

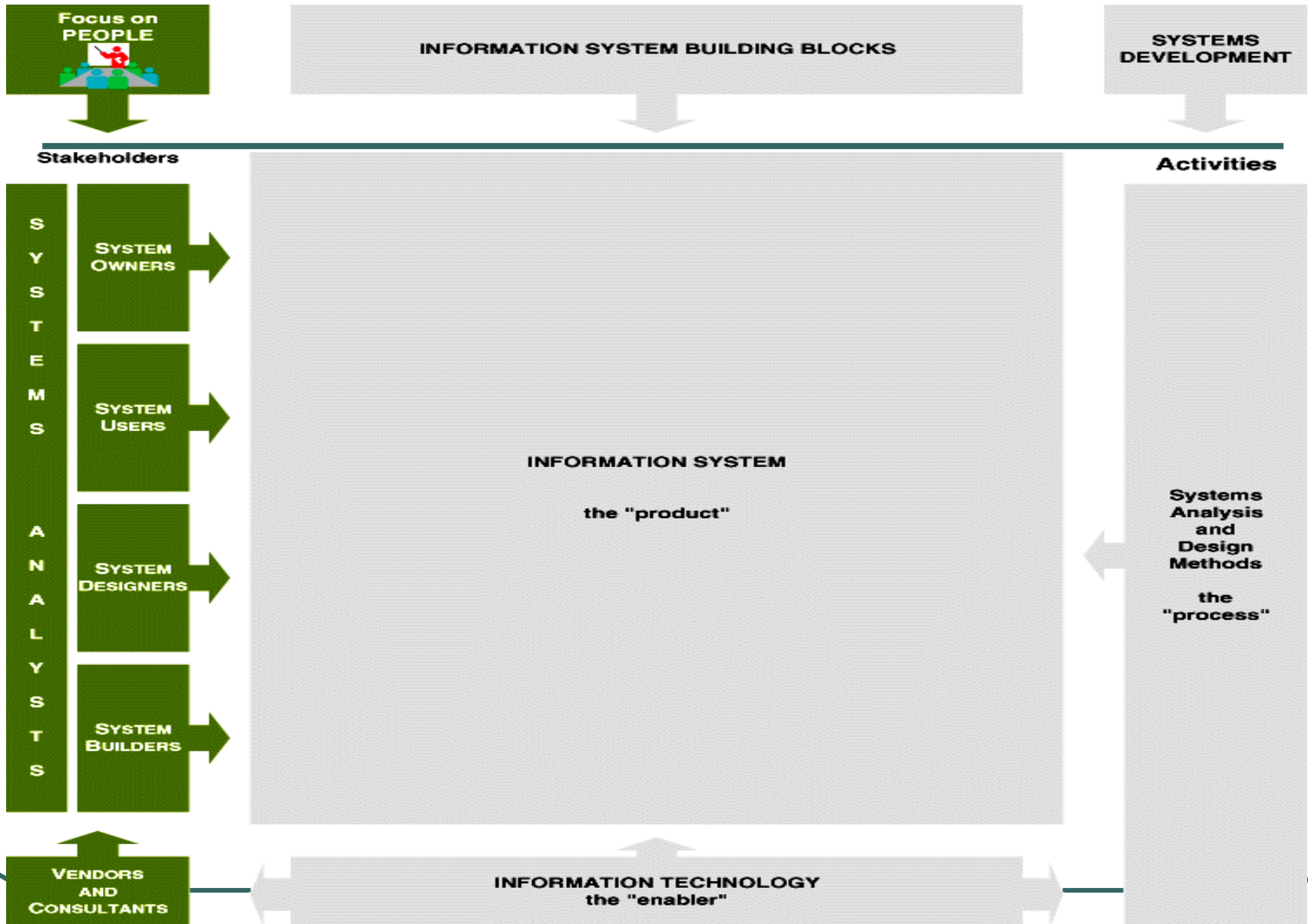
C H A P T E R

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**PLAYERS IN  
THE SYSTEMS  
GAME**

# Chapter Map



# Information Systems & Technology

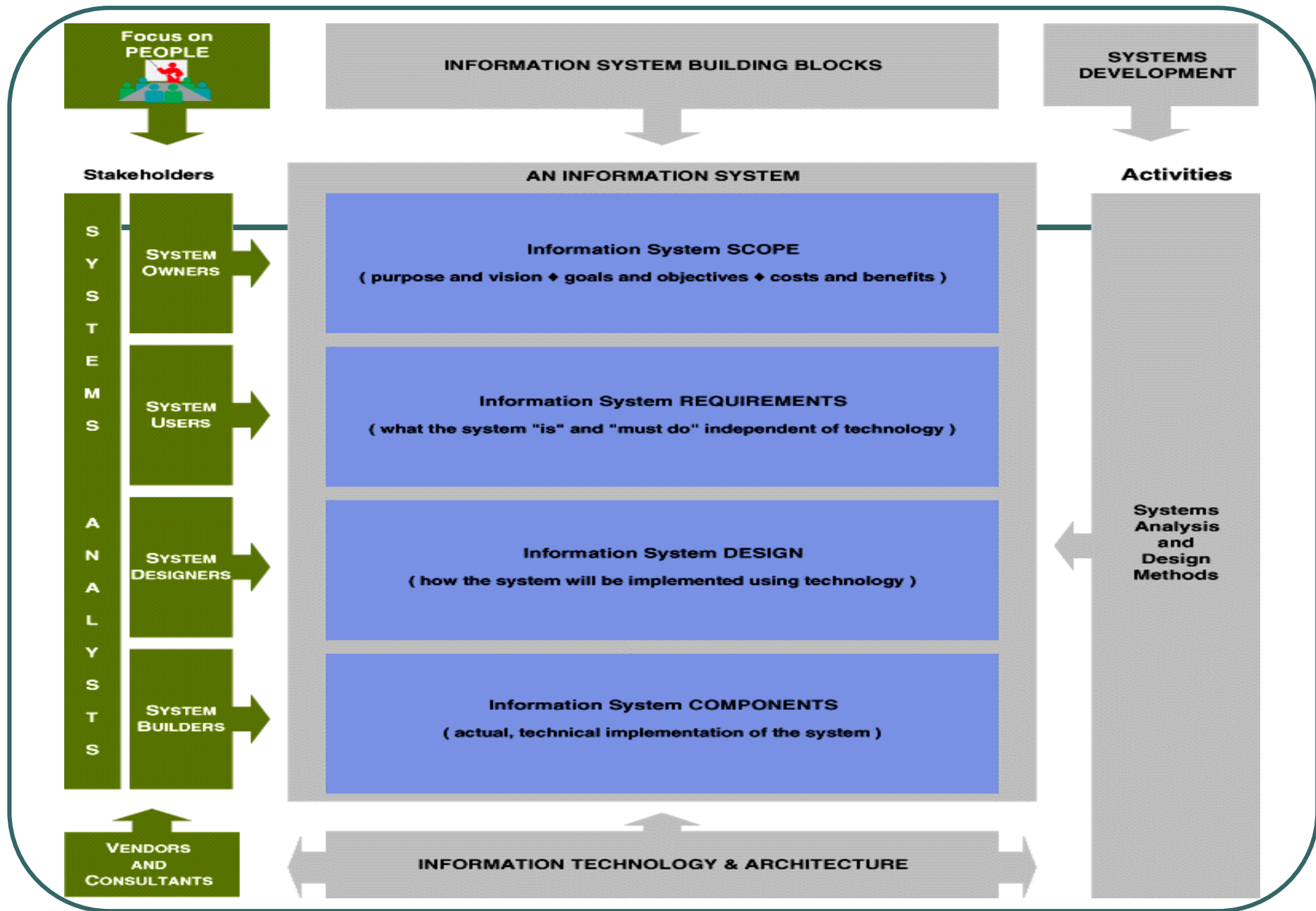
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**An information system (IS)** is an arrangement of **people, data, processes, communications, and information technology** that interact to support and improve day-to-day operations in a business, as well as support the problem-solving and decision-making needs of management and users.

**Information technology** is a contemporary term that describes the **combination of computer technology** (hardware and software) with telecommunications technology (data, image, and voice networks).

# Stakeholders: Players in the Systems Game

- **A stakeholder** is **any person** who has an interest in an existing or new information system. Stakeholders can be **technical or nontechnical workers**.
- For information systems, the stakeholders can be classified as:
  - System owners
  - System users
  - Systems analysts
  - System designers
  - System builders
  - IT vendors and consultants



# System Owners

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**System owners** are the information system's **sponsors** and chief advocates. They are usually responsible for **funding the project** to develop, operate, and maintain the information system.

# System Users

**System users** are the people who use or are affected by the information system on a regular basis—capturing, validating, entering, responding to, storing, and exchanging data and information. A common synonym is **client**. Types include:

- **Internal users**
  - Clerical and service workers
  - Technical and professional staff
  - Supervisors, middle managers, and executive managers
  - Remote and mobile users (internal but disconnected)
- **External users vs. Remote users**

# System Designers and System Builders

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**System designers** translate system users' business requirements and constraints **into technical solutions**. They design the computer files, databases, inputs, outputs, screens, networks, and programs that will meet the system **users' requirements**.

**System builders** construct the information system components based on the design specifications from the system designers. In many cases, the system designer and builder for a component are one and the same. → Programmer, Software Engineering



# Systems Analysts

**A systems analyst** studies the problems and needs of an organization to determine how people, data, processes, communications, and information technology can best accomplish improvements for the business. When information technology is used, the analyst is responsible for:

- The efficient capture of data from its business source,
- The flow of that data to the computer,
- The processing and storage of that data by the computer, and
- The flow of useful and timely information back to the business and its people.

# Problem-Solving Scenarios

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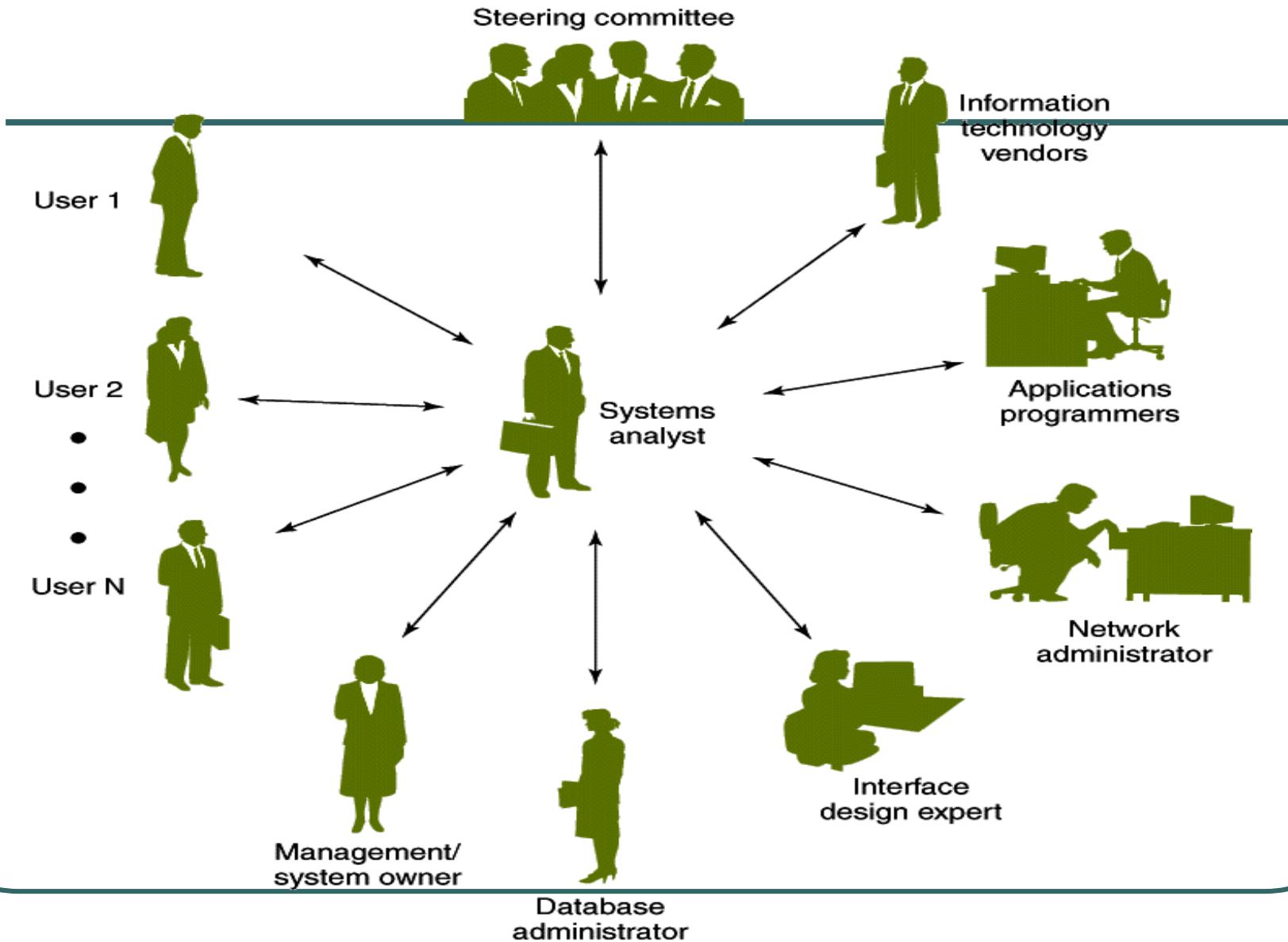
- True **problem** situations, either real or anticipated, that require corrective action
- **Opportunities** to improve a situation despite the absence of complaints
- **Directives** to change a situation regardless of whether anyone has complained about the current situation

# General Problem-Solving Approach

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1. **Identify** the problem.
2. **Analyze and understand** the problem.
3. **Identify solution** requirements or expectations.
4. Identify **alternative solutions** and decide a course of action.
5. **Design and implement** the “best” solution.
6. **Evaluate** the results. If the problem is not solved, return to step 1 or 2 as appropriate.

# The Systems Analyst as a Facilitator



# Skills Required by Systems Analysts

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- Working knowledge of information technology
- Computer programming experience and expertise
- General business knowledge
- Problem-solving skills
- Interpersonal communication skills
- Interpersonal relations skills
- Flexibility and adaptability
- Character and ethics
- Systems analysis and design skills

# Computer Ethics

## The Ten Commandments of Computer Ethics

1. Thou shalt **not** use a computer to harm other people.
2. Thou shalt **not** interfere with other people's computer work.
3. Thou shalt **not** snoop around in other people's computer files.
4. Thou shalt **not** use a computer to steal.
5. Thou shalt **not** use a computer to bear false witness.
6. Thou shalt **not** copy or use proprietary software for which you have not paid.
7. Thou shalt **not** use other people's computer resources without authorization or proper compensation.
8. Thou shalt **not** appropriate other people's intellectual output.
9. Thou shalt think about the social consequences of the program you are writing or the system you are designing.
10. Thou shalt always use a computer in ways that insure consideration and respect for your fellow human

# Summary

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- **Information Systems and Stakeholders**
- **Role of Stakeholders in Information System Development**
- **Remote Computing and Internet-centric World**
- **System Analyst & Role**
- **Systems analysis and design**
- **Modern business and technology trends that affect information systems development**
- **What are the career prospects for systems analysts?**
- **Knowledge and Skills of System Analyst**