FEEDBACK TUTORIAL LETTER

2nd SEMESTER 2019

ASSIGNMENT 1

ENTERPRISE SYSTEMS MANAGEMENT

(ESM821S)
ASSIGNMENT 1 MEMO

Question 1:

A. Define the term: Total Cost of Ownership (TCO). [2 Marks]

B. Propose two ways an organisation can consider in order to reduce the TCO. [4 Marks]

C. For each of the ways identified above (B), identify three examples of the actual costs that will be reduced and how this will be achieved. [12 Marks]

Solution:
A. The TCO can be defined as a measure of the total cost of owning and operating a piece of software, including both the initial monetary cost of purchasing it and any associated costs of implementing it.

B. Using cloud computing and open source software.

C. Costs that can be reduced by cloud computing include: hardware and software initial costs, hardware and software ongoing costs, implementation costs, operational costs. Open source software can reduce system software initial costs, application software initial costs, system software ongoing costs and application ongoing costs.

Question 2:

A. Discuss five complications that are likely to be faced by Namibian business organisations during the process of software and vendor selection. [10 Marks]

B. With reference to a case study or case studies of your choice, present five causes of ERP implementation failure. [10 Marks]

Solution:

A. Complications likely to be faced by Namibian business organisations:

1. A lack of a once-and-for-all ERP that can be adopted and can address all organisational functional areas without employing customisation. This challenge is more pronounced among small businesses that have limited IT skills or lack IT departments. This is critical to Namibia given the dominance of small businesses.

2. Another point is that software and vendor selection models that were found more effective in aiding software and vendor selection are complex and difficult to understand, especially for less educated employees of small businesses. Hence, stakeholders have an extra challenge of paying attention to contextual factors when contemplating suitable criteria for software and vendor selection.

3. Furthermore, the emergence and popularity of open source enterprise systems that are available at no initial costs (license fees) and with limited support add another dimension when it comes to software and vendor selection. This make it difficult for business organisations to apply some of the existing templates or models for selecting vendors and software.

4. Vendor and software selection choices are likely to be influenced by contextual factors for example the nature of business. For instance, the case study of FoxMayer, a United States pharmaceutical company showed that its line of business complicated the selection of the right software and probably vendor. Due to such factors, one cannot easily borrow ideas from another case study and assume it as is. This is key for Namibian business organisations given the shortage of enterprise systems skills.
5. Differences in legislation. Namibian business environment is characterised by multinational organisations. These organisations have branches in Europe and other African countries just to name a few. But, Europe and some African countries, Namibia included, have different legislation in terms of privacy and security. This will complicate choices of business managers considering the fact that a vendor and software that maybe considered for Africa may not be good enough for the European market due to regulatory requirements.

B. With reference to FoxMayer, ERP implementation failure can be caused by the following:
1. Poor selection of the software
2. No consideration of advice from consultants
3. Lack of contingency planning
4. No end user involvement
5. No business process re-engineering and system customization was done to make sure the system suits its context
6. Insufficient testing—a rushed schedule meant that testing some of the modules was skipped. In addition, the system was not tested to establish if there are no potential short comes.
7. Lack of end user cooperation
8. Poor management support.

Question 3:
A. Define Customer Relationship Management (CRM). [2 Marks]
B. Describe the history and evolution of CRM. [10 Marks]
C. Discuss the importance of Information and Technology in Supply Chain management. [10 Marks]

Solution:
A. CRM is the core business strategy that integrates internal processes and functions, as well as external networks, to create and deliver value to targeted customers at a profit. It’s grounded on high-quality customer-related data and enabled by information technology.

B. The history and evolution of CRM can be split into the following five stages or generations:
   1. **First generation.** The first generation is characterised by two activities that led to the acronym CRM.
      - The first activity included sales force automation that focused on automating sales activities. For example, using electronic means to place sales orders and making quotations.
      - The second activity was customer service and support, which was meant to offer after-sale services to customers. A major limitation of CRM during this stage was a lack of integration between back-end and front-end CRM systems.
2. **Second generation CRM.** The second generation of CRM focused on integrating isolated subsystems into a single package. This stage saw the integration of independent front-end systems to back-end systems. For instance, back-end ERPs such as research and development, manufacturing and distribution were integrated with front-end CRM systems such as service support, order processing, sales and marketing. The aim was to combine pre-sales operations and post sales activities - something that was not achieved entirely.

3. **Third generation CRM.** More efforts were made to integrate front-end and back-end business systems. Increasing growth in the Internet helped with system integration. It was during this stage that CRM started to be viewed as a strategic tool rather than a technology-based solution. Business organisations started to realise success in their strategic CRM implementations, as reflected by increasing profits.

4. **Fourth generation CRM.** During this phase, strategic CRM was widely accepted, even by small businesses. The insurgence of social media provided more angles for implementing CRM.

5. **Fifth generation CRM.** This generation experienced a full swing of using social media in CRM. The term ‘social CRM’ was even introduced to describe the nature of CRM during this era. There’s a growing interest in encouraging customer participation through electronic means. On the other end, organisations are able to gather data from different social media platforms, analyse it and use findings from the data to influence customer behaviour.

C. The importance of IT in SCM [below are some of the importance]:

1. Better decision making. An integrated SCM can lead to better decision making as these will be informed decisions from what is happening in the organization. For example, Wal-Mart became a leading retailer partly because it had a decision-making system that drew analysis from data gathered by technologies in its SCM such as barcode scanning systems, point-of-sale systems and real time data collection (Mark, 2012 in Nguyen, 2017). In particular, Wal-Mart adopted a “vendor managed inventory (VMI) system, so suppliers could be responsible for managing their own inventory in Walmart warehouses. Sending data to centralized databases of stock inventory, manufacturers were able to tell exactly when goods were getting low and when to send more to Walmart stores” (Skubana, 2019)

2. Efficiency in the SCM due to using automated and computerized systems such as inventory management systems. Such systems can approximate the movement of inventory following the just in time approach thereby reducing shortages while at the same time cutting storage costs.

3. Improving trucking system. For example, Wal-Mart is “well known for operating successfully its own trucking system and an innovative cross-docking logistic technique whereby products can be delivered from inbound to outbound trailers without intermediate storage” (Johnson, 2008 in Nguyen, 2017, p. 104).
4. Real-time access to data. Wal-Mart introduced a mobile application known as the My Productivity in 2016. This application gives real-time data on sales trends, items that need restocking, customer inquiries and customer survey results. This improved inventory management and sales.

5. Improved sales through electronic commerce. Online shopping makes goods and services of organisations to be accessible 24/7 anywhere in the world. For example, online shopping was expected to triple online sales for Wal-Mart by 2018 to $35 billion up from $12 billion that was realised in 2017.

QUESTION 4:
First National Bank (FNB) is considering to implement an Enterprise Resource Planning (ERP) system. You are required to:

A. Recommend an ERP architecture that is suitable for FNB. [1 Mark]

B. State and explain four reasons why you feel your answer in (A) above is suitable for FNB. [8 Marks]

C. Explain the difference between logical and physical integration. [4 Marks]

D. What do you understand by the term information silos? [2 Marks]

Solution:

A. N-tier or 3-tier architecture is suitable for FNB.

B. Reasons why a 3-tier architecture is suitable for FNB:

1. **More scalability.** The load put on the system is distributed across different layers (tiers). As such, an ERP deployed using a three-tier architecture tends to offer better load balancing - something that improves performance. This is key to FNB considering the fact that the bank has a big customer bank that access their online services during the off peak and peak periods (month end).

2. **Flexible.** System changes can easily be made at layer level without affecting the next one. This reduce the amount of time needed to effect changes and at the same time reduce the risk of system failure something that could lead to system unavailability. This is important to FNB given that, banking services are always in demand 24/7 and 365 days.

3. **Better security.** The distribution of services across different layers allows for the application of granulised security in layers. Security in each layer will protect the next layer. For example, if the web-tier is corrupted by viruses, it doesn’t mean the data is lost. Similarly, damage to the application layer will see the organisation still retain important data that’s kept separately. As a bank, FNB can benefit from this as it has a requirement
to meet a certain specific level of security according to Namibian and International banking laws.

4. Improved reliability. Multiple layers of redundancy can be implemented according to different tiers. This reduces system down time as a result of system failure. System reliability is important to FNB as it helps the organisation to maintain a good image and be able to return and attract new clients.

C. According to Motiwalla & Thomson (2012), logical system integration is concerned with changing the business process, organisational structures and in some instances, the mindset of employees. In terms of physical system integration, different systems have to be connected such that information can be shared across different departments. In some cases, this would involve connecting old legacy systems with new ERP system.

D. Information silos This refers to compartmentalised units of information that are isolated from each other.

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