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ENTERPRISE RESOURCE PLANNING



— Introduction

Enterprise Resource Planning integrates functions and processes of all departments into a single suit. It automates various business processes in different industries including engineering. Unlike other software applications that are developed for one customer, ERP comes in a form of packaged software. This means that many organizations including manufacturing, insurance, banking, and software developing companies can use one package of ERP. It can be interfaced with most of the software applications of organizations and can be modified to suit to specific organizations' functions and processes. It can bring numerous advantages to a manufacturing firm like Solariocot. It reduces costs and time associated with developing software applications for individual departments, makes processes of an organization efficient, standardizes business processes, and encourages innovation.

— What Could Have Gone Wrong

Lack of Quality Standards

Software applications, like other systems, products and services, require quality for effective functioning. The traditional approach to system development life cycle requires that systems should undergo through needs assessment, alternative analysis, design, development, implementation, and maintenance stages. During design and development, system developers create detailed specification of the proposed system and acquire hardware and software that are necessary for design. At this stage, system developers identify standards and quality that the system should meet.



The failure is attributed to a lack of quality standards. The system is of low quality since it fails every time. Professionals can detect failures in systems before they occur only if they were developed to the required standards and quality. The fact that a consultant audited the system and found it to be robust and sound but later failed indicates that it was not up to standard. If the system was up to standard and quality, the consultant might have detected the failing areas and alerted the management.

In appropriate Implementation and Maintenance

When purchasing a system, it is vital to take the necessary steps to install, operate, and maintain the system. Installation stage involves planning for the installation, training users and IT professionals of the organization on the various technical and operational aspects of the system, cleaning up and converting data i.e. physical data from the manual system to electronic data in the ERP, and involving vendors in the installation of the package. There should also be good lines of communication between the company and vendor. This enhances the quality of system implementation and reduces technical errors that can be made by technical team of the organization during usage and maintenance. In addition, the vendor should be responsible for maintaining the package during the initial stages for the company to reduce the costs of using the system in its entire life.

The system did not follow appropriate steps during implementation and maintenance. The system was implemented by Solaricot information technology IT staff without the help of the vendors. We later find that though the ERP failed, the IT staff in Solaricot could not detect any technical problem in the system. This means that they were left to implement what they did not understand well.



Lack of Customization

Firms buy off the shelf software applications that suit their needs. However, ready-made applications may not fully meet the needs of users. There is always the need to customize applications to fit in the processes and operations of an organization. This is normally done through making contract with the vendors to make the changes, making contract with a third party, or modifying it in-house. While outsourcing would save the organization a lot of time that it would have wasted while doing in-house, it enables the IT to perform other duties in the organization. In this case, contracting with the vendor would be more appropriate as they understand the system better and could do the modifications within a short period of time. IT staff of the organization implemented the system without customization. The SiME system might be failing because of lack of incorporation of a functionality of a department in the firm. An attempt to input the functionality may be causing the system not to perform as required and possible failure.

— What Solaricot Should Do

It is evident that Solaricot loses a lot of money and time when using SiME system. After implementing and installing the system, it does not perform as expected, meaning that it does not meet the requirement of users. In addition, the IT department and the consultants cannot identify the cause of the failure. Traditional life cycle in system development requires that when a system is completed and does not meet the needs of users, system developers should get back to needs assessment stage to start a fresh and look for the problems and fix them. To avoid further damages and losses, the company should stop using the system and take it back to the vendors who will again assess the needs of users,



perform alternative analysis, design, develop, implement and test the system to see if it meets the needs of users. While coding the system, the vendor should perform unit, integration, and system testing so that all parts of the code work without bugs that may cause the whole system to fail.

The vendor will also have to customize the system to meet the needs of the company. This will be done by getting system requirements from the company's management and IT staff. Instead of replacing the old system with new system overnight, the vendor in collaboration with the IT staff should perform parallel implementation in order to reduce the risks of losing data in case of system failure. The Company should recover any lost data due to system failure, convert them in a way that is suitable to manual system, and operate in their old manual way. This will ensure that the organization does not continue experiencing losses and encourage employees as they are used to the working of the old system. It will also provide time for the redevelopment of the SiME system.

— Importance of Understanding Value for and IT/IS Graduate

Information systems, like any other system, operate effectively when their value is high. High value implies that the quality of the system is high. Systems with high quality operate as required and have limited or no failures. They are well developed and properly tested to ensure that they have very little failing points. Standards also define the level by which a system can be developed with carefulness. Some systems such as those that work in life-saving situations have to meet high quality standards. If not, they might lead to loss of life when they fail. Such



systems are said to have high value compared to other systems. Value indicates the level of service that a system can provide to a user with minimum failure.

Information systems have become an integral part of the processes of an organization. Organizations usually process and store almost all their data, including critical ones, using information systems. This shows that information systems are of value to the organization as they do almost all the work that should have been done manually by people. Unlike the traditional systems that used to include or process information of individual departments, ERP application systems incorporate the processes and operations of all departments in an organization in one system. This means that organizations save a lot of time and money therefore the system is of value. Unlike the manual systems that serve clients slowly and inefficiently, information technology and information systems have improved the quality of services and products that clients receive. In addition, they do this quickly, efficiently, and effectively.

There is need to minimize errors and system failure to reduce system capability shortcomings. A system shortcoming is the inability of a system to function as required. It is normally attributed to the lack of meeting of the requirements of an organization by a system. If a system fails to either meet the needs of the organization or perform as required, its value and that of an organization reduces. The organization will run at a loss as the products and services will not be delivered of the required standard and customers will not find the products and services in time.

Understanding value makes IT/IS departments of organizations outsource system developers in case they do not have qualified staff in the areas. This is done with the intention to deliver software applications



that can add value to organizations. IT outsourcing increases gains in productivity of a firm. Outsourcing firms contain accumulated IT knowledge that adds value to a firm. IT/IS graduates should know that organizations with high IT intensity have high IT knowledge accumulation, therefore, benefits a lot. Having understood the meaning and need of value, IT graduates will be able to develop software applications that are of high quality and add value to organizations or users. This will enable them to identify and develop IT skills that would enhance development and maintenance of systems that add value.

