## Lesson Proper for Week 11

What is ERP?

Enterprise resource planning is a cross-functional enterprise system driven by an integrated suite of software modules that supports the basic internal business processes of a company. For example, ERP software for a manufacturing company will typically process the data from and track the status of sales, inventory, shipping, and invoicing, as well as forecast raw material and human resource requirements.

ERP gives a company an integrated real-time view of its core business processes, such as production, order processing, and inventory management, tied together by the ERP application software and a common database maintained by a database management system. ERP system tracks business resources (such as cash, raw materials, and production capacity), and the status of commitments made by the business (such as computer orders, purchase orders, and employee payroll), no matter which department (manufacturing, purchasing sales, accounting, etc.) has entered the data into the system.

ERP software suites typically consist of integrated modules of manufacturing, distribution, sales, accounting, and human resource applications. Examples of manufacturing processes supported are material requirements planning, production planning, and capacity planning. Some of the sales and marketing processes supported by ERP are sales analysis, sales planning, and pricing analysis, while typical distribution applications include order management, purchasing, and logistics planning. ERP systems support many vital human resource processes, from personnel requirements planning to salary and benefits administration, and accomplish most required financial recordkeeping and managerial accounting applications.

Some of the business process flows and customer and supplier information flows supported by ERP systems.

Benefits and Challenges of ERP

ERP systems can generate significant business benefits for a company. Many other companies have found major business value in their use of ERP in several basic ways.

§  Quality and efficiency. ERP creates a framework for integrating and improving a company’s internal business processes that results in significant improvements in the quality and efficiency of customer service, production, and distribution.

§  Decreased costs. Many companies report significant reductions in transaction processing costs and hardware, software, and IT support staff compared to the nonintegrated legacy systems that were replaced by their new ERP systems.

§  Decision support. ERP provides vital cross- functional information on business performance quickly to make better decisions in a timely manner across the entire business enterprise.

§  Enterprise agility. Implementing ERP systems breaks down many former departmental and functional walls or “silos” of business processes, information systems, and information resources. This results more flexible organizational structures, managerial responsibilities, and work roles, and therefore a more agile and adaptive organization and workforce that can more easily capitalize on new business opportunities.

Typical costs of implementing a new ERP system

The costs of ERP

*An ERP implementation is like the corporate equivalent of a brain transplant. We pulled the plug on every company application and moved to PeopleSoft software. The risk was certainly disruption of business, because if you do not do ERP properly, you can kill your company, guaranteed.*

So says Jim Prevo, CIO of Green Mountain Coffee of Vermont, commenting on their successful implementation of an ERP system. Though the benefits of ERP are many, the costs and risks are also considerable, as we will continue to see in some of the real-world cases and examples in the text. Figure above illustrates the relative size and type of costs of implementing an ERP system in a company. Notice that hardware and software costs are a small part of total costs, and that the costs of developing new business processes (reengineering) and preparing employees for the new system (training and change management) make up the bulk of implementing a new ERP system. Converting data from previous legacy systems to the new cross-functional ERP system is another major category of ERP implementation cost.

The costs and risks of failure in implementing a new ERP system are substantial. Most companies have had successful ERP implementations, but a sizable minority of firms experienced spectacular and costly failures that heavily damaged their overall business. Big losses in revenue, profits, and market share resulted when core business processes and information systems failed, or did not work properly. In many cases, orders and shipments were lost, inventory changes were not recorded correctly, and unreliable inventory levels caused major stock-outs to occur for weeks or months. Companies like Hershey Foods, Nike, A-DEC, and Connecticut General sustained losses running into hundreds of millions of dollars in some instances. In the case of FoxMeyer Drugs, a $5 billion pharmaceutical wholesaler, the company had to file for bankruptcy protection, and then was bought out by its arch competitor McKesson Drugs.

Causes of ERP Failures

            What have been the major causes of failure in ERP Projects? In almost every case, the business managers and IT professionals of these companies underestimated the complexity of the planning, development, and training that were needed to prepare for a new ERP system that would radically change their business process and information systems. Failure to involve affected employees in the planning and development phases and to change management programs, or trying to do too much too fast in the conversion process, were typical causes of failed ERP projects. Insufficient training in the new work tasks required by the ERP system and failure to do enough data conversion and testing were other causes of failure. In many cases, ERP failures were also due to overreliance by company or IT management on the claims of ERP software vendors or on the assistance of prestigious consulting firms hired to lead the implementation.