

# **CSE347**

## **Information System Analysis and Design**

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# Topic:1

- System Development Life Cycle

# The System Development Life Cycle

What is an **information system (IS)**?

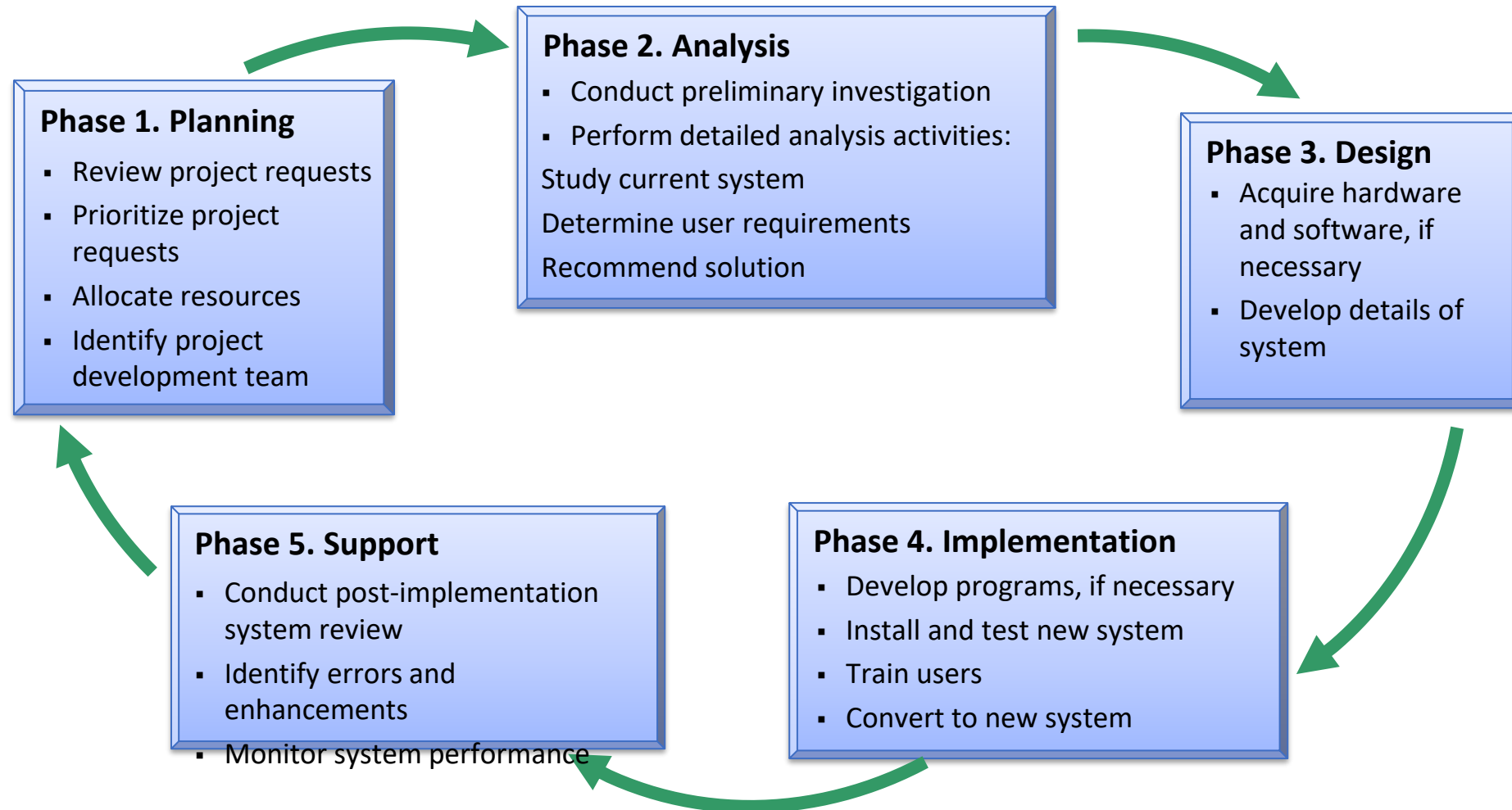
Hardware, software, data,  
people, and procedures that  
work together to produce  
quality information

**System**—Set of components  
that interact to achieve  
common goal

Businesses use many types of  
systems

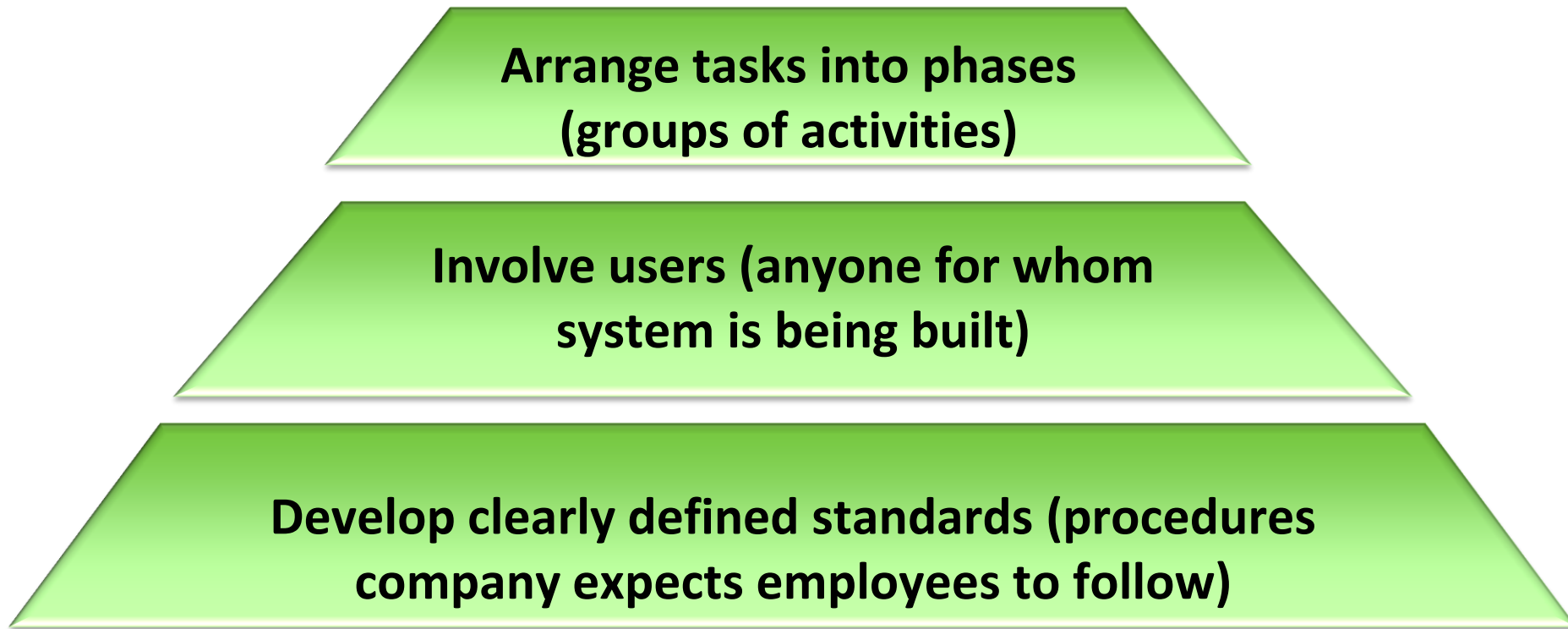
# The System Development Life Cycle

What are the phases of the **system development cycle**?



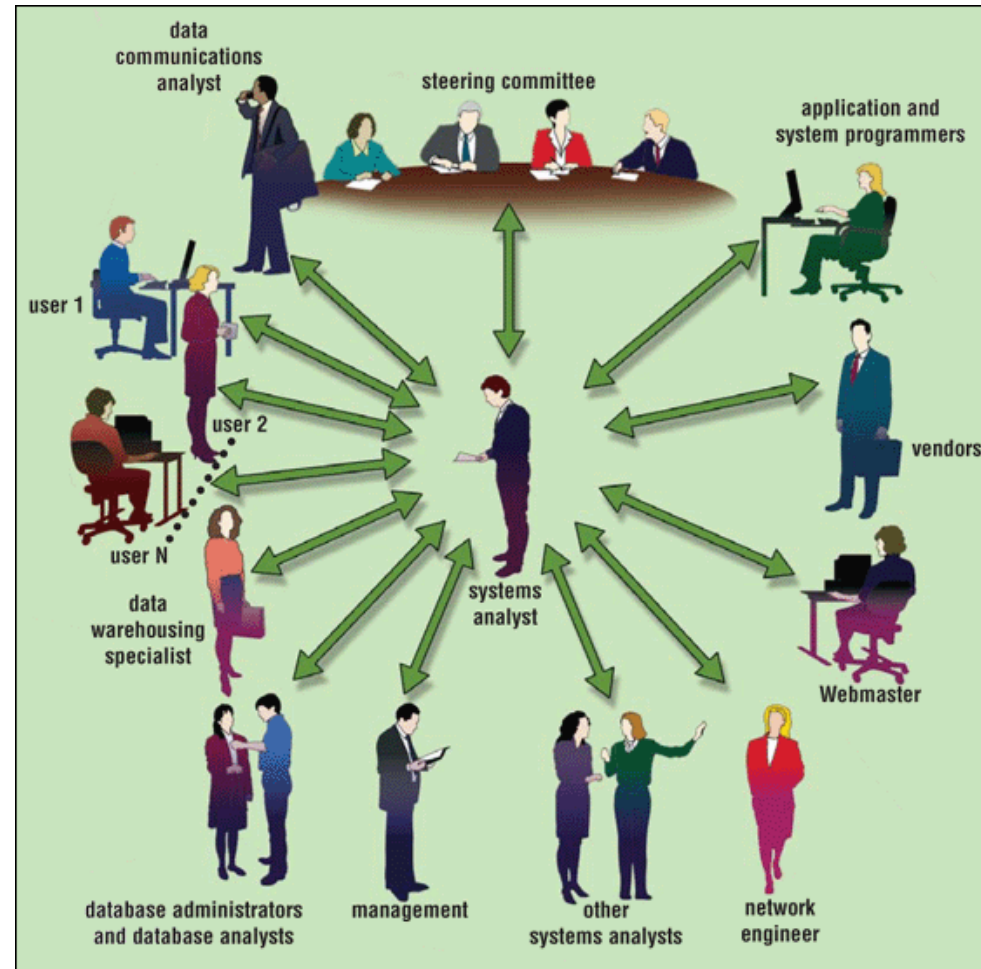
# The System Development Life Cycle

What are guidelines for system development?



# The System Development Life Cycle

Who participates in the system development life cycle?



# The System Development Life Cycle

What is a **systems analyst**?



**Responsible for designing and  
developing information system**



**Liaison between users and IT  
professionals**

# The System Development Life Cycle

What is the **project team**?

**Formed to work on project from beginning to end**

**Consists of users, systems analyst, and other IT professionals**

Project leader—one member of the team who manages and controls project budget and schedule



# The System Development Life Cycle

What is **feasibility**?

- Measure of how suitable system development will be to the company

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Four  
feasibility  
tests

Operational feasibility

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Schedule feasibility

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Technical feasibility

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Economic feasibility (also  
called cost/benefit feasibility)

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# The System Development Life Cycle

What is **documentation**?

**Collection and summarization  
of data and information**

**Includes reports, diagrams,  
programs, and other deliverables**

# The System Development Life Cycle

What are six data and information gathering techniques?

- **Review documentation**
- **Observe**
- **Questionnaire**
- **Interview**
- **Joint-application design (JAD) session**
- **Research**

# The System Development Life Cycle

What are some reasons to create or modify an information system?

- To correct problem in existing system
- To improve existing system
- Outside group may mandate change
- Competition can lead to change

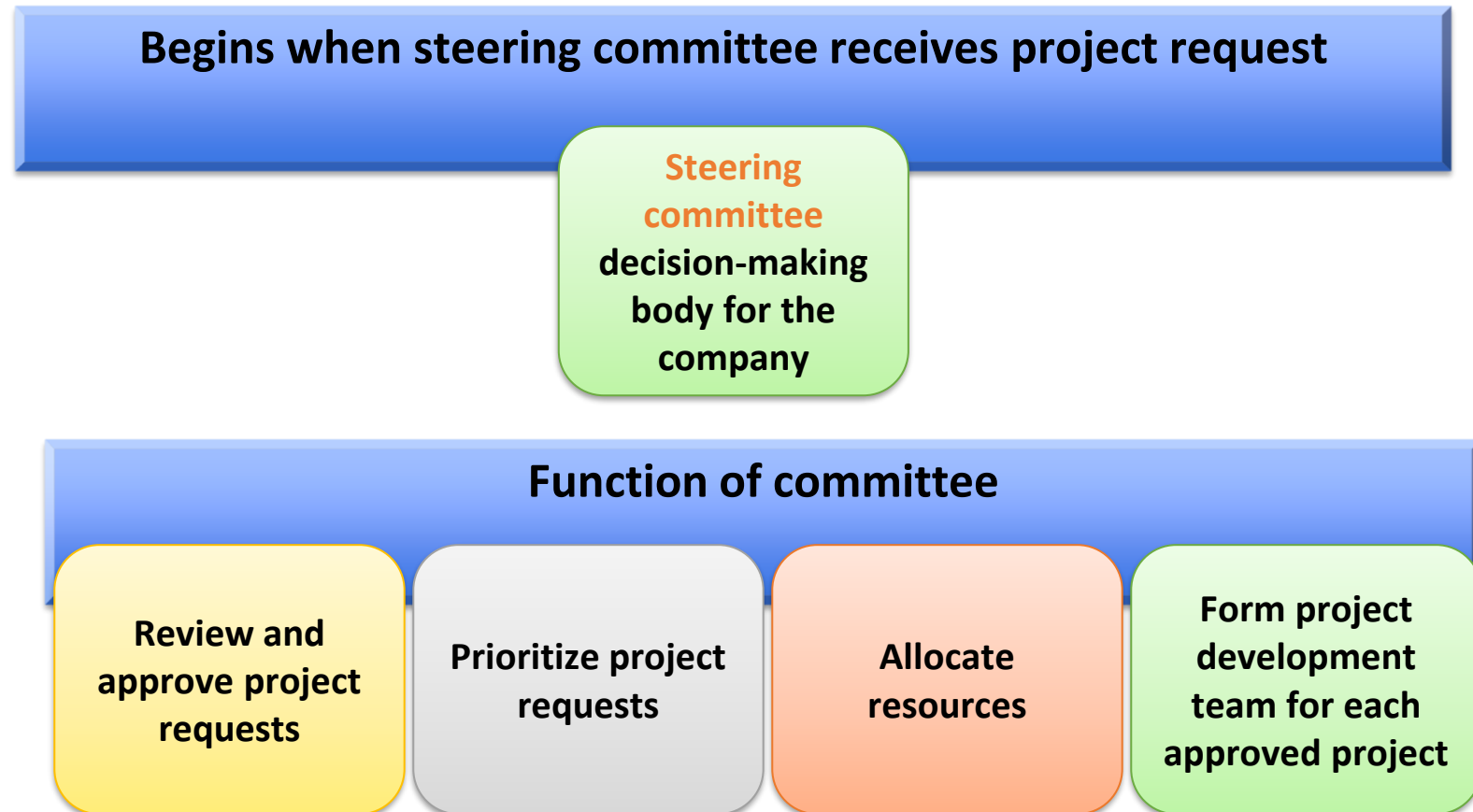
# The System Development Life Cycle

What is a request for system services?

- **Formal request for new or modified information system**
  - Also called **project request**

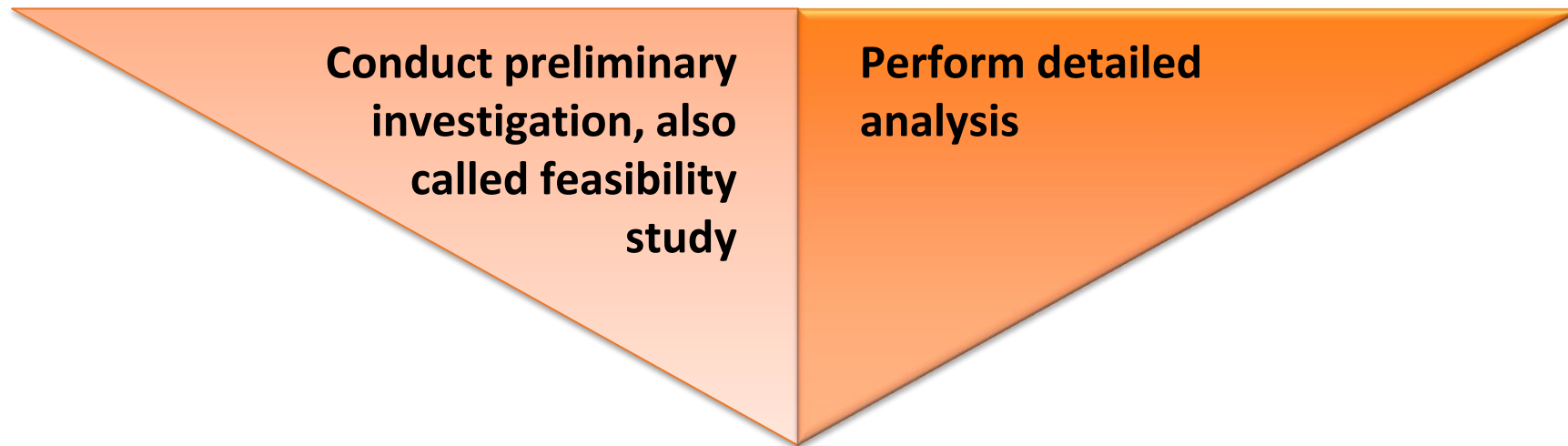
# The System Development Life Cycle

What is the **planning phase**?



# The System Development Life Cycle

What is the **analysis phase**?



# The System Development Life Cycle

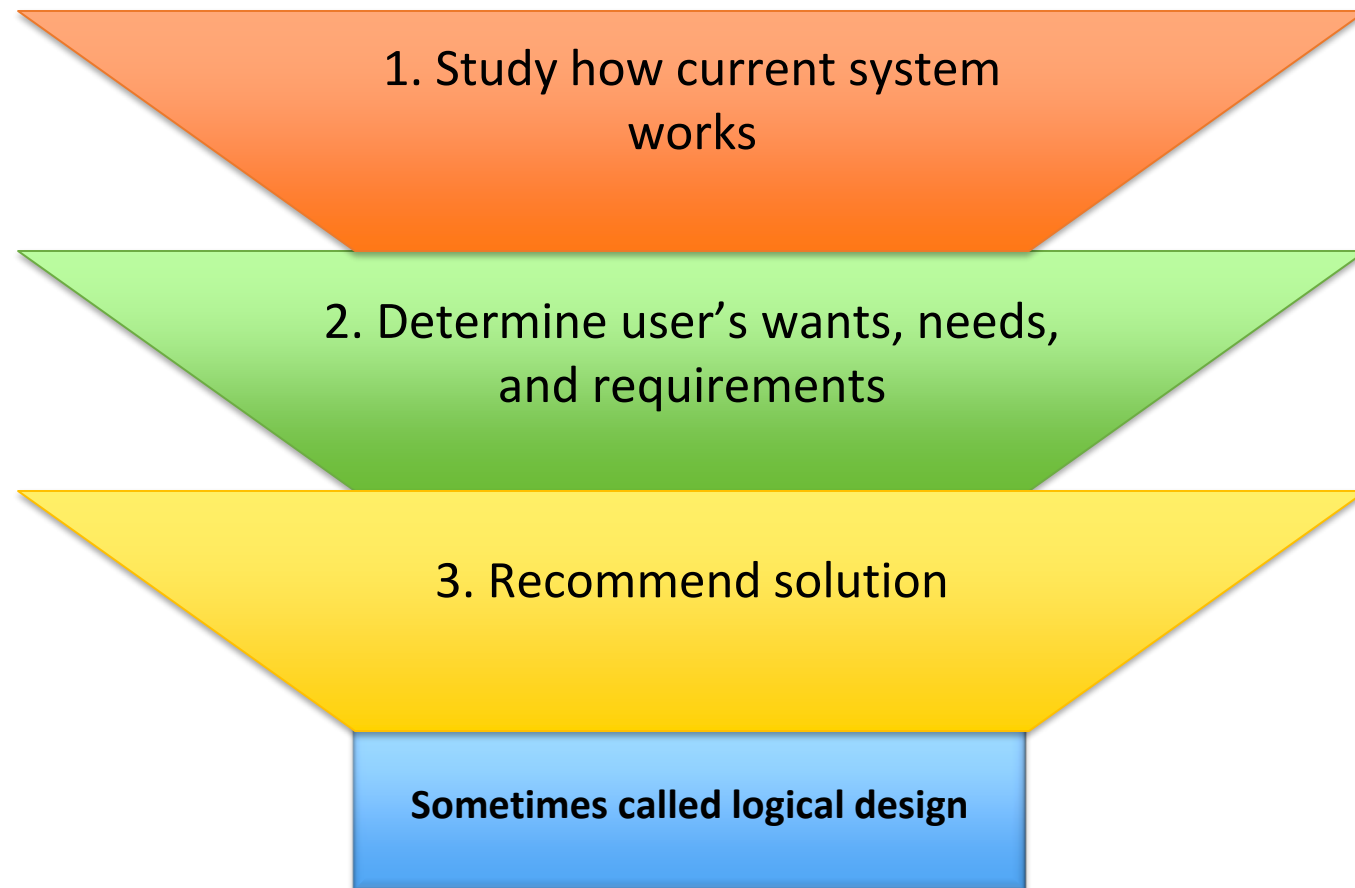
What is the preliminary investigation?

- **Determine exact nature of problem or improvement and whether it is worth pursuing**
  - Findings are presented in feasibility report, also known as a feasibility study



# The System Development Life Cycle

What is detailed analysis?

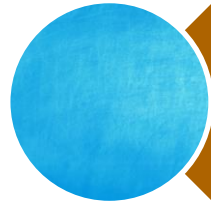


# The System Development Life Cycle

What is the **system proposal**?



Assesses feasibility  
of each alternative solution



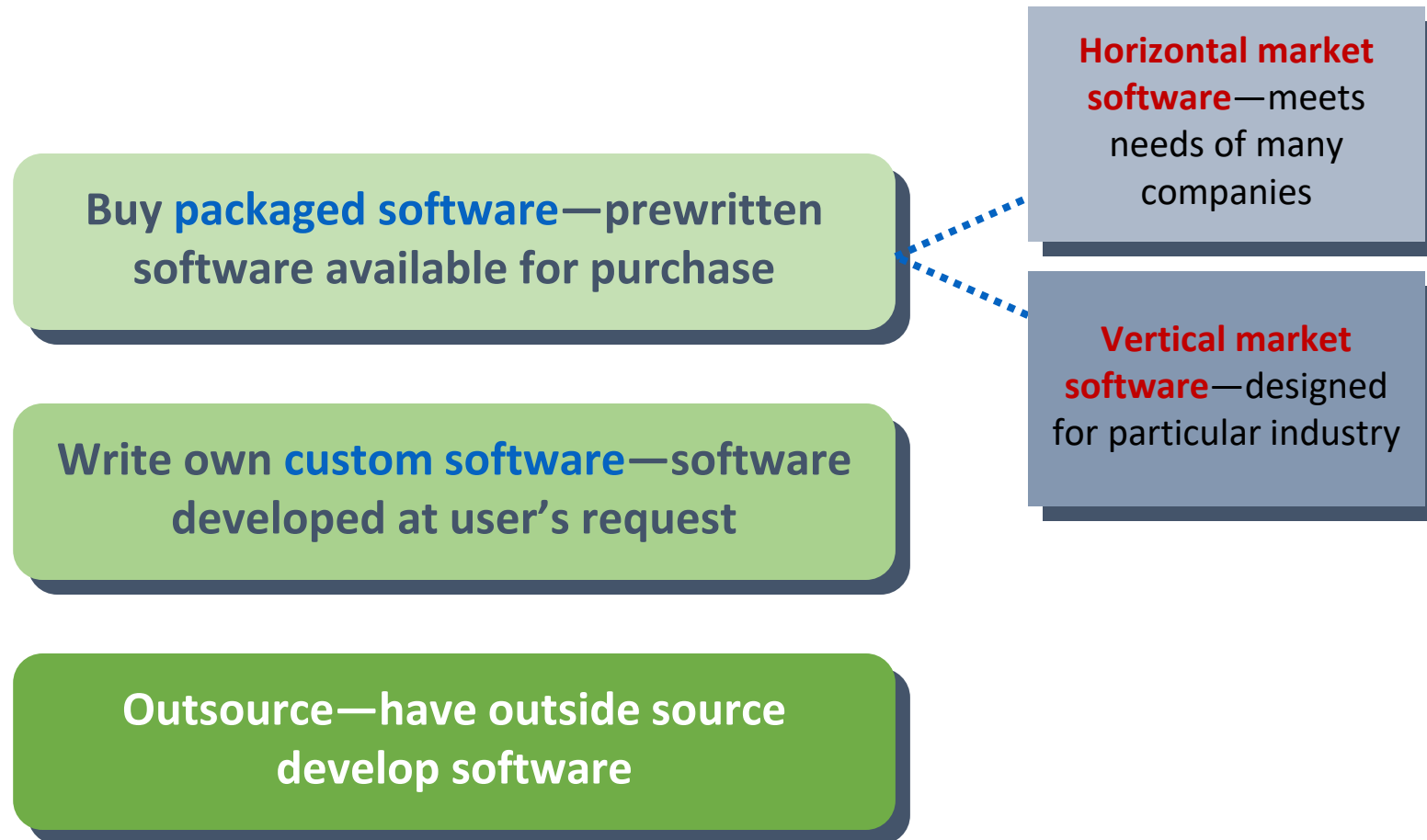
Recommends the most feasible solution  
for the project



Presented to steering committee, which  
decides how system will be developed

# The System Development Life Cycle

What are possible solutions?



# The System Development Life Cycle

What is the **design phase**?



Acquire hardware and software

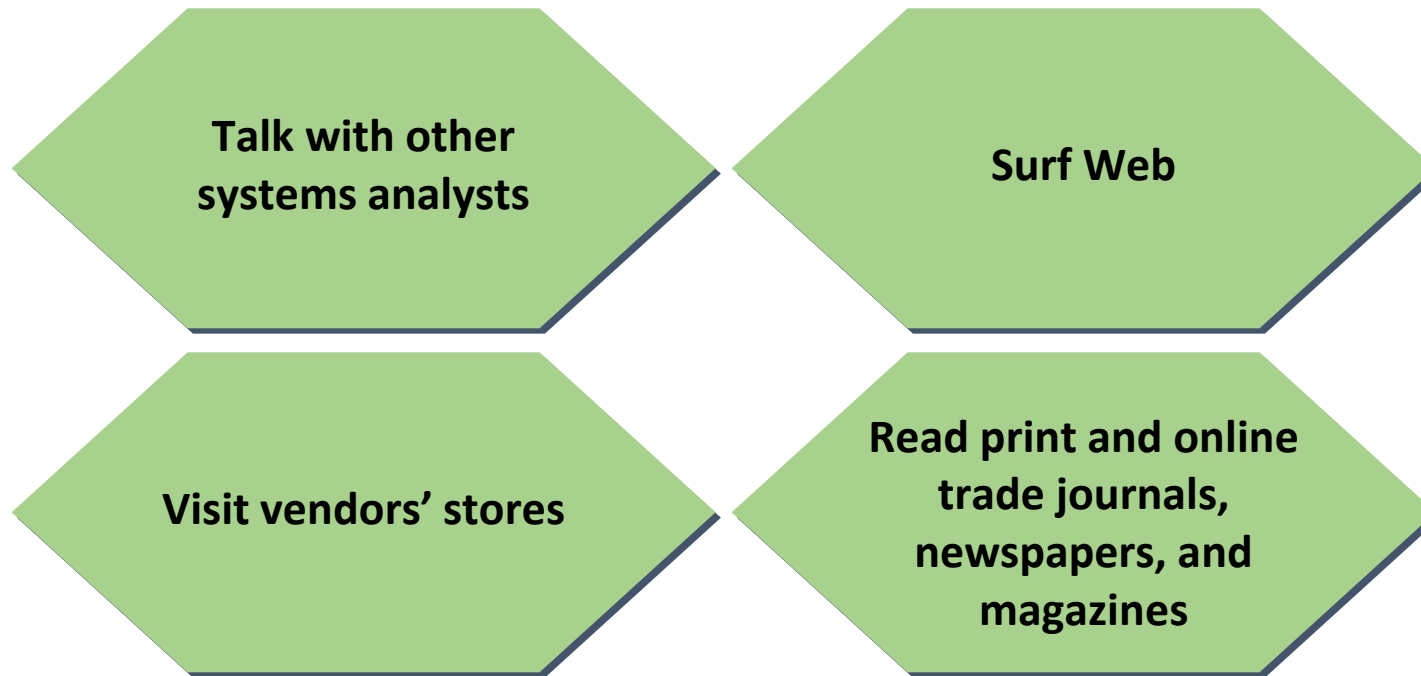
The diagram consists of two light blue rounded rectangular boxes with dark blue shadows. The first box is positioned higher and to the left, containing the text 'Acquire hardware and software'. The second box is positioned lower and to the right, containing the text 'Develop all details of new or modified information system'.

Develop all details of new or  
modified information system

# The System Development Life Cycle

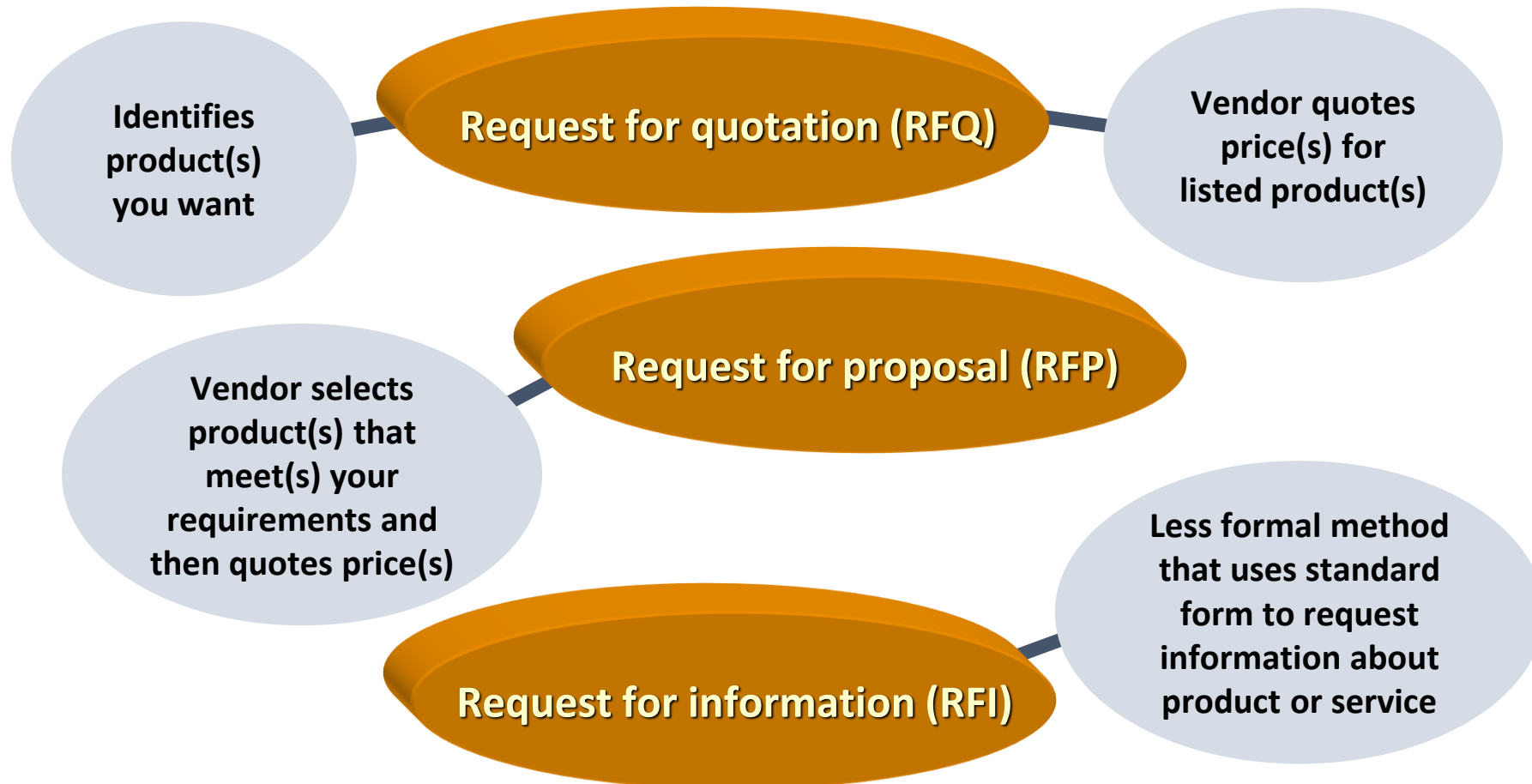
What is needed to acquire new hardware and software?

- **Identify all hardware and software requirements of new or modified system**



# The System Development Life Cycle

What are three basic documents used to summarize technical specifications?



# The System Development Life Cycle

How do systems analysts test software products?

- **References from vendor**
- **Talk to current users of product**
- **Product demonstrations**
- **Trial version of software**
- **Benchmark test** measures performance

# The System Development Life Cycle

What is a detailed design?

Detailed design specifications for components in proposed solution

Includes several activities

Database  
design

Input and  
output design

Program  
design



# The System Development Life Cycle

What is a mockup?

- Sample of input or output that contains actual data

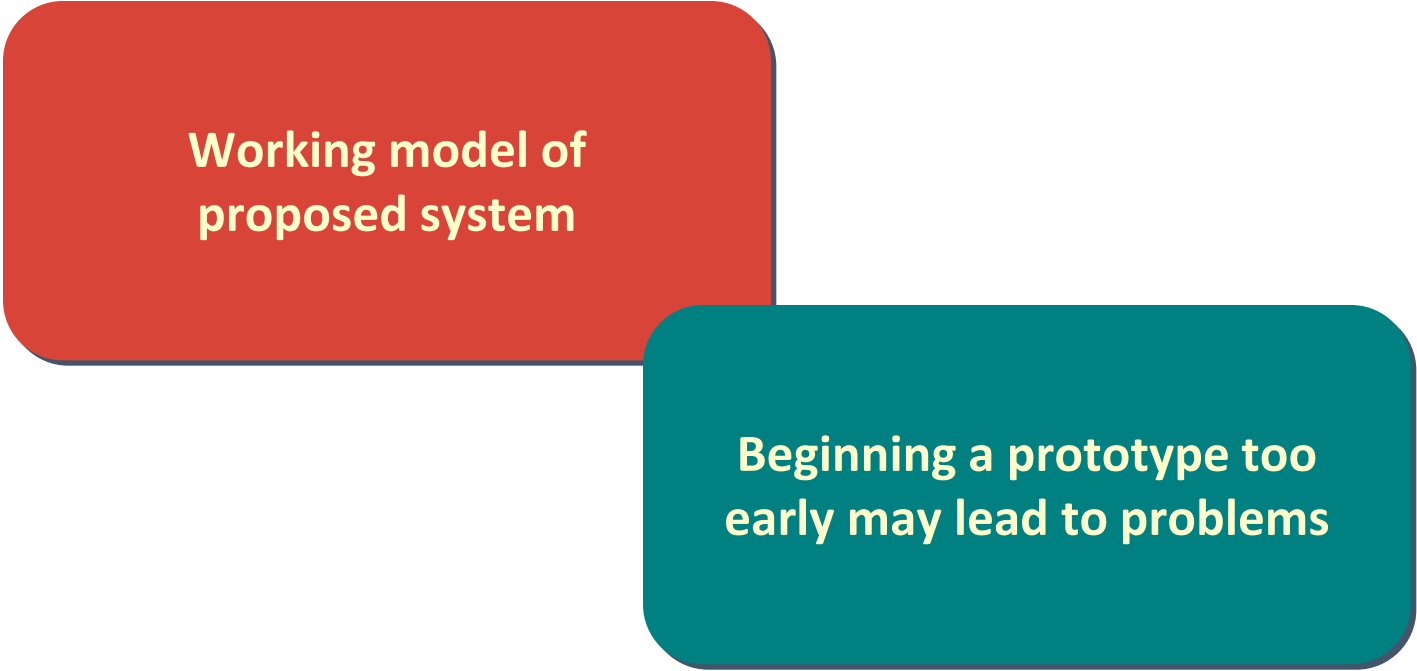
Vendor Maintenance Form

Vendor ID	Vendor Name		
COAL	Computing Central		
Address		City	State
5563 Sunset boulevard		Brea	CA
Postal Code			
92621			
Contact Name	E-mail Address	Telephone Number	Fax Number
Marianne Schlotski	schlotski@cc.com	(714) 555-3939	(714) 555-3940
Product Line			
PCs, printers, speakers, microphones			
Notes			
Pager: (714) 555-3028			

Record: 1 of 1

# The System Development Life Cycle

What is a **prototype**?



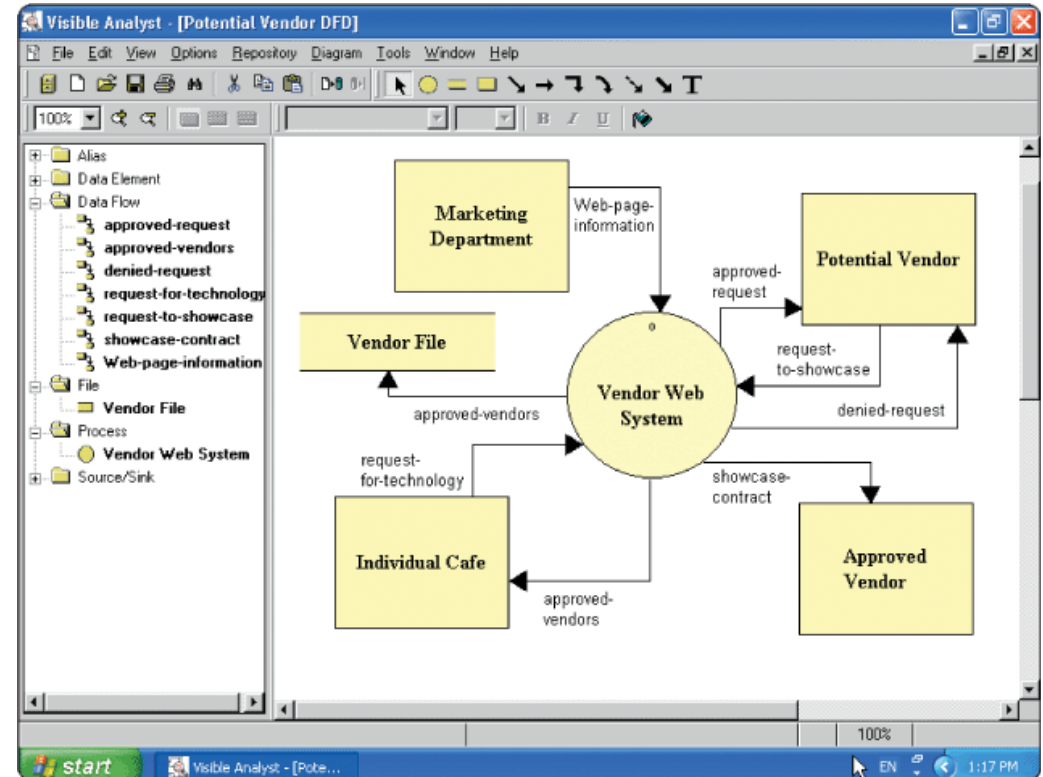
**Working model of  
proposed system**

**Beginning a prototype too  
early may lead to problems**

# The System Development Life Cycle

What is computer-aided software engineering (CASE)?

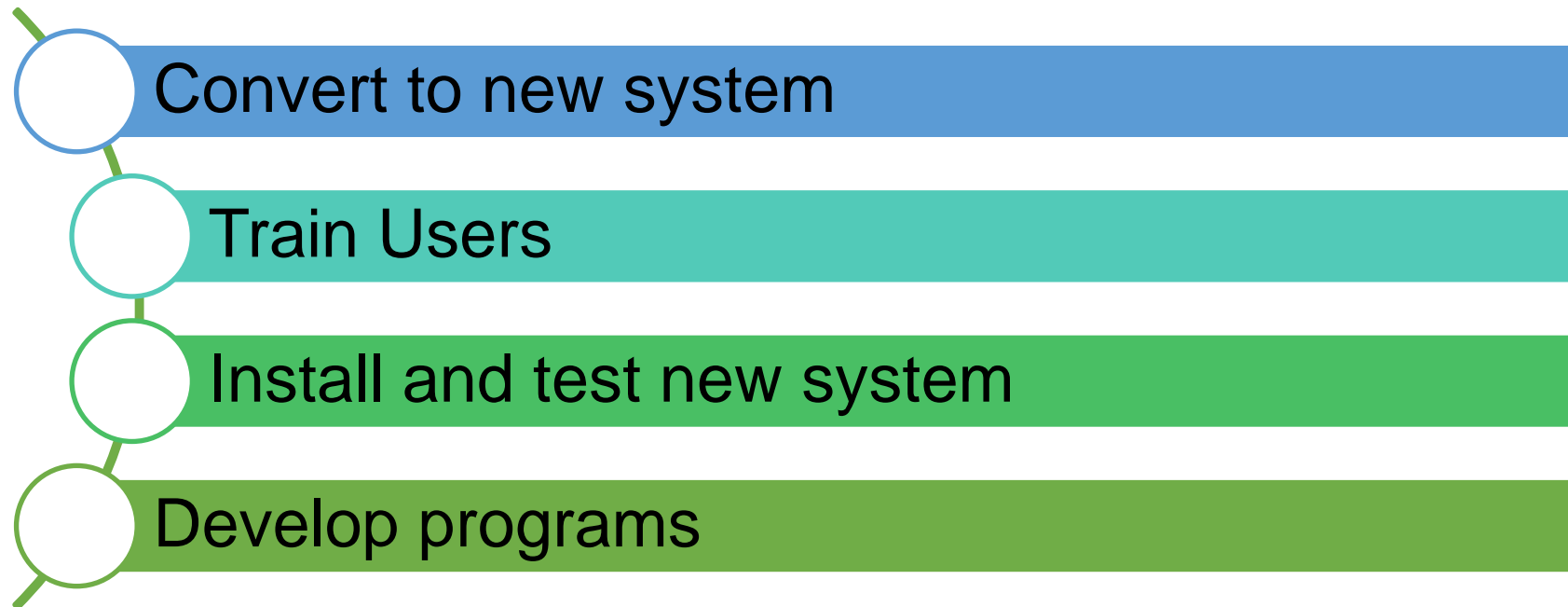
- **Software tools designed to support activities of system development cycle**



# The System Development Life Cycle

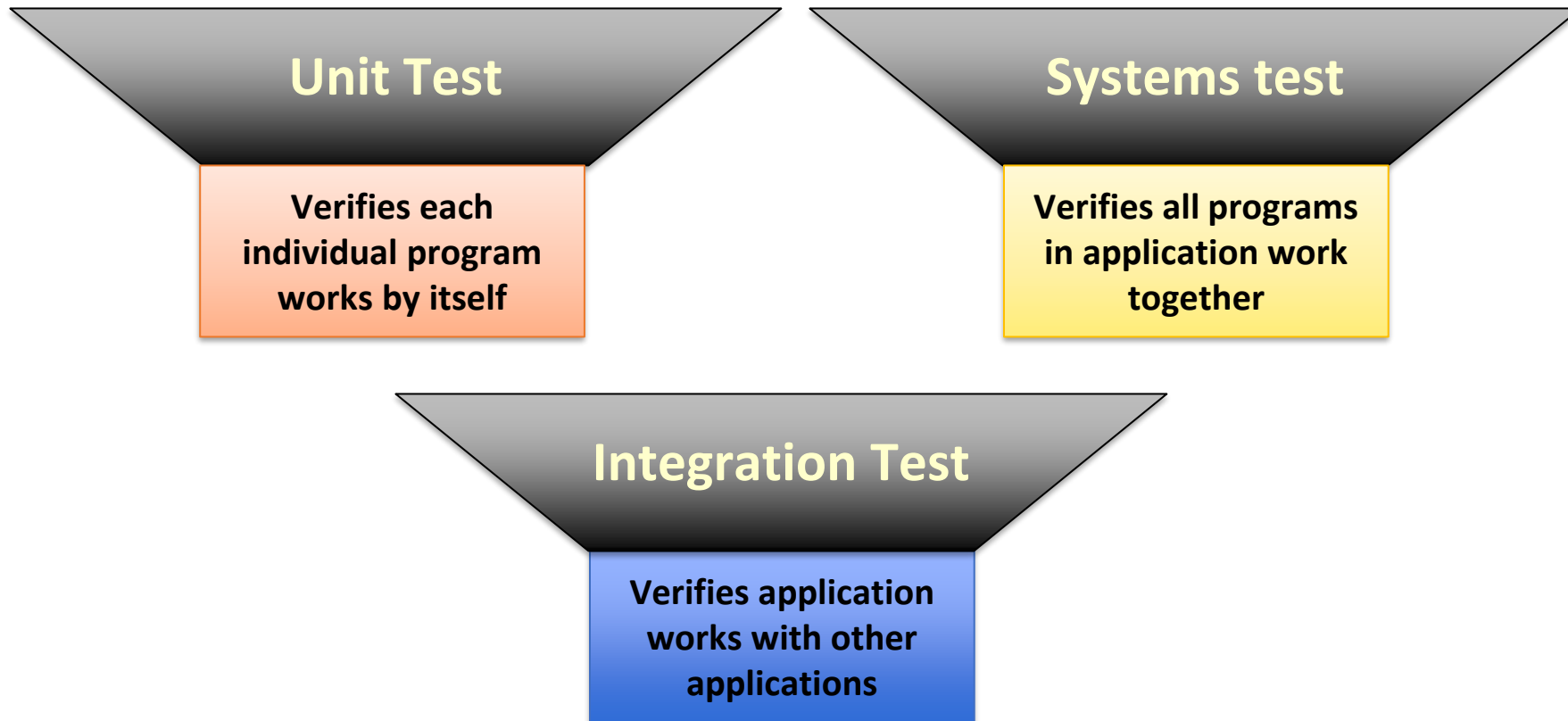
What is the **implementation phase**?

- **Purpose is to construct, or build, new or modified system and then deliver it to users**



# The System Development Life Cycle

What are the three types of tests performed by system developers?



# The System Development Life Cycle

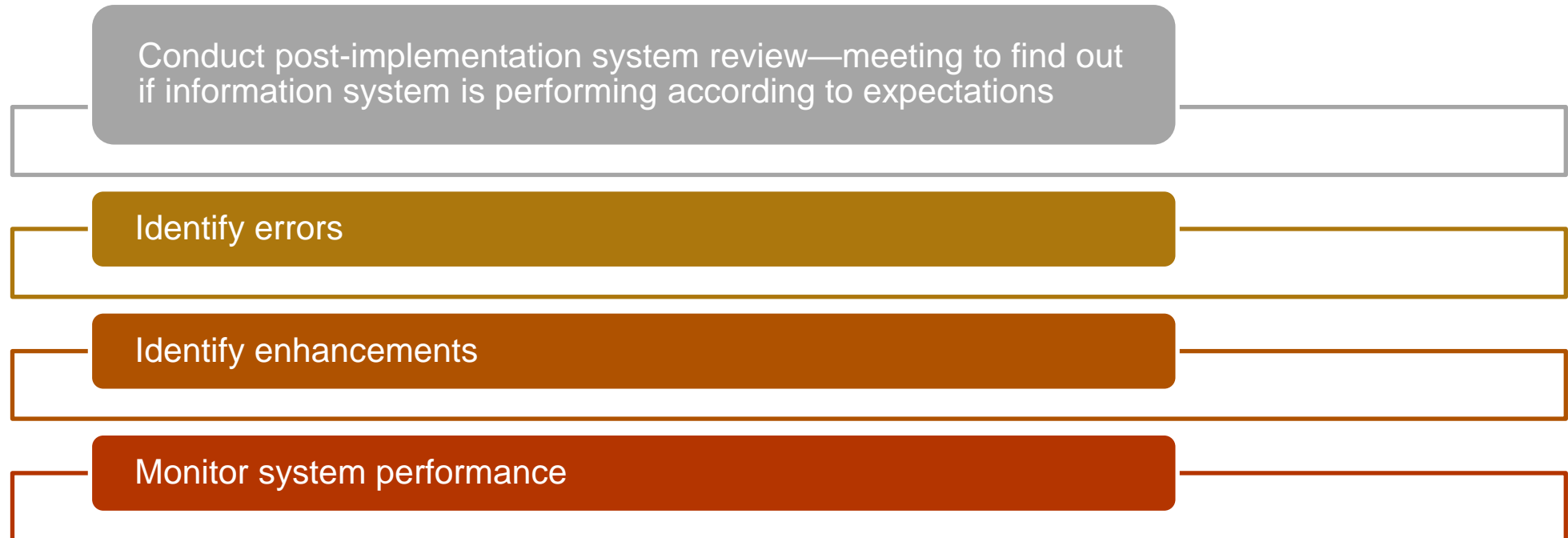
What is **training**?

- Showing users exactly how they will use new hardware and software in system

# The System Development Life Cycle

What is the **support phase**?

- **Provides ongoing assistance after system is implemented**



# Key Points

- Importance of SDLC in system development
- Documents and deliverables in different phases
- Responsibilities of different personnel working in SDLC
- Several terms used in SDLC