

Application Integration and Middleware at the Crossroads

With product marketing and architectural targets emerging for 2003 through 2005, near-term scrambling will alter vendor strategies and enterprise purchasing processes beginning in 2002. Planners must react quickly.

Key predictions for application integration and middleware that you will need for planning in 2002 include the following, drawn from the body of this Spotlight's research:

- By 2004, basic application server functionality will be ubiquitous, bundled with OSs, packaged applications, development platforms and other tools (0.8 probability).
- More than 80 percent of enterprises that lead their respective industries in revenue growth during 2002 to 2004 will have implemented a real-time enterprise nervous system (ENS) for integrating applications within and outside the enterprise (0.8 probability).
- High-end, comprehensive integration suites will coexist in the market along with low-end and specialized integration middleware, and each category (high- and low-end) will exceed \$900 million per year in software license revenue during 2002 (0.8 probability).
- By 2004, in enterprises where faster reaction is key to operational effectiveness, business activity monitoring (BAM) will be one of the top-four initiatives driving IT investment and strategy (0.8 probability).

As you review these and our other predictions, patterns will emerge. The application integration and middleware market sectors are at varying degrees of transformation because of three fundamental shifts that will take place during the next five years. Vendors and purchasing enterprises must react proactively and with full insight. The following shifts are discussed here in detail, with advice on how to respond in 2002:

- We will see a general movement from novelty/esoterica to broad-based market appeal; if a software sector is successful, then this movement is a coveted reward.
- There will be an aggregation of point products into suites and "super suites" — a shift from focused niche offerings to one-stop shopping. Even when the point products remain, the suites have huge impacts on buying centers and market perceptions.
- Enterprises will migrate from focusing on infrastructure to focusing on applications that build on the infrastructure (e.g., BAM).

In the initial four predictions presented above, these shifts can be seen: ENS and application servers become more broad-based; suites emerge; and emphasis shifts to critical applications of the infrastructure (e.g., BAM). As a historical example of the importance of these shifts, consider Internet

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technology circa 1993. Although this technology was once considered emerging and exotic, enterprise attention and vendor marketing efforts have now moved beyond protocols and cabling specifications. The discussion has been elevated, and, to get attention, vendors must move beyond TCP/IP and talk about business-to-business (B2B), electronic data interchange (EDI) over XML, RosettaNet, e-commerce, Web services — all higher-level constructs that build on a broad-based architecture. The shift from exotic to commonplace and from infrastructure to “use of the infrastructure” wiped out many “Internet” vendors that could not make the move. It is this same upheaval that we will now review in the application integration and middleware space.

Shift No. 1 — Movement From Novelty/Esoterica to Broad-Based Market Appeal

Application integration and middleware technologies were once very exotic. In the early days of integration brokers (e.g., 1996), it was not uncommon for enterprises to spend significant sums to build their own broker software. At that time, the market for brokers was the high end and the leading edge. The same degree of esoterica was seen in the early days of application servers, Web integration servers, business process managers and other parts of or relatives to the ENS. This is changing. Although there are elements of the sector that are still esoteric — e.g., BAM is in its early stages of availability — much of the application integration and middleware space is becoming well-understood and beginning to have a broad appeal. In “The Enterprise Nervous System Arrives,” DF-15-0450, our analysts discuss the emergence of a new type of business capability that is brought by an intelligence external to any particular application — the ENS. As the ENS becomes broadly deployed, vendors and enterprises alike have opportunities to mine and risks to avoid.

Opportunities for 2002: The shift to richer market acceptance and to increased importance of application integration and middleware technologies in business strategy is not complete, but it is imperative that enterprises begin planning now for the implications of broad-based appeal and subsequent deployment.

- Increase in core resources — experienced implementation resources and trained operations staff will be more readily available.
- Increased availability of references and case studies — reducing risk of failure through lessons learned.
- Increased senior-level attention — the ENS (although it is not always referred to as such) is a core to business strategy and is gaining the attention of senior management with high-impact projects.

Risks for 2002: Not everything about a movement to broader acceptance is positive. The risks of such movements will begin to be felt in 2002 and will require proactive planning.

- Increased intercompany raiding of trained resources — as the ENS becomes “the next big thing,” “headhunters” will seek these hot resources for the highest bidder.
- Knee-jerk reactions to make up lost time — the ENS will be seen as a core of competitive strategy, and management will want to invest, even if it is doing it with a herd mentality. In a race to get onboard, some projects may become too aggressive or too focused on the wrong vendor.

Shift No. 2 — The Emergence of Suites and Super Suites

In “High- and Low-End Integration Middleware Battle Heats Up,” DF-15-0467, “High-End Integration Suites Seek Mainstream Acceptance,” DF-15-0948, and “‘Low End’ Integration Middleware No Longer So Low End,” DF-15-0950, Roy Schulte outlines the suite mentality of the integration middleware space. In this case, there are two major suites emerging: high-end suites with a heavy focus on leading-edge enterprises, requiring significant capital outlay in return for comprehensive feature sets, and “low-end” suites targeting a more accessible market with lower costs and less functionality. This emergence of suites (of any kind) is a common theme that we expect in software markets, and it heralds an evolution of a market from niche specialty providers to one of comprehensive “supermarkets” of software. The point products still remain attractive, and integration middleware is still too complex not to consider best-of-breed architectures. However, the emergence and elevation of suites is like the greening of leaves in spring — it is a sign that seasons are changing. Here, the areas changing will be procurement and market dynamics. However, as will be discussed in the risks section below, suites are not for everyone or every time.

Opportunities for 2002: Suites, whether high-end or low-end, offer strong potential for vendors (as they build suites out) and enterprises looking for a one-stop shop.

- Purchase optimization — enterprises will find that suites offer the potential for expanding the scope of project and procurement analysis. In other markets, suites heralded a need for broader product analysis (e.g., no longer focusing on a single product, but instead focusing on a product family). This consolidated purchase and expanded project planning focus allows enterprises to experience the benefits of a broader range of technology as a set and at a lower price than if purchased individually. Both of these factors are “grease on the wheel” of enterprise experimentation with the core technologies of the ENS.
- Interoperability — suites are more tightly integrated than randomly selected products (with varying degrees of tightness). In historical markets, suite consolidation has meant more-comprehensive administration functionality and streamlined interaction among the suite components. Operational benefits that result are bottom-line savings.
- Larger-vendor syndrome — judging from historical markets, when suites arrive, the vendors offering suites tend to be larger and more financially stable. Although size is not a guarantee of success, suite vendors that have the market presence and success factors to succeed will emerge as the field of suite providers is established and then coalesces around a smaller number of successful vendors.

Risks for 2002: Suites are not in Gartner’s complete favor in many software areas. The current economic climate, past suite failures and suite complexity are causing backlashes in many areas beyond application integration and middleware. There is a general resurgence of interest in best-of-breed point products and focused buying. Lessons learned from the other markets that have had suites for a longer period of time indicate caution.

- Merger and acquisition — vendors will continue to acquire missing pieces to build suites (and extend vertical capabilities). This will place pressure on certain sectors of the market as components to the suite become demanded. 1999 to 2001 saw business process management (BPM) acquisitions; acquiring BAM functionality (e.g., business intelligence functionality) could be the next big wave.
- Suite pricing — buying a suite, while more attractive than buying individual components, is still more expensive than buying a subset of all the components in a suite.

- Suite imbalance — the history of software suites indicates that some components of a multicomponent suite will be weaker than their counterparts. As vendors build suites, they often supplement leading products with second-tier elements that will have to be changed out over time.
- Overbuying — suites have to be deployed as suites for the cost benefits to accrue. Buying a suite and only deploying a portion of it is a common trap that nullifies the benefit of the suite.

Shift No. 3 — Migration From Focusing on Infrastructure to Focusing on Applications That Build on the Infrastructure

The application integration and middleware technology family is still complex, and implementation of the infrastructure is still a time-consuming and expensive process. We have not reached the point of simplicity as portrayed in the Internet (TCP/IP) example earlier. However, there is a shift that has begun to move the focus of selling and buying from technology bits and bytes to business and process benefits. This shift is problematic for many vendors that cannot raise their messages and their channel capabilities to the new requirements. It is also a pitfall for enterprises that think that integration suites are a tool only for the IT shop. This transition of emphasis will be slow, but with the new focus on building competitive advantage through the use of integration technology, vendors and users will have to review how a shift to business language will change marketing messages, sales audiences, project champions, political boundaries, justification and procurement.

Opportunities for 2002: In the short term, vendors will want to develop a stronger business-level message, and users will want to realign political boundaries to ensure that an elevated message of the capabilities of the ENS falls on prepared and sympathetic ears.

- Education — the buying enterprise needs to move the message of the ENS to the senior management team and to the business leaders. Education of these key gatekeepers must take place in advance of the vendor messages that will be directly targeted at them. No CEO should be introduced to the benefits of the ENS by a random vendor pitch. The education of the business must come from its own resources, using its own criteria.
- Channel development — the vendor channel is a “double-edged sword” (see the risk section below). On the positive side, the shift to a business message will open the door for new channel partners that have a stronger emphasis on business issues. By properly selecting from among these new partners, enterprises can open up key markets and sectors.
- Packaged process templates — the packaged process template has been “the next big thing” for years, but it continues to elude. At best, process templates can focus on a subset of important transactions (e.g., RosettaNet), or they can serve as a “jump-start” for a new application (e.g., providing a 30 percent starting point advantage). Even so, the focus on business issues will increase the demands for templates that can be leveraged among installations. Enterprises can benefit from using templates as a “sweetener” that allows quicker execution of the business effort, and vendors should build templates as leverageable vertical knowledge.

Risks for 2002: The shift from an infrastructure focus to a new focus on the “application” of the infrastructure often brings market confusion, vendor failures and false starts.

- Shifting too fast — as vendors begin to realize that their infrastructure is not going to be a dominant platform, they will migrate their marketing message to focus on applications. Judging

from past scenarios, these vendors will often overhaul their companies and, in the process, often outsource their own technology for original equipment manufacturer (OEM) relationships in critical areas. Many of these vendors will de-emphasize technology and allow their once-competitive technical architectures to decline.

- Overselling — in a rush to a process focus, some vendors will go too far too quickly and will make promises that they cannot deliver. The rush to focus on strategic business benefits will often mean that the first customers of the “new vision” will be the pioneers taking the arrows. Case studies that are realistic will be helpful here.
- Channel conflict — a channel partner that was selected because it was an expert in a particular technical nuance (e.g., MQSeries internals) may not be the best partner to help sell a business vision. Often, entire channels have to be cleaned out as the vendors shift emphasis. This upheaval affects both the vendors and the clients of the vendors’ channel partners.

In all, the opportunities of these fundamental shifts outweigh the risks. These shifts are real and will happen over a period of years. Planning in 2002 means anticipating the shifts and reacting to them to maximize the opportunities while constraining the risks. In the research featured as the core of this Spotlight, our analysts review the trends in key areas and advise on the planning steps for 2002.

Features:

“The Enterprise Nervous System Arrives” (DF-15-0450) Discusses the continuing evolution of the intelligent network of application integration — the enterprise nervous system. **By Roy Schulte, Yefim Natis and Jess Thompson**

“High- and Low-End Integration Middleware Battle Heats Up” (DF-15-0467) Discusses the emergence of two classes of integration middleware suites: the high-end products and the groundswell of “low-end” products that are finding an interested customer base. **By Roy Schulte**

“Business Process Management: Responding in 2002” (SPA-15-0828) BPM’s trends are toward Web services, distributed process management and BAM; we show how vendors and enterprises must respond in 2002. **By David McCoy**

“Application Servers and Platforms: A Look Ahead” (SPA-14-9564) Continues the story of the application server market and product evolution, with recommendations that can be applied in 2002. **By Yefim Natis**

“Predictions for 2001-2003: Application Integration in IT Professional Services” (ITSV-WW-DP-0215) Reviews the IT professional services market as it relates to application integration and middleware; growth will be slowed, but not for long. **By Michele Cantara**

“2002: Composite Applications Come of Age” (SPA-15-0453) Examines composite applications and considers online transaction processing (OLTP), Java and mainframe extension strategies for 2002. **By Massimo Pezzini**

“Predictions for 2001 Through 2003 for the Application Integration and Middleware Markets” (SOFT-WW-DP-0054) Examines the quantitative impact of the economic climate on the application integration and middleware segment, presenting three macroeconomic scenarios and updating previous Gartner forecasts. **By Joanne Correia**

“The Platform for Agile Integrated Applications: Still Evolving” (SPA-15-0456) Reviews the business rule engine and business process analysis markets and shows why enterprises are getting more involved with upfront scenario-based planning. **By Jim Sinur**

“A Look Into the Future of Integration Brokers” (SPA-14-9745) Reviews the direction of the core of application integration technology — the integration broker. **By Jess Thompson**

“High-End Integration Suites Seek Mainstream Acceptance” (DF-15-0948) Discusses the market movements of the high-end integration suite vendors as they jockey to promote their products beyond the leading-edge adopters to a broader market. **By Roy Schulte**

“‘Low End’ Integration Middleware No Longer So Low End” (DF-15-0950) The “low end” of the integration middleware market is raising the bar on features and functionality, finding attraction among users — we show how many of the low-end offerings will begin to compete with higher-end suites. **By Roy Schulte**