

Case studies allow you to practice specific skills learned in the chapter. Each chapter contains several case studies that continue throughout the textbook, and a chapter capstone case.

NEW CENTURY HEALTH CLINIC

New Century Health Clinic offers preventive medicine and traditional medical care. In your role as an IT consultant, you will help New Century develop a new information system.

Background

Based on your earlier recommendations, New Century decided to continue the systems development process for a new information system that would improve operations, decrease costs, and provide better service to patients.

Now, at the end of the systems analysis phase, you are ready to prepare a system requirements document and give a presentation to the New Century associates. Many of the proposed system's advantages were described during the fact-finding process. Those include smoother operation, better efficiency, and more user-friendly procedures for patients and New Century staff.

You also must examine tangible costs and benefits to determine the economic feasibility of several alternatives. If New Century decides to go ahead with the development process, the main options are to *develop the system in-house or purchase a vertical package and configure it to meet New Century's needs*. You have studied those choices and put together some preliminary figures.

You know that New Century's current workload requires three hours of office staff overtime per week at a base rate of \$8.50 per hour. In addition, based on current projections, New Century will need to add another full-time clerical position in about six months. Neither the overtime nor the additional job will be needed if New Century implements the new system. The current manual system also causes an average of three errors per day, and each error takes about 20 minutes to correct. The new system should eliminate those errors.

Based on your research, you estimate by working full-time you could complete the project in about 12 weeks. Your consulting rate, which New Century agreed to, is \$30 per hour. If you design the new system as a database application, you can expect to spend about \$2,500 for a networked commercial package. After the system is operational and the staff is trained, New Century should be able to handle routine maintenance tasks without your assistance.

As an alternative to in-house development, a vertical software package is available for about \$9,000. The vendor offers a lease-purchase package of \$3,000 down, followed by two annual installments of \$3,000 each. If New Century buys the package, it would take you about four weeks to install, configure, and test it, working full-time. The vendor provides free support during the first year of operation, but then New Century must sign a technical support agreement at an annual cost of \$500. Although the package contains many of the features that New Century wants, most of the reports are pre-designed and it would be difficult to modify their layouts.

No matter which approach is selected, New Century probably will need you to provide about 10 hours of initial training and support each week for the first three months of operation. After the new system is operational, it will need routine maintenance, file backups, and updating. These tasks will require about four hours per week and can be performed by a clinic staff member. In both cases, the necessary hardware and network installation will cost about \$5,000.

In your view, the useful life of the system will be about five years, including the year in which the system becomes operational.