**Chapter 2 - Review Questions**

1. **What is a business case? How does a business case affect an IT project?**

* A business case is basically the reasons or justifications for a proposal (Why are we doing this and what do we hope to accomplish?). The business case is very important to an IT project, because the stronger the business case, the more likely the project will move forward.

1. **What is a SWOT analysis and why is it important?**

* A SWOT analysis is a strong foundation for the strategic planning process. It evaluates the strengths, weaknesses, opportunities and threats of an organization. It helps to examine a company’s technical, financial and human resources as well as review company assets and operations. Understanding the entire picture can help the analyst or committee make a much more informed recommendation.

1. **What are five common reasons for systems projects?**

* Five common reasons for system projects can be improved service to internal or external users, better performance, and stronger controls for accuracy and security, reduced costs and support for new products or services.

1. **What are some internal and external factors that affect systems projects?**

* A horizontal Internal and external factors that affect systems projects:
  1. Internal Factors – The company’s strategic plan, top managers, user requests, the IT department and existing systems and data are all examples of internal factors affecting systems projects
  2. External Factors – Technology, suppliers, customers, competitors, the economy and government are all examples of external factors that can affect systems projects.

1. **What are some advantages and disadvantages of a systems review committee?**

* Advantages and disadvantages of a systems review committee:
  1. Advantages – A committee approach provides a wider variety of experience and knowledge can set priorities more effectively and is less likely to be influenced by one person’s bias.
  2. Disadvantages – Action on requests has to wait until the committee is able to meet, certain members may favor projects submitted by their own department and internal differences between members could delay important decisions.

1. **What is feasibility? List and briefly discuss four feasibility tests.**

* Feasibility is a determination on whether something is able to be accomplished, and if the accomplishment of this thing is worth the efforts required to accomplish it. Four feasibility tests used in a feasibility study are as follows:

1. Operational feasibility – will the system be used effectively once it has been developed and implemented. If users can’t run the new system effectively, the expected benefits will not come to fruition.
2. Technical feasibility – the technical resources needed to create, install, operate and maintain the system. This evaluates not only the current situation but the future requirements as well.
3. Economic feasibility – do the projected benefits of the proposed system outweigh the estimated costs (TCO)? Analysts weigh the overall cost projections against the tangible and intangible benefits that are expected from the implementation of the new system.
4. Schedule feasibility – can the company implement a project within an acceptable time frame? Time needed and costs of implementation are considered here.
5. **How do tangible benefits differ from intangible benefits?**

* Tangible benefits vs. Intangible benefits:

1. Tangible benefits can be measured in dollars. Things like a system for scheduling and payroll that would reduce overtime and ensure proper coverage of a sales floor during low volume and high volume periods would be an example of this.
2. Intangible benefits can’t always be measured in dollars. Systems or products that increase employee morale or improve the company’s image with its customers would be some examples of this.
3. **What are the steps in a preliminary investigation?**

* The steps in a preliminary investigation:

1. Understand the problem or opportunity. – Are new systems required or will changes to existing systems work? How will this new system or change affect any other systems? Is the system request based on the underlying problem or just a symptom of a bigger issue?
2. Describe the project scope and constraints – What are the specific boundaries or extent of the project? What constraints are there on the project? If constraints exist, you must determine what type of constraints they are (present vs. future, internal vs. external, mandatory vs. desirable).
3. Perform fact-finding – gather data about project usability, costs, benefits and schedules. This can be accomplished by analyzing organization charts, conducting interviews, reviewing documentation, observing operations, and conducting user surveys (any time you are given pre-existing documents to analyze, it is a good idea to verify the data with users to ensure accuracy and that it is current).
4. Analyze project usability, cost, benefit, and schedule data – take the data you gathered during fact-finding, tabulate the data to make it easier to understand and review the results.
5. Evaluate feasibility – Once you have analyzed the problem or opportunity, defined project scope and constraints, performed fact-finding to evaluate project usability, costs benefits, and schedules, you will use the four feasibility tests (Operational, Technical, Economic and Schedule) to determine if the project is able to be accomplished and worth proceeding with.
6. Present results and recommendations to management – The final step in a preliminary investigation is to prepare a report to management. A typical report might contain an introduction (brief description of the system, who performed the investigation and who initiated it), systems request summary (the basis of the system request), findings (results of the preliminary investigation including a description of the project’s scope, constraints and feasibility), case for action (summary of project request and specific recommendation), project roles (who will participate in the project and their roles), time and cost estimates (cost of acquisition and installation of the system as well as TCO during the system’s useful life), expected benefits (tangible and intangible benefits and when they are expected to occur) and an appendix (which would include things like a list of interviewees and other supporting information used to make a determination).
7. **What is project scope? What is a constraint? In what three ways are constraints classified?**

* Project Scope, Constraints and three classifications of constraints:
  1. Project scope is the specific boundaries or extent of a project. You should define project scope as clearly as possible to avoid the possibility of project creep (when scope definitions expand gradually over time without specific authorization to do so).
  2. Constraints are requirements or conditions that the system has to satisfy or a result the system has to achieve. Constraints can include hardware, software, time, policy, law or cost.
  3. The three classifications of constraints are present versus future (when does the constraint have to be met?), internal versus external (is the constraint something imposed by the organization itself or by an external agency such as the government?) and mandatory versus desirable (Is the constraint essential to company success or is it something that would be nice to have?).

1. **Explain how you might use fishbone diagrams, Pareto charts, and XY charts in problem-solving. Be specific, and describe the advantages of each tool.**

* Fishbone diagrams, Pareto charts and XY charts:
  1. Fishbone diagrams – represents the possible causes of a problem as a graphical outline. You start with a problem which is represented by a horizontal line (the main bone). Diagonal vertical lines are added that represent possible causes of the problem (sub-bones). Possible causes that the analyst identifies are added as additional horizontal lines (horizontal sub-bones). As the analyst digs deeper and adds more sub-bones to the diagram, he or she is able to uncover the root cause of the problem rather than just the symptoms. This is a good way of getting past all of the extraneous data and to the root cause.
  2. Pareto charts – named for a nineteenth century economist, this chart is drawn as a vertical bar graph. The various bars represent different causes of a problem. The bars are arranged in descending order, so the most important issues can be addressed first. This system would be helpful in solving big problems up front and hopefully making the system function better for the users in a much timelier manner.
  3. XY charts – also known as a scatter diagram is used to determine if there is a correlation between two variables. The analyst identifies different variables and tries to determine if there is a pattern or correlation between two variables. A random pattern would suggest that there is no correlation between the two variables, where a pattern that is close to the same would indicate a strong connection between the two variables. This would be a good way to eliminate different factors and reach the correct answer.

**Chapter 2 - Personal Trainer, INC**

1. **Based on the background facts described in Chapter 1, draft a mission statement for Personal Trainer. Consider the firm’s overall direction, and the services, products, and experiences the company might want to offer its customers in the future. In your statement, consider all the stakeholders affected by Personal Trainer’s operations.**
   * The Mission Statement for Personal Trainer, Inc. might be:

“To be the first and only choice in health and wellness for those seeking solutions by providing world class training and health solutions in our state of the art facilities or in the comfort of your own home via our customized, web-based training programs.”

1. **Does the proposed system present a strong business case? Why or why not?**
   * Susan and Gray should interview Cassia Umi (Company President) as well as Janet McDonald (Manager of Finance), Tai Tranh (Manager of Sales & Marketing) and Reed Cotter (Manager of Operations). These folks would be able to give a better understanding of the company’s direction and how the different departments within the company would be affected by the various information systems being considered. It would also give Susan and Gray a better understanding of how each department would be supporting the new supercenter. I would also suggest that they take the time to interview a cross-section of the center managers currently employed by the company so that they can get a better understanding of what is really working currently, and what could really use improving. They may want to do some research on the internet to get ideas of systems that are currently available that will meet the needs of Personal Trainer, Inc. or to see what systems similar companies within the industry have been using to meet their needs. Taking an opportunity to research their competitors and what customers are saying about their opinions on the different systems/services being used.
2. **For each type of feasibility, prepare at least two questions that will help you reach a feasibility determination.**
   * The biggest factors that Personal Trainer, Inc. have to face with this system project on the internal side would be existing systems and data as well as user requests. The opening of the Supercenter with new offerings will require them to review the existing systems and see what can be salvaged and what has to be newly designed. As employees get used to the new features and offers being provided to their customers, there is a possibility for even more requests to come forward. The strategic plan could be a challenge, as it isn’t clear currently what that is or where they are headed long term. As far as external factors go, I believe that government could be a major issue. They are expanding into a new market internationally. There is a good chance that the rules and regulations governing their business in the U.S. may be different when it comes to their International location. As Company looks to expand further, into additional markets, they may face even more challenges. The same could be said for their suppliers. Companies delivering to their U.S. locations may run into similar issues internationally. That or they may not even be able to do business in those locations. The other consideration would be competitors. Up until now, they have only had to deal with competition inside the U.S., but now they will be facing additional international competition.
3. **You begin the preliminary investigation. What information is needed? From whom will you obtain it? What techniques will you use in your fact-finding?**
4. Know your audience – Tailor the presentation to the position and knowledge level of your audience.
5. Know your subject – Be prepared to cover all information and attempt to answer whatever questions might arise, and concerns.
6. Define the objectives of the meeting – Everyone needs to know the purpose of the meeting and what we hope to accomplish from it.
7. Grammar and spell check everything – Make sure that every part of the presentation and written take-away are checked for accuracy.
8. Define technical terms for the audience – ensure any technical term or data is defined for easy understanding.
9. Control the meeting – Make sure to keep the pace steady and keep everyone on track. Listen to feedback you are receiving from your audience for clues that you may need to adjust the pace or readdress certain areas that they may need more clarification on.
10. Practice – Take time to go over the presentation a few times to make sure everything is how you want it. This will give you the opportunity to adjust the delivery or pacing before you are actually in front of your audience.

**Chapter 2 - Case in Point 2.2: ATTAWAY AIRLINES, PART ONE**

Molly and Dan each feel strongly about their projects. The fact that they are heading up the individual departments for which the projects are to be designed leaves a high possibility that each could be biased for their project and against the other’s. The first step that I would take is to start trying to create a business case for each of the projects. A review of Attaway Airlines’ strategic planning would be a good place to begin this process. Using the SWOT analysis, I would be able to start creating a big picture view of how each of these projects might fit into the company’s Vision, Values and Mission. Attaway’s mission statement should give some pretty good information as well. We would need to clarify the main reasons for each project (reduced costs, better performance, support for new services or products, etc.) and what internal and external factors will affect the projects (Government, customers, existing systems and data, etc.). One of the major issues that seem to be in play here is the new federal reporting requirement that Molly alluded to in the last meeting. We would definitely need to know what these requirements are and when they are scheduled to begin. That alone may be a determining factor in determining feasibility of the Accounting system, and prioritizing the projects should we determine both are viable.