Case Studies

Each chapter includes a Chapter Case, a Continuing Case, a Capstone Case, and an Online Case Simulation. You can learn more about the Online Case Simulation in the MIS CourseMate Features section.

Chapter Case: Hudson Kayak Adventures

Hudson Kayak Adventures (HKA) offers ecotours and kayak rentals along the Hudson River.

Background

Steve and Linda Lane are avid kayakers and amateur naturalists who spent many weekends exploring the Hudson River's numerous creeks and tributaries. Steve was a sales representative and Linda worked as a freelance Web designer. Two years ago, Steve's division was purchased by a rival company, which announced plans to move operations to another state.

Rather than relocate, the Lanes decided to launch HKA. They reasoned that Linda could continue her work, which would provide some income while Steve tried to build HKA into a profitable business. Steve and Linda are convinced that the ecotourism market will expand greatly, and they look forward to sharing their experience and knowledge with others who enjoy nature and kayaking.

Hudson Kayak Adventures advertises in regional magazines and maintains a Web site, which Linda designed. At this time, no other kayak rental firms operate within 20 miles of HKA's location. Customers say that the HKA site is attractive and informative, but the Lanes are not sure it is attracting new business.

So far, the Lanes' plan is working out well. HKA rents space at a nearby marina, where Linda runs the office and operates her Web design business. She also handles rentals when Steve is giving lessons or busy with a tour group. On summer weekends and holidays, Janet Jacobs, a local college student, handles telephone inquiries and reservations.

HKA's inventory includes 16 rental kayaks of various types, lengths, and capacities, eight car-top carriers, and a large assortment of accessories and safety equipment. Based on customer requests, Linda is considering adding a selection of books and videos about kayaking and ecotourism.

HKA has three main business segments: rentals, instruction, and guided tours. Most customers make advance reservations for scheduled tours and instruction sessions, but sometimes space is available for last-minute customers. Rentals are split evenly between reservations and walk-in customers.

Reservations are entered in a loose-leaf binder, with separate tabs for each business activity. Linda also created a Microsoft Access database to record reservations. When she has time, she enters the reservation date, the reservation details and kayak type, and the customer information into a table, which is sorted by reservation date. Each day, she prints a reservation list. For quick reference, Linda also displays kayak availability on a wall-mounted board with color-coded magnets that show the available or reserved status of each rental kayak. In addition to the database, Linda uses an inexpensive accounting package to keep HKA's books.

Although the HKA database handles the basic information, the Lanes have noticed some drawbacks. For example, reservations for guided tours or instruction sessions sometimes conflict with Steve's or Linda's availability. The Lanes also would like to get more information about rental patterns, customer profiles, advertising effectiveness, and future business opportunities. Steve and Linda have talked about updating the system, but they have been too busy to do so.

Tasks

1. Develop a business profile for Hudson Kayak Adventures. Create a separate section for each of the following: HKA's business activities, organization, resources, customers, and potential for Web-based marketing.

2. List HKA's main functions and business processes. Draw a model of an HKA kayak rental, including possible events and results.

3. What types of information systems does HKA use? Do these systems support its current and future business objectives? Why or why not? What would you recommend?

4. From an object-oriented viewpoint, HKA treats kayaks as a class. Based on the background information provided, what are some properties of kayak objects?

Continuing Case: Personal Trainer, Inc.

Personal Trainer, Inc. owns and operates fitness centers in a dozen Midwestern cities. The centers have done well, and the company is planning an international expansion by opening a new "supercenter" in the Toronto area.

Background

Cassia Umi, president, heads Personal Trainer's management team. Three managers report to her at the firm's Chicago headquarters: Janet McDonald, manager, finance; Tai Tranh, manager, sales and marketing; and Reed Curry, manager, operations. The managers who run the 12 existing centers all report to Reed. Cassia wants the new supercenter to emphasize a wide variety of personal services and special programs for members. If the supercenter approach is successful, it will become the model for Personal Trainer's future growth. Cassia personally selected Gray Lewis, a manager with three years of fitness center experience, to run the new facility.

The new supercenter will feature a large exercise area with state-of-the-art equipment, a swimming pool, a sporting goods shop, a health food store, and a snack bar. In addition, the center will offer child care with special programs for various ages, a teen center, and a computer café. Cassia also wants members to have online access to customized training programs and progress reports.

Personal Trainer currently uses BumbleBee, a popular accounting package, to manage its receivables, payables, and general ledger. Membership lists and word processing are handled with Microsoft Office products.

Cassia believes the new supercenter will require additional data management capability, and she decided to hire Patterson and Wilder, an IT consulting firm, to help Personal Trainer develop an information system for the new operation. The firm assigned Susan Park, an experienced consultant, to work with the Personal

Trainer team. Susan's first task was to learn more about business operations at the new center, so she requested a meeting with Gray. After some small talk, the discussion went like this:

Susan: Tell me about your plans for the new operation. I'm especially interested in what kind of information management you'll need.

Gray: Cassia thinks that we'll need more information support because of the size and complexity of the new operation. To tell the truth, I'm not so sure. We've had no problem with BumbleBee at the other centers, and I don't really want to reinvent the wheel.

Susan: Maybe we should start by looking at the similarities — and the differences — between the new center and the existing ones.

Gray: Okay, let's do that. First of all, we offer the same basic services everywhere. That includes the exercise equipment, a pool, and, in most centers, a snack bar. Some centers also sell sporting goods, and one offers child care — but not child-fitness programs. It is true that we've never put all this together under one roof. And, I admit, we've never offered online access. To be honest, I'm not absolutely sure what Cassia has in mind when she talks about 24/7 Web-based access. One more feature — we plan to set up two levels of membership — let's call them silver and gold for now. Silver members can use all the basic services, but will pay additional fees for some special programs, such as child fitness. Gold members will have unlimited use of all services.

Susan: So, with all this going on, wouldn't an overall system make your job easier?

Gray: Yes, but I don't know where to start.

Susan: Gray, that's why I'm here. I'll work with you and the rest of the team to come up with a solution that supports your business.

Gray: Sounds good to me. When can we start?

Susan: Let's get together first thing tomorrow. Bring along an organization chart and think about how you plan to run the new facility. We'll try to build a model of the new operation so we can identify the business functions. When we know what the functions are, we'll know what kind of information is needed or generated by each function. That will be our starting point.

Tasks

1. Use the background information to create a business profile for Personal Trainer. Be sure to indicate areas where more information will be needed.

2. Each new supercenter service represents a business function, which is composed of one or more business processes. Using the background information and the conversation between Susan and Gray, list the business functions and the processes with each function.

3. Based on what you know, should Personal Trainer consider any of the following systems: ERP, transaction processing, business support, knowledge management, or user productivity? Why or why not?

4. What opportunities might Personal Trainer have for Web-based B2C transactions in the future? What about B2B?

Capstone Case: New Century Wellness Group

New Century Wellness Group offers a holistic approach to health care with an emphasis on preventive medicine as well as traditional medical care. In your role as an IT consultant, you will help New Century develop a new information system.

Background

Ten years ago, internal medicine specialists Timothy Jones and Dolores Garcia decided to combine their individual practices in Brea, California, to form New Century Wellness Group. They wanted to create a clinic that would concentrate on preventive medicine and fitness, as well as traditional medical care. New Century has competition from other health care providers, but no other clinic offers the same range of services.

New Century's practice has grown and now includes four primary care physicians, one nurse practitioner, four physical therapists, one registered nutritionist, eight nurses, and eight support staff people. The clinic currently has a patient base of 8,000 patients from 325 different employers, many of which provide insurance coverage for employee wellness and health maintenance. Currently, New Century accepts insurance plans

from 25 licensed health insurance providers. New Century is also considering opening another location, near a new medical center.

Doctor Jones and Doctor Garcia recently decided that the practice needs a modern information system to support its business and health information management needs. The new system would replace a mix of paper-based and legacy systems. Dr. Jones asked you to design an information system that could support the clinic's current operations and future growth.

In your first meeting, Dr. Jones provided an overview of the clinic's business processes and staff members. He told you that Anita Davenport, who has been with New Century since its inception, is the office manager. She supervises the support staff of seven people. Fred Brown handles human resources and employee benefits. Corinne Summers reports directly to Fred and works with payroll, tax reporting, and profit distribution among the associates. Susan Gifford is responsible for the maintenance of patient medical records. Tom Capaletti handles accounts receivables and Tammy Alipio is the insurance billing specialist. Lisa Sung is responsible for managing appointments. Her duties include reminder calls to patients and preparing daily appointment lists. Carla Herrera is concerned primarily with ordering and organizing office and medical supplies.

After studying this information, you start to prepare for your next meeting with Dr. Jones.

Tasks

1. Use the background information to create a business profile for New Century, and indicate areas where more information will be needed. The profile should include an organization chart of the office staff. You can create the chart using Microsoft Word or a similar program, or you can draw it by hand. In Word 2010, click the Insert tab on the Ribbon, then Smart Art, then Organization Chart.

2. Identify six business processes that New Century performs, and explain who has primary responsibility for each process. Also describe what data is required and what information is generated by each process.

3. Based on what you know at this point, is it likely that you will recommend a transaction processing system, a business support system, or a user productivity system? What about an ERP system?

Explain your reasons.

4. Describe the systems development method you plan to use, and explain the pros and cons of using this method.