**Chapter 4 Review Questions**

1. What are the key deliverables that are created during the analysis phase? What is the final deliverable from the analysis phase and what does it contain?

The key deliverables (pg 110-111) include:

* *Requirements Definition*
* *Functional Models*
* *Structural Models*
* *Behavioral Models*

The final deliverable from the analysis phase is the *system proposal*. It contains an executive summary, the system request, the work plan, feasibility analysis, requirements definition, and evolving models that help describe the system (pg 144)

**2.** What is the difference between an as-is system and a to-be system?

As-is system is the current system of an organization and a to-be system is the new system the organization wants to move to.

**3. What is the purpose of the requirements definition?**

The requirements definition is a straightforward text report that simply lists the functional and nonfunctional requirements in an outline format. The requirements are numbered in a legal or outline format so that each requirement is clearly identified. The most obvious purpose of the requirements definition is to provide the information needed by the other deliverables in analysis, which include functional, structural, and behavioral models, and to support activities in the design phase. The most important purpose of the requirements definition, however, is to define the scope of the system.

**4.** *What are the three basic steps of the analysis process? Which step is sometimes skipped or done in cursory fashion? Why?*

1) Understanding the as-is system 2) Identifying improvements 3) developing requirements for the to-be system

- The first step is often skipped when no current system exists, of the existing system and process are irrelevant to the future system, or if the project team is using a Rapid Application Development or Agile Development method in which the as-is system is not emphasized.

**5. Compare and contrast the business goals of BPA, BPI, and BPR.**

**Business Process Automation (BPA)** leaves the basic way in which the organization operates unchanged and uses computer technology to do some of the work. BPA can make the organization more efficient but has the least impact on the business. Planners in BPA projects spend a significant time understanding the current as-is system before moving on to improvements and to-be system requirements. Problem analysis and root cause analysis are two popular BPA techniques. **Business Process Improvement (BPI)** makes moderate changes to the way in which the organization operates to take advantage of new opportunities offered by technology or to copy what competitors are doing. BPI can improve efficiency (i.e. - doing things right) and improve effectiveness (i.e. - doing the right things). Planners of BPI projects also spend time understanding the as-is system, but much less time than with BPA projects; their primary focus is on improving business processes, so time is spent on the as-is only to help with the improvement analyses and the to-be system requirements. Duration analysis, activity-based costing, and informal benchmarking are 3 popular BPI activities. **Business Process Reengineering (BPR) means** changing the fundamental way in which the organization operates, “obliterating” the current way of doing business and making major changes to take advantage of new ideas and new technology. Planners of BPR projects spend little time understanding the as-is, because their goal is to focus on new ideas and new way of doing business. Outcome analysis, technology analysis, and activity elimination are 3 popular BPR activities.

1. Compare and contrast problem analysis and root-cause analysis. Under what conditions would you use problem analysis? Under what conditions would you use root-cause analysis?

These are two Business Process Automation techniques in which a business leaves their basic operations unchanged and lets computers/technology do the work.

Problem Analysis focuses on identifying solutions for any problems that are identified by users and managers. These changes usually only bring small and incremental improvements, but are effective at improving a system’s efficiency and ease of use.

* This should be used when small problems are identified, and fixing the problem will help make the system easier to use

Root-Cause Analysis on the other hand focuses on identifying the problem itself first, instead of immediately fixing it. Users generate a list of problems, and then all “root causes” of those problems are identified and investigated in hopes that fixing the “root cause” will help deter any future problems.

* This should probably be used when a problem becomes pervasive and your current solution is only temporarily fixing the issue. Investigating the root causes of problems can help find and fix the real problem and in turn may solve many problems at once. Instead of changing a burned out light bulb once a week, change the fixture itself and your light bulb will last a lot longer.

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**7.** Compare and contrast duration analysis and activity-based costing?

Duration analysis requires a detailed examination of the amount of time it takes to perform each process in the current as-is system. Activity based costing is similar to duration analysis, but examines the cost of each major process or step in a business process rather than the time taken.

**8. Assuming time and money were not important concerns, would BPR projects benefit from additional time spent understanding the as-is system? Why or why not?**

The BPR system would not benefit from understanding the as-is system. Their goal is to focus on new ideas and new ways of doing business, not fixing the old systems. The BPR looks at a broader picture of the business and looks for ways it can improve upon the outcomes that provide value to the customer.

**9.** *What are the important factors in selecting an appropriate analysis strategy?*

Important factors are:

1) Potential Business Value

2) Project cost

3) Breadth of Analysis

4) Risk

PG 123-124

1. **Describe the 5 major steps in conducting interviews.**
2. **Selecting Interviewees** – The first step in interviewing is to create an interview schedule listing all the people who will be interviewed, when, and for what purpose. The schedule can be an informal list that is used to help set up meeting time or a formal list that is incorporated into the workplan. The people who appear on the interview schedule are selected based on the analyst’s information needs. The project sponsor, key business users, and other members of the project team can help the analyst determine who in the organization can best provide important information about requirements. These people are listed on the interview schedule in the order in which they should be interviewed.
3. **Designing Interview Questions** – There are 3 types of interview questions: closed-ended questions, open-ended questions, and probing questions. Closed-ended questions require a specific answer. They are similar to multiple-choice or arithmetic questions on an exam. Used when looking for precise, specific information. Open-ended questions leave room for elaboration on the part of the interviewee. They are very similar to essay questions on an exam. Designed to gather rich info and give the interviewee more control over the info that is revealed during the interview. Probing questions follow up on what has just been discussed in order to learn more, and they often are used when the interviewer is unclear about an interviewee’s answer. They encourage the interviewee to expand on or to confirm info from a previous response, and they signal the interviewer is listening and interested in the topic under discussion.
4. **Preparing for the Interview** – The interviewer should have a general interview plan listing the questions to be asked in the appropriate order; should anticipate possible answers and provide follow-up with them; and should identify segues between related topics. The interviewer should confirm the areas in which the interviewee has knowledge in order not to ask questions that he or she can’t answer. Review the topic areas, the questions, and the interview plan, and clearly decide which have the greatest priority in case time runs short.
5. **Conducting the Interview** – The first goal is to build rapport with the interviewee, so that he or she trusts the interviewer and is willing to tell the whole truth, not just give the answers that he or she thinks are wanted. The interviewer should appear to be professional and an unbiased independent seeker of information. The interviewer should appear to be professional and an unbiased, independent seeker of info. The interview should start with an explanation of why the interviewer is there and why he or she has chosen to interview the person; then the interviewer is there and why he or she has chosen to interview the person; then the interviewer should move into the planned interview questions. Carefully record all info provided by the interviewee. As the interview progresses, it’s important to understand the issues discussed. If the interviewer doesn’t understand something, he or she should ask. Summarize key points to show you understand.
6. **Postinterview Follow-up** – After the interview is over, the analyst needs to prepare an interview report that describes the information from the interview. The report contains interview notes, info that was collected over the course of the interview and is summarized in a useful format. Should be written within 48 hours of the interview so that details are not forgotten.
7. Explain the difference between a close ended question, an open ended question, and a probing question. When would you use each?

A close ended question requires a specific, direct answer. They are normally used when an analyst is looking for precise information (i.e.-How many credit card transactions occur in a day)

An open ended question leaves room for elaboration for the interviewee. They are designed to gather more information and give the interviewee more control over what all information is revealed during the interview. They are used when the interviewer/analyst needs *WHY* answers to the close ended questions or just needs more elaboration on a topic.

A probing question is one that follows up on a topic that has just been discussed in order to learn more. These may be used when an interviewer is unclear about an answer than an interviewee has just given, or when they would just like a little more information.

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**12.** Explain the differences between unstructured interviews and structured interviews. When would you use each approach?

Unstructured interviews seek broad and roughly defined information and structured interviews have specific sets of questions that were developed prior to the interview. Unstructured are normally used at the initial stage of the IS development project, which at this time the as-is process can be unclear. Structured are normally used after the analyst comes to understand the business process much better and needs very specific information about how business processes are performed.

**13. Explain the difference between a top-down and bottom-up interview approach. When would you use each approach?**

With a top-down interview, the interviewer starts with broad, general issues and gradually works towards more specific ones. This approach is an appropriate strategy for most interviews. It enables the interviewee to become accustomed to the topic before he or she needs to provide specifics. The bottom-up approach allows the interviewer to start with very specific questions and moves to broad questions. This approach is preferred when the analyst already has gathered a lot of information about the issues and just needs to fill in some holes with detail.

I would use the top-down interview approach. It allows you to see the whole picture before figuring out how all the pieces fit together. It also gives you the opportunity to think of different questions about the details, in response to the interviewee’s answers.

**14.** *How are participants selected for interviews and JAD sessions?*

First step is creating an interview schedule listing all of the people who will be interviewed, when, and for what purpose. The people that appear on the list are selected based on the analyst’s information needs and what the interviewees can contribute.

A **JAD** is a Joint Application Development session, which is used as an information gathering technique. It allows the project team, users and managers to work together to identify requirements for the system.

1. **How can you differentiate between facts and opinions? Why can both be useful?**

You can differentiate between facts and opinions through interviews and JAD sessions, which are very useful for providing a good depth of rich and detailed information and helping the analyst to understand the reasons behind them. At the other extreme, document analysis and observation are useful for obtaining facts, but little beyond that. Questionnaires can provide a medium depth of information, soliciting both facts and opinions with little understanding of why they exist. Asking opinionated questions generally involves asking the respondent to what extent they agree or disagree. Asking factual questions involves seeking more precise values. Both facts and opinions can be useful because they help us determine if two users provide conflicting information, the conflict becomes immediately obvious, as does the source of the conflict.

1. Describe the five major steps in conducting JAD sessions.
2. Selecting participants - Determine who should be included and why they should be included (What contribution will they make to the project?).
3. Design the JAD session - Plan the activities and techniques that will be incorporated into the JAD session in order to accomplish the session goals. What information needs to be collected from users? Who gets to speak when?
4. Prepare for the JAD session - Review related material; Review JAD plan; Inform participants about the process and the contributions they'll be expected to make.
5. Conduct the JAD session - Establish rapport with the participants; Define session ground rules; Follow session plan and have facilitator conduct various activities and techniques and enforce rules; Explain any technical terms; Record necessary group input; Facilitator must remain neutral at all times during session but can still help resolve issues.
6. Post-JAD Follow up- Prepare a post-session report and circulating it among session attendees.

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**17.** How does a JAD facilitator differ from a scribe?

The JAD facilitator is a person who sets the meeting agenda and guides the discussion but does not join in the discussion as a participant. Normally there’s a scribe or two that assist a facilitator by taking notes or making copies and they usually use a computer and CASE tools.

**18. What are the three primary things that a facilitator does in conducting the JAD session?**

1. They ensure that the group sticks to the agenda. The only reason to digress from the agenda is when it becomes clear to the facilitator, project leader, and project sponsor that the JAD session has produced some new information that is unexpected and requires the JAD session to move in a new direction.
2. The facilitator must help the group understand the technical terms and jargon that surround the system development process, and help the participants understand the specific analysis techniques used.
3. The facilitator records the group’s inputs on a public display area, which can be a whiteboard, flip chart, or a computer display. They structure the information that the group provides and helps the group recognize key issues and important solutions.

**19.** *What is e-JAD and why might a company be interested in using it?*

e-JAD is Electronic Joint Application Development, which uses a software called groupware. This is used to allow the interviewees to send anonymous ideas and opinions without fear of reappraisal from people with differing opinions.

1. **How does designing questions for questionnaires differ from designing questions for interviews or JAD sessions?**

When designing questions for questionnaires they must be clearly written and leave little room for misunderstanding. Close-ended questions tend to be most commonly used. Questions must clearly enable the analyst to separate facts from opinions. Opinion questions often ask the respondent the extent to which they agree or disagree. (i.e. – Are network problems common?), whereas factual questions seek more precise values (i.e. – How often does a network problem occur: one an hour, once a day, once a week?). With interviews and JAD sessions you tend to want to ask open-ended questions that allow for the interviewee to elaborate on their answers. Probing questions are also good to use if the interviewer wants to follow-up on a previous discussed topic.

1. What are typical response rates for questionnaires and how can you improve them?

The typical response rates for paper/email questionnaires are 30-50% while response rates for Web-based questionnaires are typically 5-30%.

We can improve response rates by:

* Explain why the questionnaire is being administered and why the person was selected
* Tell the person when the questionnaire will be returned
* Offer free gift to all who take the questionnaire
* Offer to give a summary of questionnaire responses
* Personally hand out the questionnaire and contact those who have not responded after a week or two
* Provide anonymity for all respondents

**22.** What is document analysis?

When you examine all the documentation that has been done so far and examine the system itself.

**23. How does the formal system differ from the informal system? How does the document analysis help you understand both?**

The formal system is the system the company uses. The informal system is most often the real system. It gives strong indications of what needs to be changed. For instance, forms or reports that are never used should probably be eliminated. The document analysis helps you understand the formal system and the informal system, by reviewing all of the documentation and examining the system itself.

**24.** *What are the key aspects of using observation in the information gathering process?*

It is a valuable tool for gathering information about the as-is system because it enables the analyst to see the reality of a situation, rather than listening to others describe it in interviews or JAD. Also it is a good way to validate the information gathered from indirect sources such as interviews and questionnaires.

**25. Explain factors that can be used to select information gathering techniques.**

Several factors can be used to gather information. This can be done through interviews, joint application development, questionnaires, document analysis, and observation. Interviews involve meeting one or more people and asking them questions. JAD allows the project team, users, and management to work together to identify requirements for the system. A questionnaire is a set of written questions for obtaining information form individuals. Document analysis entails reviewing the documentation and examining the system itself. Observation, the act of watching processes being performed, is a powerful tool for gathering information about the as-is system because it enable the analyst to se the reality of a situation firsthand.