Exploring Enterprise Resource Planning Systems: A Comprehensive Analysis of ERP Systems

Khaled Almgren
Ph.D Candidate
Computer Science and Engineering
School of Engineering
University of Bridgeport
126 Park Ave, Bridgeport, CT 06604

Abstract

Companies, business organizations, government agencies, and educational institutions require Enterprise Resource Planning Software in order to manage their operations. This paper will investigate about the features of different ERP systems. It will provide detailed information about how these features are used, the various departments they are dedicated to, and how they help organizations to ensure smooth running of their operations. It will also compare the benefits of different systems in order to come up with a conclusion about the best of all. It will also focus on the requirements which are necessary for enabling one to acquire these systems. Moreover, it will discuss the costs associated with the software, and the type of licensing they contain. Most of the systems are designed to serve specific purposes hence they cannot be applicable on some organizations. The target publics of the developers of these systems will be discussed too.

Keywords: Enterprise resource resourcing, Adaxa Suite, Compiere, Fedena, Openbravo, Dolibarr

Introduction

Enterprise Resource Planning refers to business management software which is used by companies for data storage concerning their various stages of business activities. It enables them to create databases of their practices which provide real-time picture of the core processes which they are engaged in. ERP systems are used to keep track of the business progress in order to enable managers to discover areas which require changes. For instance, they keep updated information about the organization's financial status, manufacturing activities, expenditure rate, raw materials and its production capacity. Managers use this data to determine the necessary decisions which need to be done in order to facilitate welfare of their organizations. The most famous enterprise resource planning systems are Adaxa Suite, Compiere, Fedena, Openbravo, and Dolibarr.

Adaxa Suite

This type of ERP systems is open and fully integrated. Its code was contributed to the society and released under the license GPL/GPL2. It is put under different situations which include; e-Commerce, Law, Distributions, Electronics, Banking and even on Scientific Instruments. It is also used in businesses at various sections which include; Integrated Point of Sale, Customer Relation Management, Integrated Web stores, Material Requirement Planning, and also Supply Chain Management (Ramaswamy, 2007). This software was developed based on Adempiere and it supports a lot of business activities. It can be put under use as a general ledger whereby complex banking and financial reporting can be performed. It supports multiple currencies hence eliminating the need for performing manual conversion multiplications.

It can also handle sales reporting, compile purchase orders, perform vendor reporting, and order entry (Montgometry, 2010). It can also produce business quotes hence enabling the organization's transactions to run smoothly. It eliminates unnecessary errors which are prone to manual work such delivering of incorrect supplies, forgetting to process order entries, or delay purchase orders.

It also allows entrepreneurs to perform campaign and contact management which are necessary for keeping customers in touch and promoting sales (Monk, 2009).

This software also performs asset management through use of tracking, barcodes, fixed and depreciation asset register to keep record of all assets available. It contains in-built tools which enable reporting to be executed. The reports generated through these tools are standard but they also allow users to customize and export them to various destinations as they wish (Leon, 2012).

Compiere

This is the most preferred cloud-based Enterprise Resource Planning, and Customer Relation Management software by many companies. It provides businesses, government agencies, and nonprofit organizations with easy and cost effective tools for managing their operations. It promotes effective functionality in distribution, sales, and service processes hence maintaining good businesses and professional relationship between the targeted organizations and their publics (Kraemmerand, 2003).

Moreover, this software is flexible and allows users to make the necessary customization in order to suit their practices without triggering need for programming. Therefore, it is cost effective since it does not subject users to additional expenses after purchasing it in case they want to modify its nature. However, if the users are intending to make extensive modification on the software, minimal programming might be required in order to alter and make additions on the existing features (King, 2005). Compiere solutions are easy to acquire since they do not require any up-front investments. They enable business organizations or any other interested agencies to purchase them whenever they require their services.

They are easy to implement since they are developed to support high compatibility with many hardware platforms, browsers, operating systems and even databases. Therefore, they eliminate the doubt of failure to function by the purchasers. Moreover, they give the users an assurance of continued benefiting from them in case they decide to develop other databases or install new operating systems. They are also easy to cope with since they have a revolutionary model-based application which is designed to support and facilitate faster and simple customization (Khosrow-Pour, 2006). This application enables the users to attain satisfaction of the product easily through minimizing the difficulties which are faced during customization process.

Fedena

Fedena is open source school-based management software that is used by the Department of Education of the Government of Kerala to process and automate the system of over fifteen thousand schools found within the State. It is user-friendly software which is which is developed with UI/UX design. This software allows users to get started without undergoing any form of training. It can take duration of less than 10 minutes for a person of average Intelligence Quotient to understand its features and use it without facing much difficulty (Henderson, 2010).

It is customizable hence allowing the concerned institutions to make the necessary modifications on it hence promoting its effectiveness in usage. It was developed by Ruby on Rails with plugin architecture and allows users to customize it without incurring a lot of expenses. It is scalable in order to suit the size of users intending to benefit from its features (Henderson, 2010). It can be easily scaled up to suit large number of students in cases whereby it is being used by large institutions, or get scaled down to serve little number of students for the small institutions. It is deployed in cloud servers hence making the scaling easy to undertake without exposing the users to a lot of challenges.

It is a secure system to use whereby the data contained in it is encrypted to protect unauthorized persons from accessing it. It contains high secure servers which have SSL certificates for proving high quality data encryption. It enables institutions to use it without the fear of having their data being hacked into by malicious persons (Heidi, 2008).

Openbravo

OpenBravo Enterprise Resource planning is the main product of a Spanish Company named Openbravo (Yakovlev, 2002). It offers complex business solutions for companies in order to help them to manage a wide range of their activities which include; production, warehouses, sales, and finance. It has been developed with the latest web technologies which pay much attention on user friendliness.

According to SourceForge, this system is the most dynamic project under the SourceForge license. It was developed by the eVolpe Consulting Group to offer business solutions to small and medium-sized organizations (Grant, 2006).

It has an extended functionality that allows full-scale enterprise management and promotes customization in order to suit the customer needs. The developers of this system do not charge any fees for obtaining license to use it. The only charges applicable are for implementation and Information Technology training for the users (Gill, 2011). Moreover, if the users require system extensions, some fees are charged in order to offer the service. This system has been successfully implemented on the small and medium-sized businesses and it also extends its use to the government agencies whereby it has been put in use by the Governments of America and Spain. Its implementation on the government agencies proves it efficiency, effectiveness, and reliability while in use.
Its dynamic development feature enables it to follow the latest market trends through being updated to the latest versions without incurring the user additional costs (Ferdows, 1997). Therefore, it is effective for promoting advancement in experience by the users since every new version is introduced in order to address a certain aspect of customer needs. It is compatible with Windows operating System and Open Source Linux Systems hence facilitating its variability in use. It makes it available for use by many persons who have installed various operating systems on their devices. It has a detailed technical documentation which allows it to be extended by any person who posses java programming skills. It can be easily integrated with a free point of sale system which promotes enterprise management (Clemons, 1986).

Dolibarr

Dolibarr Enterprise Resource Planning is modern software which is developed with much emphasis on user-friendliness (Yusuf, 2004). It supports business activities which include; orders, invoices, contacts, stocks, agendas, and emails among others. It is designed to support use by small business, foundations and also freelances. It assists businesses to process multiple orders within a short period and produces reporting by using the ledger feature contained in it (Shields, 2005). It also enables them to manage the available stock through processing asset barcodes and purchase orders in order to discover the type of stock which needs to be added.
It supports management of employee leave requests so as to keep an updated record about the ones who will be at work during a particular time (Dehning, 2003). This enables the organization to prepare early enough to acquire personnel to represent the employees who will be out for leave in case the various departments do not have adequate professionals. It enables invoice management in order to keep record of the business activities which have taken place already. Invoices authorize execution of various activities and allow use of the business resources as requested. Therefore, proper management using the invoice management feature of Dolibarr ERP enables business to keep track of usage of their resource and avoiding unnecessary losses occurring through misuse of resources (Turban, 2008).

Comparison of the Enterprise Resource Planning Systems

Most of these systems provide almost the same features to support business operations. However, there are a few differences which occur on the development strategies and the features contained by the systems. For instance, Adaxa Suite and Compiere systems are different from Dolibarr and Openbravo in that they support even large business enterprises. Their systems are developed with strong features which support multiple data entry in order to support extensive business operations without crashing. However, Dolibarr and Openbravo are mostly developed for use by the small and medium-sized businesses. They contain most same features as the Adaxa Suite and Compiere but the technology used in developing them is not strong enough to support extensive business operations (Ching, 2004).

On the other hand, Fedena Enterprise Resource Planning is developed to be used by school-based institutions. Unlike the other systems, its features are designed to support students in executing their learning. Data contained in this system is highly encrypted and requires authorization in order to access to it. It lacks some of the features contained in the other systems since it is not entirely business oriented. Therefore, it does not involve features such as point of sale management, and chain supply management (Brown, 2003).

Openbravo ERP system is also different from the other stated systems in that its developers do not charge license fees for customers who intend to use it. This system is offered free of charge to the users by charges apply when additional services are required such as implementation, training and extension systems (Thomas, 1998).

The best Enterprise Resource Management is Compiere. Apart from supporting all nature of organizations including all sizes of businesses, government agencies and nonprofit organizations it does not require programming to make customizations. Most of the other systems including Openbravo software require users to have skills in Java programming in order to be able to make customizations (Stable, 2000).

It enables users to acquire it without a requirement of up-front investments hence gaining more credit over the other systems. Its customization process is cost effective since the users without skills in programming do not have to higher experts to perform the task. Though Openbravo is offered free of charge, it worthiness cannot be compared to that of Compiere software. It contains wide variety of features which are worthy paying for (Shields, 2005).

Conclusion

Enterprise Resource Planning systems enable businesses and other concerned organizations and government agencies to manage their operations with easy. The large business organizations receive very many orders and invoices which cannot be processed manually. Moreover, they contain a lot of stock whereby it becomes impossible to monitor, control, and determine the purchases which need to be done without using computer software.

These systems are developed with much emphasis put on user-friendliness in order to save the users from incurring a lot of expenses for undergoing training in order to be able to operate them. The features contained in these systems are easy to understand hence requires the users to spend little time to learn how they operate. They have been designed with multiple features integrated together in order to provide a wide variety of options for executing business activities. They have targeted elimination of most of the manual processes which are include in the crucial sectors of business transactions whereby occurrence of errors may lead the organizations to incur a lot of losses.

However, all systems are not developed for the same purpose or designed with similar tools. Difference comes in when distinguishing the technology used to develop them and the target publics who were aimed by the developers. Some systems such as Dolibarr and Openbravo were mainly developed to support activities of the small and medium-sized businesses. On the other hand, Fedena's developers were targeting the school based institutions hence the software is not entirely embedded on business practices.

Some software such as Openbravo do not require payment of license charges by their users unlike the others whereby users are expected to pay charges in order to use them. All the systems were developed with high emphases on compatibility and ease of customizations in order to meet customer needs effectively. Though some systems like Openbravo may require IT training for users to operate them, most of the others are easy to operate, and requires the users to take little time in understanding the provided features. Openbravo is the most dynamic system which allows users to update to the latest versions without incurring any additions costs after implementation.

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