

# Magic Quadrant for Multichannel Access Gateways, 2007

Gartner RAS Core Research Note G00152113, William Clark, Michael J. King, 8 November 2007

**Gartner rates software vendors that embed multichannel platform capability. Enterprise adoption of multichannel access gateway functionality continues to rapidly rise. Offerings in this market remain diverse but are coalescing into two segments.**

## WHAT YOU NEED TO KNOW

Enterprises are increasingly mixing mobile and multichannel solutions from multiple vendors, each with separate software stacks for data transport. This leads to conflicts with managing network connections on mobile devices, an inability to administer security and devices, complexities with testing, an increase in software defects, reduced battery performance, and higher support and services costs. In counteracting this trend, IT staff will attempt to place all of this functionality under a single infrastructure, resulting in increased deployments of multichannel access gateways (MAGs) during 2008.

MAGs allow IT departments to create and enforce an architectural, rather than a tactical, approach to multichannel mobile/fixed solutions. The end-user, cost, management and security benefits of MAGs are significant. Large enterprises with significant, diverse populations of mobile employees should settle on one or two MAG vendors by 2010 in order to take advantage of those benefits.

Security and management concerns, driven by regulatory requirements and high-profile data breaches, have driven businesses to look at IT for the security and the management of mobile devices. This too will force IT to look at a single platform for application deployment and management moving forward.

MAG deployments will continue to grow at least twice as fast as the overall application market over the next five years, and will be used in conjunction with unified communications platforms to orchestrate voice- and data-centric applications.

The number of vendors qualifying as MAG platform providers grew from 15 in 2006 to 23 in 2007. The market is evolving from a three-tier segmentation to two tiers. Most MAGs have grown from wireless application gateways offering simple application access to fully featured platforms with connection security and administration features; a few have developed from a management and security angle; and now, operating system (OS) vendors Microsoft and Research In Motion (RIM) have joined the market. The leader, Sybase, has developed its offering through a diverse set of acquisitions.

## STRATEGIC PLANNING ASSUMPTION(S)

- The MAG market will top \$1 billion by 2010.
- By 2010, 50% of enterprises will have migrated away from tactical mobile application silos (supporting a single application) to strategic platforms capable of supporting multiple applications, managing devices, and securing data and transport.
- By 2012, half of the application oriented MAGs will be merged or acquired or be forced to become application vendors.

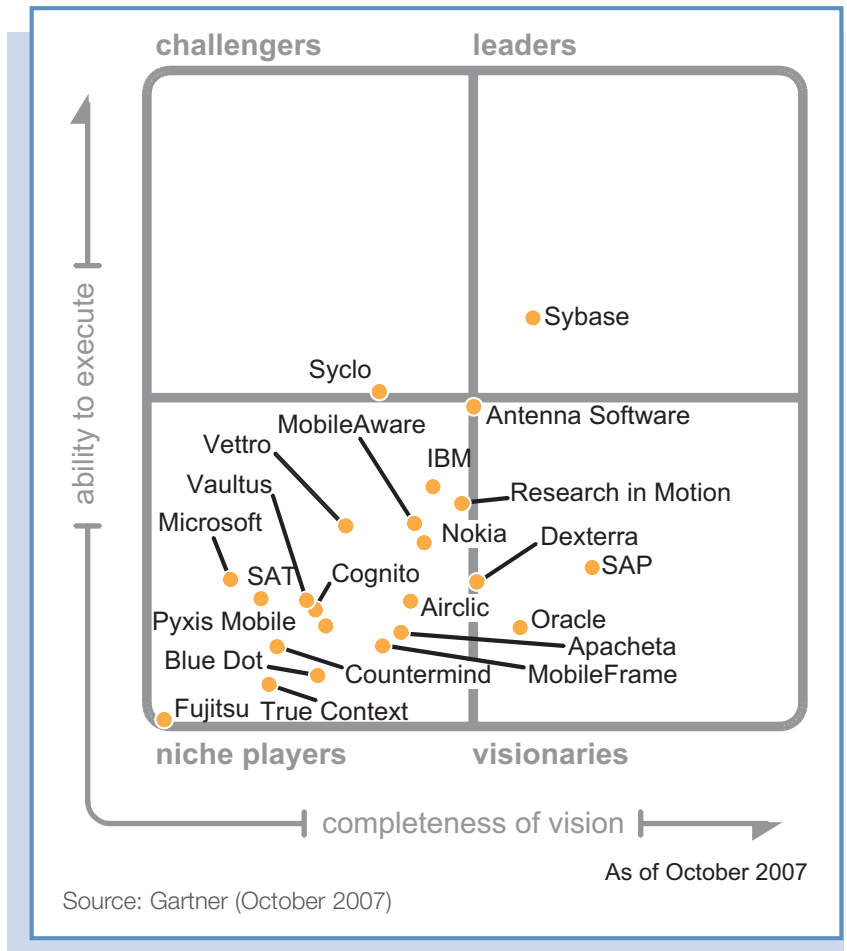
## MAGIC QUADRANT

### Market Overview

There are fundamental challenges in delivering multichannel business applications, whether to mobile devices, Web clients or point-of-sale kiosks. Unlike PCs, the target devices have differing operating systems, differing screen sizes and resolutions, differing input mechanisms, and differing output media (voice and data), and may attach intermittently (sometimes causing their IP address to change) and/or operate over multiple types of networks that have varying bandwidth and latency characteristics. This scenario requires not the fixed client server architecture of the PC world but one that adapts dynamically to each scenario. The PC world has traditionally sought lower upfront cost software investment followed by relatively few but major upgrades. Because of the requirements of constantly changing groups of users and the rapidly evolving device environment, mobility requires more frequent upgrades. Multichannel software requires a larger upfront investment for software that promises lower costs as the target devices change by necessitating only changes to small isolated components of software.

Multichannel capability (especially mobile) is becoming more important as enterprises expand their mobile application capabilities to users. Enterprises are increasingly mixing solutions from multiple vendors, each with separate software stacks for data transport (which results in poor battery life). This also leads to conflicts with managing network connections on mobile devices, an inability to administer security and devices, complexities with testing, an increase in software defects, and higher service and support costs. To counteract this trend by putting all of this functionality under a single infrastructure, large enterprises

Figure 1. Magic Quadrant for Multichannel Access Gateways, 2007



worldwide should deploy MAG functionality by 2009. This is because MAGs reduce total cost of ownership (TCO) by 30% to 50% for mobile application deployments over coding-centric approaches, which use third-generation language (3GL) frameworks like .NET or Java, by doing the following:

- Providing code reuse for multiple device, multiple OS and multiple network support.
- Reducing and collapsing the amount of transport and network layer software needed for incremental solutions.
- Providing pre-built user interfaces for small form factor devices (this is significant due to the nuances of building optimal user experiences, which are key to user adoption).

The Magic Quadrant is copyrighted November 2007 by Gartner, Inc. and is reused with permission. The Magic Quadrant is a graphical representation of a marketplace at and for a specific time period. It depicts Gartner's analysis of how certain vendors measure against criteria for that marketplace, as defined by Gartner. Gartner does not endorse any vendor, product or service depicted in the Magic Quadrant, and does not advise technology users to select only those vendors placed in the "Leaders" quadrant. The Magic Quadrant is intended solely as a research tool, and is not meant to be a specific guide to action. Gartner disclaims all warranties, express or implied, with respect to this research, including any warranties of merchantability or fitness for a particular purpose.

© 2007 Gartner, Inc. and/or its Affiliates. All Rights Reserved. Reproduction and distribution of this publication in any form without prior written permission is forbidden. The information contained herein has been obtained from sources believed to be reliable. Gartner disclaims all warranties as to the accuracy, completeness or adequacy of such information. Although Gartner's research may discuss legal issues related to the information technology business, Gartner does not provide legal advice or services and its research should not be construed or used as such. Gartner shall have no liability for errors, omissions or inadequacies in the information contained herein or for interpretations thereof. The opinions expressed herein are subject to change without notice.

- Reducing or avoiding testing and integration costs by reusing subsystems of the above elements and, in the case of MAG vendors, using 4GL techniques, by improving the productivity of and targeting programmers whose cost basis is lower.

MAGs also reduce the risk, project-by-project, of organizations making the mistake of placing an over reliance on thin-client or Ajax architectures instead of multichannel architectures.

Organizations need to align their selection of MAG vendors with their own internal service-oriented architecture (SOA) capability and ask MAG vendors about architectural styles they support outside of thick-client ones. Also, from an enterprise architecture perspective, some MAGs that started as specialists or point solutions are still evolving their SOA capabilities, and this must be considered in their evaluation. MAG offerings are complex and are intertwined with client- and server-side management, development and application offerings, making it imperative to discuss your current technology and skill base, as well as industry-specific, geographic and application needs, discussing the points above with an analyst before finalizing shortlists.

At least half of all tactical mobile software deployed by large enterprises today will be replaced by 2010. It will, for the most part, be replaced by MAG approaches that allow organizations to create composite applications specifically for business transactions at a time when the variety of devices (some vendors now support over 3,000 devices), networks (consider all variants of wired WAN/LAN, wireless WAN, personal-area network and wireless LAN), and peripherals (MAG vendors should support printers, bar code readers and radio frequency identification readers) is steadily growing. Increasingly, MAGs are becoming a linchpin of service-oriented architectures, as they insulate enterprise architectures from this complexity. Lastly, as regulatory requirements and recent high-profile thefts of data devices (laptops, PDAs and e-mail devices) drive the need for ITOs involvement in the management and security of all devices in the field, MAGs should be constructed to provide a uniform way to build mobile applications that conform to security policies. Regulatory pressures (such as Sarbanes Oxley, CISP, HIPAA and similar EU regulations) are all aiming for auditability of all connected devices, and many organizations will find MAGs useful in meeting those requirements. Gartner believes that up to 20% of enterprise investments in MAGs will be driven by these requirements.

### Market Definition/Description

MAGs provide tools and client/server mobile middleware for highly device- and network-adaptive thick (offline) enterprise applications.

The MAG market has moved from three tiers to two. In 2006, Gartner classified MAGs as either architecture-centric, application-centric or specialists. But in 2007, we have observed that the architecture and application vendors are now competing head-on for partners as infrastructure MAGs, while mobile application specialist MAGs are finding success through focusing on specific geographies, applications or vertical industries. There are seven multichannel infrastructure vendors: IBM, Microsoft, Nokia, Oracle, Research In Motion (RIM), SAP and Sybase, and 16 mobile specialists, including Vetro, Cognito, Syclo, Antenna Software and Dexterra. Gartner often sees a mixture of these types of vendors on shortlists and, in several cases, there is cross-licensing of offerings between vendors. MAGs with an emphasis on a

particular application or device type are often rated lower than those vendors able to address a wider audience of applications or devices.

Within IT organizations, two distinct job functions are addressing multichannel application development:

1. Traditional developers who demonstrate leanings toward Java or .NET programming languages.
2. Technical business analysts who prefer high-level languages.

To address both segments, many MAG vendors are providing both higher-level languages and application templates to ease development time. Increasingly less programming expertise is required to bring forth solutions. While the infrastructure vendors have stayed focused on traditional programming techniques, the success of the higher-level language and template approach offered by the leading MAG specialists will eventually cause the majority of MAG vendors to offer this second method.

In some cases, MAGs are seen on shortlists with tactical vendors, as most of the 300-plus vendors tracked by Gartner that offer mobile software are tactical in nature. Tactical vendors include those that offer mobile e-mail; thin-client mobile application servers; mobile platform, tool and point solutions; mobile device management; customer relationship management (including field service management and sales force automation); enterprise resource planning (including enterprise asset management and IT asset management); supply chain management (including warehouse management); and supplier relationship management.

Gartner estimates that the overall size of the MAG market was \$520 million to \$570 million in 2006, and that it grew at a rate of about 30% in 2006, slowing from 40% growth in both 2004 and 2005. The number of companies meeting Gartner's MAG criteria grew from 15 to 23 (nine were added and one was dropped) during 2006.

Software sales in the MAG market are difficult to estimate for five reasons:

- Variability of the software to service ratio on a per-deal basis.
- Bundling of mobile middleware and application pricing into core application or toolkit pricing by vendors.
- Revenue claims from privately held vendors are hard to corroborate, while the larger software vendors typically do not break out revenues associated with mobile software or middleware.
- MAG software is often "given away" by larger software vendors to sell traditional products.
- Sales channels tend to muddy the revenue waters.

Gartner projects that the MAG market will top \$1 billion by 2010. This figure includes server licensing; tool suite licensing; client software licenses, including device management, built-in security, databases, pre-built applications and connectors that are bundled tightly with the MAG platform. There is also a considerable services market tied to mobile platform deployments, which is slightly larger than the MAG software market, but relatively small compared with overall enterprise spending on mobile projects.

The market for unified communications platforms, which currently complements MAGs, will begin to overlap with the MAG market as

the distinction between voice- and data-centric applications narrows. Competitive situations are arising where voice-centric unified communications approaches compete with data-centric applications - for example, when integration of voice-enabled front ends for enterprise applications such as warehouse management or healthcare either complement or compete with MAGs.

Another market that is currently distinct, but that will increasingly overlap with the MAG market, is that of mobile e-mail platforms. As MAG vendors offer fully featured e-mail platforms (Nokia and Sybase) and collaborative applications (such as SAP/Microsoft's Duet offering), and as more e-mail vendors join RIM to begin to offer more application functionality, we expect this market distinction to blur.

MAGs will evolve from today's offerings, which are, for the most part, database-synchronization-centric. They will become composite-transaction-oriented. Note the distinction between composite applications (where there is one user interface blending data from multiple sources into a unique view) and composite transactions (which might not only spawn a unique view, but also a related summary e-mail to the end user or to colleagues). Mobile portals and thin-client mobile application servers complement existing MAG functionality - a limited set of MAGs also offer thin servers. The best MAG architectures treat thin clients as just another transaction medium.

Since many MAG vendors are small, a common concern is the overall viability of the market and the scenario for its maturation. The infrastructure MAGs will evolve to dominate a considerable amount of the lower layers in the MAG software stack - so, while in the next two to three years the number of MAG vendors will increase, by 2012, half of the application-oriented MAGs will be merged or acquired, or else be forced to become application vendors. They will merge with field-service management (FSM) or appropriate application-specific market vendors, or else they will fail. It is imperative that IT departments deploy MAGs as a separate software layer that can be swapped out as the market changes.

## Inclusion and Exclusion Criteria

### Inclusion Criteria

To qualify for this Magic Quadrant, a vendor must:

- Show financial viability; it must either be profitable or have sufficient sales in the pipeline and cash reserves to guarantee viability for 12 months.
- Provide either a stand-alone mobile development environment or toolkit, or have a specific database, integration or design capability for mobile composite applications within a broader software development suite.
- Offer developer support (either stand-alone or within the context of an encompassing solution development platform) and be visible to Gartner in the marketplace. MAG vendors need to provide 10 reference customers that have used the platform in production environments for six to 12 months. Those that don't receive a lower execution score and are included only on the basis of independent observation of their platform in production.

- Support application integration for multiple commercial enterprise applications (like those from SAP or Oracle), as well as home-grown applications through common interfaces such as Java, XML, SQL and BizTalk.
- Show support for composite application development: specifically, the ability to update disparate data stores, based on one transaction by a mobile user.
- Support a wide range of devices, including at least two of the following categories: smartphones; PDAs; tablet PCs; notebook PCs; ruggedized handheld computers; and specialized platforms, such as vehicle-mounted devices, set-top boxes, point-of-sale terminals and kiosks of various form factors. A vendor must support at least one Microsoft Windows platform and one handheld device running a non-Windows operating system. They must support transformation to sub-Video Graphics Array screen resolutions and non-qwerty input formats. Fewer supported platforms results in a lower execution score.
- Support for disconnected (offline) application functionality for the categories of devices it focuses on, and preferably some form of rich or thin client for others. Offline access can include partial (cached) or full access to application data.
- Strong system integration capability, either directly or through partners - MAGs are still evolving and this is an important factor in successful MAG deployments.

Gartner has more criteria for when enterprises need to select MAGs, as well as desirable criteria that cover advanced MAG functionality.

### Exclusion Criteria

Companies excluded from Gartner's Magic Quadrant for MAGs include vendors of: thin-client mobile application servers that support only browser or applet-based applications; application development or forms toolkits; terminal server products; mobile virtual private network (VPN) products; and carrier-based or thin-client mobile application servers. For examples of these vendors, (also see Note 1). Reasons for excluding these vendors are as follows:

- There is a lack of support for a range of application architectures.
- They do not allow enterprises to create composite applications.
- Most do not enable management and security of devices.
- Most do not enable full time access to these applications and data.
- Most do not market and sell to enterprises.
- They are not strategic platforms. Rather, most are designed to tactically service a single application or functional group need.

In this year's Magic Quadrant, we have included a number of companies that had not previously fit the criteria. Both OS vendors and application specific-vendors with flexible platforms have advanced in functionality and market presence significantly enough to be included. However, their shortcomings - limited device diversity support, limited application examples and below-par device/application management capabilities - significantly affect their score.

## Companies Providing Elements of Multichannel

### Functionality Not Appearing in the Magic Quadrant

Blackbay, Trimble, Tempos 21, Telsys, Avenade, Agentek, Appear Networks, Astea, Sun and salesforce.com all provide elements of multichannel functionality.

- Agentek specializes in field service applications.
- Appear Networks (Sweden) is focused on providing a context-aware mobile platform for the transportation market in Europe.
- Astea has multichannel capability, but limits its focus to only extending its applications.
- Avenade is presented by Accenture as a multichannel platform for large mobile installations.
- Blackbay (Australia) has significant installations in Asia/Pacific.
- Tempos 21 and Telsys, both located in Spain, have significant platform-based mobile solutions.
- Salesforce.com continues to cultivate its mobile platform with the goal of providing rich-client experiences for sales forces.
- Sun is adding offline sync support through Synchronia, and its service delivery platform (SDP) contains elements that can be used as a MAG.

Trimble's acquisition of @Road, its ownership of Eleven and its focus on mobility make it a viable software platform for multiple mobile deployments.

### Added

Airclic, Apacheta, Blue Dot, Microsoft, Pyxis Mobile, Research In Motion, SAT, True Context and Vaultus.

### Dropped

Appresta (purchased and subsequently pulled its MAG platform offering).

## Evaluation Criteria

### Ability to Execute Product/Service

Does the vendor's server software, client software, application development toolkits, application management capabilities, device security and management abilities meet the buying requirements of enterprise users?

### Overall Viability

MAGs are purchased as a strategic piece of infrastructure, so vendor viability has taken an increasing role in our evaluation criteria. To qualify, small vendors need approximately \$10 million in annual revenue; to be either profitable or nearly profitable; and/or have cash on hand to finance one year of operation. For large vendors, continued commitment from upper management for mobile capabilities and overall company financials are considered.

### Sales Execution/Pricing

Factors include numbers and geographic dispersion of inside/outside sales, partnering, and level of local sales support for resolving issues. Also important are value-added reseller (VAR) and system-integrator (SI) relationships, carrier partnerships and ongoing application developer relations. Vertical strategies and customers play a role in the criteria, as do pricing models and TCO.

### Market Responsiveness and Track Record

How long has the company been in the MAG market? How has the company responded to the maturation of the market and its changing requirements? Is the company growing at, or faster than, the market rate?

### Marketing Execution

Has the company successfully marketed to specific verticals, locations or end users in IT? What is the strategy based on? Is it tooling, database, device, applications or system integration channels? What is the level of market awareness of the company's MAG offering? How does the company work with its partners to create a healthy "ecosystem"?

### Customer Experience

This is the most important category and requires actual customer experience (for example, from IT, line of business and end users) for the entire engagement life cycle; from initial contact through sales, procurement, development, integration, deployment and support. Given that many customers interact more with the VAR and/or SI than the software vendor, this category also takes into account the vendor's choice of partners, and any ongoing partner evaluation/certifications.

### Operations

Has the company successfully scaled its business geographically? In many cases, MAGs need to be able to support multinational deployments. How does it

**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	high
Marketing Execution	standard
Customer Experience	high
Operations	low
Source: Gartner	

support vendor partners, training centers and developer relations? How well run are sales, marketing, finance, research, development, testing, system integration, help desk and other key functions? Are proper quality assurance processes in place?

### Completeness of Vision

#### Market Understanding

Numbers and geographic dispersion of inside/outside sales, partnering, and level of local sales support for resolving issues are important. A longer-term vision of MAGs' functionality, beyond mobile application enablement, including vertical-industry understanding, voice, instant messaging, location and presence are also important factors. Carrier relationships, and hosted and non-hosted offerings will also factor in here.

#### Marketing Strategy

A market understanding of requirements for security, management and integration with existing platforms; and of department/functional groups with requirements for rapid return on investment and frontline applications. Pre-existing relationships in adjacent markets like field service or enterprise targeted offerings weigh heavily in this category.

#### Sales Strategy

Number of sales professionals and their geographic spread, number of vertically focused teams, and the vertical markets to which they attend. Within this category, we also evaluate the sophistication of the sales teams and the scalability of the sales model. Lastly, this category seeks to take account of partner strategies and how they will relate to future sales efforts.

#### Product Strategy

Does the future road map for the product reflect the market's direction and the likely requirements of buyers in 18 to 24 months? Does the history of the product reflect steady improvements and growth in functionality? Has the company built or acquired the pieces necessary to maintain product relevance/leadership? Does the company seek to address additional client requirements, beyond mobile application deployments?

#### Business Model

This category evaluates the vendor on its ability to balance the need for company and product agility with the need for leadership in the market. How does the vendor's focus reflect future market conditions and requirements? How will hosting, partnerships and services affect growth?

#### Vertical Market Strategy

Is the company focused on the growth verticals, such as transportation, logistics, healthcare, government, education, oil and gas, petrochemicals, utilities, insurance, financial services and professional services? Is it able to articulate a strategy for vertical differentiation and can it maintain that position? Has it identified horizontal applications that span multiple verticals and can it capitalize on those frontline applications across the customer base?

#### Innovation

Does the company have a compelling technical story that supports a compelling business proposition? Does it have an ambitious technical direction that will enable it to deliver ongoing product enhancements faster than its competitors? Does it

provide input for or participate in standards bodies? We also consider intellectual property positions. Note, though, that Gartner does not give legal advice.

### Geographic Strategy

Does the company have a strong plan for supporting customers and growing business worldwide. Is the company strong in at least two regions? What is its track record for multilingual support, including product, sales, and partners? What are its international expansion plans? Do they mirror the market maturity rates we expect?

### Leaders

For the first time since we resumed coverage of this market in the Magic Quadrant format, a Leader has emerged. Leaders in this market match vision with execution. They must have a good vision of the multichannel enterprise, a solid understanding of IT requirements and scalable channels to markets. They also have to provide platforms that are easy to purchase, program, deploy and upgrade. Smaller vendors that have focused on key elements of multichannel functionality and offer application-centric solutions have not yet matured to offer the broad platforms needed by large enterprise customers. Application vendors still lack the flexibility to support a sufficient number of applications, and have not provided enough product substance in terms of nonfunctional requirements (for example, device management, security and policy enforcement) to be included as Leaders.

### Challengers

Challengers in this market must have high numbers of enterprise clients; a large, growing base of seats in deployment; and the ability to meet the needs of all departments in global rollouts. They have a complete software suite with all the required functionality that is scalable for large numbers of users. They are vendors with a history of execution in the market. They may lack either strong technical or business vision or have lingering gaps or confusing overlaps in products or channels to market.

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

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

## Visionaries

Visionaries in this market have a compelling vision of both the product's and the market's future, and the technical direction to take them there. However, they have not backed that vision up in one of the following areas: history of execution, low TCO (even compared with some Niche Players), strong financial results or a long list of satisfied clients with large installations. We expect vendors in this category, as well as the stronger Niche Players, to be heavily "mined" for potential acquisition by the larger, traditional software vendors.

## Niche Players

Niche Players are not as strong in one or more of the following criteria: geography, product breadth/completeness or focus, or number of customers. While they may be a particularly good choice because of vertical or customer knowledge, Gartner suggests pairing Niche Players with Challengers or Visionaries on MAG shortlists, and that enterprises ask niche MAG vendors to show how they will remedy their shortcomings through partnering or integration for specific projects.

## Vendor Strengths and Cautions

### Airclic Strengths

- Located in Newtown, PA, Airclic has Innovative vision linking mobility to end-to-end business processes, and current end-to-end tool maps from process design to code execution.
- Investment partners include Motorola, and a strong channel partnership stemming from its relationship with Symbol.
- Track record in proof-of-delivery, inventory, and asset control applications in transportation, distribution, delivery and logistics companies.

### Cautions

- Approach requires a different mind-set for code maintenance, as workflow information is created in Visio and then interpreted using a mobile workflow engine on the device. Airclic has a narrow technical multichannel vision.
- One of the smallest MAGs, it augments software revenue with speciality hardware.
- Geographic span and marketing/sales channels are very limited and must be greatly expanded for the company to be considered by multinational enterprises.

### Antenna Software Strengths

- Located in Jersey City, New Jersey, Antenna's Strong value proposition and vision - focus on sales force automation (SFA) and good execution using generalist approach to customer relationship management (CRM)-based applications. A good fit for Oracle Siebel On-Demand customers.
- Strong support for both RIM BlackBerry and Windows mobile platforms.
- Overall strong approach to cost-effectiveness - hosted model enables enterprises to scale to raise or reduce user counts or to effect short-term rollouts.

- Greatly improved development environment, with significant application management capabilities.
- One of the larger vendors in this market with a significant installed customer base.

### Cautions

- Improved its MAG vision score in 2007, but the majority of installations remain in its traditionally strong area of sales force and field service. It will need to continue to improve its development environment and broaden its scope to enterprise asset management (EAM) and other types of applications in order to continue its strong growth.
- Device security and management must take a more prominent position in Antenna's portfolio, as increasing numbers of enterprises base their investment decisions on that functionality.
- Must expand channels to market in order to capture more hosted and non-hosted sales. We expect carrier relationships to play a large role in 2008.
- Support in all geographies has been limited to date. Enterprises should ensure that local support is in place.
- It is still a relatively small company when compared with the infrastructure MAGs.

### Apacheta Strengths

- Located in Media, PA, Apacheta has Solid prepackaged mobile workflow applications and elements of advanced multichannel functionality are built in.
- Strong, albeit limited set of customer references, especially focused and a good fit for enterprises focused on extending Microsoft Visual Studio programming environments.

### Cautions

- Early stages of building out toolkit. Expects to augment offering with other infrastructure MAG functions.
- Very low number of installed seats, and is one of the smallest MAG vendors.
- Weak marketing.
- Geographic span and sales channels must be increased significantly to remain a viable MAG.

### Blue Dot Strengths

- Located in Denver, CO, Blue Dot features EAM with several sophisticated implementations. Higher than market growth, and a loyal customer base.
- Partnerships include those with Infor and Oracle for EAM.
- Improved application development environment - Blue Dot is a good example of an application specialist evolving into a platform offering.

### Cautions

- One of the smallest MAG vendors, Gartner has not seen Blue Dot on shortlists outside of its EAM speciality.
- Narrow application focus detracts from infrastructure offering. Consider Blue Dot as a complement to infrastructure MAG offerings.

- Consider Blue Dot in EAM-focused deployments and when Infor and Oracle are already in-house.

### **Cognito Strengths**

- Located in London, U.K., Cognito has industry knowledge in field service, facilities management, public sector (housing), utilities and transport.
- Strong professional services offering.
- Excellent customer satisfaction in complex implementations.

### **Cautions**

- Span is limited to Western Europe, which makes it an unattractive proposition for multinational corporations. It is not recommended outside of Western Europe.
- Medium to high TCO, in line with complexity of project.
- Cognito needs to further expand geographically and become more aggressive in building out new sales channels and marketing its platform.

### **Countermind Strengths**

- Located in Littleton, CO, Countermind continues to have numerous large enterprise customers in the energy, food and beverage, and manufacturing industries, primarily in the Western U.S.
- Mobile Intelligence platform demonstrates a solid understanding of decomposing mobile workflows and mapping them to software implementations. In 2007, Countermind filed patents in several areas, such as complex application processing.

### **Cautions**

- One of the smallest MAGs in terms of company size and revenue, Countermind is also weak in marketing.
- Needs to expand its sales, support and marketing span. Multinationals need to consider MAGs with greater geographic reach.

### **Dexterra Strengths**

- Located in Bothell, Washington, Dexterra has significant activity and customer wins with customers who prefer Microsoft device platforms.
- Highly flexible development environment has been significantly upgraded in 2007 and has moved a step away from dependence on Visual Studio, enabling both traditional developers and less-technical developers to build applications.
- Improved carrier and VAR/SI relationships worldwide have provided for better channels to market.
- Strong marketing presence and growth in sales worldwide.

### **Cautions**

- Gap between execution and marketing message continued for Dexterra in 2006 and 2007. Longer deployment timeframes in

many complex customer examples have led to higher TCOs. This has led to wide variation in the degree of customer satisfaction.

- The current project backlog could lead to a continuation of long deployment cycles.
- While much improved, device management and security must remain a focus area for product development in order for Dexterra to remain competitive.
- Carrier relationships could possibly pull Dexterra resources away from enterprise deployments.

### **Fujitsu Strengths**

- Acquired significant new business in Japan for its MAG and has an active consulting business with expertise in mobile across all regions.

### **Cautions**

- Weak product offering that must be augmented. Customer references and appearances on shortlists are a few in Japan, the U.S. and Western Europe.
- Consider its multichannel package only if using Fujitsu Consulting and after considering other infrastructure and specialist MAGs.

### **IBM Strengths**

- Longtime significant investment in tools and open platforms give IBM strong capability in non-RIM and non-Microsoft environments, such as Series 60 and Linux Java.
- Voice and unified communications vision is augmenting its sole focus on mobile, as it continues its integration of the WebSphere group into the Lotus organization.
- Leading channels to market with IBM Global services - hence the strong insight with regard to enterprise mobile requirements through its services arm.

### **Cautions**

- After years of thought leadership in this area, it stands to be surpassed by RIM, Microsoft, Oracle and SAP as infrastructure MAGs. Gartner has witnessed slowdown in customer wins and inquiry interest.
- Lack of focus, as responsibility for the MAG offering has moved to the Lotus management team, resulting in long lead times for product enhancements and version updates. Frequent shifts in product ownership within IBM, coupled with executive migrations, call into question commitment to the market.
- MAG offering remains among the highest in terms of TCO due to its complexity. Most MAG deployments coincide with large consulting efforts.
- Poor marketing of capabilities and offerings, even within IBM global services and sales. Multiple Gartner clients have reported confusion in the value proposition of Lotus Expeditor offerings, even within a single IBM sales team.
- Customers should question multichannel platform and tooling costs within each project.

## Microsoft Strengths

- Gives enterprises the ability to construct multichannel servers using Visual Studio, SQL CE, its direct push capability within its mobile e-mail offering, and its thin-client profile support for other device types.
- Long standing relationships with enterprise IT departments; desktop/notebook/tablet market leadership; rapid adoption of Windows mobile in the smartphone market; and dominance of that OS in the ruggedized handheld market.
- Huge .NET developer base, some skills transfer to compact .NET framework, making it a relatively painless process.
- “Best-of-breed” application development tools and support aids debugging.
- Partner ecosystem increasingly features application- or industry-specific MAGs such as SAT, which extend core multichannel functions.

## Cautions

- Despite technical prowess, it has little to no vision in bundling MAG functionality or articulating the value proposition for software reuse across client and server architecture.
- No single platform or product offering with MAG functionality - developers must cobble together solutions using both Microsoft and non-Microsoft product using low-level constructs in order to provide an end-to-end offering. This obviously presents both cost, expertise and deployment timing issues.
- Lack of server product strategy outside of the handheld platforms and .NET programming tools markets.
- Limited to no ability to address non-Microsoft devices for thick (offline) client applications.
- Plans to augment Microsoft with other infrastructure or specialist MAG vendors through 2009.

## MobileAware Strengths

- Located in Dublin, Ireland, MobileAware executed well with former Broadbeam customers and has dramatically expanded its multichannel vision, including the introduction of mobile VPN functionality.
- TCO for MobileAware-based implementations has been low compared with the rest of the industry.
- Partnerships with BEA and European carriers in the thin-client mobile application server area have augmented the company’s original focus on logistics and energy verticals markets.

## Cautions

- Needs to further build out its research and development capability to match its improved technical vision.
- Marketing has significantly improved, but channels remain much smaller and less extensive than infrastructure MAGs.
- Project execution at a global scale is the next challenge. There have been technical issues in large-scale deployments regarding hardware support and ease of configuration.

## MobileFrame Strengths

- Located in San Jose, CA, MobileFrame has recent customer wins of significant scale, which give it credence. Customer loyalty and sophistication is high, and TCO is still trending low compared with competition.
- Unlike many specialist MAGs, MobileFrame focuses on a flexible development environment rather than on pre-built applications. Toolsuite excels at ease of enterprise application integration, and addresses the needs of traditional programmers as well as business-analyst-level application developers.

## Cautions

- Still building track record in multichannel market - it remains one of the smallest vendors in the market.
- Limited channels to market may limit future company growth. MobileFrame needs to continue to expand its geographic presence.

## Nokia Strengths

- Strong financial position, and position as one of the larger mobile e-mail vendors, enables reach into a significant number of devices and users.
- Device management and security remain a focus, and are key elements in IT-driven purchases of MAG platforms.
- E-series devices have seen significant adoption in Western Europe and there have been strong introductions in Asia/Pacific. This potentially provides a receptive audience for end-to-end solutions featuring both Nokia enterprise mobile e-mail and MAG, particularly for sales forces and lightweight field service.

## Cautions

- Broad commitment to the enterprise software market continues as execution in MAG capability was solid but unremarkable in 2007. Reference implementations using Nokia’s application synchronization function remain limited.
- Emerging strength in mobile device management and simple enterprise deployments requiring file synchronization.
- Vision and progress with regard to core MAG functions - such as application composition, debugging and testing - remains limited. For example, Nokia’s offering stops short of building enterprise application integration (EAI) tools, such as those from Microsoft or smaller firms like MobileFrame, nor does it provide front-end tools for business orchestration or composite application creation.
- As we predicted in last year’s Magic Quadrant, Nokia has not focused on upgrading the core Intellisync platform in the application integration area. To improve as a MAG infrastructure provider, it must invest to make improvements or forge closer partnerships in its development environment, advance its ability to create composite applications and improve its pre-built application capability.

## Oracle Strengths

- MAG platform did not progress significantly from 2002 through 2005. In late 2006, it moved ahead by starting to articulate a vision of mobility that transcends its application and technical silos, and since the Siebel acquisition, it has begun to progress with mobile components.
- Breadth of Siebel offering (from handhelds to laptops, both offline and online) has helped execution score. However, most implementations are very tightly bound to the core application.
- Breadth of offering (ranging from warehouse, to thin-client, to Oracle's E-Business Suite) supports mobile collaboration, including mobile personal information manager (PIM) and push capabilities. While Oracle's high-level vision for the products has improved, and it has made acquisitions to support that vision, enterprises considering mobile projects with Oracle need to exercise caution, as some offline capabilities of Oracle Fusion Middleware will be relatively immature in upcoming releases.

## Cautions

- Still struggles to maintain focus on multichannel and mobile capability, as with all application suite vendors. There is still a substantial amount of Oracle customers who choose third-party mobile support over Oracle's offering. Gartner projects that it will be at least 2009 before the various application offerings can begin to leverage Fusion as an integration point for mobile.
- Instances of mobile composite application integration using existing MAG offerings are still rare. Customer references for Oracle Application Server 10g support are weak; some customers report long development cycles, scaling issues and high TCO.
- Continued realignment across consulting practices and application portfolios, and conflicting partnerships, such as that with Antenna Software, will continue through 2010. Enterprises needing to integrate non-Oracle applications or suites, or composite applications, should consider other offerings.

## Pyxis Mobile Strengths

- Located in Waltham, MA, Pyxis Mobile has a strong offering and market share across investment, insurance and banking industries. Applications cover a broad range of users including wholesalers, institutional salespeople, investment bankers, portfolio and hedge fund managers, analysts, advisors, agents, and others.
- Variety and depth of prepackaged mobile applications, and "pluggability" with other mobile device platforms such as Microsoft, RIM and Motorola (Good Technology Group).
- Depth of integration with RIM BlackBerry environment.

## Cautions

- Not as much deep integration outside of RIM BlackBerry support.
- Narrow focus - not recommended for enterprises outside financial services implementations.

## Research In Motion Strengths

- Largest single e-mail vendor with strong ties to both IT and C-level decision makers - putting it in a strong position for "e-mail + 1" application adoption.
- Significant numbers of devices deployed with core application functionality, potentially reducing the cost of additional application deployments.
- Security, transport, push and management of RIM devices remains best of breed. Application-centric MAGs with modular designs can benefit from RIM's "mobile engine."
- Strong ecosystem for "application neutral" mobile enterprise enablement, including a large number of developers and partners producing applications using RIM's multichannel elements.

## Cautions

- Narrow set of device types supported. No bridge yet between smartphone and ultra-mobile PC (UMPC), tablet and PC applications, other than abstraction and layering through Java.
- Software licensing programs have shown little uptake among non-RIM device vendors, meaning that few non-RIM devices are addressable for e-mail and/or other applications.
- Device management and security capabilities on non-RIM devices is not supported by the BlackBerry Enterprise Server (BES) or Mobile Data System (MDS).
- RIM's Java Platform, Micro Edition (Java ME) is proprietary with Java extensions that encourage device vendor lock, and as such should be avoided in order to retain flexibility.
- Many application customer references are currently deployed via secure BES browser access, limiting functionality, offline availability and user interface (UI) customization.

## SAP Strengths

- Improvements to the development environment (particularly in SAP's vision around business process orchestration), reduction of synchronization times and the expansion of the product to include production prepackaged applications has enabled lower TCO and more rapid deployment timeframes.
- Focus on key verticals and accompanying marketing efforts have resulted in significant growth in seat licenses over the past 18 months.
- Traditional application's penetration in IT departments worldwide and a sustained marketing campaign around multichannel applications has resulted in receptive customer bases.
- Continues to make significant progress in developing a mobile partner "ecosystem."

## Cautions

- As with Oracle, large application suite vendors find it challenging to maintain long-term focus and execution on mobile. Complexity and size of toolkit preclude extensive use of Netweaver outside extension of SAP applications.
- There will continue to be significant time lags (typically a year) between upgrades to mobile infrastructure and when core applications are based on these upgrades.

- Non-SAP application-based examples of mobilization customers remain infrequent.
- Must continually refine the marketing message, and follow that up with product developments to enable Netweaver to expand beyond the existing customer base, one market segment at a time.
- Device management will remain a weakness of the platform through 2008, as SAP plans to address this with Netweaver Mobile 7.1.
- Still considerable customer complaints regarding performance of Java client - SAP is addressing this by adding the ability to generate either .NET or Java client-side code.

### SAT Strengths

- Located in Houston, TX, SAT has extensive mobile application portfolio for energy sector, with a particularly large number of customers in oil and gas, and petrochemical, and a limited footprint in adjacent industries such as utilities, pulp and paper, and mining.
- Strong partnership with Microsoft; tightly tied to Microsoft platforms such as Visual Studio.
- Strong customer satisfaction, albeit at relatively high TCO.

### Cautions

- Consider primarily for applications in SAT's areas of speciality, such as regulatory compliance and energy optimization.
- Overall narrow focus on technical, channel and marketing.
- Enterprises wishing to support a wide range of non-Microsoft devices (including RIM BlackBerry and Nokia) will find the SAT offering lacking.

### Sybase Strengths

- Key acquisitions of best-of-breed vendors and solid execution have enabled Sybase to move into the Leaders category. These acquisitions built a nearly complete MAG product with top-tier functionality.
- Device management remains a key differentiator. Afaria, as an integrated part of the Information Anywhere suite, gives Sybase entry into increasing numbers of IT shops, as it tries to address the growing issues around mobile device management.
- Sybase 365 (the newly acquired Mobile 365 and the AvantGo products combined) provides a thin-client application platform and messaging platform for enterprises to reach mobile users with business-to-consumer (B2C) applications and provides a delivery mechanism for business-to-enterprise (B2E) applications across all business sizes.

### Cautions

- Growth-by-acquisition strategy, while netting considerable market share, means that Sybase tends to reflect a weakness found at Oracle with respect to its application suite. While Sybase advocates an integrated approach, its legacy naming strategy and its sluggishness in pruning fading product portfolios for years doesn't properly convey its integration strengths. Avantgo is an example of this, where the user base continues to erode and decrease its value. Sybase needs to be

more proactive (like Cisco) in shaping or pruning acquisitions, as this trait has weakened its market position and clouded the value proposition to the market.

- Still lacks advanced application connectors and pre-built applications.
- Due to the "a la carte" menu of products within the suite, it is often a higher-cost alternative when all modules are selected.
- Integration timing is often longer than for application-focused vendors, due to the tool-like nature of the products. This can drive costs higher in single application environments.
- Must continue to focus on its VAR/SI channel, as variability still exists there. Often, that channel is the only relationship it has with the end user.

### Syclo Strengths

- Located in Hoffman Estates, IL, Syclo's breadth of customers and history of providing complex mobile solutions at relatively low TCO allow it to retain Challenger status. Continued execution within the existing customer base (primarily EAM and complex field service applications) has netted moderate seat growth and driven Syclo deeper within its existing customer base, which has made Syclo one of the largest MAG vendors.
- Security and EAM focus has enabled significant penetration into government, energy and regulatory agencies, industries where Gartner expects growing need for mobility in the next 24 months.
- With improvements over the past year, Syclo's development environment has released incremental upgrades such as improved navigation in the toolset, particularly for the 4GL developers it targets.

### Cautions

- Overall execution score slipped slightly in 2007. Multiple customer defections due to dissatisfaction with legacy versions of the Syclo tool environment, primarily related to the difficulty in navigation between viewpoints and challenges in business logic debugging. Existing customers need to negotiate terms for upgrade and estimates for moving existing solutions to the new toolset. Syclo claims this will be eased by extensive import/export capability, but instances of this have not yet been observed.
- Will require additional channels to market in order to continue to keep pace with market growth.
- Device management will require continued investment in order to compete with focused mobile device management (MDM) products.

### True Context Strengths

- Located in Ottawa, Canada, True Context's simple forms-based approach is suitable for small and midsize business (SMB) and department-level mobile deployments for field service and data collection.
- Partnerships with players such as Rogers AT&T, with a straightforward software-as-a-service (SaaS) model.
- Focused on simple applications, and adept at over-the-air provisioning.

### Cautions

- Very small customer base. The company needs to diversify geographically in order to remain a viable MAG.
- Limited geographic support. Its initial focus was on Canada, though there has been recent expansion into the U.S. Enterprises need to make sure of project support and scalability.
- Lack of connectors for mainstream applications, and sophisticated enterprise application integration tools.
- Multinational enterprises need to be cautious before investing in True Context until its portfolio, customer base and geographic reach improve.

### Vaultus Strengths

- Located in Boston, MA, Vaultus has a good breadth of prepackaged application connectors, bundling with pre-built applications, especially IT asset management (ITAM) and financial services.
- Partnerships include Cognos, and an emerging relationship with Business Objects.
- Solid core MAG platform technology, a straightforward design and solid customer references.

### Cautions

- Observed on relatively few shortlists. It is an engineering-centric company that needs to improve marketing and sales.
- Narrow focus compared with infrastructure MAGs; multinationals need to consider augmenting Vaultus offering.

### Vetro Strengths

- Well-established track record. Strong focus on mobile ITAM (including partnership with HP for Peregrine offering), general SFA and field service management.
- Focus and success in delivery of mobile through a SaaS model. Gartner has observed low TCO for applications based on Vetro's MAG.
- Wide variety of customers, both in terms of size of deployment and vertical industry.

### Cautions

- Customer references are uneven. Some complaints of rising deployment costs from customers deploying earlier generations of Vetro software.
- Marketing has improved, particularly within wireless service providers, but it's still a weakness. Gartner still sees Vetro on very few shortlists.
- Organizations wishing to reduce capital expenditures and/or those with an outsourcing strategy are best equipped to benefit from Vetro's approach.

### Acronym Key and Glossary Terms

<b>DBMS</b>	database management system
<b>GPRS</b>	general packet radio service
<b>GUI</b>	graphical user interface
<b>MAG</b>	multichannel access gateway
<b>PIM</b>	personal information manager
<b>SFA</b>	sales force automation
<b>SI</b>	system integrator
<b>TCO</b>	total cost of ownership
<b>VAR</b>	value-added reseller

### Note 1

#### Exclusions: Products and Vendors That Do Not Meet Multichannel Criteria

The following categories of offerings do not meet either the general or the specific required criteria described in the Exclusion Criteria:

- Vendors that focus on single platforms: Palm is an example.
- Vendors of thin-client mobile application servers: for example, Volantis, InfoGin and Motricity.
- Vendors of application development, forms toolkits, B2C-focused tools or open-source products with mobile support: examples include Qualcomm's Binary Runtime Environment for Wireless (BREW).
- Terminal server products: examples include, Citrix and Microsoft Windows Terminal Server.
- Mobile point solutions: for example, Mobile Data Solutions, @Road, Anyware Mobile Solutions, Mobile Computing Corporation and Appear Networks.
- Carrier-based platforms or thin-servers: for example, Openwave, Motorola, Xora, Gearworks and IBM's Service Provider Delivery Environment.

### 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, skills, etc., 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 of the individual business unit to continue investing in the product, to continue offering the product and to 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 in order 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, 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, etc.

**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 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 product 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 set 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 verticals.

**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.