

# Magic Quadrant for Application Infrastructure for Back-End Application Integration Projects

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**Back-end application integration technology providers continue to consolidate as users expand and increase the complexity and sophistication of their service-oriented-architecture-driven and software-as-a-service-driven integration requirements.**

## WHAT YOU NEED TO KNOW

The application infrastructure market reflects the convergence and overlap of many of the middleware tools available to support application development, deployment and execution. The part of the market focused on integrating back-end application systems is seeing consolidation and new challengers and leaders emerge, indicating that the market is incrementally maturing; however, even the leaders have more work to do to complete modernization projects, and to secure long-term retention and the long-term retention of their market shares in an economic environment that is driving organizations to implement extensive cost-cutting measures (see Figure 1).

## MAGIC QUADRANT

### Market Overview

Application integration technology burst into the middleware market in the mid-1990s. At that time, sophisticated integration products were offered exclusively by integration specialists. The term “specialist” is used to characterize vendors whose products and services are limited to providing application infrastructure (a characterization that remains true today). Initially termed “message brokers,” the products from these vendors focused on providing a graphical approach to specifying the business logic required to transform and intelligently route data among applications. Gradually, the features provided in conjunction with the broker expanded to the point of becoming a suite. The products offered by enterprise service bus (ESB) vendors evolved in the same manner – adding services that resulted in a suite. Due to changing consumer buying practices and increasing functional overlap, the ESB and integration suite markets have merged. Characteristics of integration specialist vendors include:

- A broad set of integration and service-oriented architecture (SOA) services
- They typically out-innovate megavendors
- Components of suites fit well together and have a single, comprehensive architecture
- Products are designed for a heterogeneous environment, encompassing disparate application servers
- Nonproduct assets, such as solutions (for example, a preconfigured order-to-cash process), and knowledge-based assets (for example, patterns, templates and best practices) are not as extensive as those offered by megavendor competitors

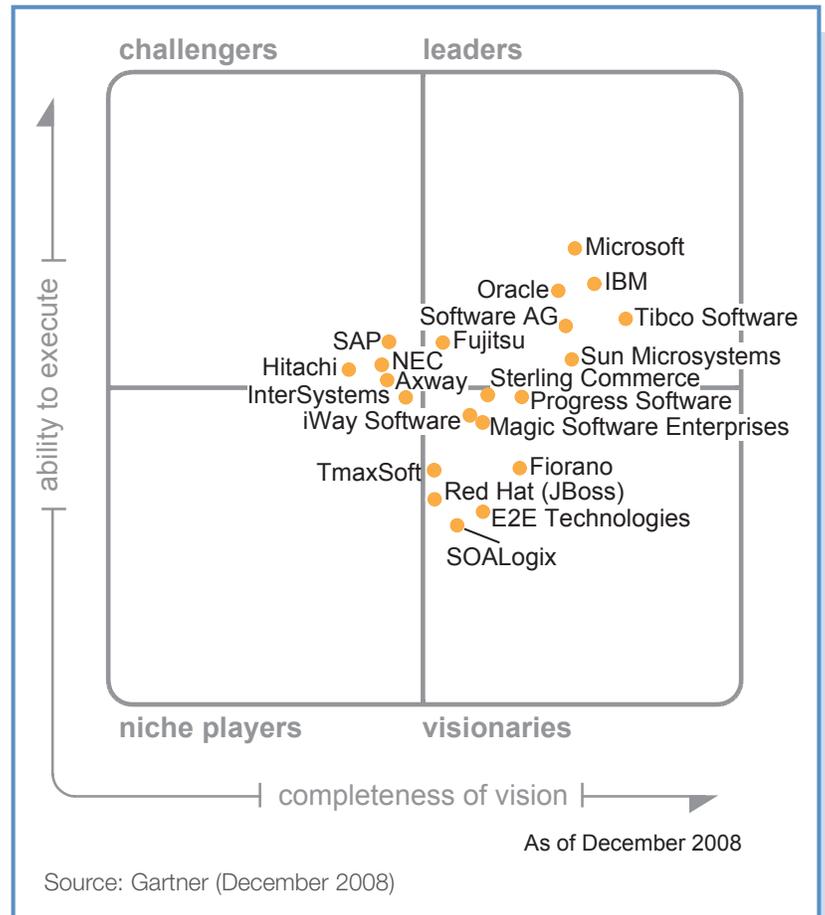
From 1999 to 2001, IBM and Microsoft entered the application integration market, where they have since been joined by Oracle, SAP and Fujitsu. These vendors are often referred to as “megavendors.” The term “megavendor” is used to characterize large application infrastructure vendors that provide products and services whose applicability extends well beyond that of application infrastructure. Early products offered by these vendors could be characterized as “testing the waters.” The solutions were more limited in scope (for example, constrained to messaging transformation and intelligent routing), and often contained immature or unintegrated components. Moreover, buying into megavendor products often resulted in vendor lock-in, because when an organization commits to the megavendor “stack,” there are technical reasons (for example, proprietary extensions) and business reasons (for example, strategic relationships) that perpetuate follow-on sales. Therefore, until recently, products from these vendors have tended to be less well-suited to a best-of-breed approach to deploying an application infrastructure.

Today, megavendors’ offerings are reaching functional parity with integration specialists’ offerings. Therefore, although specialists continue to outmaneuver megavendors by being more innovative in business process management (BPM) tools, business activity monitoring features and complex event processing capabilities, megavendors are countering by sowing fear, uncertainty and doubt about smaller vendors, and by expanding integration sales to include a broad set of assets that is complementary to integration (such as solutions, services, patterns and templates), and that add significant value to organizations deploying SOAs.

Interest in SOAs has directed attention away from back-end application integration. However, integration remains an essential discipline, which increases the value of your IT portfolio and better positions that portfolio to deliver business value.

The predominant types of software employed for the back-end application integration usage scenario are ESB suites. Competition among vendors supplying these types of products is tight. Megavendors and specialists vie for suite customers whose interest is expanding from just integration to include SOA projects.

**Figure 1. Magic Quadrant for Application Infrastructure for Back-End Application Integration Projects**



Aggressive demand for ESB suites is driven by:

- Companies expanding their SOA initiatives
- The trend of creating services by using existing business logic and data assets (which results in the need for integration)
- An emerging recognition that there is a huge overlap in the features required to support the deployment of SOA-based applications and those required to support data consistency, multistep process and composite application integration styles

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## Market Definition/Description

Application integration is defined as “giving applications that were designed independently the ability to interoperate.” In 2008, Gartner republished a seminal paper identifying three integration styles: data consistency, multistep process and composite application integration.

The objective of data consistency integration is to make data across all applications consistent. For example, if a customer changes a billing address in a CRM application, then that event is pushed out to other applications (for example, accounting, billing and ERP) so that those applications can update their databases with the most-current data.

Multistep process integration entails orchestrating the execution of the activities of a business process, regardless of whether those activities are performed by software (applications or services), humans or even intelligent devices in a manner that automates the flow of execution through instances of that business process. Comprehensive support for multistep process integration entails supporting multiple styles of business processes, including system-to-system, human-to-human, collaborative, document-centric and administrative.

Composite applications, the third style of integration, is growing rapidly as organizations seek to leverage established assets (including the services created using SOA) and to minimize the amount of new code that must be developed and maintained.

This Magic Quadrant emphasizes product capabilities most relevant to projects that have, as their primary objective, integration of the back-end data and business logic of applications. These projects deliver increased cohesion and unified access to resources of purchased packages; enterprise legacy products; and applications that are new and custom-designed from other relevant enterprises or that are provided by service providers.

We evaluated 21 vendors in this Magic Quadrant. Some vendors that were not included may be suitable for projects in particular geographies or vertical markets.

There was consolidation reflected in this Magic Quadrant: Software AG acquired webMethods; Progress Software acquired Iona Technologies; Oracle acquired BEA Systems; and Workday (not an application infrastructure vendor) acquired Cape Clear Software.

To succeed in the modern business-computing environment, organizations must have the flexibility to experiment and innovate, while preserving the overall integrity and quality of service of their core systems. To achieve this, most enterprises are engaged in two kinds of projects:

- Systematic: Designed to advance the core enterprise computing capability
- Opportunistic: Designed to experiment with new opportunities

The product and vendor selection decisions considered in this Magic Quadrant can be used for both project types, but they are most frequently used for systematic projects because of the broad product portfolios and the vendors' holistic views of enterprises' application infrastructures.

Multienterprise (or B2B) integration is the extension of the internal projects described above. Although ESB features to support multienterprise integration are considered to a limited degree in the evaluations of vendors for this Magic Quadrant, Gartner publishes a separate Magic Quadrant to rate, in detail, the vendors and products used for B2B integration projects.

## Inclusion and Exclusion Criteria

To be admitted into the application infrastructure for back-end application integration projects Magic Quadrant, vendors must provide – either in the form of multiple products (whether or not framed in a suite) or as a single integrated product – the following key capabilities:

- Classic integration services – Common services for data consistency, multistep processes and composite application integration, including messaging, bulk data movement, transformation, flow management, adapters and process integration packs (PIPs).
- SOA support – Features required for deploying SOA and event-driven architecture (EDA), including an ESB, a registry, and support for multiple deployment strategies and policy management.
- BPM support – Tooling manages the execution of activities in a business process, regardless of whether those activities are performed by humans, programs or even intelligent devices in a manner that automates the flow of execution through that process.
- Development and deployment environment – A graphical environment for specifying the interfaces and technologies required to implement data consistency and multistep process styles of integration.
- Management – System monitoring and management features that keep IT infrastructures running at peak efficiency at all times by enabling the remote monitoring and management of distributed applications, services and information sources, and by enabling the automated resolution of predefined conditions and events.

Inclusion in the application infrastructure for back-end application integration projects Magic Quadrant is based on an assessment of the fit of a vendor's complete portfolio of application infrastructure offerings to the requirements listed above. We make this selection based on the real-world use patterns and technology content of the vendor's offerings. The vendor must have a strongly competitive offering in the key capabilities, but it must also offer useful capabilities in the following technical areas:

- B2B support – Functionality supports the transaction of business electronically between any two companies or among members of a B2B community (such features also have relevance in large organizations – for example, between different divisions).
- Complex event processing – Functionality that extracts the information value from multiple input base events, and generates summary-level complex events that provide insight into current and future business conditions.
- Business activity monitoring – Functionality that provides real-time access to critical business performance indicators to improve the speed and effectiveness of business operations.

- Data integration services – Functionality that is used to establish common access to data sources (structured and unstructured), improve data quality or federate data from multiple sources.

#### Added

- **E2E Technologies:** The company offers a model-based platform that provides the capabilities required to support back-end integration projects.
- **SOALogix:** The company offers an ESB and related services that provides the capabilities required to support back-end integration projects.

#### Dropped

- **BEA Systems:** The company was acquired on 1 July 2008 by Oracle.
- **Cape Clear Software:** The company was acquired in February 2008 by Workday, a company offering HR applications through a SaaS model. Cape Clear's middleware technology is used by Workday in the context of its SaaS offering, but it is not sold anymore to user organizations.
- **Iona Technologies:** The company was acquired in July 2008 by Progress Software. Iona's middleware technology (Artix and Fuse) is in the process of being integrated into Progress' product lines.
- **PolarLake:** The company refocused its strategy around offering specific integration solutions for the financial services market.
- **WebMethods:** The company was acquired in June 2007 by Software AG. Software AG retained webMethods' products and branding.

### Evaluation Criteria

#### Ability to Execute

The ability to execute in the application infrastructure for the back-end application integration use scenario primarily reflects maturity and completeness of the product offering, reasonably affordable costs and the presence of a sizeable customer base that reports good experience with the vendor's integration technology. Vendors' responsiveness in reacting to market trends, their ability to communicate a sensible value proposition and their effectiveness in supporting customers with a proper organization are also important factors, although not more so than for other markets. In other words, product quality, users' productivity, vendors' viability, commitment to client success and low costs are heavily weighted, and marketing and sales success have a moderate weighting (see Table 1).

**Table 1. Ability to Execute Evaluation Criteria**

Evaluation Criteria	Weighting
Product/Service	high
Overall Viability (Business Unit, Financial, Strategy, Organization)	high
Sales Execution/Pricing	standard
Market Responsiveness and Track Record	standard
Marketing Execution	standard
Customer Experience	high
Operations	high
Source: Gartner	

#### Completeness of Vision

Technology providers are evaluated on their ability to convincingly articulate logical statements about market direction, innovation, customer needs and competitive forces, and how well they map to Gartner's position. Highest weighted in completeness of vision are a vendor's product vision and the innovation exhibited in carrying out that vision. Because integration products are maturing, market understanding, business model and geographic strategy carry medium weighting, while marketing, sales and vertical strategies are weighted low (see Table 2).

**Table 2. Completeness of Vision Evaluation Criteria**

Evaluation Criteria	Weighting
Market Understanding	standard
Marketing Strategy	low
Sales Strategy	low
Offering (Product) Strategy	high
Business Model	standard
Vertical/Industry Strategy	low
Innovation	high
Geographic Strategy	standard
Source: Gartner	

## Leaders

Leaders are vendors with a proven and comprehensive integrated product set, as well as a sizeable installed base of reasonably satisfied clients that extends internationally. They have an ample installed base of products to cross-sell their integration solutions to, and have demonstrated their ability to anticipate technology and market trends over the years by extending their offerings with composite, application-enabling technology.

Leaders manifest their understanding of the problem space by providing innovative features, and by extending their integration technology to support initiatives, such as SOA and BPM.

## Challengers

Challengers are vendors that have demonstrated that their technology can support the implementation of numerous, large, business back-end integration projects, and have built platforms capable of effectively competing against, and often besting, those of the leaders. However, these vendors are followers, rather than leaders, in providing new, innovative features, or their innovation is focused on a specific problem space. In some cases, their vision is not manifested through focused marketing messages and value propositions. Most of the challengers have the opportunity to become leaders through greater product innovation, combined with marketing and sales focus on back-end application integration.

## Visionaries

Visionaries demonstrate innovation from a product and technology innovation perspective. They have significant investments in integration technology, and their prospects for survival and growth depend on their ability to establish a strong presence in application infrastructure for back-end application integration. However, products of some of the larger visionaries have relatively small installed bases and, in some cases, their production readiness is not fully proved via a spectrum of mission-critical deployments.

Through diligent and focused execution, some of these players have the opportunity to become leaders. Other vendors are small and have limited sales, marketing and support resources, creating significant obstacles in the pursuit of their ambitions. Many of these vendors are likely to merge or be acquired by larger companies, but some offer excellent and highly innovative products that outperform large vendors' offerings.

Often products in the Visionaries Quadrant can be used together with point products from other vendors to create comprehensive middleware infrastructure that has all the features offered by the "one-stop shopping" suites of larger vendors in the Leaders quadrant.

## Niche Players

A niche player often offers good and, in some cases, excellent back-end integration technology. The focus of a niche player on a specific vertical market has resulted in products that are less useful in integration problems outside that domain. Alternatively, a vendor may lack focus on this problem space, which, for them, is a marginal business. Other reasons for vendors to be positioned in this quadrant are that they have limited sales, marketing and support resources, or are committed to only one geography or installed base.

Nevertheless, the back-end integration technology from a niche vendor can be an optimal choice for specific classes of users (for example, users in a particular vertical market where the vendor's integration technology is focused, or users in the same geography where the vendor is focused). A vendor in this quadrant could emerge as a visionary through a greater commitment to innovation and focus on this market.

## Vendor Strengths and Cautions

### Axway Strengths

- Long-standing vendor in this space, with a proven history of execution, growth and intelligent use of effective acquisitions.
- Mature technology for core integration projects, a good range of offerings that covers BPM and business activity monitoring, and a well-established customer base worldwide.
- Strong system integration parent (Sopra) and senior management, strengthened by acquisitions globally.
- Leading B2B software platform (also available as integration as a service); B2B is Axway's primary focus.

### Cautions

- Limited Axway brand awareness.
- Must resolve the duplication in functionality coming from the recent Axway acquisitions within Synchrony Integrator, and must minimize customer impact.
- Needs to counter the threats posed by competing with megavendors and their increasingly powerful best-of-brand offerings for back-end integration.

### E2E Technologies Strengths

- Innovative middleware platform (E2E Bridge) that combines ESB and flow management capabilities on top of a high-performance, highly scalable, proprietary application server.
- Highly productive and completely model-driven (UML) development and execution environment (based on an UML virtual machine) that does not require any form of coding.
- Significant (approximately 50 production clients) installed-based in demanding SOA backplane, back-end integration and B2B integration projects.
- Has partnerships in place with IDS Scheer, Oracle, SAP and Microsoft, and with a network of resellers in multiple countries.

### Cautions

- Small company headquartered in Switzerland with limited R&D and marketing investment capabilities.
- Low E2E brand awareness.
- Limited number of available E2E Bridge skills, which increases users' perceived technology adoption risk.
- Lack of a vertical industry focus risks stretching marketing and development resources too thin as the company tries to support customers that belong to sectors with too many different requirements.

## Fiorano

### Strengths

- Unique and highly productive development process and runtime paradigm.
- Proven, scalable and reliable message-oriented middleware (MOM) backbone.
- Compatible with diverse operating systems and application servers.
- Able to address a broad range of projects, from simple SOA to high-end, sophisticated application integration scenarios, including those requiring orchestration.

### Cautions

- Low visibility in the market.
- Small vendor, with limited sales and support staff for SOA and the application integration market.
- Supplies only the SOA and integration backplane; must partner to deliver business activity monitoring, BPM, and portal and workflow capabilities.
- Must stretch development resources to stay current with evolving industry standards.

## Fujitsu

### Strengths

- Deep understanding of back-end integration requirements based on a long history of supporting the mainframe environment.
- Enhanced, noninvasive accessibility to mainframe-hosted applications (based on multiple screen consolidation) via an ESB for Web-based Java applications and service consumers.
- A growing number of integration projects across mainframes, packaged applications and custom applications on an open system, inside and outside the U.S., along with many production implementations, such as corporatwide Interstage suite product deployment inside Fujitsu used for integrating business-critical, back-end applications via Interstage Service Integrator (ESB), Systemwalker (CMDB) and CentraSite (service registry and repository), in conjunction with Interstage Business Process Manager where its projects are managed through the Interstage Application and Service Management Suite.
- Comprehensive application infrastructure products supporting SOA, EDA, BPM and business activity monitoring to that enable corporatwide process visibility and improvement.

### Cautions

- Needs more-aggressive support for heterogeneous user experience integration to address opportunities as back-end integrations.
- Small track record for supporting non-Fujitsu, mainframe-based integration.
- Small ecosystem of independent software vendors, system integrators and packaged application vendors outside of Japan, and little leverage within that ecosystem.
- Limited presence in B2B integration outside Japan.

## Hitachi

### Strengths

- Offers a broad set of features for classic integration (including flow management, adapters, B2B integration via the uCosminexus Service Platform), for service integration via uCosminexus Service Platform with uCosminexus UDDI registry and for data integration via DataStage and uCosminexus Information Federator.
- Leverages Hitachi's broad installed base in hardware (storage) and system management software to cross-sell uCosminexus products inside and outside Japan (especially in the Asia/Pacific region), along with a good track record for supplying high-quality integration products and for implementing in mission-critical areas in a wide range of industry sectors.
- Support for integrating major packaged applications and SOA knowledge transfer by offering uCosminexus Navigation Platform and SI Navigation System (pattern-based system design to reduce integration efforts), along with partner community enhancement.
- Supports large-volume data flow across front ends and back ends for real-time analysis for complex event processing and business activity monitoring projects using uCosminexus Stream Data Platform.

### Cautions

- Little support for Web 2.0-based, front-end integration.
- Consolidation of hub-and-spoke, legacy enterprise application integration (EAI) market.
- Lack of support for Service Component Architecture (SCA)/Service Data Objects (SDO) and Open Services Gateway Initiative (OSGi).
- Little brand recognition by system integrators and independent software vendors of uCosminexus outside Japan.

## iWay Software

### Strengths

- Flexible ESB suite suitable for all integration patterns, including SOA.
- Deployment footprint is smaller than that of many vendors because the use of Java Platform, Standard Edition (Java SE) circumvents the need for a full-blown Java Platform, Enterprise Edition (Java EE) application server.
- Largest adapter portfolio (more than 300). Comprehensive adapter development environment (Universal Adapter Framework) with application introspection feature.
- Global sales and support.

### Cautions

- Some customer dissatisfaction with adapters because of bugs. iWay has recently reorganized to address the issue, but it is too early to address results.
- Although iWay Service Manager is less-expensive than some competing products, the cost of its adapters provides challenges in building a business case for return on investment.

- Although iWay offers an integrated SOA governance solution based on AmberPoint, users of other SOA management technologies will be required to integrate, at the metadata level, other SOA management products with iWay Service Manager.
- Grown its customer base to more than 500, but current market dynamics (a shift to conservative buying patterns that occur in a market whose products are maturing, where market consolidation is happening and where there is growing megavendor market share) are likely to move the “center of gravity” for iWay’s revenue toward adapters.

## IBM

### Strengths

- IBM brand recognition, global reach and “mind share,” and a huge installed base of products that are leveraged for WebSphere sales.
- Comprehensive product line with deployment successes for integration and SOA. The product line includes BPM, complex event processing and business activity monitoring features, and is now complimented by the InfoSphere product line.
- IBM Services, which provides comprehensive methodologies for back-end integration and SOA projects across IBM Global Business Services and IBM Software Group.
- Large number of strategic partnerships with independent software vendors that base their products on WebSphere technology.

### Cautions

- Some users experience problems in getting WebSphere Process Server to meet their requirements – even with IBM resources involved.
- For implementing complex, back-end interfaces in a homogeneous WebSphere environment, be prepared for IBM to suggest a large number of products, including WebSphere Modeler (WM), WebSphere Integration Developer (WID), WebSphere Process Server (WPS), WebSphere ESB (WESB) and WebSphere Monitor.
- Users contemplating transitioning interfaces from WebSphere Interchange Server to WPS face significant challenges. Tooling supporting this transition is limited. Expect to use IBM resources to help execute the transition.
- Multiple users have provided feedback about product complexity (WID) and product integration challenges (WM-WID).

## InterSystems

### Strengths

- Leading presence and name recognition in healthcare markets as an integration technology provider; strong support of healthcare industry integration standards and protocols, including recent entry into the internationally emerging electronic health records management space.
- Well-designed, well-integrated, high-performance technology suite with a track record in multiple patterns of application integration and high productivity for integration projects.

- Growing adoption in new vertical markets (including financial, telecommunications and government), beyond traditional healthcare; large number of partners.
- Strong, profitable, private business with no debt; worldwide presence with a large number of partners.

### Cautions

- Still largely unknown as a back-end integration platform provider outside the healthcare market.
- Minimal support for specialized B2B integration scenarios.
- Minimal presence or influence in industry standard initiatives and consortia outside of healthcare.
- Privately held business, and can be prone to surprises more than transparent, publicly owned businesses, although this particular company has had a steady business record.

## Magic Software Enterprises

### Strengths

- Rich and easy-to-use iBolt integration platform based on a proven, metadata-driven, and SaaS-enabled application development and runtime container that provides transformation, routing, human workflow, modeling, composition, portals and business activity monitoring.
- Specific iBolt packaging addresses SAP BusinessOne, JDE Connect, salesforce.com and iSeries integration scenarios.
- Large and global network of partners (independent software vendors, value-added resellers and system integrators).
- Singular focus on small or midsize businesses (SMBs), as well as SAP, Oracle’s JD Edwards World, and salesforce.com’s and IBM’s System i ecosystems via indirect channels.

### Cautions

- Additional marketing initiatives seem to have strengthened the brand, but further investment is needed.
- Improvements by Microsoft to BizTalk, particularly on ease of use and cross-platform communication, could challenge iBolt’s positioning.
- Focus on SMBs limits its appeal for large enterprises, which are the biggest consumers of back-end integration technology.

## Microsoft

### Strengths

- Brand recognition, global reach, mind share and huge installed base of products that are leveraged for BizTalk Server sales.
- BizTalk Server is an identified part of two of Microsoft’s largest and most aggressive initiatives: Oslo and Azure Services Platform.
- BizTalk Server installed base of more than 8,000 customers – two-thirds are estimated to be BizTalk Server 2006 Enterprise Edition or newer versions.
- Ability to attract large numbers of independent software vendors that provide a wide variety of solutions based on BizTalk Server.

### Cautions

- Applicability is limited to the Windows environment, which means customers must exercise increased diligence when evaluating integration challenges if mixing and matching products on other platforms to create a unified application infrastructure for a heterogeneous environment.
- Integration – in particular, the integration required to support services for mission-critical services and applications – is best approached systematically. Microsoft's tools are implemented in a manner that encourages opportunistic development. This does not imply that Microsoft tooling cannot be used systematically; rather, it is a caution not to use Microsoft's tooling opportunistically for mission-critical interfaces.
- Users often apply Team Foundation Server, which is intended to manage development artifacts, to manage the BizTalk Server interface artifacts. Microsoft's Managed Services Engine is used to manage a subset of SOA metadata. Comprehensive, general-purpose metadata management (that is, business process models, component models, data models, applications, services and interface artifacts) will only become available incrementally as future versions of Microsoft's Oslo technology extends the capabilities that exist today in Team Foundation Server and BizTalk.
- Although Microsoft partner's with HP, AmberPoint and SOA Software, currently there are no products for managing and implementing policy and life cycle management integrated with BizTalk Server.

### NEC

#### Strengths

- Offers back-end integration technologies based on best-of-breed OEM technology, including Oracle's WebLogic Integration, Software AG's webMethods in support of NEC's WebOTX product (WebOTX Enterprise Service Bus, Gateway Builder, connectors and BizEngine).
- Strong focus on legacy modernization and integration with packaged applications.
- Aggressive move to support application platforms as a service by developing a framework that incorporates traditional EAI capabilities.
- Shift to service-based integration for Next Generation Network.

#### Cautions

- Lack of architectural coherence for overall solution.
- Not much enhancement of NEC's integration technologies, except for WebOTX SOA-related technologies.
- Weak articulation of the business value for application infrastructure products and the business scenarios to which they apply.
- Limited incorporation in NEC's design/development methodology, and lack of support for SCA/SDO.

### Oracle

#### Strengths

- Credibility as a provider of business-critical software infrastructure coming from success, technical excellence and

the installed base of Oracle databases, as well as from the track record of the recently acquired leading middleware vendor BEA Systems.

- Comprehensive product line for back-end integration and SOA that includes Java Message Service (JMS)-based, MOM, adapters, B2B integration, BPM technology, business rules, business activity monitoring, data integration and ESBs as part of the wider Oracle Fusion Middleware (OFM) stack.
- Highly regarded and successful Oracle BPEL Process Manager (BPM technology) and BEA AquaLogic Service Bus (now Oracle Service Bus) ESB products, with a significant installed base for business-critical, back-end integration projects and SOA backplane support.
- A wide installed base of Oracle's packaged applications create increased opportunity for cross-selling OFM back-end integration technology and OFM-enabled packaged integration applications (PIPs and Foundation Packs) framed into Oracle's Application Integration Architecture.

#### Cautions

- The massive effort to integrate BEA Systems' technologies into Oracle's original products will absorb significant Oracle R&D resources, may risk slowing down the pace of innovation and may expose the installed base to inconsistencies in the migration path.
- Worldwide process for integrating BEA Systems' sales and support organization is still in progress in several countries and may slow down Oracle's momentum in the middleware business.
- Users may be confused (and decide to look elsewhere) by a back-end integration offering, including multiple and partially overlapping products (Oracle ESB, AquaLogic Service Bus, BPEL Process Manager, AquaLogic BPM and WebLogic Integration), while in the process of being integrated and rationalized.
- Managing the transition of multiple legacy integration platforms' (such as Oracle InterConnect, WebLogic Integration and Oracle ESB) installed bases to new, combined Oracle/BEA offerings.

### Progress Software

#### Strengths

- Proven, scalable and highly available messaging backbone (SonicMQ) and ESB (SonicESB), as well as a unique mainframe integration technology (DataDirect Shadow real-time enterprise).
- Highly functional service management offering (particularly Actional 7).
- Leading-edge, high-volume, low-latency event processing capability (Apama).
- Able to address a broad range of projects, from simple SOA to high-end, process-centric integration scenarios, and has added the open-source support (FUSE) from Iona.

#### Cautions

- Competition from larger vendors with an established presence in major accounts has impeded the growth of smaller, pure-play vendors (such as Progress).

- Does not offer its own workflow and BPM extensions that are applicable in some multistep integration scenarios.
- Limited support resources for large customers.

## Red Hat (JBoss)

### Strengths

- Leading position in open-source application platforms and open-source markets is a solid start-off position for entering an adjacent open-source integration solution market. Red Hat will benefit from the apparent decline in alternative open-source integration offerings due to acquisitions and business challenges.
- A credible road map for a comprehensive integration environment, including a multiprotocol ESB, rule processing engine, collection of adapters, event processing, complex event processing, BPEL-based process orchestration and business activity monitoring – implemented as an all-open-source suite.
- Highly capable engineering talent and management commitment to independent growth of the company's middleware business.
- Acquisition of BEA Systems by Oracle creates a marketplace opening for a comprehensive, independent application infrastructure provider – a suitable role for Red Hat's middleware business.

### Cautions

- The JBoss ESB product (the integration offering centerpiece) was recently released. Consequently, it has a small installed base and is not yet proven in mainstream production use.
- Integration technology is mostly promoted as part of an SOA suite (focused on composition ahead of back-end integration projects), thus the integration angle of the technology has limited market mind share.
- The only support for batch is available with the recently acquired MetaMatrix Enterprise Data Services Platform – a data-oriented integration offering, still to be converted to open source.
- No systematic and dedicated support for B2B integration scenarios, although the existing ESB and MetaMatrix technologies are deployed for B2B projects – in some cases, by advanced users.

## SAP

### Strengths

- Large, loyal application installed base that creates huge upsell opportunities for SAP's back-end integration technology.
- Strategic role for SAP applications and SAP SOA makes SAP NetWeaver integration technology almost inevitable for SAP customers.
- Large and growing customer base (approximately 2,800) in production with SAP NetWeaver Process Integration (PI) for SAP-centric (both SAP to SAP and SAP to non-SAP), back-end application integration and B2B integration projects.

- The recently released SAP PI 7.1 integration platform is the first step toward a more distributed architecture and it significantly improves technical quality over previous versions of the product (7.0 or older).

### Cautions

- Very SAP-centric development, deployment, administration and life cycle management tools make the learning curve for SAP NetWeaver PI steeper than for most competing products for integration specialists with no SAP technology skills.
- A historical industry perception that SAP NetWeaver XI was unsuitable for non-SAP-centric integration scenarios often creates internal resistance to strategic adoption in large enterprises, especially those with established investments in back-end application integration middleware from competitors.
- The announced plan to move the current, partially ABAP-based NetWeaver PI product toward a new, fully Java-based architecture may create migration issues for the installed base and may delay adoption from new users.
- Limited vision for emerging back-end integration technologies, such as event-processing, business activity monitoring, emerging interoperability protocols (such as AMQP and DDI), low-latency messaging and platform modularity/dynamic extensibility standards (such as OSGi and Java Business Integration).

## Software AG

### Strengths

- Ambitious, growing and profitable company.
- Large and loyal installed base for Natural 4GL and the Adabas database management system represents large upsell opportunities for back-end integration technology.
- The combination of Software AG's and webMethods' portfolios results in an extensive integration offering, including BPM, legacy integration, ESB, data integration, master data management and metadata management (such as CentraSite, which was jointly developed with and offered by Fujitsu).
- Users consider the products easy to use, even for complex integration problems.

### Cautions

- WebMethods' products continue to have differences in the experience established by the user interface. Some products are not yet Eclipse-based. However, current plans will have a consistent Eclipse-based user experience by next spring 2009.
- Users continue to experience performance bottlenecks with webMethods transformations. Software AG's partners, Informatica and Contivo, claim better performance. Prior to committing to a purchase of webMethods technology, test the different transformation solutions (webMethods, Informatica and Contivo) to identify the one that will meet your integration performance requirements.
- With the market and competing megavendor products maturing, Software AG will continue to slowly lose market share to megavendors that have broader appeal to conservative buyers (as do other application infrastructure specialists).

- Software AG must innovate to stay competitive in electronic design automation and business activity monitoring, and must develop a message that positions webMethods technology with respect to cloud computing.

### SOA Logix

#### Strengths

- Innovative technology that drives integration from a semantic information model.
- Standards conformant platform that provides a broad set of features, including orchestration, rules management, policy and life cycle management, and data integration.
- Broad experience in some problem spaces, including that of integration project management applications.
- Subscription-based sales strategy with competitive pricing.

#### Cautions

- Although products are innovative and comprehensive, SOA Logix is a small vendor that just entered the market for back-end integration products in 2007. SOA Logix must extend its mind share beyond the problem space of integrating project management applications in which it has a track record of success – that market is consolidating and dominated by megavendors. It will be difficult for SOA Logix to gain traction given the situation.
- Must extend support for BPM beyond the rules feature of the Orchestration and Workflow Services features in Confero.
- The BAM capabilities provided by SOA Logix are less extensive than that of its competitors.
- Although a cloud-computing message is emerging from SOA Logix, the company faces stiff competition from megavendors, including IBM, Oracle and Microsoft, and from open-source offerings. It will be challenging to attract independent software vendors to its technology for application-platform-as-a-service and SaaS offerings.

### Sterling Commerce

#### Strengths

- Gentran integration suite portability, quality and scalability.
- Well-executed, hybrid B2B software and service strategy.
- Product and service quality.
- Vendor viability (profitability and parent, AT&T).

#### Cautions

- Limited SOA infrastructure. Although Sterling Commerce has refocused its GIS marketing message onto SOA, its GIS solution still doesn't offer an SOA governance technology or a user-accessible ESB.
- Onerous migration of some Gentran Server (Sterling's electronic data interchange solution) users to the Gentran Integration Suite product.
- Yantra, Nistevo and Comergent Technologies are application vendors. Thus, the acquisitions represent a potential shift in emphasis from infrastructure to applications.
- Limited international market growth.

### Sun Microsystems

#### Strengths

- Wide, normalized, well-integrated, well-architected set of functionality designed to work with any Java EE-compliant application server.
- OSGi architecture enables right-sized deployment.
- Multiple large customers with enterprisewide commitment to Sun's Java Composite Application Platform Suite (Java CAPS) products.
- Strategy of open sourcing products is starting to pay off, with large government contracts landed because using open source doesn't require the lengthy RFP process required for capital expenditures.

#### Cautions

- Sun's sales force is maturing in its ability to sell application infrastructure. However, Sun still has work to do to regain the momentum previously enjoyed by SeeBeyond in a market where growth is flattening.
- Java CAPS mind share still lags behind that of products from IBM, Oracle, Tibco Software, Software AG and SAP, which results in those vendors being considered ahead of Sun.
- Sun's marketing for its Java CAPS open-source components lags what is provided for its other open-source offerings, including Solaris, MySQL and the GlassFish application server.
- Lack of messaging about how Java CAPS SOA implementations can be used to support BPM initiatives.

### Tibco Software

#### Strengths

- New product packaging strategy that offers a "bare bones" ESB at a price that's affordable by projects and that adds BusinessWorks and a composite application product in layers.
- Optimized for heterogeneous environments.
- Comprehensive product line with strong functionality. Addresses integration and SOA, and has innovative ActiveMatrix Service Grid technology.
- Innovative ActiveMatrix and ActiveMatrix Grid enable SOA solutions built using components created by using a variety of popular programming models (such as Ruby, Spring, Java and .NET).

#### Cautions

- For 2007, Tibco grew less than 5% in the application infrastructure suite, BPM suite, portal, MOM and stand-alone B2B middleware subsegments. Tibco is getting squeezed by megavendors in consolidating markets.
- Lacks a comprehensive metadata management capability with life cycle management features.
- Tibco bundles, while offering competitive pricing for initial SOA technology (the ActiveMatrix Service Bus) and a supporting logical progression of technology from integration through the adoption for SOA, which adds up to a hefty total investment.

- Tibco remains committed to traditional, perpetual CPU-based and enterprise licensing models for its extensive technology stack, whose products are offered independently or as a collection of bundles. Expensive, single-vendor solutions such as this that use traditional pricing models will increasingly come under fire from subscription pricing models (such as Sun, Progress and JBoss) – vendors introducing use-based pricing and open-source software technology.

## TmaxSoft

### Strengths

- Offers a solid, comprehensive set of OSGi-compliant products, including application integration (BizMaster EAI), service integration (ProBus, with policy management capabilities), B2B integration (AnyLink), massive parallel and distributed data integration (ProETL), a real-time data backbone (ProSync) and distributed query (ProDataHub).
- Very strong presence of TmaxSoft's application infrastructure in Korea, with leverageable references with enterprise-scale implementations of AnyLink and BizMaster EAI integration products and prepackaged solutions in financial services, banking and other vertical markets.
- Support for SOA, electronic design automation and SCA/SDO to provide more-flexible and dynamic integration and management via the implementation of service-level agreements.
- Track record of high-end transaction processing deployments, which are leveraged in selling its integration technology and partner products with TmaxSoft's products.

### Cautions

- Very limited presence in back-end integration, and a very small number of system integrator partners outside Korea.
- Competes effectively head-to-head against IBM and BEA locally, but lacks the resources for major regional, Asia/Pacific and global expansion.
- Needs to increase its presence in more industry segments.

### Vendors Added or Dropped

We review and adjust our inclusion criteria for Magic Quadrants and MarketScopes as markets change. As a result of these adjustments, the mix of vendors in any Magic Quadrant or MarketScope may change over time. A vendor appearing in a Magic Quadrant or MarketScope one year and not the next does not necessarily indicate that we have changed our opinion of that vendor. This may be a reflection of a change in the market and, therefore, changed evaluation criteria, or a change of focus by a vendor.

## Evaluation Criteria Definitions

### Ability to Execute

**Product/Service:** Core goods and services offered by the vendor that compete in/serve the defined market. This includes current product/service capabilities, quality, feature sets and skills, whether offered natively or through OEM agreements/partnerships as defined in the market definition and detailed in the subcriteria.

**Overall Viability (Business Unit, Financial, Strategy, Organization):** Viability includes an assessment of the overall organization's financial health, the financial and practical success of the business unit, and the likelihood that the individual business unit will continue investing in the product, will continue offering the product and will advance the state of the art within the organization's portfolio of products.

**Sales Execution/Pricing:** The vendor's capabilities in all pre-sales activities and the structure that supports them. This includes deal management, pricing and negotiation, pre-sales support and the overall effectiveness of the sales channel.

**Market Responsiveness and Track Record:** Ability to respond, change direction, be flexible and achieve competitive success as opportunities develop, competitors act, customer needs evolve and market dynamics change. This criterion also considers the vendor's history of responsiveness.

**Marketing Execution:** The clarity, quality, creativity and efficacy of programs designed to deliver the organization's message to influence the market, promote the brand and business, increase awareness of the products, and establish a positive identification with the product/brand and organization in the minds of buyers. This "mind share" can be driven by a combination of publicity, promotional initiatives, thought leadership, word-of-mouth and sales activities.

**Customer Experience:** Relationships, products and services/programs that enable clients to be successful with the products evaluated. Specifically, this includes the ways customers receive technical support or account support. This can also include ancillary tools, customer support programs (and the quality thereof), availability of user groups, service-level agreements and so on.

**Operations:** The ability of the organization to meet its goals and commitments. Factors include the quality of the organizational structure, including skills, experiences, programs, systems and other vehicles that enable the organization to operate effectively and efficiently on an ongoing basis.

### Completeness of Vision

**Market Understanding:** Ability of the vendor to understand buyers' wants and needs and to translate those into products and services. Vendors that show the highest degree of vision listen to and understand buyers' wants and needs, and can shape or enhance those with their added vision.

**Marketing Strategy:** A clear, differentiated set of messages consistently communicated throughout the organization and externalized through the Web site, advertising, customer programs and positioning statements.

**Sales Strategy:** The strategy for selling products that uses the appropriate network of direct and indirect sales, marketing, service and communication affiliates that extend the scope and depth of market reach, skills, expertise, technologies, services and the customer base.

**Offering (Product) Strategy:** The vendor's approach to product development and delivery that emphasizes differentiation, functionality, methodology and feature sets as they map to current and future requirements.

**Business Model:** The soundness and logic of the vendor's underlying business proposition.

**Vertical/Industry Strategy:** The vendor's strategy to direct resources, skills and offerings to meet the specific needs of individual market segments, including vertical markets.

**Innovation:** Direct, related, complementary and synergistic layouts of resources, expertise or capital for investment, consolidation, defensive or pre-emptive purposes.

**Geographic Strategy:** The vendor's strategy to direct resources, skills and offerings to meet the specific needs of geographies outside the "home" or native geography, either directly or through partners, channels and subsidiaries as appropriate for that geography and market.