ERP Works Wonders With Multi-Application Support

ERP systems must be integrated with other technologies for organisations to reap their full benefits, and maximise profits while doing business @ Internet speed.

ERP (enterprise resource planning) systems, when chosen judiciously, implemented correctly and used properly, can bring about dramatic improvements in an organisation, making it more competitive. In the last two decades, enterprises around the world have implemented ERP systems. While many such implementations led to the demise of companies, others failed but managed to survive and salvage the systems wasting billions in the process. (Yes this is true; while Fortune 500 companies like Hershey's, Whirlpool, Nestle, IBM, Apple, etc, were able to absorb the billions of dollars lost, the major casualties were smaller companies who didn't have the reserves to absorb the losses and had to file bankruptcy). Even those that successfully implemented ERP, failed to utilise its full capabilities.

Only a miniscule percentage implemented and used ERP systems properly, and was hence able to realise their true potential.

By the turn of this century, however, even organisations using ERP systems successfully, were unable to compete with their new business rivals. Surprisingly, the ERP systems were not necessarily the villains. They functioned as they were supposed to. But in all cases, after a certain point, the ERP systems were unable to take the organisations further—ahead of the competition. Why?

The limitations of ERP systems

ERP is an integrated software solution used to manage a company's resources. ERP's immediate predecessors—MRP and MRP II—focused mainly on managing the manufacturing and accounting resources of a company. ERP systems were to manage more functions of enterprises, today integrating all business management functions, including planning, inventory and materials management, engineering, order processing, manufacturing, purchasing, accounting and finance, human resources, and more.

But ERP was not designed to

look beyond the 'four walls' of the organisation, simply because the concept of ERP was born at a time when companies were run as independent enterprises with limited relationships.

Till a few years ago, an organisation could have thrived by delivering high quality products or services at reasonable prices. ERP was designed to do just that and with the right ERP package, companies could process orders, plan production, manage inventories, invoice customers, pay suppliers, and balance books. But it had its limitations:

Managers and decision-makers could not generate custom reports or queries when needed, preventing them from acting quickly and effectively.

Only the current status could be accessed, such as open orders. But managers often need to look beyond the current status to find trends and patterns for better decision-making.

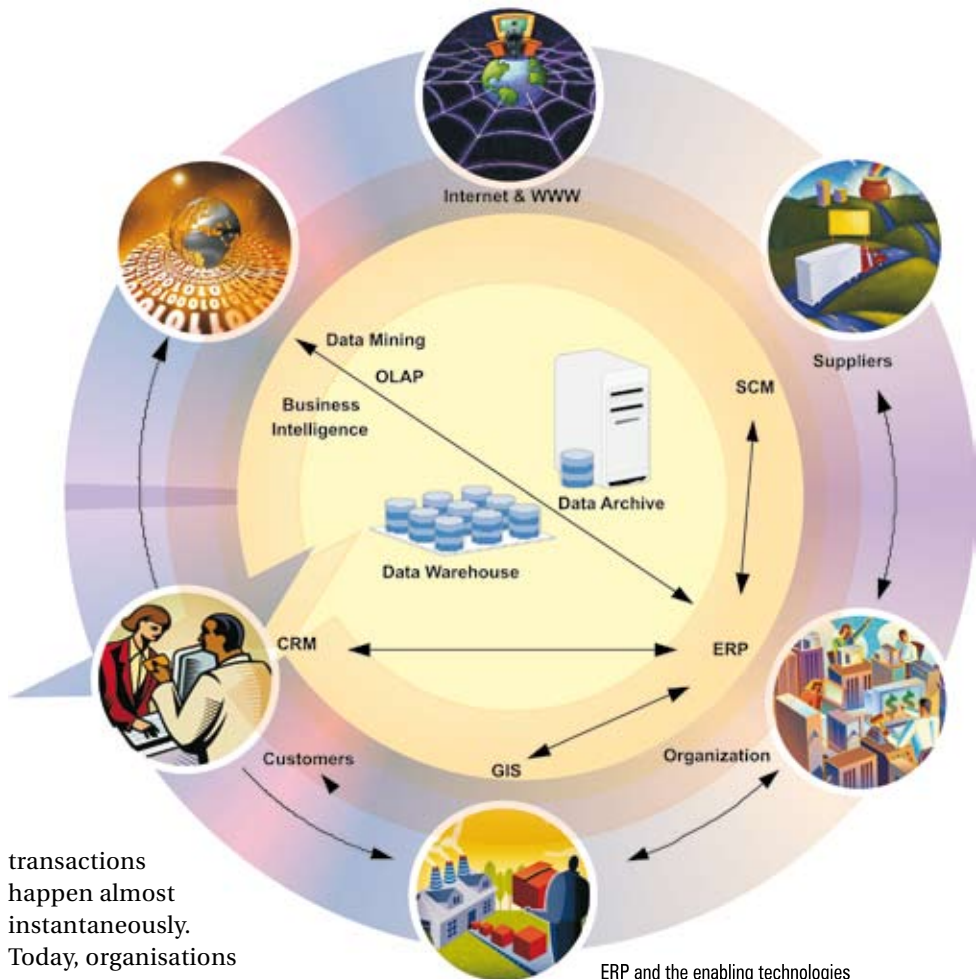
The data in the ERP application was not integrated with other enterprise systems and did not include external intelligence.

ERP systems could not meet all of the analytical and reporting needs of organisations.

ERP systems were not designed for information integration from multiple sources. The ERP databases were designed to optimise performance and therefore lacked the constructs required for multi-dimensional analyses. Most ERP solutions lack the advanced functionality of today's leading reporting and analytical tools. Moreover, performing complex analyses on the ERP database will impact the performance of the operational (on-line) systems.

ERP sure, but not alone...

ERP systems lack many features that organisations require to effectively compete in today's eBusiness environment where business transactions happen almost instantaneously. Today, organisations must have the capability to communicate and transact with their customers and business partners electronically, using technologies like EDI (electronic data interchange) and EFT (electronic funds transfer). Businesses must find ways to integrate new technologies that complement ERP.



ERP and the enabling technologies

ERP can be the backbone of an enterprise's applications but successful orchestration of the complexities of modern business will depend on a company's ability to share information promptly, securely, and effectively with customers, partners and suppliers. Organisations must seamlessly integrate their supply and value chains.

ERP systems are expensive to buy, implement, and maintain. But the real cost is the lost opportunities from not getting the most value from them. These systems were designed before the birth of the 24/7 global Web economy. A company today cannot hope to provide its customers and business partners with a personalised, unified online experience without integrating a host of new technologies with its existing ERP applications for external-facing processes.

Take the case of A&M Machines, a global leader in the design, manufacture, and support of automobile engines and power systems. Today's competitive automotive industry demands far more than power from an automobile engine. It demands performance at the lowest possible costs and the highest level of reliability. In order to retain its No 1 position, A&M had to constantly innovate—develop new products and improve the

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efficiency of the existing ones. The organisation has a world class R&D centre that helps it to stay ahead of competition. A&M was one of the first organisations to use an ERP system to improve the efficiency of its manufacturing processes. Today, thousands of A&M employees and contractors use ERP solutions for finance, quality management, plant maintenance, materials management, controlling, program management, logistics, accounting, and sales and distribution transactions. Even though the ERP solution replaced a number of disparate legacy systems and provided a common ground to pull a lot of business functions together, the manual processes remained for managing large volumes of unstructured content (information such as digital photos, scanned images, and CAD drawings, not easily managed by any ERP system). In addition, difficulty finding critical information quickly hampered efficiency in numerous ways.

A&M realised that it needed to complement its ERP solution with a product data management (PDM) solution. The PDM system integrated the document repository and ERP applications, empowering ERP users to collect, securely store, find, link, and easily retrieve the required documents. With just a few clicks, employees could view relevant documents stored within the document repository without ever having to leave their desks.

The customer almighty

The key differential in today's market is customer satisfaction. But the ERP systems include only the functions required for sales force automation (SFA) and call centre operations and fail to provide a personalised experience to customers.

Braintree Books, one of the largest on-line bookshops in the country, learnt this lesson the hard way. At Braintree, initially the ERP system played a vital role in improving its efficiency and made the order processing faster and efficient. But after that the company began to stagnate. There sales revenue decreased, customers started leaving the organisation, and the profits dwindled.

Like Braintree, ERP implementations leave many companies saddled with massive, isolated systems containing vital customer, product, or service data. These systems lack the functionality needed to optimise customer-facing operations and enable business partners to work more closely and efficiently. The solution is to integrate a Customer Relationship Management (CRM) system with the ERP system. Automated CRM processes are used to generate personalised marketing and customer care based on the customer information stored in the system.

The main problem that Braintree Books faced was lack of customer satisfaction. The company did not have any system to reward loyal customers. Customers making their hundredth purchase were treated just like new customers, entitled to no special treatment—like advance announcements, product recommendations, gifts, or discounts. So, they began drifting towards stores that offered personalised service and special treatment. Thankfully,

Braintree Books realised its mistake in time. It augmented its ERP system by integrating a CRM package that included personalisation features. Now customers receive personalised service depending on their value to the organisation. The CRM software also has features to run targeted promotional offers and mail campaigns so that the preferred customers get more incentives and discounts. The customer care centre too has been made state-of-the-art and the customer care executives can see the purchasing history of the customer and are able to offer preferential treatment to loyal customers. The new initiatives have started showing results immediately and customer satisfaction, revenues, and profits have improved. The satisfied customers have brought in new customers (through a referral program) and the future looks bright.

Technology is the key

According to Gartner Group, "Organisations should accelerate investment in upgrading their eBusiness/eCommerce platforms and those involved in B2B commerce should focus their investments on technology that further reduces the human touch needed to complete orders." The ideal eBusiness platform would deliver consistent, personalised information about products and services, inventory, pricing, terms and conditions, service options and other vital areas to internal users as well as to customers and partners (resellers, distributors and suppliers) across the entire extended value chain. eBusiness systems should expand the traditional boundaries of ERP systems. All these are now possible if an organisation can identify the right technologies and integrate them with its ERP system.

The age of information

Today, managing your organisation efficiently and productively is not enough for survival. For that winning edge, organisations must not only know what is happening inside but also outside the company. In fact, knowing the external factors—changes in the business environment, customer preferences and trends, new rules and regulations, competitor strategy, market trends, etc.—are more important. This information is critical for survival and is more difficult to get when compared to the internal information.

Another factor that is very important is the organisation's historical data. It is a veritable gold mine, as it can provide valuable insights regarding demand, customer demographics, customer preferences, etc. The challenge faced by enterprises today is to avoid information overload by intelligently selecting available data and presenting it in a way that is intuitively meaningful. When a company can make decisions based on timely and accurate information, it can improve its performance.

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BI and CI for success

According to FWP (www.findwhitepapers.com), "Business intelligence (BI) is a broad category of applications and technologies for gathering, providing access to, and analysing data for the purpose of helping enterprise users make better business decisions. The term implies having a comprehensive knowledge of all of the factors that affect your business."

By adding a data warehouse and a business intelligence front end to the ERP system, we can use the events in the past to predict the future. Just as ERP fine tunes resource planning and management, business intelligence fine tunes ERP. A data warehouse organises ERP data so that it is easily accessible for online analysis. Business intelligence systems improve business competitiveness by providing reporting and analysis tools to the desktop, enabling communication with the entire supply chain via the Web and automating alerts and actions.

Competitive Intelligence (CI) is a branch of BI, which is concerned with the external environment. CI gathers information that helps organisations formulate strategies to beat competition and assists decision-makers predict future trends and take smart decisions. CI helps in making use of the information before your competition does.

The ultimate objective of BI is to improve the timeliness and quality of information. BI systems provide online analytical processing (OLAP) and data mining tools that managers can use from the desktop to discover significant trends and patterns. For example, analysts can drill down to obtain progressively more detailed information about retail sales, change metrics, graphs and charts; they can reuse reports, create "what-if" analyses and generate best-case

and worst-case scenarios.

Valuable in its own right, ERP information becomes even more valuable when it is combined with information from other sources. A BI system allows this, as well. For example, a marketing manager might want to combine sales information from the ERP system with consumer demographics from A. C. Nielsen or business demographics from Dun & Bradstreet. With this information, the company can better segment its customers and improve customer relationship management. An automobile manufacturer for instance, can combine its internal ERP data with external databases to identify customers likely to be receptive to advertisements for a sports car, sedan, van or sports vehicle. Similarly, a pharmaceutical company can integrate its ERP information with sales and prescription information from pharmacies and doctors to better target its advertising. The purchasing department of a computer manufacturer might combine its ERP data with external data about sales forecasts for microprocessors. With this information, the purchase department can react to rising demand by consolidating all purchases stored in memory to obtain a better price from a single supplier. A sales organisation, on the other hand, could combine the data from its ERP system with that of its sales force automation (SFA) system. With the combined information, sales analysts and sales engineers can create special promotions for overstocks and supply up-to-date product availability to the sales force at the point of sale.

Businesses can optimise their investment in ERP systems by closing the loop between the BI system and the ERP system. The loop begins when the company discovers valuable business information from the ERP system; it closes when the company feeds those discoveries back into the ERP system to continually improve business processes. For example, an on-line business can use the business intelligence system to discover each customer's purchasing patterns and then update the operational system with recommended products. The next time the customer visits the site the operational system would tailor the Web page to feature products the customer would be likely to purchase.

> Only those companies that are lean, aggressive, and constantly looking for ways to improve and streamline their operations, will survive. For this to happen, companies have to embrace the technological advancements and make full use of them. ERP is the central or the core component around which the various technologies are integrated, and these combine to enable an organisation to work at the speed and efficiency of the Internet age, with most processes automated.

Business intelligence systems for ERP can also issue alerts when certain events occur or thresholds are met, enabling your business to react more quickly to problems and opportunities. For example, if a certain number of customers return a product for the same reason, the system can automatically alert engineering, manufacturing, and customer service to send a letter to customers apologising and offering a replacement or a reduced price on an enhanced product. Similarly, a customer service manager might want the system to generate a thank-you note to all those who purchase a product and suggest the customer also purchase a warranty.

Thus, by integrating information from disparate company functions, ERP systems consolidate valuable business information. Unfortunately, ERP reports generally provide only a fraction of the useful information in the system. Data warehousing and business intelligence unlock the power of ERP systems by providing managers with quality information, quickly and efficiently.

Net advantage

The ultimate value from the ERP investment results from integrating the ERP system not only with a business intelligence front end, but also with the Internet. When you provide a Web-based interface to the information in the business intelligence system, the Internet becomes an enterprise information utility for employees, partners, suppliers and customers.

A popular early application for integrating ERP business intelligence with the Internet is supply chain management. All participants—engineering and product design, vendors and suppliers, production, marketing, distributors and customers—can get the information they want, when they want it, from wherever they want it. So marketing people could provide customers with the latest product details and pricing information, the inventory management could be done based on real-time information, production can be fine tuned so that the right quantities are produced, and that

too, when required.

The suppliers and partners in turn, can share the information with their suppliers. Product designers, both for manufacturing and service companies, can capture customer information in real-time, refining their products for greater market appeal or customising them for key customers. By adding a Web-based interface to your ERP business intelligence, you can integrate the supply chain, speeding time to market and gaining manufacturing efficiencies. This Web-enabling will further help improve online performance.

Supply chain integration

There are many technologies that help overcome the limitations of ERP systems. In fact, ERP systems, along with these technologies can help transform even brick and mortar companies into e-businesses. For example, the integration of Product Lifecycle Management (PLM) and ERP significantly improves the productivity and effectiveness of users and organisations working with product and plant related information.

Brick and mortar companies conduct their business in the traditional way, doing most of the process manually, with no information integration and process automation. This kind of a business model will rarely succeed in today's competitive environment.

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The technologies that will enable companies to do business at Internet speed when integrated with the ERP system are Business Intelligence (BI), Data Warehousing, Data Mining, On-line Analytical Processing (OLAP), Supply Chain Management (SCM), Product Lifecycle Management (PLM), Customer Relationship Management (CRM) and Geographical Information Systems (GIS).

Business @ Internet speed

In this Internet age, what separates the market leaders from the followers, is the ability to gather the right information, get it to the right people and help them make better decisions quickly so that the company can react to the changes in the business environment promptly and efficiently, find and seize new business opportunities, lead the organisation through uncharted waters, anticipate and provide customers and partners with what they want, make customers and partners feel special and so on. For this, ERP alone is not enough; it must be integrated with other technologies. Only then can companies do business at Internet speed. ■

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