

Chapter -11

Solve review

Review Questions::

1.What does a creeping commitment approach to feasibility analysis mean?

A *creeping commitment* approach to feasibility analysis means that feasibility is not assessed just once at the beginning of a project, but is continuously reassessed throughout the system development life cycle.

According to the document you provided:

"Feasibility should be measured throughout the life cycle. In earlier chapters we called this a *creeping commitment* approach to feasibility. The scope and complexity of an apparently feasible project can change after the initial problems and opportunities are fully analyzed or after the system has been designed. Thus, a project that is feasible at one point may become infeasible later."

This approach ensures that as more is learned about the system, its requirements, and its implementation challenges, the decision to continue or stop is revisited at various checkpoints, helping avoid costly mistakes.

2.What are the feasibility analysis checkpoints in the development cycle? What should be done at each checkpoint?

occur during the system analysis phases and follow a “creeping commitment” approach. This means feasibility is reassessed at several points as the project progresses. Below are the key checkpoints and what should be done at each:

1. Scope Definition Checkpoint

- When:** During the **Scope Definition Phase**

- **Purpose:** Assess the urgency of the problem and provide a rough estimate of development costs.
- **Action:**
 - Determine if the problem/opportunity justifies a detailed study.
 - Provide a high-level cost-benefit assessment.
 - Evaluate if the project is worth further analysis.

2. Problem Analysis Checkpoint

- **When:** After a more detailed study and **Problem Analysis Phase**
- **Purpose:** Reassess feasibility with a clearer understanding of problems and potential benefits.
- **Action:**
 - Refine cost and benefit estimates.
 - Reassess if the problem is still worth solving.
 - Evaluate whether the initial scope has expanded (scope creep) and adjust accordingly.

3. Decision Analysis Checkpoint

- **When:** During the **Decision Analysis Phase** • **Purpose:** Evaluate alternative system solutions.
- **Action:**
 - Define and compare multiple system alternatives (e.g., do nothing, reengineer, buy, build).
 - Analyze each option in terms of operational, technical, schedule, and economic feasibility.
 - Recommend the most feasible solution to proceed to design.

At each checkpoint, the project may be:

- **Approved to proceed,**

- **Revised** to adjust scope or strategy, or
- **Canceled** if deemed infeasible.

These checkpoints ensure that resources are only invested in projects that continue to demonstrate viability.

3.What are the objectives of the operational feasibility test?

The objectives of the **operational feasibility test**—as outlined in your uploaded document—are to assess:

The objectives are to:

- Determine if the proposed system solves the identified problems
- Assess if users will accept and use the system
- Evaluate if the system meets organizational needs
- Identify potential operational issues

In short, operational feasibility evaluates whether the system will **work effectively and usefully in the intended business environment** once implemented

4.Why is it important to find out how the end users and managers feel about the problem solution that the system analyst has identified?

It's important because:

- Users/managers ultimately determine the system's success
- Their concerns may reveal overlooked requirements
- Early buy-in increases adoption chances
- They may identify practical implementation issues
- Resistance can be addressed early

কারণগুলো গুরুত্বপূর্ণ:

- ব্যবহারকারী/ম্যানেজারদের সিস্টেমের সফলতা নির্ধারণ করে
- তাদের উদ্বেগ অবহেলিত প্রয়োজনীয়তা প্রকাশ করতে পারে
- প্রাথমিক সমর্থন গ্রহণযোগ্যতা বাড়ায়
- তারা বাস্তবায়নের সমস্যা চিহ্নিত করতে পারে
- প্রতিরোধ প্রাথমিকভাবে মোকাবেলা করা যায়

5. When is usability analysis performed? What is the objective of the usability analysis?

When is Usability Analysis Performed?

Usability analysis is checked at key stages of the project:

1. **Scope Definition Phase** – Initial check: "*Is this problem worth solving?*"
2. **Problem Analysis Phase** – After studying current issues: "*Can the new system actually fix these problems?*"
3. **Decision Analysis Phase** – When comparing solutions: "*Which option works best for users?*"

This step-by-step checking is called "**creeping commitment**"—meaning the team keeps reassessing usability before moving forward.

What is the Goal of Usability Analysis?

The main purpose is to make sure:

- The system solves real user problems**
- Users will actually accept and use it**
- It's worth the cost and effort**
- It fits with how the organization works**

This helps avoid wasting time and money on a system that users won't like or use.

6.What is the objective of the technical feasibility test?

To check if:

1. **The technology works** – Is the solution practical and reliable?
2. **The company has (or can get) the tech** – Hardware, software, etc.
3. **The team has the skills** – Can staff use/maintain it?

Goal: Avoid choosing a system that's too complex, outdated, or impossible to support.

7. What are the characteristics of development costs and operating costs? Use three examples of each kind of cost ..

Development Costs vs. Operating Costs

Development Costs (*One-time expenses to build the system*)

Characteristics:

- Paid **once** during system creation
- Include labor, design, and setup
- Stop after implementation

Examples:

1. **Staff salaries** – Paying developers (\$50/hour) to code the system
 2. **Software licenses** – Buying a \$10,000 database for development
 3. **Training** – Sending analysts to a \$3,500 programming course
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Operating Costs (*Ongoing expenses to run the system*)

Characteristics:

- **Recurring** (monthly/yearly)

- Include maintenance, supplies, and support
- Continue for the system's entire lifespan

Examples:

1. **Maintenance fees** – Annual \$5,000 contract for server repairs
2. **Supplies** – Printing 15,000 forms/year at \$0.22 each
3. **Support staff** – Paying IT \$60,000/year to manage the system

8. list 5 examples of tangible benefits.

Tangible benefits are described as those **that can be easily quantified**, typically in monetary terms. Examples include:

- **Fewer processing errors**
- **Increased throughput**
- **Decreased response time**
- **Elimination of job steps**
- **Increased sales**
- **Reduced credit losses**
- **Reduced expenses**

These benefits are measurable and can be used directly in a cost-benefit analysis to evaluate the economic feasibility of a system

9. Why Is the time value of money concept an essential consideration when assessing economic feasibility?

The concept of the **time value of money** is essential when assessing economic feasibility because it ensures that **future costs and benefits are adjusted to their present values**, enabling accurate comparison and evaluation of investment alternatives.

As stated in the document:

"One concept that should be applied to each technique is the adjustment of cost and benefits to reflect the time value of money. **The time value of money — a dollar today is worth more than a dollar one year from now.**"

By applying this principle in methods like **payback analysis, return on investment (ROI),** and **net present value (NPV)**, analysts can:

- Avoid misleading results that ignore the timing of cash flows.
 - Make sound decisions by comparing projects with different durations.
 - Determine whether the investment returns are sufficient when considering inflation or opportunity cost.
- **নগদ প্রবাহের সময় উপেক্ষা করে ভুল সিদ্ধান্ত এড়ানো**
(যেমন: আজকের ১০০ টাকা আর ৫ বছর পরের ১০০ টাকার মূল্য এক নয়)
- **ভিন্ন সময়ের প্রকল্পের তুলনা করে সঠিক সিদ্ধান্ত নেওয়া**
(যেমন: ২ বছরের প্রকল্প বনাম ৫ বছরের প্রকল্পের লাভের তুলনা)
- **মুদ্রাস্ফীতি বা বিকল্প বিনিয়োগের সুযোগ বিবেচনা করে লাভ ঘর্থেষ্ট কিনা তা নির্ধারণ**
(যেমন: ব্যাংকে টাকা রাখলে যে সুদ পেতেন, তার চেয়ে প্রকল্পটি বেশি লাভ দিচ্ছে তো?)

10. What are me most commonly used techniques to determine the cost-effectiveness of a project ?

The most commonly used techniques to determine the cost-effectiveness of a project, as explained in your uploaded PDF, are the following economic feasibility or cost-benefit analysis methods:

1. Payback Analysis

- Determines how long it will take for the accrued benefits to repay the costs of the system.
- The result is called the *payback period*. A shorter payback period generally indicates a more cost-effective project.

2. Return on Investment (ROI) Analysis

- Compares the total net benefits to the total costs over the system's lifetime.
- $\text{ROI} = (\text{Lifetime Benefits} - \text{Lifetime Costs}) / \text{Lifetime Costs}$
- This gives a profitability percentage for the investment.

3. Net Present Value (NPV) Analysis

- Adjusts all future costs and benefits to their present value using a discount rate to reflect the time value of money.
- $\text{NPV} = \text{Total Present Value of Benefits} - \text{Total Present Value of Costs}$
- A positive NPV indicates a profitable and cost-effective investment.

These methods help assess whether a project is economically feasible and support decision-making for project selection and approval

11. For what are the candidate systems matrix and feasibility analysis matrix used?

1. Candidate Systems Matrix

Purpose: "What are our options?"

- **How it works:**

- Columns = Different system solutions being considered
 - Rows = Key features being compared (e.g., cost, speed, user needs)
 - **Key point:** Just lists facts—**doesn't pick a winner.**
 - **Example:** Comparing 3 software options for features like "cloud storage" or "mobile access."
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2. Feasibility Analysis Matrix

Purpose: "Which option actually works best?"

- **How it works:**
 - Rates each option on critical factors (e.g., cost, tech requirements, legal rules).
 - Uses scores/weights to rank choices (e.g., "Technical Fit: 5/5").
 - **Key point: Eliminates bad fits**—like systems that are too expensive or hard to implement.
 - **Example:** Scoring options A, B, C on "ease of use" and "budget" to pick the top choice.
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Simple Analogy:

- **Candidate Matrix** = "Here are 3 cars with their specs (price, mileage, color)."
- **Feasibility Matrix** = *"Car #2 is best because it's affordable, fuel-efficient, and available now."*

12. For written reports what is the difference between the factual format and the administrative format?

Factual vs. Administrative Report Formats

Feature	Factual Format	Administrative Format
Best for	Technical teams, developers	Managers, executives, decision-makers
Structure	1. Introduction 2. Methods 3. Facts 4. Conclusions	1. Introduction 2. Conclusions first 3. Facts summary 4. Methods 5. Final wrap-up 6. Appendices (details)
Key Focus	Detailed data & processes	Bottom-line results & recommendations
When to Use	Technical specs, system requirements	Proposals, executive summaries
Reader Experience	"Walk through our process step-by-step"	"Here's what you need to know upfront"

13. What are the steps in writing a report?

7 Steps to Write a Report

1. Define Purpose & Audience

- Ask: "Why am I writing this?" (e.g., inform, persuade, document).
- Tailor content to the reader (e.g., technical team vs. executives).

2. Gather & Organize Info

- Collect data, research, or interview notes.
- Group related ideas (use bullet points or outlines).

3. Create a Structure

- **Factual Format:** Intro → Methods → Facts → Conclusion.
- **Administrative Format:** Intro → **Conclusions First** → Details → Appendices.

4. Write the First Draft

- Start with key sections (avoid perfection—just get ideas down).
- Use clear headings and short paragraphs.

5. Revise & Edit

- Trim fluff, fix jargon, and check logic flow.
- Ensure facts are accurate and cited.

6. Add Visuals (If Needed)

- Tables, charts, or diagrams to simplify complex data.

7. Finalize & Share

- Proofread for typos/grammar.
- Format professionally (font, spacing, page numbers).
- Distribute to stakeholders.

14. What are the advantages and disadvantages of presentations?

Advantages of Presentations

1. **Clarity** - Visually highlights key recommendations (e.g., "This system will cut costs by 20%").
2. **Speed** - Delivers conclusions fast (executives get the "big picture" in 15 mins).
3. **Interaction** - Live Q&A addresses concerns immediately ("How does this handle peak demand?").
4. **Persuasion** - Tone/body language boosts credibility (critical for approval).

Disadvantages of Presentations

1. **Oversimplification** - Skips technical nuances (e.g., integration challenges).
2. **Time Pressure** - Forces complex ideas into 10-slide decks (details get cut).
3. **Presenter Risk** - Great content can flop with poor delivery (umms, shaky visuals).
4. **No Reference** - Attendees may forget details without a written follow-up.

When to Use Presentations?

- **Best for:** Decision-makers, high-level approvals, or building consensus.
- **Pair with:** A short executive summary (1-2 pages) for post-meeting reference.

15. What should be done to follow up the formal presentation?

Post-Presentation Follow-Up Actions

1. Send a Written Summary Within 24 Hours

- For **executives**: 1-2 page "decision memo" with key recommendations, costs, and ROI.
- For **technical teams**: Detailed appendix with specs, timelines, and FAQs.

2. Structure the Report Smartly

- *Administrative format* for leaders: **Conclusions first** → Brief supporting facts → Call to action.
- *Factual format* for implementers: Methods → Data → Technical constraints.

3. Include Critical Extras

- **Title page + Table of contents** (for easy navigation).
- **Visual recap**: Infographic of key benefits (e.g., "3 Ways This Cuts Costs").

4. Address Open Questions

- Add an appendix titled "*Post-Presentation Q&A*" with resolved queries.

5. Schedule Next Steps

- Example email:

"Per your request, here's the feasibility matrix comparing Option A/B. Let's meet Thursday to finalize the vendor."

