

UNIVERSITY OF ESWATINI
DEPARTMENT OF BUSINESS ADMINISTRATION
MAIN EXAMINATION
DECEMBER, 2018

TITLE OF PAPER: MANAGEMENT INFORMATION SYSTEMS

COURSE CODE: BUS615

TIME ALLOWED: THREE (3) HOURS

- INSTRUCTIONS:
1. THE NUMBER OF QUESTIONS IN THIS PAPER IS 5.
 2. SECTION A IS COMPULSORY.
 3. ANSWER ANY THREE (3) QUESTIONS IN SECTION B.
 4. THE MARKS TO BE AWARDED FOR EACH QUESTION ARE INDICATED ALONGSIDE THE QUESTION.

NOTE: MARKS WILL BE AWARDED FOR GOOD COMMUNICATION IN ENGLISH, AS WELL AS FOR ORDERLY AND NEAT PRESENTATION OF WORK. FURTHER MARKS WILL BE AWARDED FOR USE OF RELEVANT EXAMPLES.

SPECIAL REQUIREMENTS: NONE.

THIS PAPER IS NOT TO BE OPENED UNTIL PERMISSION HAS BEEN GRANTED BY THE INVIGILATOR.

Read the following and answer the questions that follow:

Frito/Lays

Because the rate of technological change is so rapid, most people see IT through the narrow lens of short-term, silver-bullet solutions. IT vendors want you to believe that their important new technologies will blow away what has come before. You can't blame a salesperson for trying to sell, or CIOs for having a queasy buy-or-lose feeling, but this attitude is precisely the opposite of the one companies should be taking. We would argue that because the winds of change affect IT more than any other area of the organisation, IT benefits most from a long-term, disciplined, strategic view, and a square focus on achieving the company's most fundamental goals.

For example, Frito Lay's strategic goal has always been to make, move and sell tasty, fresh snack food as rapidly and efficiently as possible. That goal hasn't changed since 1930s, when founder Herman Lay ran his business from his Atlanta kitchen and one delivery truck. He bought and cooked the potatoes. He delivered the chips to the stores. He collected the money and knew all his customers. He balanced the books and did his own quality assurance. Herman Lay knew how to conduct the perfect "sense and respond" e-business before such a thing ever existed, for he held real-time customer, accounting, and inventory information all in one place-his head.

After years of spectacular growth, the company became progressively distracted from this simple business model. By the early 1980s, the company's sales force has swelled to 10,000, and information grew harder and harder to manage. The company's old batch-based data processing systems were all driven by paper forms that took 12 weeks to print and distribute to the sales force. All sales transactions were recorded by hand; reams of disparate data were transferred to the company's mainframe computers. Much was lost in the process of setting up a dozen different functional organisations and a variety of databases, one of which communicated with each other.

This modus operandi made it impossible to change prices quickly or develop new regional promotions, streamline production, or improve inventory management. It was as if Herman Lay's company had suffered a spinal cord injury, with the brain and body no longer connected. At the same time, the company was seeing the rise of strong regional competitors. The leaders realized that if trends continued as they were; its overall revenues would fall significantly by early 1990s.

Mike Jordan, who took over as CEO of Frito Lays in 1983, decided to tackle the problem. He reconstructed the company as a hybrid organisation that was neither totally centralised nor decentralised. His goal was to teach the company to “walk and chew the gum at the same time”, as he put it, by separating the company’s two competitive advantages: the purchasing, production, and distribution leverages of a national powerhouse, and the local resources that gave the company regional speed and agility.

All this led to an organisational design that kept purchasing, manufacturing, distribution, systems, accounting, and R&D as the centralised platform, leaving the decentralised sales and marketing organisations to launch their store-by-store and street-by-street offensive. Having identified the company’s strategy, Jordan then developed a long-term renewal (as opposed to “rip and replace”) plan. An executive committee comprised of CEO, CFO, CIO, and two executive vice presidents- outlined a shift from paper to risky, emerging handheld technology for the sales people on the street, as well as transformation from batch accounting to online operational systems. The goal was to digitally reconnect the company’s nervous system. Equipped with the cool new handhelds, the sales force would be able to manage price, inventory, and customer changes in real time and connect to supply pipeline. The handheld computers would also establish a technological “beach-head”- one sufficiently important to keep business’s attention and achieve fast operating results.

Paying for all this, of course, would not be easy. The journey would take from 1984 to 1988, at a huge cost (at the time): \$40 million for the handhelds and about \$100 million for databases and core systems. Some of the executive committee balked, arguing that efficiencies gained by the technology would be lost by the sales people working fewer hours. But the company had no choice but to revitalise its regional sales, and though the systems overhaul would be costly, staying put would be even costlier.

To fund the new computers, Jordan set up a long term, on-going funding mechanism designed to keep IT spending both predictable and fairly stable from year to year. To get things rolling, each sales region had to commit to a reduction in selling expenses from 22 cents on the dollar to 21 cents within a year of the handhelds’ installation. The savings would be achieved by increasing sales at constant cost, reducing costs, or a combination of two.

The scheme worked; with the new system in place, the company saved between 30,000 to 50,000 hours of paperwork per week. By 1988, savings resulting from better control over sales data came to more than 440 million per year – savings that in turn funded the renewal of the core data systems. Frito Lay was able to cut the number of its distribution centres, reduce stale product by 50% and increase its domestic revenues from \$3 billion in 1986 to \$

4.2 billion by 1989. Today, Frito Lay continues to be the dominant player in the snack-food industry.

Frito Lay's technology story received a lot of press at the time, mostly because the handheld technology was sexy. But notice what the story was really about; it was about executing Herman Lay's original, real-time business experience – feeling the money jingling in the pocket and seeing the inventory in the truck!

Today, Frito-Lays has more than fifteen \$100 million brands: LAYS, FRITOS', CHEE,TOS, BAKEN-ETS, RUFFLES DORITOS, FUNYUNS, TOSTITOS, BAKED LAYS, WOW!, SUNCHIPS, MUNCHIES, OBERTO, ROLD GOLD, GRANDMA'S Cookies and Quaker Chewy Bars, Quakes and Fruit & Oatmeal Bars.

QUESTION ONE

(20 marks)

In detail how to use the value chain model changed Frito Lays business processes ensuring its competitiveness in the market.

QUESTION TWO

(10 marks)

Initially Herman Lay began his business from home, knowing his customers and being responsible for all transactions manually. Discuss how a Database management system would have benefitted him.

QUESTION THREE

(10 marks)

Jordan had to make the decision to fully automate Frito Lays business processes. Briefly describe the four stages of decision making in this decision making process.

SECTION B

Question 1

It has been said that the advantage that leading edge retailers such as Dell and Walmart have over their competition is not technology; it's their management. Do you agree? Why or why not? Give a detailed account supporting your argument. (20 marks)

Question 2

Porter's competitive forces model help companies develop competitive strategies using information systems. Describe how information systems can support each of these competitive strategies and give examples. (20 marks)

Question 3

Explain how the value chain model can be used to identify opportunities for information systems. (20 marks)

Question 4

Describe each of the principal factors risk factors in information systems projects (20 marks)