

Tutorial 2 Development of ERP Systems

Objectives:

- Define integrated information systems, and explain why they are essential in today's globally competitive business environment.
- Identify the factors that led to the adoption of ERP systems.
- Discuss the characteristics of ERP systems.
- Discuss the benefits of ERP systems.
- Explore the success and failures of ERP systems.

Discussion Questions: (~40 mins)

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

1. What are the typical functions or departments in an organization? What type of work is done in each of these functions?
2. Define integrated information systems, and explain why they are essential in today's globally competitive business environment.
3. What are the motivating factors or impetus that drives management to consider ERP adoption?
4. What are the main characteristics of an ERP system? What are some newly developed features of ERP systems?

Case Study/Practical Exercises and Discussion: (~40 mins)

1. Integrated Information Systems

Large organizations dealing with hundreds, or thousands of suppliers have a difficult task in keeping information flowing to the right person at the right time. At one point, Lockheed Martin Aeronautics, with \$13.2 billion in sales (2010) and over 29,000 employees, was running 75 legacy systems, some dating from the 1970s. To stay efficient while keeping customers happy and taking on more aircraft orders, the company decided to implement an Enterprise Resource Planning system. Think of Coles have tons of suppliers

Lockheed Martin's final system allows suppliers to handle more of their own transactions by accessing the new ERP system through an existing secure Web portal. For example, using the portal, a supplier can now track each step of an order. In addition, the supplier can see the production trends at Lockheed Martin, and plan its own production to satisfy Lockheed Martin's

FIT3138 Real-time Enterprise Systems

2. Anticipate orders (Forecast)

needs—in effect, anticipating orders. Through this integration of many systems into one large ERP system, Lockheed Martin was **able to cut costs and connect suppliers worldwide into its system**, enabling the company to become more efficient. 3. More efficient

http://www.uwosh.edu/faculty_staff/wresch/ERPlockheed.htm

In another industry, Tumi, Inc., the luggage and travel products company, was running several legacy systems that were written “in-house,” meaning they were programmed by company staff. The different systems covered processes such as taking an order, running the warehouse, and completing financial statements. None of the systems were linked; therefore, **passing information from one system to another was a slow and cumbersome process**. Tumi could not **fill its orders on time**, had **excess inventory** in the warehouse, and was frequently **unable to meet customers’ shipping deadlines**. To address these issues—and to better support the company’s expansion plans—Tumi made a conscious effort to make information technology a business driver, and the company brought in an ERP system to **integrate the business functions**. With the new integrated ERP system, Tumi has been able to **expand its business, decrease inventory by 30 percent, cut its warehouse space by 38 percent, and increase sales by 25 percent**. Tumi’s management believes that one of the company’s primary strengths lies in its integrated systems. Manufacturing is now quick to react when demand increases, and forecasting is more accurate. Source: Ellen Monk, Bret Wagner. (2013). Concepts in Enterprise Resource Planning. (4e) Course Technology, Cengage Learning. (Pg 15)

<https://youtu.be/3kvb10LkMpo>

- Discuss the **problems that both Lockheed Martin and Tumi faced** with an unintegrated system.
- **How** does the implementation of an ERP system **improve the performance** of both companies?

Spend some time discussing the requirements of Assignment 1. (20 minutes)