

How Are ERP Systems Different?

Enterprise Resource Planning (ERP) is an enterprise-wide information system that facilitates the flow of information and coordinates all resources and activities within the organization.

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Fourth Generation Software, makers of



Affordable, Adaptable ERP Software

Highlights:

- **For the small or medium-size business (SMB) that requires a comprehensive ERP solution it is important to learn the differences between a “full-function” ERP solution and less capable solutions. Many solutions that may appear to be complete ERP solutions are not.**
- **Most of the widely recognized names in ERP software have integrated what they deem “best practices” into their solutions and require customers to use these. This reliance on the vendor to map out their perception of how a business should operate poses special challenges to the SMB.**
- **Differences in ERP solutions can affect whether or not users attain their desired goals from the system. Understanding these differences can help clarify the best approach to selecting, implementing, and maintaining the “right” system.**
- **Fitrix™ provides a “game-changing” ERP solution at a price that gives small to mid-size firms an avenue to differentiate to meet their customers’ needs.**

So many software solutions call themselves Enterprise Resource Planning systems that you'd almost need a software application to keep up with them all. There are incredibly complex solutions, some from firms that are household names. There are many “low-end” solutions that call themselves ERP solutions – but actually aren't. ERP solutions can generally be characterized by the size of the company they're best designed to fit; their range of functionality which includes the breadth and sophistication of their modules; the degree to which their modules are integrated with one another; the system's scalability; and, of course, the system's cost which includes acquisition, support/maintenance, and the services associated with deployment.

“Full-function” ERP solutions, which are discussed in greater detail later in this paper, are accepted and widely embraced tools used mostly by larger firms to realize cost savings and improve operations. Up until relatively recently they were thought by some to be too complex and expensive for the Small and Medium-sized Business (SMB). This is no longer the case. Innovative approaches to developing and implementing ERP systems now make it an effective strategic weapon for the little guy – and in some cases, allows the little guy to compete effectively with its much larger competitor.

Just because a software offering is positioned as an ERP solution does not make it so. For example, there are dozens of add-ons to accounting packages such as QuickBooks™ or Sage

Peachtree® software – a number of these run on an Access™ database, lack complete ERP functionality and features, and are not scalable. Comparing these packages to a full-function ERP solution is like comparing a tugboat to an aircraft carrier.

One Size Does NOT Fit All

While there are some common characteristics among firms that get the most value from their ERP solutions, there is no one “right” approach for small to medium-sized businesses in implementing a solution. There are many issues to think about when choosing an ERP solution.

There are dozens of applications that provide a wide range of capabilities. ERP solutions usually contain 18 to 24 integrated modules. A study by the Aberdeen Group found that better performance of the solution correlates with more modules deployed but that in general, SMBs used slightly fewer modules than large enterprises. The trick is to take greater advantage of those modules deployed.

ERP solutions are modular in construction usually containing anywhere from 18 to 24 integrated modules.

Most of the widely recognized names in ERP software have integrated what they deem “best practices” into their solutions. These “best practices” are the vendors’ judgment of the most efficient and effective way to perform a business practice. While some best practices may be a good fit for your organization, being locked into all of a software vendor’s best practices is probably not. Firms looking to implement ERP systems are frequently required to adapt their organization to accommodate the software’s processes rather than adapting the ERP solution to the firm’s processes. This reliance on the vendor to map out their perception of how a business should operate poses special challenges to the SMB.

- In many instances, the revamping of business processes to fit standardization required by the software can result in a loss of competitive advantage.
- It can add a level of complexity that smaller firms don’t have the resources to address.
- It can inhibit creativity in business processes requiring compliance or complex work-arounds.
- These systems are usually not customizable. Any allowable customization will likely be difficult and complex. For a smaller firm this requires configuration and often

programming that can exceed either in magnitude, complexity, or both, the capabilities of in-house staffs.

Thinking about achievable business goals resulting from an ERP acquisition, in conjunction with a realistic assessment of the capabilities and bandwidth of the in-house IT staff, can help clarify the best approach to selecting, implementing, and maintaining the system. Just remember – one size does not fit all.

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In many ways, choosing an ERP solution is like buying a new suit of clothes: you want to start with a suit that fits well off the rack, but usually some tailoring is required. When you put it on, you don't want it to look or feel awkward or uncomfortable, and you don't want to have to diet or bulk up for it to fit.

What Makes An ERP Solution “Full-Function”?

ERP solutions vary by the size of the company they fit and by their range of functionality. For the SMB that requires a comprehensive ERP solution it is important to learn the differences between a full-function ERP solution and less capable solutions. Four key characteristics highlight the differences between full-function ERP solutions and ERP wannabees:

- Depth and breadth of functionality,
- Seamless integration of modules,
- Scalability of the solution and underlying technologies,
- Enterprise-level IT architecture capability support.

Depth and breadth of ERP solution functionality

This is relatively straightforward to measure – a well researched and thought out ERP Request For Information (RFI) or “feature checklist” representing a company's specific needs will assist the ERP buyer in assessing the relative functional strength of an offering. Remember that more modules doesn't mean more features if they are simplistic or functionally deficient, or aren't appropriate to the business. The desired feature checklist should be explicit, especially in areas

most critical to the business. Also, software demos with the vendors to observe how key features work are important in understanding a solution's capabilities.

Additionally, the availability of specific modules – especially for manufacturing companies such as assemble-to-order manufacturers with complex, highly configurable items – usually indicates whether the ERP solution is full-function.

Seamless Integration of Modules

This can be significant in realizing the full value from the ERP solution. Wikipedia defines the following characteristics of ERP software (as "Typical"):

1. An integrated system that operates in (next to) real time, without relying on periodic updates,
2. A common database, that supports all applications,
3. A consistent look and feel throughout each module,
4. Installation of the system without elaborate application/data integration by the Information Technology (IT) department.

The best ERP solutions are seamless. They are designed and built as an integrated group of modules using a common database, user interface, and technologies. An ERP system that stitches together diverse products and technologies will sacrifice many of its intended benefits. ERP modules should not only share a common database but also common data so that all data is entered and stored only once. ERP systems that require "interfacing" of data between modules restrict access to real-time data that crosses modules (some data may not be accessible for hours or even days). In the worst case, the same data may have to be entered twice, requiring extra effort and the risk of errors.

Without a common database and common data, powerful data query and data mining capabilities are lost. Without a seamless system, users may have unnecessary restrictions, such as having to wait for someone else to run an interface before they can complete an operation. A user interface that is consistent across all modules greatly reduces training time and improves users' ability to intuitively learn the potential of the system as they use it. ERP systems having different user interfaces for different modules can be frustrating and cumbersome to use and increase the likelihood of data entry mistakes.

Systems stitched together from different sources are also more difficult and costly to install and support. They typically require a larger support staff that must master multiple technologies and complex interfaces.

Scalability of the Solution and Underlying Technologies

Scaling is important for SMBs, both upward and downward. The SMB needs a scalable system that can grow with their business, but the system needs to operate efficiently on a smaller scale as well while the business is small. An ERP system designed for use by a Fortune 1000 company can't scale down in a way that is appropriate to the SMB

Full-function ERP solutions differ from less capable ones by supporting three types of scalability:

- Functional scalability,
- Concurrent user scalability,
- Transactional scalability.

Functional Scalability

This refers to the software's ability to support different levels of business process complexity within the software applications, allowing "room to grow" from a functionality perspective. An example of this is "batch support". If sales order entry can be configured via a simple setting it allows users with proper access to enter and process transactions through the system without batch controls, which larger companies often utilize. Yet when more control is required, enabling "batch support" gives individual order entry users their own batches, which can be controlled separately. This latter control is helpful in organizations having many order entry clerks, but can be onerous in smaller shops having only one or two people entering orders.

Concurrent user and transactional scalability

This indicates how many users and transactions the system can accommodate without sacrificing performance. The chosen ERP solution should easily and reliably support the number of anticipated users and transactions throughout its planned life cycle. It should accommodate anticipated seasonal/cyclical business spikes and long-term growth. One key component of scalability is the data storage mechanism underlying the software. Having a high-performance, highly scalable On-Line Transaction Processing SQL (Structured Query Language) database at

the heart of the ERP software solution is a key requirement for both concurrent user and transactional scalability. Solutions using workstation-oriented data storage technologies like the Microsoft® Access™ database, or legacy or entry-level database technologies dramatically lack the concurrent user and transactional scalability of the more “industrial-strength” SQL technologies.

Enterprise-level IT architecture capabilities

The last key factor that differentiates full-function ERP solutions is the system's ability to support advanced enterprise-level IT architecture capabilities that ensure high reliability and overall business continuity. For example, the ERP solution should utilize a proven technology architecture that supports one or more viable Disaster Recovery (DR) schemes. The more sophisticated ERP solutions support “high availability” options that ensure that each transaction processed in the system is “replicated” over a redundant system architecture consisting of both hardware and software. If a system failure does occur, there is little or no loss of data integrity and business continuity is preserved. Competition among technology providers, such as database vendors, has lowered the cost for SMBs to implement advanced IT architecture capabilities. Full-function ERP systems take advantage of these capabilities

How the Fitrix Approach Fits the SMB's Needs

The Fitrix ERP solution, from Fourth Generation Software, is a full-function ERP solution targeted to SMB business leaders who need a tool that provides a strategic advantage at an affordable price. Most other ERP solutions targeted to the small to mid-sized firm are from larger ERP vendors who have lowered their solution's costs by limiting functionality and/or scalability. An example of this is Fitrix's manufacturing module, which includes a sophisticated Product Configurator – a powerful module for configuring and quoting mass-customizable products. Less capable ERP solutions don't provide this functionality.

With twenty feature-packed modules including financial/accounting, distribution, manufacturing and CRM all running on a world-class SQL database, and tools to integrate to third-party eCommerce solutions, Fitrix offers the functionality and scalability usually found in the products of more high-end “enterprise” ERP solutions.

Fitrix ERP is designed for the SMB customer but it and its underlying technology can (and does) support hundreds or even thousands of concurrent users. The chart displayed in Figure 1 provides an overview comparison of the Fitrix ERP solution compared to other well-known applications.

Figure 1: ERP Features Comparison

Product Family	Microsoft Dynamics AX	NetSuite OneWorld	Sage MAS 500	SAP Business All-In-One	Fourth Generation Fitrix ERP
Financials	✓	✓	✓	✓	✓
Distribution	✓	✓	✓	✓	✓
Manufacturing	✓	✓	✓	Limited - Some Features Provided in ERP Operations ✓	✓
CRM	✓	✓	✓	Available as add-on module from SAP Business Suite ✓	✓
eCommerce Integration	✓	✓	✓	✓	✓ *
Document Management	✗	✓	✗	✓	✓
Business Intelligence	Developer Toolkit ✓	✓	✓	✓	Via Numerous 3rd Party Products ✓
Tools	✓	✓	Developer Toolkit ✓	✓	Fitrix ERP Developers RAD Toolkit ✓
Full App Source Code	✗	✗	✗	✗	For Additional Nominal Charge ✓

* Fitrix ERP Magento Commerce eCommerce Connector available later in 2011.

Source (all except Fitrix): Inside-ERP Midmarket ERP Comparison Chart by Brian Phelps, December 2008.

To find out more about how small to mid-size discrete manufacturers and wholesale distributors can benefit from the Fitrix ERP solution, please visit www.fitrix.com, email info@fitrix.com or call toll-free 1-800-374-6157 or 1-770-432-7623 outside the US and Canada.