FIT3019 – Information Systems Management

Semester 2, 2015

Assignment 2

Due Date:	23 October 2015
Cut-off Date:	30 October 2015
Weight:	60% of assignment weighting, i.e., 30% of overall weighting
Full Marks:	100
Submission Method:	FIT3019 Moodle submission system
Submitted Files:	<Your Lastname>-<Your ID> a1.zip. For example, if your surname is Smith and your ID is 123456, then the submission file name is *Smith-123456a1.zip*
References:	Study Guides 2 - 4

Submission Policy

Assignment Submission Methods

- WinZip your assignment 2 report using and label the zip file as stated above.
- Unless instructed by your immediate unit advisor otherwise, your submission file must be submitted through the Moodle Assignment Submission System.

Late submission of assignments

- An assignment must be submitted by the *cut-off date*, which is usually seven days after the *due date*. Any assignment submitted after the cut-off date will not be accepted by the Moodle system and therefore, it will be marked automatically to zero.
- Any assignment submitted after the due date will be penalised as per the faculty rules explained on the Unit Guide.
- This policy is strict because comments or guidance will be given on assignments as they are returned, and sample solutions may also be published and distributed, after assignment marking or with the returned assignment.

Extensions

- It is your responsibility to structure your study program around assignment deadlines, family, work and other commitments. Factors such as normal work pressures, vacations, etc. are seldom regarded as appropriate reasons for granting extensions. An extension will only be **considered** with supporting documents and if the problem/illness occurred **within the week prior to the due date**.
- Requests for extensions must be made by email **at least two days** before the due date. You will be asked to forward original medical certificates in cases of illness, and may be asked to provide other forms of documentation where necessary.

- Contact your Campus Unit Adviser by email to request extensions.

Assessment Policy

It is expected that the physical presentation of this assignment must be neat and clear using MS-Word. This assignment must be presented in a report format using the following specifications:

- Although there is no word-limit for this assignment, please note that your answers are assessed based on their quality (i.e. their completeness and your understanding of the ISM principles/concepts applied) and not their length. As a guide, the total length of your answers should not be more than 16 pages.
- Page size: A4; Font size: min. 11 points
- References used must be detailed (See referencing format in Prescribed Text or follow any accepted format). When references are obtained from the Internet, ensure you provide the URLs which are accessible by me. Beware of plagiarism (see Plagiarism details on FIT3019 Unit Guide website).
- If diagrams are used in the explanation of your answers, label them clearly.

A **presentation penalty** of up to 20% will be applied to assignments that do not meet this expectation.

Assignment Specifications

Answer all questions.

Question 1

Case study: Healing with Outsourcing

Health maintenance organizations (HMOs) are not easy to manage, from an IT point of view. This is especially so when management decides to acquire other HMOs, whose information systems must be Integrated. HMOs heavily depend on reliable claim-processing systems. Inefficiency of such systems may take a company down. Harvard Community Health Plan, which later changed its name to Harvard Pilgrim, indeed was on the brink of extinction because of IT-related problems. One would expect this non-profit organization, which is the oldest HMO in Massachusetts, to perform better.

In April 1999, Harvard Pilgrim Healthcare, based in Brookline, Massachusetts, reported an unprecedented net loss of $54 million and an operating loss of $94 million for the previous year. The publicity was bad. CEO Allen Greenberg and CFO Thomas Brophy resigned. Charlie Baker stepped in as CEO on May 24, 1999. He brought in a new COO and a new CFO. The CIO soon resigned. Baker invited Louis Gutierrez, who was employed at the Federal Reserve, to be the organization's new CIO. Gutierrez knew the challenge was formidable, but he joined Harvard Pilgrim in July 1999. Baker also hired turnaround consultants from Time Zero of Cambridge, Massachusetts. Time Zero is a division of Perot Systems, a Texas consulting and outsourcing company owned by former presidential candidate H. Ross Perot.

Gutierrez and the rest of the new senior management team hit the ground running and started working almost around the clock, seven days a week, to save the sinking HMO. The small group of senior officers formed a turnaround steering committee and held late-night planning sessions twice a week. The new management team blamed part of Harvard Pilgrim's woes on its mishmash of information systems, which had been patched together as the HMO acquired other health-care insurance companies in the 1980s and 1990s.

In 1986, the HMO, which had 240,000 insured members, acquired Multi-Group, a regional New England HMO with 105,000 members. In a pattern that would continue, Harvard Pilgrim did not integrate the enrolment and claims systems of the two health-care plans. For the next 11 years, the HMO continued to acquire additional small, regional HMOs, including Rhode Island Group Health Association and Neighbourhood Health Plan. It also expanded into Maine. Its largest acquisition was Pilgrim Health Care, in 1995. This acquisition added 350,000 members under the HMO's umbrella. Senior executives did not appreciate the importance of IT for successful operation, and Harvard Pilgrim did not integrate all of the different systems.

So Gutierrez inherited more than 55 different, separate applications, including four claims-processing systems that left the HMO incapable of tracking claims or setting accurate premiums. He had duplicate systems that could barely feed managers information from which to pull consolidated financial reports. Needless to say, the systems did not support daily operations well. His assignment was to improve the IT infrastructure—hardware, software, and telecommunications—and also ensure efficient claims processing.

To make matters worse, different departments seemed to be at war: IT was managed by one department; claims processing was managed by another. The two departments constantly blamed each other for mishandling their responsibilities. Whenever claims got in trouble for the time it took to sort through provider claims that came in a second time, it blamed IT and vice versa. The IT department was also in charge of the data centre operations, network infrastructure, and programming activities. A few days after he assumed his new position, Gutierrez was approached by the CEO with a question: should Harvard Pilgrim outsource the management of its IT, its claim processing, or both? The decision was in the hands of the new CIO. He was given two weeks to decide, which he found an extremely short time for such an important decision.

During the next two weeks, Gutierrez spent time with his new staff in both technical and claims operations, asking for their advice while simultaneously trying to keep operations running smoothly. Some board members who had gone through a similar outsourcing decision years before voiced concern. They were worried the outsourcing might be done too hastily without adequate attention to operational needs.

Gutierrez wanted clearly assigned accountability of both the IT and claims-processing staffs. He believed that the only way to transform the claims function was to change the way both staffs worked, to make them a cohesive unit with common goals. He decided to outsource the functions of both departments.

Harvard Pilgrim used a health-care management system called Amisys, developed by a company by the same name. Perot Systems has more Amisys specialists than any other company in the world—an important criterion in Gutierrez's decision. But he also thought that the vendor met other expectations. Because there was no time to prepare an RFP (request for proposal), Gutierrez and his team decided to start negotiations with Perot Systems immediately. The team locked itself in a room with Perot Systems representatives for several long days. At 2 a.m., on the third day, the team emerged with a handshake deal. After he said goodbye to the legal team that helped him with the negotiations, he drove to CEO Baker's house. That afternoon, over Chinese food, Baker signed the 10-year, $700 million outsourcing contract.

As part of the deal, 826 claims-processing and IS staff members became employees of Perot Systems, but they stayed at their desks. The agreement did not result in any layoffs. The only IT professionals Gutierrez decided to keep in his employ and under his direct control were the 40 people in charge of data warehousing, e-commerce strategy, security policy, and technology process reengineering.

The transition to the new arrangement was not smooth. In the first days, there was a clash between the highly disciplined, almost military-style approach of the Perot Systems executives and the casual culture of Harvard Pilgrim. New requirements by Perot Systems, such as employee drug testing, were not well received. In time, though, the outsourcing deal proved beneficial.

In January, as the Harvard Pilgrim financial team was working to close the accounting books for 1999 by reconciling results from two financial systems and evaluating a large claims inventory, it discovered additional losses of between $60 million and $70 million. In all, the HMO reported a $227.4 million loss for 1999. The bad news almost discouraged the executive team, including Gutierrez. Under Massachusetts's new insolvency law, the state's commissioner of insurance took action. The court placed Harvard Pilgrim into temporary receivership, trying to prevent bankruptcy while ensuring payment to physicians and hospitals so that insured members could continue to have coverage. Harvard Pilgrim was not the only HMO in trouble. Another 20 HMOs were in a similar situation in 1999 and early-2000.

Harvard Pilgrim's senior management developed a turnaround strategy acceptable to the state. On the IT front, Gutierrez and Perot Systems embarked on an effort to fix the claims-processing mess. At that time, claims processing was handled by four systems that failed frequently and crashed under an increasing number of transactions. The team eliminated three of the systems, kept only Amisys, upgraded it to a newer version that could handle a larger number of transactions, and installed new, more reliable hardware. To Gutierrez, Perot Systems' greatest contribution was in the claims-processing operation. The Perot Systems team managed to reduce the claims backlog and implement significant improvements. Yet, Harvard Pilgrim did not invest heavily in technology to accomplish the improvements. The team also integrated several disparate ISs: general ledger, cash management, project accounting, treasury, HA, and payroll. However, the HMO still had more than 50 different unintegrated systems.

Although Harvard Pilgrim was taken out of receivership in June 2000 and its financial

picture is much improved, the organization was still losing money, but significantly less than in previous years. For 2000, it reported a net loss of $9.7 million—a great improvement over the $227 million net loss of 1999. Unprocessed claims have been reduced from more than 800,000 to under 175,000—less than one week's worth of claims—and the claim processing cycle is now shorter. In 2002 and 2003 the organization had several million dollars of net income. In 2003 Harvard Pilgrim was rated by the National Committee for Quality Assurance (NCQA) as the only health plan in the country among the top ten in both quality and member satisfaction.

Gutierrez is happy with the outsourcing deal. He said he would not be satisfied, though, until Harvard Pilgrim had several profitable years. One of his colleagues said that he was an example of an old adage: he took all the bricks that were thrown at him and used them to build a new foundation.

Source: E. Oz, Management Information Systems, 4th edition, 2004, pp. 163-164; Genusa, A., "Blood, Sweat and Systems Integration," CIO, June 15, 2001; and www.cio.com; www.harvardpilgrim.org, September 2003.

Read the case study carefully and answer the following questions:

(a) What was the main asset that Perot Systems brought to the business partnership with Harvard Pilgrim? Why did Gutierrez, the CIO, prefer to outsource to Perot Systems rather than to another, perhaps larger, company?

(b) Gutierrez decided not to outsource the responsibilities of 40 of his IT professionals and keep them under his control. Consider the areas of their expertise. In your opinion, why did he decide to keep these particular areas outside the outsourcing deal?

(c) Apparently, Gutierrez was highly involved in all that the Perot Systems team did. What was the purpose of outsourcing if he was still so much involved? In general, does a CIO have any responsibilities when all the IS areas are outsourced? If your answer is positive, what is the nature of such responsibility?

(d) As a result of the outsourcing deal, almost the entire staff (826 people) became Perot Systems employees. How, then, could Harvard Pilgrim benefit from the deal in terms of new knowledge and expertise?

(e) Outsourcing may be different types like IT outsourcing, transition outsourcing, business processing outsourcing, etc. Which type of outsourcing is made by Harvard pilgrim as presented in this case study? Justify your answer.

(f) Outsourcing offloads a burdensome technical responsibility and allows management to focus on its core business. However, some experts still believe outsourcing strips a company of an important competence— IT know-how. Which statement do you agree with? Why?

(6 x 6 = 36 marks)

Question 2

There are various approaches to integrate the systems in a large organisation. Discuss the differences in among these approaches. For each approach, search the Internet for an example of an organisation which has used that approach to integrate its systems. Discuss why this organisation uses that integration approach instead of the other two approaches.

(*Hint*: McNurlin and Sprague, Chapter 9.)

[Total 14 marks]

Question 3

a) Read the article "When Failure Is not an Option" on the following URL:
http://www.cio.com.au/index.php/id;421113260;fp;4;fpid;16

Discuss in what ways AG Edwards manages their IT projects similar to the ones suggested in your prescribed text. Discuss if there are any management techniques used by AG Edwards that are not covered by the ones n your prescribed text.
[7 marks]

b) It has been suggested that the largest office systems payoffs come from improving effectiveness (doing the right thing) as opposed to improving efficiency (doing things right). Which position do you agree with and why? [7 marks]

(*Hint*: McNurlin and Sprague, Chapter 10.)

[Total 14 marks]

Question 4

a) Explain the following three technologies:
- Decision support systems (DSSs)
- Executive information systems (EISs)
- Expert systems (ESs) [6 marks]

b) Compare and contrast the similarities and differences between these three technologies? [6 marks]

c) For each of these technologies, provide an example of a company that uses that technology and briefly explain how it supports the company in its knowledge-based work. [4 marks]

(*Hint*: McNurlin and Sprague, Chapter 12.)

[Total 16 marks]

Question 5

a) Explain the processes of building Human Capital and building Structural Capital. [3 marks]

b) Wave is a tool developed by Google. A video on the demo of this tool is shown on http://googlesystem.blogspot.com/2009/05/google-wave.html.

In comparison to traditional email applications, discuss how Google Wave help in supporting knowledge management in a business organization. [17 marks]

(*Hint*: McNurlin and Sprague, Chapter 14.)

[Total 20 marks]