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Successful Implementation of an Enterprise System: A Case Study

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Abstract

This paper presents a brief case study of a successful enterprise system implementation that was accomplished in a short development cycle. The case examines the key decisions of the development team and key success factors.

Introduction

When first introduced into the U.S. market in the early 1990's, enterprise systems seemed like a panacea for many organizations' information systems problems. Companies were struggling with a hodgepodge of internally written and commercially available packaged software systems running on a variety of different hardware platforms. Valuable information systems development time was diverted to ever-increasing maintenance loads of legacy systems (Pressman, 1997). At the same time, U.S. companies were beginning to realize that their core business processes were in drastic need of an overhaul. Enterprise systems, such as those offered by SAP, Oracle, and Baan, seemed like a good solution to problems that many companies were facing. The early practitioner's press was rife with the promise of what these enterprise systems could do for an organization, such as cut cycle times, reduce error rates, offer software solutions to multi-business companies, and bring employees closer to customers. (Jestus, 1997)(Lienert, 1996)(King, 1996)(Jaynes, 1995).

Recently, however, stories of enterprise system implementations gone awry have appeared.(Zeitz, 1996) Some companies were in their third or fourth year of the project, and no software was yet in production. Consulting costs on these systems were much higher than expected, often 3 to 4 times the cost of the original software. Very little of the expected cost savings were being seen. (Zeitz, 1996) The software was often purchased without executives fully understanding what it was they had purchased, and frequently purchased for the wrong reasons. (Kay, 1996)(Zeitz, 1996)

The purpose of this paper is to present a case study of a medium-sized manufacturing firm that implemented a packaged enterprise system. Unlike many of the enterprise system failures represented in the recent press, this company successfully implemented an enterprise system. The case study illustrates that, with proper planning and people, an enterprise system can be implemented for the right reasons, in a reasonable amount of time, without involving an exorbitant amount of consultants.

The Case

XYZ company (name changed to protect identity) is a manufacturing firm headquartered in the southern midwest with revenues of approximately $550 million per year. The company operates 12 plant locations and 40 sales locations throughout the U.S. and Canada. In addition, the company has sales offices in 15 foreign locations. The company has experienced rapid sales growth throughout the 1990s, with CAGR over 10%.

The company's success has been driven by a customer-focused value formula, which states that the company must provide its customers with better service and quality, at a lower total product cost and a shorter delivery time than any of its competitors. Although improvements were made during the 1990's in service and quality, and the company's lead time of four weeks on a new custom design was the best in the industry, progress toward reducing the lead time to a company specified goal of two weeks was not being made. The competitors were beginning to make improvements in their own lead times and were close to matching XYZ's standard, resulting in the loss of a key competitive advantage.

A lead time reduction team discovered that all individual tasks in the order fulfillment process only added up to the two weeks that XYZ desired. However, passing the information from one system to another created a seemingly insurmountable barrier of four weeks. The order information had to pass through five major systems and nine interfaces from the beginning to the end of the process. While many of these systems were good systems that provided the company with competitive advantages, a number of legacy systems remained from the 1970's in several operating areas.

The team felt that the only way to reduce the lead times to the desired two weeks would be to develop a seamless system that unified all business process and eliminated all duplicate data. The initial plan indicated that it would take about 2 ½ years to build the desired system in-house. With a key competitive advantage at stake, and the competition growing ever closer, XYZ knew that it would have to find a system solution in a shorter time frame. After an extensive evaluation, the team recommended SAP's R/3 system.

From the preliminary investigation, the team recognized that this project would touch everything that the company did. It was therefore critical to have across-the-board upper management support from all functional areas. If any area refused to participate, the functionality of the entire process would be seriously diminished, and the company might not be able to meet the lead time goal. The project was presented at an executive committee meeting by the CFO and the President. The upper management group, recognizing the magnitude and implication of the project, convened a steering committee which included the Chairman, CEO, CFO, President, Executive VP Engineering, and the Executive VP Operations. This steering committee provided commitment, drive and the important feedback to help keep the project focused on lead times and customer service. Members of the steering committee attended the implementation teams' weekly status meetings throughout the implementation process.

At this point, the implementation team was chosen. Because the company had a good history of user led development, the decision was made that the core implementation team would be made up of predominantly users, rather than IS people. These people would be responsible for leading the project in their functional areas, configuring the new system, migrating the data and making decisions on behalf of the department and the company on how data and work would flow through the system and functional areas. The IS people would serve in supporting roles to this group in functions such as operations, security, and as members of the individual area teams. Team members were chosen from individual functional areas that were key people in the user department and generally one management level below the VP level. These people were committed to the project 100%, and the team members' usual duties were absorbed by the user departments without adding additional people. XYZ chose to use consultants in only a technical support role for the project. At its peak, the company had only eight outside consultants on site to assist the twenty people on the inside implementation team.

Scope management became particularly important in the implementation. The team had to decide what was necessary to get the time improvements in the first phase of implementation. The company chose to implement the purchasing, manufacturing, financial, and human resource modules first. These areas provided the best opportunity for improvement and would eliminate five of the nine interfaces that the order has to pass through on the way to being filled.

The team was under strict instructions that the conversion was to be accomplished without disruption to the plant or customer service. The decision was therefore made to implement the manufacturing plants in sequence. The pilot plant chosen was a medium sized plant with a product line which is representative of most XYZ products. This plant was an hour's drive from the office where the team was working and the conversion was accomplished over a week long vacation shutdown. The next plant conversion was accomplished over a regular weekend.

The implementation of these core business processes was accomplished in the planned seven month time frame. In this initial implementation, XYZ has achieved over forty-five different workflow improvements, productivity improvements or the elimination of duplicated effort. Some of these improvements include immediate recognition of materials shortages, 24-hour availability of the system seven days a week, international currencies and multiple language availability to support the company's global operations, simplification of the plant scheduling process, reduction in financial close time, the number of system interfaces that information has to pass through has already been greatly reduced.

The implementation effort will continue through mid-1998, at which time the remaining core processing, such as sales and engineering systems will be converted to the enterprise system. At that time 95% of the company's information processing will happen on its enterprise system, the implementation of which will take approximately 1½ years.

What Can be Learned from this Case?

In this case, a packaged enterprise system was chosen for the right reasons. An enterprise system is a tool to solve a specific business problem. It is not a substitute for strategic thinking about business process, nor will it, by itself, provide a company with any sort of competitive advantage. In this case, the enterprise system was chosen as a tool to solve a specific problem -- reduce lead times.

Top management not only supported the implementation, but drove the process. The implementation of an enterprise system is a strategic function that affects all parts and processes in a business, and affects the service to the customer. If this is considered just a software project by top management, rather than a business project, or if the top management group has little interest in participating in the ongoing project, the implementation team will not get the important feedback they need. The top management's main role in is in keeping the project focused on competitive advantages.

The company committed 100% of some of their best people's time to the project. "If it is an IS driven project, it will not succeed." (Kay, 1996). For this company, this meant user-led development. The intensive user involvement is also necessary to implement changes in the departmental organizations. They are more likely to have insight into the people within the department and what they can handle if significant workflow change is involved. The company's long history of user led development obviously contributed to the success.

Consultants were used sparingly by the company. The people available often lack the depth of training and experience to really add value to the project. In addition, consultants who have only six months training often cost a company $2,500 per day, and while they may know how to configure the system, they do not know your company or what is best for your company. (Kay, 1996). XYZ used consultants only in technical support–without a user group and an IS development team in place, this would not have been possible.

The company specifically wrote out the goals of the project and managed toward them. Simply implementing the software is no guarantee that these goals will be met. These goals need to be reviewed by top management and the implementation team on a regular basis or the project can easily get off target. It is extremely important for these goals to be written and published, both for the implementation team and the user departments. They provide an important communication tool as well as an important decision-making tool. They are also critical in managing scope of project.

Conclusion

A seven-month successful implementation of a packaged enterprise system is possible with the right goals, the right people, and the right company. However, not all companies are in a position to achieve what the company in this case achieved. There are things to be learned for all practitioners facing the same challenge from the case provided. Hopefully this case has clarified the decision making process that underlies a successful development effort, and pointed out some success factors for an enterprise implementation.

References

References are available from the author.