Seat No.: _____   Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY
MBA – SEMESTER III – EXAMINATION – WINTER 2019

Subject Code: Enterprise Resource Planning   **Date:29/11/2019**
Subject Name: 3549282
Time: 02:30 pm to 05:30 pm   **Total Marks: 70**
Instructions:
1. **Attempt all questions.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**

Q.1		Definitions	**14**
		(a) Make to order	
		(b) Business integration	
		(c) Business modelling	
		(d) BPR	
		(e) What is PLM?	
		(f) Reengineering	
		(g) OLTP	
Q.2	**(a)**	Explain with examples the conceptual model of ERP and its evolution.	**07**
	(b)	Compare and contrast the process view of organization.	**07**

OR

	(b)	Explain direct and indirect benefits of ERP?	**07**
Q.3	**(a)**	Explain an On-line Analytical Processing (OLAP) in detail.	**07**
	(b)	What is Data Mining? Discuss the advantages of Data Mining.	**07**

OR

Q.3	**(a)**	Why is product lifecycle management cross functional? What are the business drivers for the product lifecycle management application?	**07**
	(b)	Describe about the ERP functional modules i) Human capital Management ii) Financial management iii) Supply chain planning	**07**
Q.4	**(a)**	What is meant by ERP life cycle? What are the phases in an ERP life cycle?	**07**
	(b)	How BPR is connected with ERP. Explain.	**07**

OR

Q.4	**(a)**	What are the deliverables and milestones of final preparation and GO live stage of an ERP project?	**07**
	(b)	What are the reasons for which an ERP implementation can turn out to be a great success?	**07**

Nestle SA is the parent company of the candy-making giant and is headquartered in Switzerland (Konicki, pg 185). In 2000 Nestle SA decided that it wanted to leverage its size and begin acting like the giant it is. To do so, it signed a $200 million contract with SAP to roll out an ERP system to its 230,000 employees in 80 countries around the world (Olson, pg. 53). In addition to this sum, Nestle SA also committed to an additional $80 million to be spent on consulting, maintenance, and upgrades (Konicki, pg. 185). Executives at Nestle SA realized that the company needed to standardize its business processes if it wanted to be competitive. The rollout was scheduled to take three years for Nestle SA's largest sites with the others to follow. Included in the implementation were the mySAP.com financials, accounts payable, accounts receivable, planning, production management, procurement, direct procurement, supply-chain, demand planning, fulfillment, and business-intelligence modules (Konicki, pg. 185).

Prior to the Nestle SA ERP decision, Nestle UK had already implemented an ERP system. The British subsidiary of Nestle SA implemented SAP R/3 over a period of five years in 18 UK manufacturing sites (Glick, 7 Days, pg. 4). This implementation wrapped up in 1999 and was the one of the UK's largest ERP systems with over 6,000 users (Glick, Enterprise, pg. 24). As with the Nestle SA deployment, the goals of the Nestle UK implementation were centred on leveraging the size of the organization as well as tightening up the supply chain and re-engineering work practices and processes (Glick, 7 Days, pg. 4).

The third Nestle ERP implementation story involves Nestle USA. Nestle USA is the $8.1 billion U.S. subsidiary of Nestle SA. In 1997, Nestle USA began its own ERP project known as Best (Business Excellence through Systems Technology) (Worthen, pg. 1). Scheduled to run over the course of six years ending in the first quarter of 2003, this project was budgeted at well over $200 million and would implement five SAP modules: purchasing, financials, sales and distribution, accounts payable, and accounts receivable (Worthen, pg. 1-3). Similar to the other two Nestle divisions, the goal behind this ERP implementation was unification. Additionally, the project would solve Nestle USA's Y2K woes (Worthen, pg. 3). In the case of Nestle USA, the ERP was part of the vision Nestle USA Chairman and CEO Joe Weller referred to as "One Nestle" that would be responsible for "transforming the separate brands into one highly integrated company" (Worthen, pg. 2). Prior to the implementation, Nestle USA had nine different general ledgers and 28 points of customer entry (Worthen, pg. 2). The goal of the ERP project was to bring these numbers down to one. One of the most interesting views on the Nestle USA problem is the story of vanilla. Prior to the ERP implementation, Nestle USA did not act as one company. Instead, each location acted on its own behalf and was free to make its own business decisions. "In 1997, a team examining the various systems across the company found, among many other troubling redundancies, that Nestle USA's brands were paying 29 different prices for vanilla – to the same vendor" (Worthen, pg. 2). This situation arose from the fact that each factory negotiated their own deals with the vendor and the vendor adjusted the price per factory based on what they thought the factory would pay. The situation was only worsened by the fact that each factory referred to vanilla in a different way. While one factory might have referred to vanilla as 1234, another factory referred to it as 7890. This made it nearly impossible for individuals at the corporate headquarters to do comparisons across plants to see manufacturing costs (Worthen, pg. 2).

Regardless which Nestle case is examined, the goals behind all three ERP implementations were similar for all the divisions. That is, in each instance, there was a driving goal to consolidate the operations of the different locations so that Nestle could truly leverage their size and buying power. Additionally, there was a need to centralize and control data so that the financial, reporting, and forecasting numbers were more consistent and accurate. As each factory acted as an autonomous unit, Nestle was at a severe competitive disadvantage and realized that it needed one system used by all in order to be more efficient and survive in the global economy.

The term 'ERP implementation' has become synonymous with 'nightmare' in recent years. High profile failures dot the headlines and companies are often intimidated not only by the high price but also the negative effect implementations can have on their business. Vendors such as SAP are working diligently on shaking this reputation and have made great strides in meeting their goals. "In 1996, a user could expect to pay six to 10 times the license cost in consulting charges. These days the external consulting cost has dropped to typically one to two-and-a-half times the software costs, depending on how much process re-engineering the user does" (Adshead, pg. 26). Fortunately for companies considering an ERP implementation there have been enough done in the past that there are opportunities to learn from the successes and failures of others. One of the key factors of a successful implementation is "don't try to make the product fit exactly the way you would ideally like to work or on the other hand assume that people will completely change their processes to meet the package. The first takes many years and costs loads, the second meets big resistance" (Adshead, pg. 26). For most businesses there needs to be a middle-of-the-road approach where individuals realize that the software will not solve every organizational problem and not every process in the company can be re-engineered to fit the software. Regardless, savvy project leaders with prior ERP implementation experience will tell you that there are several pitfalls to avoid during ERP projects. The first is not to select an ERP package based on a demo. Choose your package wisely, ask questions, get references, and do your homework. An ERP package is a costly investment and you need to be sure you are choosing the package that best fits the needs of your organization. The second is get management commitment. Not securing top management buy-in results in an automatic project failure. Management commitment is often high at the beginning of a project but begins to wane as the project wears on. It is vital to keep management interested, involved, and positioned squarely behind the project. The third is to avoid heavy customization. It is both easy and tempting to customize ERP packages to fit your exact needs. Unfortunately excessive customization will haunt you by lengthening the project timeline and by driving up maintenance costs in the future. The final pitfall to avoid in ERP implementations is not to underestimate the importance of training. It is not uncommon that users receive several days of training on the new system and then do not see the system again for months. Users need in-depth and on-going training and should even be involved with system testing if at all possible (Adshead, pg. 27).

Unfortunately for Nestle USA, they did not heed the failures of others. Throughout the implementation, Nestle USA made several large mistakes that almost doomed the project. When the project began a team of 50 top executives and 10 senior IT professionals was assembled to develop a set of best practices for all Nestle USA divisions. The goal was to develop these best practices for all functions of the organization. Each function from manufacturing to sales would eventually be forced to retire their old approaches and adopt the new best practice that had been

developed. Concurrently, a technical team was charged with the task of implementing a common data structure across the company (Worthen, pg. 2). By the time the implementation began in 1999 Nestle already had problems with its employees' acceptance of the system. Most of the resistance met by the project team was traced back to the fact that "none of the groups that were going to be directly affected by the new processes and systems were represented on the key stakeholders team" (Worthen, pg. 3). This was only the start of Nestle USA's problems. By early 2000, the implementation had turned into a disaster. Employees did not understand how to use the new system and did not understand the new work processes they were being forced to adopt. Divisional executives were just as confused as their employees as they had been left out of the planning and development of the new system and were less than willing to assist in straightening out the mess that had developed (Worthen, pg. 3). The result of this was that morale plummeted and turnover skyrocketed. In fact, "turnover among the employees who forecast demand for Nestle products reached 77 percent" (Worthen, pg. 3).

Nestle USA's implementation problems did not stop with employee issues. Technical difficulties began to emerge as well during the rollout. In the rush to beat the Y2K deadline the project team had overlooked the integration points between the modules. This meant that the different modules could not talk to each other. So if a salesperson gave a discount to a customer and entered it in the system, the accounts receivable portion of the system did not know of the discount. The result was that the customer would pay their bill but invoice appeared as though it were only partially paid (Worthen, pg. 3).

By June 2000, Nestle USA was forced to halt the rollout and the project manager was removed from the project and reassigned to Switzerland (Worthen, pg. 3). Nestle USA gathered 19 key stakeholders and executives went on a three-day offsite retreat to discuss the future of the project. Out of this meeting came the revelation that they would need to redefine the business requirements of the project and then shape the project timeline around the requirements rather than to shape the timeline around a predetermined end date (Worthen, pg. 3-4). This process took until April 2001 and resulted in a detailed blueprint for the project team to follow. A director of process change was hired to act as a liaison between the project team and the different functional divisions (Worthen, pg. 4). With all of these items finally resolved, the project was able to continue. The last rollouts were scheduled to be completed in the first quarter of 2003 (Worthen, pg. 1).

Although there were bumps in the road for Nestle USA's ERP implementation, it certainly seems to be paying for itself. As of 2002, Nestle USA claimed they had already realized a savings of over \$325 million (Worthen, pg. 1). Most of these savings came in the area of supply chain improvements, specifically demand forecasting. "The old process involved a sales guy giving a number to the demand planner, who says, 'Those guys don't know what the hell they are talking about; I'm going to give them this number'. The demand planner turns [that number] over to factory, and the factory says the demand planner doesn't know what the hell he's talking about. Then the factory changes the number again. With SAP in place, common databases and business processes lead to more trustworthy demand forecasts for the various Nestle products. Furthermore, because all of Nestle USA is using the same data, Nestle can forecast down to the distribution center level" (Worthen, pg. 4).

In addition to saving money, Nestle USA has also been able to come together as one organization. The problem of 29 different brands of vanilla has been solved and now with common databases each factory refers to vanilla in the same manner. They also use common processes that simplify operating procedures and allow for the centralization of functions such as developing training procedures. Training no longer needs to be customized for each factory. Since each location follows the same procedures, training materials only need to be developed once. Additionally, any Nestle USA employee could relocate to another factory and not have to adjust to local processes.

Nestle UK experienced similar successes with their ERP implementation. They were able to recoup the money spent on the system in only two years (Glick, 7 Days, pg. 4). Further, like their American counterpart, Nestle UK has experienced reduced inventory levels, tighter control on inventory, and a more disciplined attitude toward business processes (Glick, 7 Days, pg. 4). Most importantly, the ERP implementation at Nestle UK helped to foster a "culture of continuous improvement" (Glick, Enterprise, pg. 24). "Improvement priorities are clear: first, the internal opportunities; second, business-to-business; and third, business to consumer" (Glick, Enterprise, pg. 24). This attitude is embodied by the fact that following the ERP rollout they hired a process development manager. This person's sole responsibility is to act as a bridge between business and the Information Technology department and to make sure that employees stay focused on continuous improvement rather than simply trying to maintain existing systems (Glick, Enterprise, pg. 24).

	(a)	What is the need of implement ERP for nestle?	**07**
	(b)	What are the hurdles company face during implement of ERP?	**07**
		OR	
Q.5	**(a)**	What are the implement strategies in different countries?	**07**
	(b)	Is the implementation of ERP successful or failure for Nestle?	**07**

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