Chapter 11 Hands-on Activities

Activity 1

Before developing an information system, a company must check to see if the project is economically feasible. The company must conduct a cost/benefit analysis. Within the systems development life cycle, this process is part of systems analysis and is referred to as the economic feasibility study. Return on investment (ROI) is the most accurate type of cost/benefit analysis. It subtracts the costs from the benefits using interest rates to adjust these figures in order to arrive at a net present value. Table 11.1 on page 413 illustrates a ROI for a system.

Create a ROI in Microsoft Excel using the following data.

Year	Cost	Benefit
Year1	22,500	0
Year2	103,000	0
Year3	0	18,000
Year4	0	30,000
Year5	0	40,000
Year6	0	40,000

Using an interest rate of 5% for the first 3 years and 6.5% for the second three years, determine the net present value of the system for the first 6 years. Save the document at **ch11actsol1.xls**.

Is building this system economically feasible?

Activity 2

When implementing an IS, there are a number of ways to convert from the old system to the new system. In parallel conversion, organizations run both systems at the same time for a period of time. This allows companies to use the old system as a backup in case the new one fails. In phased conversion, the IS is broken down into modules that are implemented one at a time. This system allows users to start using some modules sooner and to train gradually. If it will take a company a long time to train the employees to use the system efficiently, then phased conversion may save the company money.

Using Figure Table 11.1 on page 413 as a reference, create a Microsoft Excel spreadsheet that calculates the return on investment using data from the following two tables.

Parallel conversion costs and benefits:

Year	Cost	Benefit
Year1	22,500	0

Year2	113,000	0
Year3	0	18,000
Year4	0	30,000
Year5	0	40,000
Year6	0	40,000

Phased conversion costs and benefits:

Year	Cost	Benefit
Year1	22,500	0
Year2	113,000	12,000
Year3	0	32,000
Year4	0	40,000
Year5	0	40,000
Year6	0	40,000

Using an interest rate of 5% for the first 3 years and 6.5% for the second three years, determine the net present value of the system for the first 6 years. Save the document as **ch11actsol2.xls**.

Is phased conversion more economically feasible than parallel conversion in this case?

Activity 3

Prototyping is one method of constructing an IS that can reduce development time. It involves building "quick and dirty" models and revising them based on the feedback of prospective users. However, prototyping is not appropriate for all situations. It is best to prototype when systems are not large and complex, when systems provide solutions to unstructured problems and when users have difficulty specifying system requirements. If the system interfaces with other systems, prototyping is not the best development method. Create a table in Microsoft Word to classify the following situations as appropriate for prototyping or not appropriate for prototyping. Save the file as **ch11actsol3.doc**.

- a training system used to certify workers in the double glazing industry
- a marketing IS for a charity that can pull data from a legacy membership database
- an IS for a music company that allows users to purchase and download music online and tracks user information and purchasing habits
- an expert system that helps scrap recyclers identify metals