

# **ERP + CRM = an Amplified Profitability of A Business**

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**ABSTRACT:** Enterprise Resource Planning (ERP) and Customer Relationship Management (CRM) are two sides of the same profitability coin. ERP and CRM are similar in many ways, as they are both used to increase the overall profitability of a business. These systems overlap in some areas, and can be completely integrated in others. In this paper we have given an overview of ERP and CRM as stand-alone systems and their evolution. We have discussed the need for integration, model used for integration, some of the softwares available for integrating and it also covers the benefits of an integrated system. By this, one can understand how integrated ERP – CRM system improves productivity by reducing duplication of data entry tasks, empowering employees with the right information at the right time, streamlining business processes through automated workflow, and improving organizational task management.

**KEYWORDS:** Enterprise Resource Planning (ERP), Customer Relationship Management (CRM).

## **I. INTRODUCTION**

CRM and ERP are two important technology acronyms that businesses need to know about. Both are valuable business software solutions but each system is used to manage and achieve very different business goals. As integrated ERP-CRM system it addresses complete end-to-end business process.

### **Enterprise Resource Planning (ERP)**

ERP mainly focuses on the business. ERP is a system for improving the efficiency of business processes. ERP allows for the rapid sharing of standardized information throughout all departments. Executives, managers, and employees all enter information into the ERP system, creating a real-time, enterprise-wide snapshot. Problems in any area will automatically create alerts in other affected areas. This allows departments to begin planning for issues before they become a problem in that department. In short, by allowing the business to focus on the data, instead of the operations, ERP provides a method for streamlining business processes across the board. ERP focuses on reducing overhead and cutting costs. By making business processes more efficient, ERP reduces the amount of capital spent on those processes.

### **Customer Relationship Management (CRM)**

CRM is a system for recording and storing all information related to customer interactions. It focuses mainly on the customer. CRM can be used by executives to create sales projections, by sales representatives to maintain contact with clients, by shipping clerks to verify addresses, and by the billing department to create invoices. The goal of CRM is to provide a comprehensive store of customer data that can be used to increase sales, improve customer retention, and make customer relations more efficient.

## **EVOLUTION OF ERP SYSTEMS**

The evolution of ERP systems closely followed the spectacular developments in the field of computer hardware and software systems. During the 1960s most organizations designed, developed and implemented centralized computing

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systems, mostly automating their inventory control systems using inventory control packages .Material requirements planning (MRP) systems were developed in the 1970s which involved mainly planning the product or parts requirements according to the master production scheduled .Manufacturing resources planning (MRP II) were introduced in the1980s with an emphasis on optimizing manufacturing processes by synchronizing the materials with production requirements. ERP systems first appeared in the beginning of the 1990s with the power of enterprise-wide inter-functional coordination and integration. ERP systems integrate business processes including manufacturing, distribution, accounting, financial, human resource management, project management, inventory management, service and maintenance, and transportation, providing accessibility, visibility and consistency across the enterprise..During the 1990s ERP vendors added more modules and functions as “add-ons” to the core modules giving birth to the “extended ERPs.”



Figure 1: Evolution of ERP

## EVOLUTION OF CRM SYSTEMS

During 1980’S Database Marketing focused on Data Mining and the outcome of this was Direct Marketing .During 1990’s Relationship Marketing focused on loyalty programs. Advanced planning and scheduling, e-business solutions such as Customer Relationship Management, concept supported by latest technologies came into existence during 2000’s.

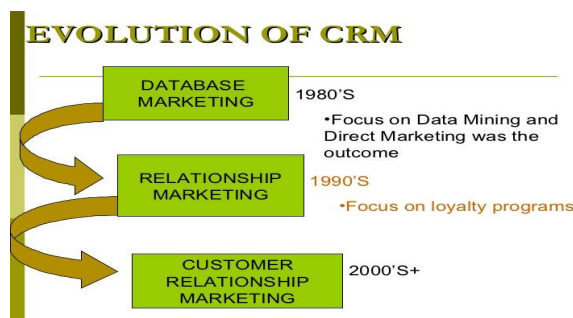


Figure 2: Evolution of CRM

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## II. NEED FOR INTEGRATION

Many small-to-mid-sized organizations use CRM and ERP solutions to automate and improve the management of their operations. CRM is a front-office system that centralizes all information about external marketing, manages the sales pipeline, automates customer service, tracks information about customers, as well as creates dashboards and reports on this data. ERP systems automate and manage back-office business activities, such as accounting, collections, human resources, payroll, manufacturing, distribution, and purchasing.

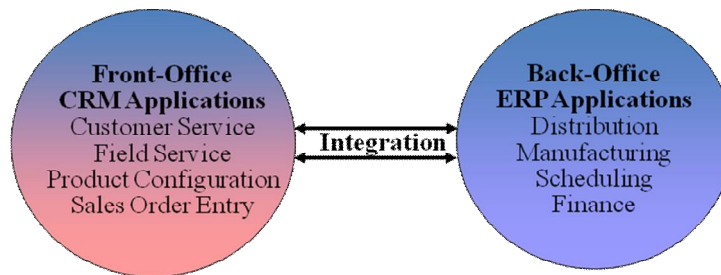


Figure 3: Integration of CRM-ERP

Using integrated CRM-ERP solutions, organizations gain access to comprehensive and consistent data about customers from throughout the organization using their accustomed application. This integrated information enables users to view combined financial and nonfinancial information about customers from within the CRM application, regardless of where the data is generated or stored. Integrated solutions also eliminate the need to perform complex, time-consuming and costly point-to-point integration and the challenges of upgrading systems.

Now-a-days many companies operate CRM and ERP as integrated systems which has

- ability to track customer interactions
- single point of customer information
- centralized data warehouse
- ability to target customers effectively
- control over forecasting and sales reporting.

Integration of CRM-ERP improves productivity by reducing duplication of data-entry tasks, empowering employees with the right information at the right time, streamlining business processes through automated workflow and improving organizational task management.

## III. MODEL AND SOFTWARES USED FOR INTEGRATION

The ERP-CRM model shown in the Fig 4, clearly described the ERP model to solve the business problems. Whenever customer request engender it is directly forwarded to the concern department for the assessment and positive response. After statistical analysis and evaluation of the request the answer is sent back to the corresponding customer and this feedback will be saved in the database for the future requirements. This scenario is most common in each and every organization for creating more sophisticated and steadfast environment. We presented this whole scenario in our model in two different views. In effect after, there is a construction of easy to use and implement surroundings for the upper management and their employees to put their stress and expertise within the company's limitation and taking their company on top and behaving with their customer on priority.

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The two views are as follows:

- Outer View
- Inner View

### Outer View

Whenever a customer contacts with the company, the customer support officer receive customer’s request. In the company’s prospectus this department has much importance because of correspondence directly with the customer. In our model we have presented Customer Relationship Management as an outer view. CRM is responsible for receiving requests and replying to the customer directly.

### Inner View

The important part of the model is inner view or ERP view. In this view each department have equal access to a single database that holds the customer’s data or complaints. In ERP view the customer queries are rotating and evaluated by the concern department. For example a customer want to purchase any product will apply for a product through the customer support department (outer view) and the request will be forwarded to the sales department (inner view) and sales department will check the payment status in the database and will forward the same request to the operations department (inner view) for the delivery of the product and the record will be stored in the database.

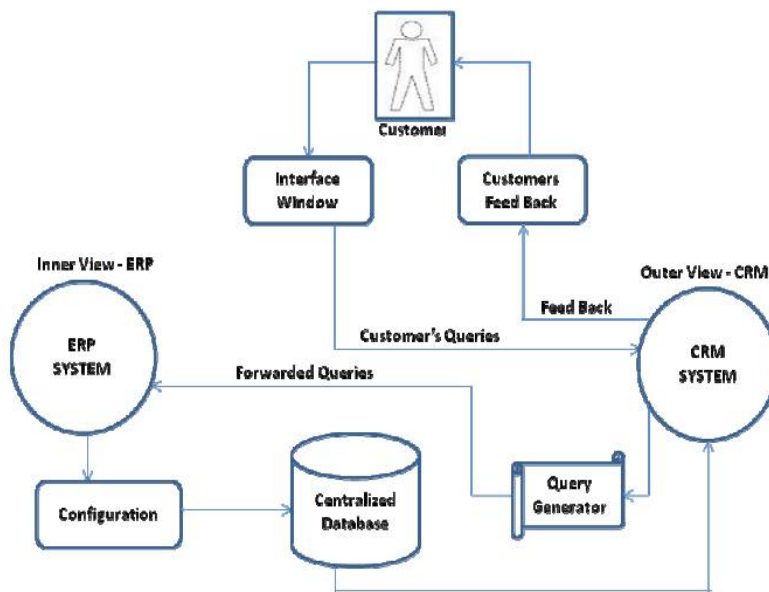


Figure 4: Model for Integration

### Softwares

1. MuleSoft provides two solutions to help businesses integrate their CRM and ERP systems. Mule makes it possible to integrate Salesforce.com CRM with SAP ERP. This allows business to automate processes and create seamless connectivity.

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2. Microsoft Dynamics Connector. Microsoft has released a data integration tool for linking Microsoft Dynamics NAV/AX and Microsoft Dynamics CRM – creatively called the Microsoft Dynamics Connector. The connector allows for out of the box bi-directional integration between the ERP entities and the CRM entities such as Customer, Invoices, Sales Orders and Items.

## IV. BENEFITS

The demand for ERP-CRM integration is at an all-time high. With some specific areas included in both, integrating the two can have significant benefits that save the company's time and help get orders out faster. Integration leads to quicker turnaround times and improve efficiency. It will also help in promotional and discount pricing. Integration eliminates double entry by keeping all data in one view. Some key benefits of integration of ERP and CRM are discussed below.



Figure 5: Integrated ERP-CRM

1. A 360 degree view of your customer  
One of the biggest advantages of ERP and CRM integration is that it gives a complete view of the customer. From prospect, to sales and support, to finance and accounting, together these systems provide complete visibility into customers' needs, buying habits, order history, preferences, account standing, etc. It can also help build lasting relationships with customers and determine where there is potential for future growth. It can even help anticipate the customer's needs before customer does.
2. Better access to critical information.  
A CRM and ERP solution that is fully integrated gives employees the ability to access important information in real-time. Without it, employees are less efficient and customers will pay the price. A fully integrated ERP and CRM solution empowers the employees with access to the information they need exactly when they need it. With the touch of a button, they can retrieve inventory levels, shipments, customer financials, order history, returns, payments, pricing, etc.
3. Streamline business processes.  
In the past, without an integrated solution, many business processes were manual and time-consuming. However, a key benefit to merging ERP and CRM software is enhanced productivity through streamlining processes and automating workflow. Additionally, an integrated solution cuts down on the amount of duplication of data entry tasks.
4. Reduced IT support and training cost.  
When there is just one system to maintain instead of two, and there is no need for interfaces to be built nor integration required, IT support cost will significantly drop. With integrated ERP and CRM, there is less training and support required for employees. Employees will be trained on just one system, and additional courses and updates will cost less.



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## V. CONCLUSION

This paper aims at exploring the integrative value of ERP and CRM systems along with how different software such as Mulesoft and Microsoft Dynamics Connector provides value to systems integration. It also focuses on explaining how integrative value is gained from the two resources ERP and CRM systems as well as the impact they have on firm's performance. From this one can understand how integrated ERP – CRM system improves productivity by reducing duplication of data entry tasks, empowering employees with the right information at the right time, streamlining business processes through automated workflow, and improving organizational task management.

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