MARKET OVERVIEW

April 2, 2004

ERP Applications — Market Maturity, Consolidation, And The Next Generation

by Paul Hamerman and Byron Miller

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by Paul Hamerman and Byron Miller
with Erin Kinikin and Liz Herbert

EXECUTIVE SUMMARY

ERP is maturing and consolidating as vendors seek to acquire a critical mass of customers and maintenance revenues. License revenues will rebound from declining to minimal growth, with maintenance becoming the bulk of the business. Significant opportunities exist for large companies to consolidate their ERP system environments for efficiencies. New opportunities are also developing for better business-process support, deeper verticalization, and integration middleware. Toward the end of this decade, we anticipate the emergence of the next generation of application packages, extensively leveraging service-oriented architectures (SOAs).

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NOTES & RESOURCES

Research for this report is based on market revenue analysis and ongoing discussions with major vendors, including MAPICS, Microsoft Business Solutions, Oracle, PeopleSoft, SAP, SSA Global Technologies, and others. We also incorporated end-user feedback from client inquiries and consulting activities.

Related Research Documents

"Comparing the Comprehensive Enterprise Application Vendors"
July 22, 2003, Planning Assumption

"Market Overview 2003: Comprehensive Enterprise Applications"
April 3, 2003, Planning Assumption

"Market Overview: ERP in Transition"
March 26, 2002, Planning Assumption

COMPANY ERP ENVIRONMENTS ARE OFTEN FRAGMENTED AND CUSTOMIZED

ERP software runs the core operations of a business, including finance/accounting, production, inventory, order management, procurement, and human resources (HR) management. However, implementations have often been fragmented and departmentalized, and different applications have had varying levels of success. Financial and HR applications have been the most successful in supporting the needs of many types of businesses, while companies have struggled to implement packages that support other core business operations or processes that span multiple departments or functions.

Complex ERP Environments Present Several Challenges

Most companies have complex ERP environments consisting of packages from multiple vendors that have been customized, as well as an array of internally developed software that must integrate with the packages. Businesses face ongoing ERP software challenges:

- **There is often a gap between package functionality and business needs.** Companies address the gap by customizing the software, building extensions, or buying specialized best-of-breed packages. These remedies increase implementation and integration costs — customization and integration comprise about one-third of the cost of the initial implementation.

- **ERP environments are costly to maintain.** Companies spend between 20% and 33% of their implementation costs every year on maintaining the systems. Escalating vendor maintenance fees along with mandatory upgrades contribute to higher costs of ownership. Customized applications are particularly difficult to upgrade, since the customizations usually must be reapplied to the new version.

- **Larger companies typically have multiple ERP packages and vendors.** These fragmented environments result from divisional autonomy or acquisitions. Even when a common vendor is used, multiple installations are common and software versions vary. While multiple ERP systems may be necessary to meet the varying needs of operating units, it is more difficult to aggregate enterprise data, such as financials and HR and to achieve economies of centralized business processes and IT operations.

- **Integration of systems is complex.** Integration between the ERP packages and other internal and external systems has traditionally been handled through point-to-point batch integration. Although improved ERP vendor integration tools and open standards are making integration easier, it remains a major IT challenge. One telecommunications company estimated that integrating with existing systems added six months to the deployment time of any new application.

Companies Are Simplifying Their ERP Environments

Many companies implemented ERP systems in the mid to late 1990s, a prosperous time for the application software industry. Technical challenges and implementation time and resource constraints, however, limited success. Scalability limitations of client/server software packages caused multiple instances to be deployed at plant or division levels. Software customization was encouraged by some vendors and consultants, leading to protracted implementations and upgrade problems. Alternatively, rapid implementation methodologies were promoted that failed to align software capabilities with business processes. Realizing value from these ERP investments proved to be elusive for most companies.

In the past few years, the situation has improved. ERP vendors continue to strengthen their products and most companies are refining their ERP environments to improve business value and ROI. The following trends are emerging:

- **Companies are standardizing on a single ERP vendor.** Forrester survey data shows a clear trend toward standardizing on a single vendor in large companies that have been using multiple ERP vendors.[1]

- **Companies are moving toward fewer software instances.** Previous research has shown the benefits of a single global instance of an ERP system.[2] Consolidation of the number of software instances is being driven by improved technical scalability, as well as an opportunity to reduce hardware and support costs through centralization.

- **Comprehensive ERP offerings reduce the need for best-of-breed bolt-ons.** The large vendors have focused on expanding integrated suites to replace functionality provided by best-of-breed vendors. This has occurred in broad areas such as CRM and supply chain management as well as narrow areas such as recruiting and expense management.

- **Industry-specific functionality is getting deeper.** ERP has its roots in manufacturing, but support for other industries continues to improve. SAP, for example, has expanded its industry solutions in many areas, including retail, banking, chemicals, oil and gas, and aerospace/defense.

- **Integration capabilities are improving.** The major vendors are now providing integration tools and exposing more open APIs. Even Oracle, the last bastion of the single integrated suite, is now emphasizing its ability to also integrate with legacy and best-of-breed systems. Infrastructure-based toolsets have been developed by ERP vendors and are being marketed as products to enhance integration and interoperability.

THE ERP MARKET IS MATURE

As an industry segment, the ERP market has reached a high level of maturity. License revenue declined the past three years. This decline can be blamed to some extent on the economic downturn, but the fact remains that fewer and fewer large deals are occurring. Most large companies and governmental organizations have already committed to one (or more) ERP vendors. The majority of license revenue for the large vendors is coming from existing customers and average deal sizes are declining.

Maintenance Revenue Is the Market's Growth Engine

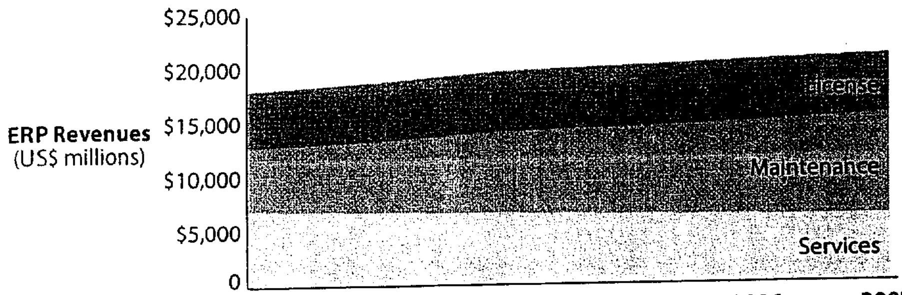
License revenues for the core ERP applications — finance, HR, and operations (e.g., purchasing, inventory, production, order management) — will remain relatively flat, especially at the high end of the market. This means that the growth engine will shift to recurring maintenance revenues, as well as new modules outside the traditional ERP footprint. PeopleSoft, for example, has aggressively grown its maintenance subscriptions business to more than 40% of its revenue stream, while licenses have declined to 24% of the business (consulting and training comprise the remainder). For the market as a whole, growth in maintenance revenue results from two factors — gradual increases in maintenance fees by the vendors and growth of the license revenue base.

Forrester's market forecast for ERP is as follows (see Figure 1):

- **The ERP market size is $5.4 billion in license revenues and $19.7 billion overall.** From a historical perspective, this market experienced high growth until 2000, when it peaked at $6.1 billion in license revenue, then declined to its current size of $5.4 billion. We are including the total revenues of the comprehensive enterprise applications (CEA) vendors in these figures, even though a significant portion falls outside the traditional ERP footprint (see Figure 2). Previous research showed the traditional ERP market size is now approximately $3.8 billion in license revenues and $14.2 billion overall.[3]

- **The market will see a modest recovery in 2004 and then level off.** This is good news for a mature market that has declined each of the past three years. There is some pent-up demand for ERP applications that will enable companies such as SAP and Microsoft Business Solutions (MBS) to achieve applications revenue growth in 2004 and 2005. Overall, however, this market is still consolidating and is very mature. Software license revenue will be flat (zero growth) through 2007, while overall revenues will grow by approximately 3%, largely driven by maintenance. Recent earnings announcements from vendors, such as Oracle and Lawson Software, show some strengthening in applications licensing activity. In addition, SAP has forecasted a 10% improvement in license revenues for 2004. SAP's gains, however, are likely to come at the expense of its competitors as the market consolidation continues.

Figure 1 Forecast: Global ERP Market Revenues, 2002 To 2007



	2002	2003	2004	2005	2006	2007	CAGR
License	$5,298	$5,422	$5,585	$5,641	$5,624	$5,455	0.6%
Maintenance	$5,792	$6,573	$7,493	$8,045	$8,616	$9,207	9.7%
Services	$7,010	$6,784	$6,640	$6,427	$6,275	$6,263	-2.2%
Total (US$ millions)	**$18,100**	**$18,779**	**$19,718**	**$20,113**	**$20,515**	**$20,925**	**2.9%**

(numbers have been rounded)

Source: Forrester Research, Inc.

- **Maintenance revenues will increase by 9% through 2007.** Maintenance revenues will continue to grow as a function of adding to the license revenue base, with a minimal level of attrition from customers declining to renew maintenance contracts.
  In addition to the organic growth of adding 20% of new license revenues to the recurring maintenance base each year, most vendors have increased their maintenance pricing in the past three years to help compensate for declining license revenues. We believe that price increases are over for the most part, since the noise level of customer complaints is reaching a breaking point. However, maintenance will continue to grow by approximately 9% annually, mainly due to licensing activity. For the top three vendors (representing 60% of the market), maintenance revenues increased by 12.8% from 2001 through 2003.

The ERP Market Consists Of Three Major Customer Segments

The ERP software market falls into three primary segments by customer size: large companies, the midmarket, and small businesses (see Figure 3).

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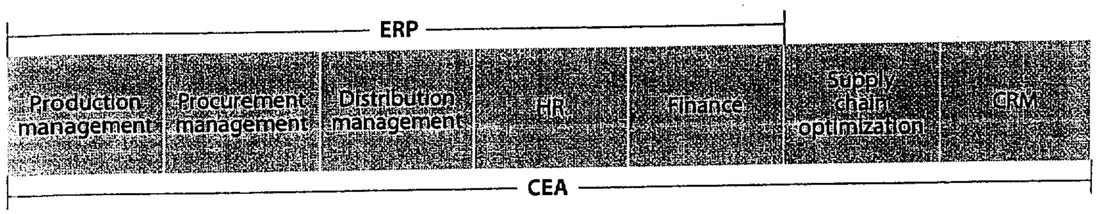
Figure 2 ERP And CEA Compared



Source: Forrester Research, Inc.

The Midmarket Is The Battleground

With the decline in the number of high-dollar deals in the large company ERP market, the three CEA vendors are turning their attention more and more to the midmarket. This was a key driver for PeopleSoft's acquisition of J.D. Edwards in 2003. SAP has been ramping up distribution of its lower midmarket product Business One as well as refining its All-in-One offering for the upper midmarket. Oracle is also focusing on the midmarket with a scaled-down offering called Special Edition. There are two key challenges for these vendors:

- **Big vendors struggle to lower cost of ownership.** This is being addressed by bundling configuration and implementation services at a competitive fixed price, as well as emerging hosted options. Ongoing cost of ownership remains an issue, and the big vendors will have to work hard to overcome this perception.

- **The big company direct-sales model does not fit the midmarket.** A highly leveraged, indirect channel is needed to reach the tens of thousands of midsize companies. Microsoft Business Solutions has built a vast indirect partner channel that has proven successful in this market. The CEA vendors have a long way to go to build similar channel leverage, although SAP has made some good progress.

SOAs WILL TRANSFORM THE MARKET

A message-based component architecture is a fundamental necessity of ERP/CEA systems. And we are seeing this more and more in products spurred on by the adoption of SOAs. Adoption of SOA will evolve from the fringes to the application core, with most vendors moving through the following stages:

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Figure 3 ERP Market Segments By Customer Size

Market segment	Size range (annual revenues)	Solution characteristics	Representative vendors
Large companies	$1 billion plus	Global functionality, high network and transactional scalability, sophisticated reporting and analytics	SAP, PeopleSoft, Oracle
Upper midmarket	$250 million to $1 billion	Mulitnational functionality, but less scalability. Often sold through channels rather than direct to customer.	Microsoft, Lawson, SSA Global, Geac, SAP, PeopleSoft, Oracle
Lower midmarket	$50 million to $250 million	Mulitnational functionality, but significantly less scalability. Often sold through channels rather than direct to customer.	Microsoft, Epicor, Exact, Sage, NetSuite, SAP Business One
Smaller businesses	Under $50 million	Single location, country-specific, PC- or LAN-based. Standardized packages with lower cost and complexity.	Sage, Intuit, ACCPAC, NetSuite

Source: Forrester Research, Inc.

- **SOA is now used primarily between components in heterogeneous architectures.** Vendors are using it to integrate between components that they have bought (or built) on different platforms. For example, MAPICS is using the architecture to integrate functions that are on the iSeries platform with functions that are in its Wintel platform.

- **SOA will be used between components in general.** The architecture is moving into the mainstream and will be pervasive in new ERP/CEA systems in two to three years. This will make the suites more modular. It also has the potential for deepening industry offerings. For example, a vendor may have a component that manages inventory of finished product that uses one "age before use" criteria for some textiles industries and a whole different "age before use" criteria for the spirits industry. These two modules often exist as separately maintained code. If the components had been developed as sets of smaller components that delivered services, the change between one method and the other could be as easy as changing a service mapping.

- **SOA has the promise of transforming the market.** As use of SOA grows, the architecture will invite greater use of standard definitions of functionality. This will make it easier to use components from different vendors without the complex integration that must be done today. The broadening of systems that heavily embrace services could render ERP/CEA systems as another legacy type. The vendors would then have to focus on the application technology platforms as the main part of their business. They could still be active participants in a new composite application market that delivers smaller component-based services instead of focusing on suites. It may also give rise to new system integrator types that focus on prepackaged service-based systems

ENTERPRISE CHANGES DRIVE BETTER BUSINESS-PROCESS SUPPORT

Enterprises are continuing to work at driving out costs while creating greater value. For manufacturers in particular, it has meant virtual manufacturing where many plants no longer have excess capacity for sudden increased demand. This has resulted in some manufacturing being done in contract facilities while maintaining control and status. For others it has meant making changes and tracking the business in near real time. In every case it has driven the demand for better business process support.

- **Better business process support drives better integration.** Integration is demanded at every level: what the user sees, how the applications communicate, and how the data is held in common. It takes all three aspects to seamlessly carry out the business processes. This will drive the ERP vendors further into extended platform support with features that rival the incumbent platform vendors.

- **Extended value chains depend on better business process support.** It used to be that supply chain planning, especially supply chain optimization, was the key to extended value chains. In part that is true. However, to realize all the benefits of extended value chains, the whole enterprise needs to be involved and the only way to accomplish that is through extensive business process support. The ERP vendors will extend their applications with robust process definitions that cross traditional application modules, as well as improve processes and data infrastructure.

THE BIG VENDORS WILL CONTINUE TO DOMINATE

It is interesting to note that in the last 10 years the companies in the top three revenue slots have been the same for seven of those years — Oracle, People Soft, and SAP (see Figure 4). The only change in position among the three occurred last year when the No. 3 company (PeopleSoft) bought the No. 4 company (J.D. Edwards) and became the No. 2 company.

Figure 4 ERP Market Leaders Based On Revenue, 1994 To 2003

	#1	#2	#3	#4	#5
1994	SAP	Oracle	SSA	J.D. Edwards	Baan
1995	SAP	Oracle	SSA	J.D. Edwards	PeopleSoft
1996	SAP	Oracle	J.D. Edwards	PeopleSoft	Baan
1997	SAP	Oracle	PeopleSoft	J.D. Edwards	Baan
1998	SAP	Oracle	PeopleSoft	Baan	J.D. Edwards
1999	SAP	Oracle	PeopleSoft	J.D. Edwards	Baan
2000	SAP	Oracle	PeopleSoft	J.D. Edwards	The Sage Group
2001	SAP	Oracle	PeopleSoft	J.D. Edwards	The Sage Group
2002	SAP	Oracle	PeopleSoft	J.D. Edwards	The Sage Group
2003	SAP	PeopleSoft	Oracle	The Sage Group	Microsoft

Source: Forrester Research, Inc.

Market Consolidation Will Continue

One aspect of this market is sure: Big is in. The top five vendors in 2003 accounted for more than 70% of the ERP market. Companies seeking to purchase enterprise systems want to purchase from a vendor that will be around for a while — this generally means a purchase from the major players. Growing without acquisition in this mature market is very difficult. The vendors have gotten the message, and there haven't been a lot of new entrants, so movement has been largely due to vendors buying established vendors.

Microsoft Business Solutions Has Joined The Top Tier

Microsoft is an interesting case because it got into the ERP/CEA market by purchasing an established vendor and has grown by purchasing other established vendors. However, now that it is in the market, it is attempting to grow further by applying its massive resources to redefine the acquired vendors in its own image. All of its acquired products are moving toward a common architecture and code base that will require Longhorn — Microsoft's next-generation operating system. The new architecture will be SOA out-of-the-box. The breadth of the offering and Microsoft's distribution capability has brought it into the top five in terms of revenue. However, it is a different play focusing on the bottom end of the market. Microsoft will have the broadest number of clients but only small numbers of users in each.

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RECOMMENDATIONS

MAKE THE MOST OF YOUR ERP INVESTMENT

- **Invest for the long term.** ERP software is a long-term investment (10 to 20 years) as long as the vendor remains viable and supports your company's growth and business evolution. Maintain your investment by keeping current on the release path and by leveraging expanded functionality where appropriate.
- **Consolidate your ERP environment to reduce costs and integration effort.** Some businesses may be able to achieve a single-instance ERP implementation. Companies with more diverse operations should try to standardize on a single vendor and centralize corporate financial and HR applications.
- **Understand long-term ownership costs and avoid overkill.** CEA packages may be appealing to sophisticated midsize companies and competitively priced for acquisition and installation. Long-term maintenance and upgrade costs, however, may prove to be overwhelming.
- **Favor open over proprietary.** Choose a vendor that is embracing open standards for development and integration. This will support more solution flexibility and promote long-term vendor viability.
- **Extend but do not customize.** Open architectures will enable easier integration and extension of ERP solutions. On the other hand, extensive customization of the packaged application itself will increase costs and compromise ROI, whether the environment is open or proprietary. Extend carefully to preserve the ability to upgrade.

WHAT IT MEANS

MORE CONSOLIDATION, THEN OPPORTUNITY

ERP consolidation and architectural renewal will change the dynamics of the market:

- **Open architectures will lead to more productive software partnerships.** Instead of trying to put best-of-breed vendors out of business, major vendors will reach out to specialists for plug-in functionality.
- **User firms will have fewer vendor choices but more deployment options.** Outsourcing ERP support services and infrastructure will grow, especially in the midmarket. Pay-as-you-go pricing models will expand as well. Integrating multiple solutions will shift from a negative to a positive for customers.

- **Services companies will gear up for the next wave of innovation.** The migration to Web-client applications was good for services firms. As architectures evolve further, the cycle will start over. The benefit to the customer should be more apparent the next time around.
- **Money will follow innovation.** A new market for bolt-on solutions will evolve around the ERP ecosystem, providing investment opportunities for venture capital firms.

ALTERNATIVE VIEW

IF COMPANIES DON'T INVEST, ERP WILL CONTINUE TO SHRINK

The position that ERP will experience a modest recovery after three years of decline assumes that there is some pent-up demand for large company applications and a growth opportunity in the midmarket. Many companies, however, have put their ERP systems into a holding pattern, with no plans to upgrade. Also, second- and third-tier vendors continue to consolidate, taking some products out of play. SAP seems to be gaining share as other vendors falter, but the industry may suffer a net decline overall as ERP becomes less of an IT investment priority.

ENDNOTES

[1] For Forrester's Business Technographics™ November 2003 North America Benchmark Study, we spoke with technology decision-makers at 818 North American firms with at least $500 million in revenues about their 2004 application software spending plans. See the December 1, 2003, Brief "Outlook for 2004 App Budgets: Conservative Growth."

[2] For those that meet the criteria, single-instance systems make a lot of sense. The concept will be most popular among high-tech manufacturers with revenues between $750 million and $3 billion. See the June 13, 2003, Planning Assumption "One Global Enterprise System: When and Why."

[3] The large tier-one vendors will grow at a faster overall rate than tier-two and tier-three vendors due to their breadth in faster-growing sectors, like CRM, supply chain management, supplier relationship management, PLM, and analytical applications. See the April 3, 2003, Planning Assumption "Market Overview 2003: Comprehensive Enterprise Applications."

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Fax: +1 617/613-5000
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