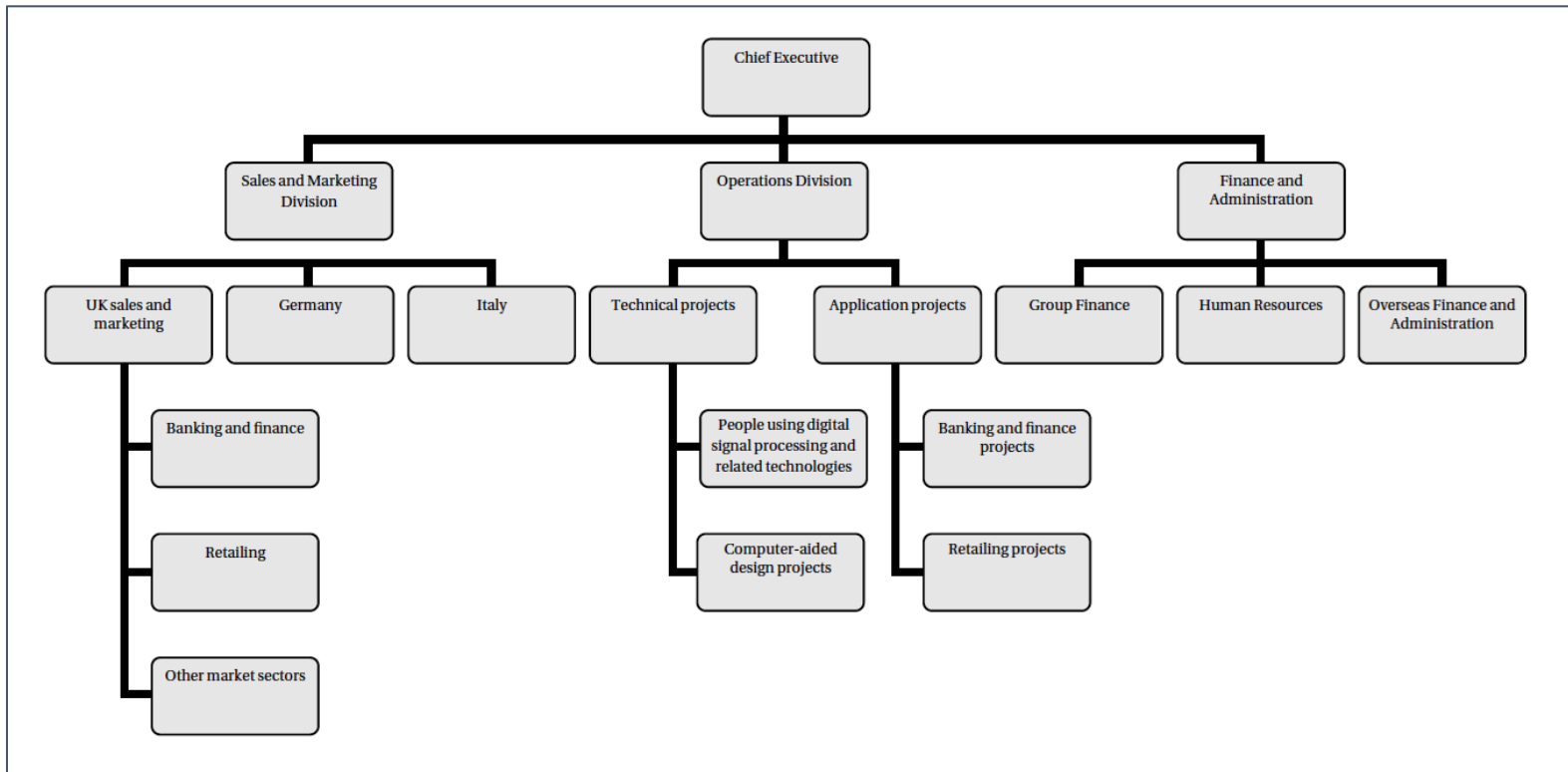
An organizational structure for a bespoke software house

Ref 1 - Page 44

2.4 Setting up a Structure in Practise

- The general process of setting up a structure

    1. Plan the future - Make your plans as far in advance as you can, This covers the subsequent 3 -5 years for startups. Aim for 10 or more years for organizations that are more established

    1. Think about the past - Think on what has and hasn't worked successfully in terms of how teams or departments interact

        Consider this: If you have a one-story home with a foundational crack, adding more levels will simply make the issue worse

2.4 Setting up a Structure in Practise

3. Build the organizational structure - Priority at this point should be on establishing
> Selecting the ideal, most effective processes
> Reaching business objectives
> Providing good client service

There are numerous ways to structure your workforce
> By function (sales, marketing, accounting, etc.)
> By region
> By product line

Organization can be vertical, hierarchical, flat or matrixed.

2.4 Setting up a Structure in Practise

4. Fill in the people - Determining if an existing employee is naturally suited to the re-defined function is both vital and challenging. You can determine the new competencies required as an employee might not fit a function as precisely as they did in the past.

5. Balance authority and responsibility - Give your staff equal amounts of authority and responsibility regardless of where they sit within the organizational hierarchy.

Otherwise,they might get frustrated, and might lose interest.

6. Fill in employee data and metrics

7. Practice robust performance management of employees

8. Review your organizational structure annually

2.5 Management Issues in IT

- Managing people is never easy because life is about change

- Due to the pandemic, the corporate climate has changed quickly and a variety of new challenges have emerged

- Challenges HR managers face today :

    > Finding and recruiting the right talent
    > Wellbeing of employees
    > Promoting inclusion and diversity in the workplace
    > Regulation & compliance
    > Skills gap
    > High Staff Turnover

2.5.1 How to Overcome the Challenges

- **Having effective conversations with staff**
  > Everybody communicates in a unique way, thus some ways of communication may be effective for some workers but ineffective for others. Finding out about the various personality types in your team is the greatest method to overcome any communication barriers.

- **Addressing performance issues**
  > It is easy for workers to fall short of expectations if there aren't defined standards and goals in place. To each team member, clearly define your goals and the expected outcomes.

- **Let employees leave**
  > Consider performing a root cause analysis to determine if there is a way to keep employees on your team before they leave.

2.5.1 How to Overcome the Challenges

- **Make appropriate hiring choices**
  > Don't just select individuals based on a "feeling," but rather develop a strong selection process. By using selection assessments, you can get a better idea of the candidate's work style and see how they would respond in various scenarios.

- **Manage conflicts within the team**
  > Before you take any action in response to a dispute between team members, it's critical that you comprehend the situation completely.
  > Reminding your employees of the culture and principles of your firm is one method to handle disagreement.

Summary

Types of Organizations	• Sole Traders • Partnerships • Cooperatives • Limited Companies
Organization Models	• Organic Model • The bureaucratic model • Matrix Management
Structuring Principles	• Function based Structure • Geography based Structure • Product Line Structure • Structure by Market Sector • Structure by Technology