Chapter 10

System Development

Steps in Development - #1

- **Problem Identification**
  - **Which department(s) has(have) the problem?**
  - **How significant is the problem**
  - **What is the problem?**
  - **Overview of potential system**

  - **Should be developed by the end users, the business**

Steps in Development - #2

► **Feasible?**

- ► **Legal?**
- ► **Required by law?**
- ► **Technology issues?**
- ► **Organizational issues?**
- ► **Economic Potential**
  - ► **IT projects should reduce costs or**
  - ► **IT projects should increase revenues or**
  - ► **Are necessary to run the business (telecommunications)**

Steps in Development - #3

System Analysis

- **Bring in all users**
- **Bring in all stakeholders**
- **Bring in IT Team**
- **Bring in all current reports/forms**

- **To recommend multiple options to management with a recommendation and return on investment on the best option**

- **All business majors involved in this step**

Systems Analysis – Step 3 Continued

▶ *The process of studying an existing system and identifying the weaknesses and inefficiencies that occur as a result of that system*

1. Summary of needs/problems
2. Recommend Hardware
3. Recommend Software
4. Recommend People
5. Recommend Communication Devices
6. Training Procedures
7. Maintenance Requirements

Recommendations for development

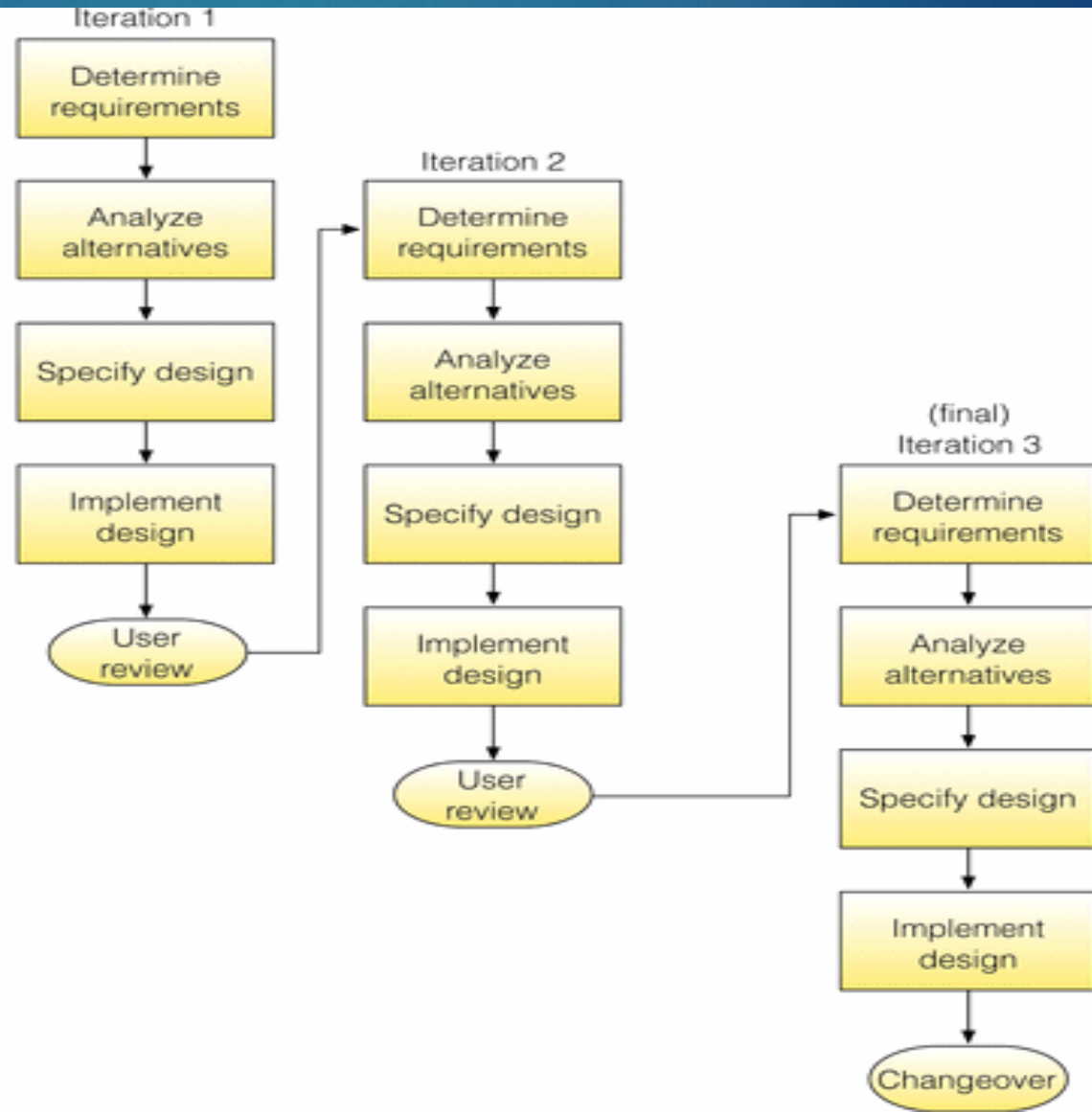| Purchase the software | Write the software | Lease the software | Purchase/ modify |

System Development #4

- **System Design**

  - Involves IT and end users
  - Design the databases
  - "Story board" the screens
  - Determine

Use Prototypes to help in the design phase

System Development #5

- **Implementation**

  - Write the code (IT)

  - Build

System Development #6

- **Testing**

  - Use individuals outside the IT department
  - End

System Development - #7
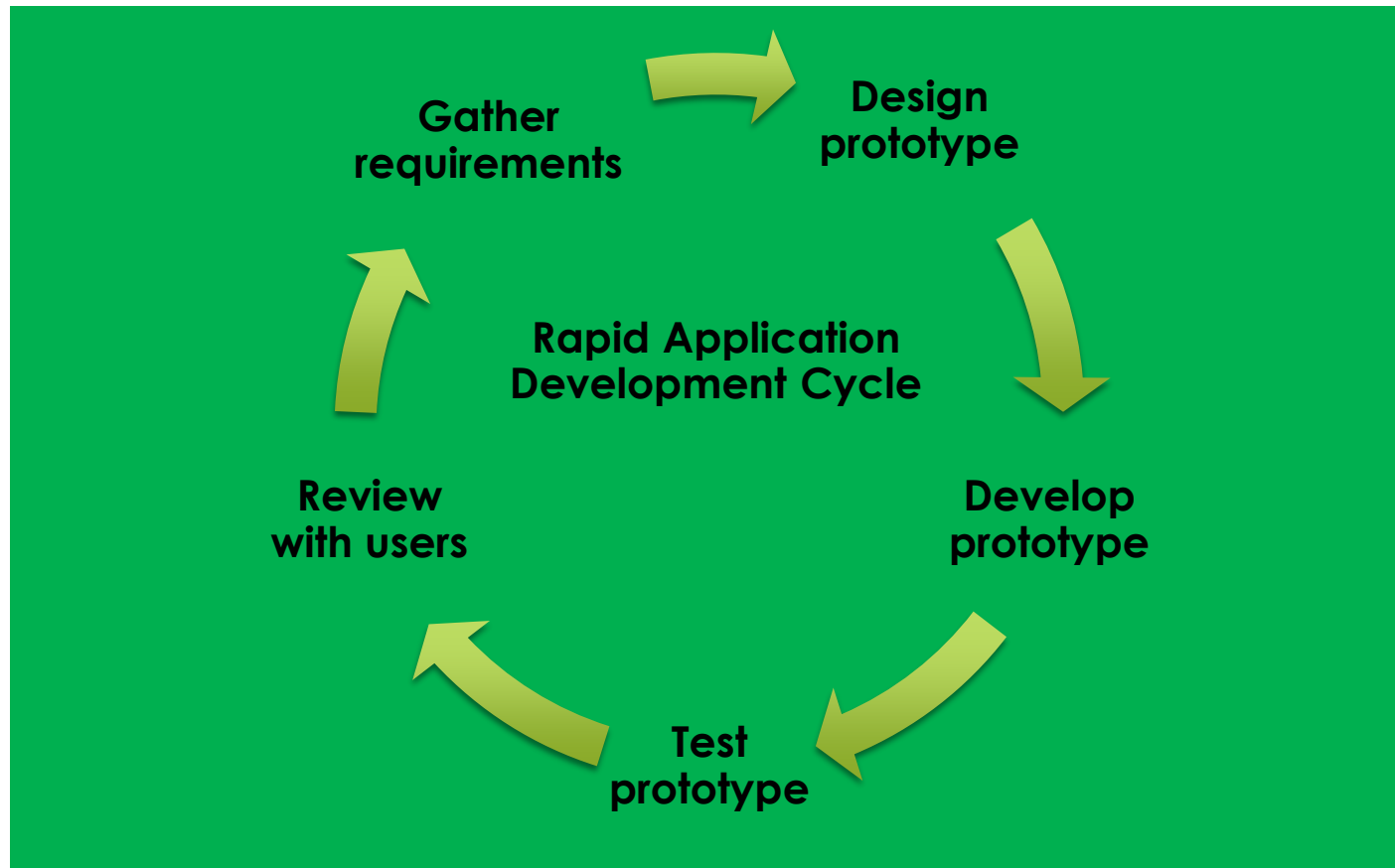
- **Conversion to new system**

  - Parallel – Run both

  - Phased – Small segments of new system

  - Cold Turkey

System Development #8

- **Maintenance**
  - Changes to the system after 'live'

- Up to 30% of overall costs!

Rapid Application Development (RAD)

Rapid Application Development Cycle

- Gather requirements
- Design prototype
- Develop prototype
- Test prototype
- Review with users

Outsourcing Models

- **Full or complete outsourcing:** outside company handles all IT functions so the organization can focus on its core activities

  - may reduce IT costs.

- **Selective or partial outsourcing**: only certain aspects of IT are outsourced to a service provider.

- **Process-based outsourcing:** organization outsources a particular