

A White Paper by Exact Software



Working Together More Efficiently:

Mapping out the Company's Business Processes



Executive Overview

To embrace the collaborative enterprise, businesses will undergo a mind shift.

Collaborate or stagnate

The ways in which people in companies work together and the ways companies think and do business are undergoing radical and unavoidable changes. What was once a business approach based on guarded and proprietary information available only to a select few people within an organization has become a business approach based on the need to collaborate—both inside and outside the four walls of an enterprise. As our global economy becomes more digital, businesses must drive down costs to be competitive and to improve profits. Both the ability and frequency of collaboration leads to improved organizational performance and, thus, profits. Indeed, to survive, an enterprise must be flexible enough to collaborate externally with its suppliers and partners while fostering that same environment among its employees. We must collaborate or we will surely stagnate.

To embrace the collaborative enterprise, businesses will undergo a mind shift. Traditional organizational structures will have to make way for an open attitude towards every individual and every organization with which they work. This is the direct result of the rapid acceptance of the Internet as the medium for information exchange between employees, businesses and other organizations, customers and suppliers.

Exact Software believes the walls that previously existed between various departments and organizations are tumbling down and in time will disappear altogether. They will have to disappear if an organization wants to stand out among its competition. Customers expect the best service regardless of the way they enter an organization. This service should come without delays resulting from, "That's not my department," or "You'll have to speak to my colleague." Solutions providers need to provide tools to increase an organization's effectiveness through collaboration.

Get your house in order

Those enterprises that want to make the transition to true collaboration successfully will benefit from getting their own house in order. The organization should be transparent and efficient. The use of knowledge and resources has to be optimal. Through the ability to set up secure Websites and manage content, extended ERP offers the means necessary for the essential preparation: improving and streamlining the organization and its communication.



New tools are being developed that provide the opportunity for organizations to extend their ERP systems.

Extend enterprise applications beyond the 80/20 rule

To improve collaboration, enterprises should be willing to extend their enterprise applications to more than 20% of the organization. The 80/20 Rule that 80% of a company's processing is completed by 20% of its resources (employees) no longer applies. Enterprise applications contain enormous processing power, but that power is limited to the few. New tools are being developed that provide the opportunity for organizations to extend their ERP systems. To get an understanding of how the 80/20 Rule evolved, let's take a look at the evolution of enterprise systems.

Up to the beginning of the 1980s, automation was almost exclusively directed at distinct subsystems such as financial administration, inventory control and personnel administration. It was an approach that led to what we now call "islands of automation," a phenomenon still present in many businesses today.

The idea of automating internal business processes was first applied in large-scale businesses in the manufacturing and processing industry. This laid the basis for MRP, material requirements planning. First generation MRP systems had some limitations, among which was the paradoxical fact that users saw their inventories increase instead of decrease, as promised by software vendors. In the beginning of the 1970s this evolved into its second generation, called MRP II, manufacturing resource planning. With MRP II, products became feature-rich but at the same time became a bit more complex.

The next step in the evolution was to reach different parts of the business, beyond the manufacturing process. Software vendors added payroll for salary administration, Human Resource Management (HRM), project management, asset management and even some electronic form of document management, thereby in theory covering the entire range of activities within an enterprise.

A new market, however, evolved that quickly exceeded the original MRP market and built upon the efforts of software vendors that added functionality beyond manufacturing and distribution. The Gartner Group named it enterprise resource planning, or ERP. Countless new software vendors offered their back-office products and services under this new umbrella and several developed into giants. The message, based on the concept of best practices, was of particular interest to large companies. But, for the small and medium-sized business, the concept of best practices was very expensive to acquire as well as to be trained and supported on. This gave rise to the ERP mid-market.

The problem in each stage of evolution remained constant: while functionality was very robust and quite useable, how could users extend this functionality to others in the enterprise? How could the information stored in an enterprise system be dynamically, easily, yet securely accessible beyond a select group of internal managers and back-office professionals? Other areas that directly contribute to a firm's revenues, like marketing, sales and customer service, typically are not a part of this process—processes that form the sphere of front-office employee activity. These employees should have access to up-to-date business information any time, anywhere in the world so they can



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make good and informed decisions faster. In today's highly competitive environment, this is a requirement, not an option. The call for broad, easily accessible business information has only become louder since the introduction of new, Internet-based communications. With easy to use standard software in the form of Web browsers that not only work on every modern PC and notebook but also on more compact equipment such as Personal Digital Assistants (PDA) and even cellular telephones, it is possible to exchange information from any imaginable place, at any time. To extend the power of enterprise applications beyond the few, enter extended ERP solutions.

Key Tenets

Organizations should be prepared to collaborate, organize and extend their business systems. Some key tenets—intended to support those decisions:

- keeping everything in one central database guarantees that all relevant information will be quickly available to employees at all times, thereby reducing the amount of paper and the time needed to make key decisions
- providing secure, role based access by all in a single sign-on environment ensures employees, customers, partners and others have secure access to everything they need
- automating all business processes leads to streamlined requests and workflow requiring less time to complete tasks

Keep everything in one central database

The idea that recording the same data on multiple occasions and in multiple places is a waste of time, and adheres firmly to the principle that the information an organization collects during the course of its existence should be recorded once and stored in one location. That is the only way to guarantee that everyone in the organization has access to the same information at all times.

This principle is not new in itself, but until recently it was financially unfeasible for most businesses. Progress in the area of scalable database server technology, together with the advantageous combination of increasing capacity and the lower prices of processors and storage media, has changed this for good. Most businesses can afford to continuously expand its wealth of information without having to discard data or free up storage space.

Information will only start providing real returns when it is in digital form. While paper is without question the most mobile data carrier, there are also some disadvantages. With paper documents you run the genuine risk of having multiple versions of that document



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at any given time. You also run a security risk when anyone can access a hardcopy document. Paper documents also lack the ability to be linked to other information, making it difficult to track them down.

Extended ERP systems provide the ability to digitize this information and store it once. Solutions can structure and enrich recorded information by making hyperlinks between data. This makes insight into data in a specific context possible anytime at any desired level of detail, and allows for the retrieval of related information. Mandatory key words and free text search options provide optimal access to all documents relevant to the organization. Only digitizing everything will guarantee that, besides information created within the system, all external information will be available for review and analysis by employees and others involved in the organization.

Secure, role-based access by all in a single sign-on

Centrally stored information should be accessible anytime, anywhere. Not long ago the idea of universal access seemed impossible. But the emergence of the Internet, intranet and extranet applications has removed the last obstacles.

Every individual user should have access to the information he or she needs, but no more. This requirement has been fulfilled in extended ERP through the use of security levels. You have the ability to assign specific security levels for customers, resellers, employees and the public as you see fit. These security levels form a stepped security system, in which security level 0 represents "The World" and applies to everyone who visits the company's public Website from the outside. Security level 1 represents "Customer" and offers access to the company's customer portal, the part of the Website reserved exclusively for customers. Level 10 is the security level for employees in general; level 18 is for middle management, etc. Every user logs in on his or her level with a combination of a user name and a password. This provides access to all parts of the system for which he/she has rights. For security at the highest management levels, for example financial information, a user name and password can be supplemented with other security mechanisms such as hardware keys or biometric identification methods.

An employee can and often does have multiple roles. For example, a support employee can answer a customer's questions and be responsible for assessing technical tips for accuracy before they appear on the customer Website. Every role has a specific set of tasks and responsibilities associated with it. It is also possible to give more than one person the same role, thus creating teams of employees with the same rights. This plays an important role in the possibilities extended ERP offers for workflow management and assignment of tasks. Establishing employees' roles simplifies transferring, delegating and assuming tasks.



The most important advantage is that, like the data storage, the entire system can be managed and maintained centrally.

Extended ERP should be developed as one system, with one interface for every user in the form of his/her Web browser. The rights assigned to a user are established once. Logging in once provides users with access to all the information and functions to which they are entitled. Having to remember multiple user name/password combinations is now a thing of the past. For the organization, the fact that every user has only one user name/password combination means a significant simplification of the management of user rights. This translates directly into a lower cost of ownership of the system as a whole.

Automate everything you can

Business processes, and the tasks surrounding them, should be automated as much as possible. To do so, extended ERP should use a collection of advanced algorithms to ensure that tasks and requests are allocated to and completed by the appropriate person or group. A request can be the direct result of a transaction (for example a request for product information from the Website), but can also be created explicitly by one employee for another (for example, someone who requests a day off from his/her manager).

Virtually all activities within a company have a common structure for request, approval and completion. This assumption is the basis for the request concept that plays a major role in workflow management, but which remains largely hidden from the user in his or her day-to-day work. A request can be a task for you, a follow-up phone call, a support question or a note on the customer account.

Architecture

The above-mentioned tenets form what is referred to as three-tier architecture: a database layer, an application layer and a presentation layer. You may view system architecture as something for technocrats, but this gives extended ERP a number of essential advantages.

The most important advantage is that, like the data storage, the entire system can be managed and maintained centrally. The time-consuming and costly management and maintenance on the part of the users can be reduced to practically nothing. All a user requires is a Web browser, a user name and a password.

A second advantage is that the management, maintenance and security of the system can be outsourced easily, eliminating expensive investments in infrastructure. The advantages of outsourcing include a better insight into costs, clear agreements as to the performance and availability of the system (in the form of Service Level Agreements), and the fact that the company no longer has to hire its own IT personnel. These factors make outsourcing an attractive alternative for small and medium-sized businesses.



Extended ERP: the functional components

There are seven functional elements that comprise extended ERP. Each offers its own broad range of functions and redefines collaboration.

HRM is also the functional component that handles online management and planning of employees, task delegation, management of workflows, absence tracking, and dealing with matters such as expenses and special compensation.

HRM: it's all about people

In addition to traditional human resources management functions, the HRM functional component offers your employees Web-based access to their personal information. With HRM, every employee has access to the products, customers, documents and workflows with internal or external requests, to which they are linked.

Through the use of security levels and roles, HRM allows you to establish the combination of rights and tasks an employee has and to which information he or she has access. Each change is recorded immediately by HRM, including the identity of whoever makes the change, so that anonymous actions are impossible.

HRM is also the functional component that handles online management and planning of employees, task delegation, management of workflows, absence tracking, and dealing with matters such as expenses and special compensation. The functional component also allows you to construct an internal "yellow pages" where your employees can look up information about their colleagues, like location, skills, presence/absence, and other colleagues in the same room or vicinity. All employee-related financial transactions can be traced and reported down to the level of the individual employee.

HRM also offers a wide range of functions for generating reports and statistical information that provide up-to-date insight into the performance of your most important asset and means of production: your employees. These reports can be configured in any desired format, from organizational chart and absence statistics by department or function, to turnover information and more. HRM also has a direct link to the payroll system.

HRM is also an essential tool for asset management. You can track requests for assets and report on the requests. HRM tracks which assets individual employees in your company have been given access to, such as computers or cellular telephones.

Logistics: accurate and consistent information

The extended ERP functional component for catalog, item and price management and product configuration is logistics. Entering and storing information once ensures that this information is always up-to-date and consistent. The functional component provides the ability to adjust price information per customer or group of customers and also lets you define different price policies for different countries if necessary.



CRM is an essential tool for effective, goal-oriented account management and sales automation, including the planning of activities per account, recording hours spent on an account, managing marketing campaigns, managing your sales pipeline, as well as publishing online product information and catalogs.

Logistics not only keeps information up-to-date concerning products and services you have sold to your customers and related information such as brochures, manuals and guarantees, but also facilitates the management of products that are used internally such as equipment, furniture and office supplies. On an individual basis, items that employees may or may not acquire can be established.

Internal product information can also be made available for suppliers, so that they can take timely initiative to replenish stocks. Logistics is prepared for information exchange via the XML protocol.

CRM: everything about relationships

The CRM (customer relationship management) functional component is the meeting point for all information concerning customers and prospects. The information on the customer card is linked to all the relevant documents and information, such as contracts, invoices, financial transactions, sales sheets, meeting and visit reports, customer questions and complaints including the status of the responses, and reseller or distributor information. CRM ensures that the information that is spread out across various sub-products can be approached and managed from one location.

CRM compiles customer information and makes it accessible to all interested parties, including the customer. Just like other users, the customer can access the system using a Web browser to monitor the status of an existing order or to check the answer to a question posed via the Web. CRM also offers customers the ability to update information in the system, such as entering a change of address or a different contact person, thereby allowing the person that knows the most about this information to keep it accurate. Thanks to the one-time, central data entry principle on which extended ERP is based, the updated information is available to every user immediately and in a guaranteed consistent format. Back-office users also benefit from this. By sharing a central database, the above change is reflected in the back-office as well. CRM also offers extensive possibilities for generating ad-hoc reports, statistics and analyses.

CRM is an essential tool for effective, goal-oriented account management and sales automation, including the planning of activities per account, recording hours spent on an account, managing marketing campaigns, managing your sales pipeline, as well as publishing online product information and catalogs.

Workflow: streamlined business processes

Workflow helps you process, streamline and monitor the requests within your company. Electronic processes defined in workflow ensure that requests are routed to the person's workflow who is responsible for completing that type of request. Through the use of this functional component, the rules and procedures formulated for every type



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of request are managed. Uniform and efficient processing of requests is thus guaranteed. e-Workflow offers your employees, customers and partners the ability to view the current status of requests, without having to call, write or e-mail.

With workflow's built-in reporting and analysis capabilities, you can ascertain which types of requests are most common, how many requests a given employee has processed in a given period of time, how long their average requests remained open, and what is the average processing time of a particular type of request. This allows you to streamline your business processes, while continuously evaluating and improving those processes. In addition to the predefined request types in workflow, you can define as many new, company-specific requests as you like.

Documents: complete information and knowledge management

Document management is the functional component responsible for information and knowledge management. Organizations require a user-friendly, flexible and definable document creation and management system that allows them to streamline their internal and external communication.

Creating, storing and managing documents centrally forms the basis of document management. You can link documents to customers, employees, products, projects and other documents any way you like. Document management offers you simple ways to set up and manage Websites for target groups that can be defined within an extended ERP solution.

With advanced publication and search possibilities, a document management system is the medium for information exchange. Whereas e-mail messages are only visible for the sender and the receiver(s), message traffic can now become part of the system. The information exchanged is also available and visible for other interested parties.

The information stored remains permanently accessible and is constantly enriched, creating transparency in your organization. Users of particular information, for example the minutes of a meeting with links to other relevant documents, always have access to the same version of the information.

Document management is the most universal functional component in an extended ERP system, and is used intensively by the other functional components for the storage and exchange of information. Pharmaceutical companies, for example, with complex process documentation or businesses seeking ISO 9000 compliance will find that document/knowledge management provides a robust platform for these business requirements.



Every financial transaction within the organization is recorded in an extended ERP solution's central database and is directly available for online reporting and analyses. The standard interface is the organizational chart.

Project Management: all relevant information at your fingertips

The project management functional component takes advantage of permanent, anytime, anywhere access to information stored in an extended ERP solution. With a project management component, the employees involved have access to all relevant project information at any point in the project cycle, such as the availability of people and assets, contract information, requests and their status, time input and budgets.

Project management is suitable for both the management of internal and external projects. Such solutions offer powerful tools for managing projects based on workflows, creating cost and revenue forecasts and generating project reports. You can also define who has access to what project information. Additionally, project management functions as a knowledge base for storage of all information related to completed projects. This includes information from the original project proposal and the project agreement through the invoicing and project evaluation. The information is also accessible for later use as a template for a new project.

Financial Management: insight into your finances

Financial management component acts as your company's financial control room. This functional component is as powerful as it is multi-faceted, providing you with the instruments necessary for the consolidation and analysis of financial information, and comparisons of budgets and analysis against actuals. Every financial transaction within the organization is recorded in an extended ERP solution's central database and is directly available for online reporting and analyses.

The standard interface is the organizational chart. Here the user can specify which performance indicators should be shown and at what level of detail. The drill-down capability makes it possible to view performance indicators like profit and loss figures at any level. You can then trace them back to individual transactions. You can also gain immediate integration with your existing ERP back-office product. Where relevant, a financial management component can automatically convert local currencies to the centrally used currency.

Such components make it possible to work with different but related budgets simultaneously. Additionally, workflows can be defined for the approval of budgets.

Seven functional elements, one database

Together, the seven functional components comprising extended ERP offer you all the instruments necessary for monitoring and managing the processes and activities within your organization and between your organization and the outside world. This is all made possible through the use of one central database that is accessible any time, anywhere.



Because all the information is entered only once, the consistency of the information used by each functional component is guaranteed. The central database also contains the links between the information for which every individual functional component is responsible. This gives you a 100% up-to-date and accurate overview of your business.

The result is an integrated package so multi-faceted that it is difficult to categorize.

Summary

Extended ERP: greater than the sum of its parts

As we discussed, extended ERP emerged from three basic principles:

- keeping everything in one database guarantees that all relevant information will be quickly available to employees at all times, thereby reducing the amount of paper and the time needed to make key decisions
- providing secure, role based access by all in a single sign-on environment ensures employees, customers, partners and others have the information they need
- automating all business processes leads to streamlined workflow requiring less time to complete tasks

The result is an integrated package so multi-faceted that it is difficult to categorize. Is it a workflow package? A tool for sales force automation? A tool to manage your help desk? For automation of professional services delivered by, for example, consultants? An HRM package? An item management package? A tool for document management? For financial consolidation? A Web publishing tool? A corporate portal? An e-business package?

As unbelievable as it sounds, the response to each of these questions should be "Yes". By integrating these functional components into one application, organizations of all sizes in all industries can increase collaboration, create organizational transparency and efficiency, and extend the power of business systems like never before.

The key to implementing this system is to map out the company's business processes beforehand.

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