Tutorial 1 - Solution

Introduction to Real-time Enterprise Systems
Business Functions and Processes

Objectives:
- **Discuss the characteristics and benefits of real-time enterprise systems;**
- **Differentiate between a business process and a business function;**
- **Define integrated information systems, and explain why they are essential in today's globally competitive business environment.**

Discussion Questions:

In groups of 3 or 4, discuss one the following questions.

1 . Discuss the framework of "Sense-Analyse-Response" in respect to the case of "Telematics Service Delivery" (Architecting the Real-Time Enterprise, pp 24 – 28).

Points to note:

The business strategy of the enterprise determines what needs to be sensed, what kind of the analysis is needed and what the responses need to be while the business processes, information and IT systems support the collection and analysis of information and in the execution of the response.

"Sense" component enables the enterprise to be informed of all external and internal information that is relevant.

"Analyse" component helps analyse the information, identify patterns, forecast and predict likely impacts and consequences.

"Respond" component determines the best possible response based on the analysis of the relevant information and executes the determined response.

In Telematics:

Real Time Data Capture- Vehicles transmit data (TCU, OBD, location data, cargo related data like temperature, pressure etc) in the form of data packets, every few seconds. The Telematics platform must be able to handle the large volume of data coming from thousands of vehicles.

Real Time Data Analysis - Telematics platforms are required to analyse data in real time in order to provide insights.

Real Time Response - Telematics platforms are required to provide recommendations and alerts to the stakeholders in real time via diverse channels.

Real Time Content Integration – The Telematics platform must enable integration with enterprise systems and concerned 3rd parties to improve overall organisational responsiveness.

Real time enterprise solutions have to address important attributes of architecture like scalability, high availability and reliability as to remain responsive and updated.

2. Based on the case of "Retail Promotion Optimisation" (Architecting the Real-Time Enterprise, pp 29 – 32), discuss the benefits that can be realized from the real-time Enterprise solutions.

   Points to note:

   To assess what benefits they can realise from the real-time Enterprise solutions, we should have a look at what would be term as their success factors:

   As retailers are looking for ways to reduce cost, the ability to provide lower cost of ownership provided by the solution would be an important factor. Analytics provided by the solution is the USP and hence its efficiency would be a key factor. Retailers should be able to see increase in sales because of data provided by analytics, reports and optimum promotions as suggested by Promotion Optimization Engine. The benefit should be clearly reflected in the dollar value in terms of cost savings and increase in sales because of better promotion management across channels and geographies.

   Another key aspect for the success of this solution is its adaptability. Some kind of solutions may already exist in retailers today. The ease with which retailers and business users could switch from legacy systems to this solution would become important.

   The IT management on the other hand would look for the ease of integration of the solution with their existing infrastructure without much of the effort and investment.

   So, the benefits would be:

   Business agility, flexibility, scalability, faster time to market, access to best in class analytical ability, scope for customisation and lower cost of ownership are some of the key benefits that retailers should be able to realise from this solution.

3. Distinguish between a business function and a business process. Describe how a business process cuts across functional lines in an organization. How might a manager organize his or her staff in terms of business processes rather than functional departments? What benefits would there be with this type of organization? What challenges would it pose?

   Solution:

   A business function is a business "activity," such as sales order processing, production scheduling, cash-flow management, and recruiting personnel. A business process is a

collection of activities that takes one or more kinds of input and creates an output that is of value to the customer.

A business process occurs when a series of activities are performed in more than one functional area. Making and selling a product to a customer is a process that involves sales, production, and accounting activities. The people who work in each activity must work together to make the sale go smoothly - taking the order, scheduling production, shipping the product, recording data about production and sales and the ultimate collection of the customer's payment.

Today, business managers try to think in terms of business processes that integrate the functional areas, thus promoting efficiency and competitiveness. An important aspect of this integration is the need to share information between functional areas, and with business partners. ERP software provides this capability by means of a single common database.

The better a company can integrate the activities of each functional area, the more successful it will be in today's highly competitive environment. Integration also contributes to improvements in communication and workflow. Each area's information system depends on data from other functional areas.

Case Study/Practical Exercises and Discussion:

4. In your groups read the document on Ford's SAP Story: The Long Road to Service Parts Management. And then answer the questions that follow:
    You will need to do some additional research to answer all the questions.

    a)   *What was meant by the sacrifices for standardization?*
    In order to implement a standard package (in this case SAP) Ford had to modify a number of the business processes in its US and Europe operations to match the 'best practice' design of the software.

    b)   *Describe the global template?*
    Ford and SAP designed a set of standard business processes and guidelines to be used by all their global divisions in order to implement the new system.

    c)   *Why were business processes so important in the changeover to SAP?*
    The business process changes would have significant effects on Ford's physical world: for example, the consolidation of regional warehouses and parts depots Ford had long maintained. During the mid-2000s, Ford had overhauled its U.S. parts operations. It revamped its eight large service-parts depots into 26 smaller warehouses that offered faster supply to Ford's dealers. Ford's European network, however, has not gone through that same optimization.

    d)   *What is SAP?*
    SAP (Systems, Applications and Products) SAP, is the name of the ERP (Enterprise Resource Planning) software as well as the name of the company. SAP Software is a European multinational who develop software solutions for managing business operations and customer relationships.

e)   Discuss the issues faced by Ford based on Thompson's statement: There were 19 different countries in Europe, plus the US, that had to be represented and we sometimes found that there were 20 different ways of doing things.

Ford had many different divisions in different parts of the world that had been doing business in different ways. This caused many problems including different languages, currencies, local laws and regulations etc.

f)   Describe the benefits obtained from the several hundred million-dollar multiphase project which first kicked off in 2001?

Many benefits were realized, including:

- Replacing more than 40 legacy applications in the United States and more than 130 legacy systems in Europe
- 20 percent improvement in forecasting accuracy of parts
- 15 percent reduction in inventory levels
- Greater visibility into the collaboration processes with suppliers that allow Ford to respond more quickly to changes

g)   Why is it important for new staff to grow both their IT and business skills?

The two skills are strongly related.

IT staff must be aware of the way the business works and mangers need to be aware of the technology in order to make the best strategic decisions.

5.   Your tutor will play the following clips on the projector.

a. While watching the videos, jot down some of the benefits afforded by these real-time solutions mentioned in the clip.

b. Discuss why this is crucial to businesses today.

(i)   SAP Supply Chain Management: Overview Video (2.16 mins)
Get a glimpse of a new SAP Supply Chain Management solution that features the latest technological and customer engagement innovations
https://www.youtube.com/watch?v=AEnWiY7h71k

(ii)   S/4 HANA - The Real-Time Supply Chain video (2.35 mins)
Published on 6 Jul 2017
Discover how SAP S/4HANA enables a real-time supply chain, an element crucial for business excellence for all consumer products companies. Learn how the new solution enables companies to transform their supply chain, better manage inventory levels, execute MRP runs at any time during the day, while empowering supply chain mangers with insight to act in the moment.
https://www.youtube.com/watch?v=wNAKmt6Z5d4