

# Magic Quadrant for Mobile Enterprise Application Platforms

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**Gartner analyzes the mobile enterprise application platforms that support mobile application development and deployment for smartphones, ruggedized devices, notebooks and tablet PCs.**

## WHAT YOU NEED TO KNOW

In this research, Gartner analyzes the mobile enterprise application platforms (MEAPs) of Microsoft, Research In Motion (RIM), Apple, IBM, Pyxis Mobile, Spring Wireless, SAP, Oracle, Sybase, Syclo and Antenna Software. This market remains split among mobile software and tooling specialists, with platform diversity as a core element; application suite vendors, with mobile extensions; and device operating system (OS) vendors, with more-narrow offerings based on their own platforms. The offerings in this Magic Quadrant, and mobile application enablement will continue to grow in importance to enterprises during the next three to five years, as enterprises continue to extend decision-relevant information to employees, who themselves are increasingly mobile. Mobile seat deployments grew much more slowly in 2009 than during the period of 2003 through 2008, because many organizations have established baselines of mobile functionality, and many projects are second generation or third generation (3G). However, we expect that investments driven by the cost optimization of business processes to continue, due to the high return on investment (ROI) and relatively quick (less than 12 months) break-even payback cycles.

Adoption of MEAPs continued to be stronger than the overall software market, although macroeconomic issues did have a moderate impact on growth. Whereas mobile e-mail and personal information management (PIM) support is ubiquitous worldwide and is moving into its commoditization phase, Gartner estimates that, although more than 80% of enterprises with mobile line of business application requirements have invested in MEAPs or packaged solutions, fewer than 15% of organizations have MEAP-based deployments that have reached all business units, all processes and all employees.

The number of vendors in this Magic Quadrant remains at 11, with Antenna Software's acquisition of Dexterra and Pyxis Mobile's addition being the only changes. Gartner expects the use of MEAPs to continue to increase through 2013 as smartphone use permeates the enterprise, and as the need to support device diversity — combined with deeper integration — gives vendors new points of differentiation. As we predicted in 2008, the vendors in this Magic Quadrant were, and continue to be, well-positioned to weather a more difficult economic climate.

This market is made up of three types of vendors:

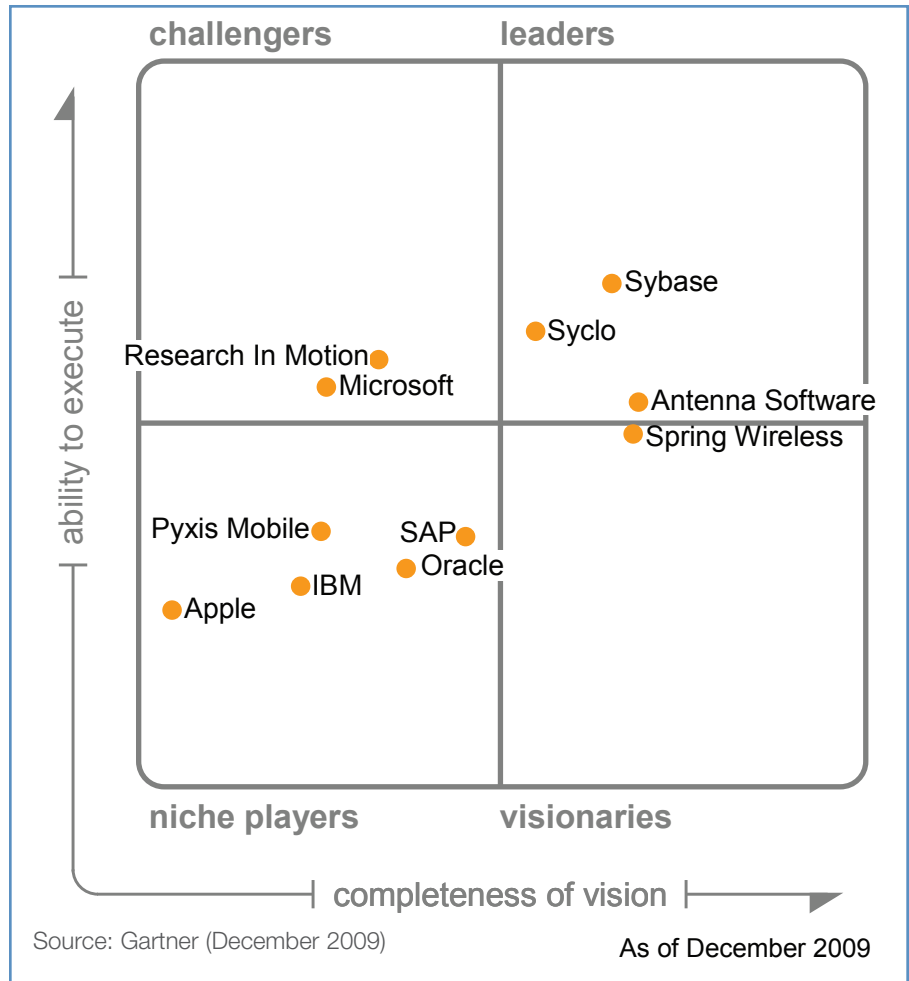
- Mobile OS-focused vendors, such as Microsoft, Apple and RIM, that have developed broad mobile application development (AD) toolkits focused on a single platform, rather than on diverse mobile OS support. In cases where device diversity is less important, these represent viable long-term choices. We estimate that this approach ranges from 40% to 60% of deployed enterprise applications, depending on the industry. Gartner believes that this percentage will decrease as more enterprises face multichannel requirements to support greater device and OS diversity.
- Mobile specialists with multichannel capability (such as Sybase, IBM, Pyxis Mobile, Spring Wireless and Syclo). A core tenant of their value proposition is being device- and application-platform-agnostic.
- Application suite vendors (like SAP and Oracle), that have made considerable investments in their own mobile infrastructure and application offerings, as well as that of their partners. These vendors focus on enabling their own application suites.

These vendors are the primary options; however, the mobile middleware and toolkit technology area is very active, and enterprises need to be aware of other vendors, such as those that offer prebuilt solutions such as packaged mobile applications.

Gartner expects new competition to emerge from vendors such as salesforce.com and Google as they increase their emphasis on mobile, and as rich-client technologies reduce the effort required to field enterprise-class mobile experiences. Gartner believes that there will be two new entrants to the MEAP Magic Quadrant by 2011, likely coming from the Web-based application markets or cloud services, where both the AD and possibly the application execution environment are hosted "in the cloud."

One lasting impact of the iPhone and the burgeoning Android platform is a requirement for multiplatform access to application data in a growing number of enterprises. MEAPs contain prebuilt

Figure 1. Magic Quadrant for Mobile Enterprise Application Platforms



tools, and sometimes prebuilt functions, that may not be a part of the platform tools, and, in some cases, the MEAP tools may well be better-optimized for developing mobile applications than generic platform tools (for example, support for ruggedized handhelds).

MEAP vendors offering approaches that support mobile OS diversity have significant advantages over application suite or mobile OS platforms/tools in three situations: (1) when there are three or more applications; (2) when there are three or more targeted OSs or runtime platforms; and (3) when projects involve the integration of three or more back-end systems. Gartner further rates these vendors in "Critical Capabilities for Mobile Enterprise Application Platforms."

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Large enterprises with significant populations of mobile employees should standardize on one or two MEAP vendors. Those that have diverse applications, networks and device requirements need to strongly consider the multichannel capability of the MEAP they choose; those who do not have diverse requirements can focus on a smaller set of target devices, and may find that narrower offerings suffice.

## STRATEGIC PLANNING ASSUMPTION(S)

From 2010 through 2013, the number of enterprises choosing multichannel MEAP vendors will rise 10% annually.

By 2011, there will be two new entrants to the MEAP Magic Quadrant.

## MAGIC QUADRANT

### Market Overview

There are fundamental, unchanging challenges in delivering mobile business applications, whether to smartphones, ruggedized PDAs, Web clients or point-of-sale kiosks. Unlike PCs, the target devices have differing operating systems, screen sizes, resolutions, input mechanisms and output media (voice and data); may attach intermittently (sometimes causing their Internet Protocol [IP] addresses to change); and may operate over multiple types of networks with 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 software investments with lower upfront costs, followed by relatively few, but major, upgrades, whereas the mobile consumer world focuses on smartphones and 3G services, with applications that require updates on a semiregular basis (in three- to six-month cycles). MEAPs must deliver higher performance and resilience in a more diverse set of circumstances.

Because of the requirements of constantly changing groups of users and the rapidly evolving device environment, mobility requires more-frequent application upgrades and additions. Multichannel software addresses these more-frequent upgrades by providing (for a larger upfront software investment) the promises of lower costs and greater agility as the target devices change by necessitating only changes to small, isolated components of software. Mobile AD remains just as complex as in previous years as it moves into the mainstream because of diversity and multichannel considerations. Enterprises that attempt to support a range of mobile development platforms face these issues:

- Higher development costs, because skills must be maintained for multiple platforms, tools, and, in some cases, programming or database languages
- Separate software stacks and delivery methods for data transport
- Complexities with testing
- An increase in software defects
- Cases when applications must coexist on client devices
- Conflicts with managing network connections on mobile devices
- An inability to administer security and devices from a central point of control
- Reduced battery performance as applications use divergent delivery methods/paths
- Higher support and service costs

Security and management concerns, driven by regulatory requirements and high-profile data breaches, have led businesses to look to IT for standardized and more cost-effective methods to ensure the security and management of mobile devices. In some cases, IT and management can dictate the exact model of devices — a notable distinction from MCAPs — where, by definition, the target devices can be considered any handheld that is procured by an end user in a given country or region.

These factors suggest that IT organizations need to evaluate MEAPs for AD, deployment and management capabilities. In cases where enterprises need to support complex approaches (multiple applications across multiple back-end systems targeting a range of mobile devices), more-sophisticated multichannel features will weigh more heavily. Mobile specialists are becoming more agile or “pluggable” to align with programmer skills around mainstream development tools, such as Eclipse, Microsoft Visual Studio and Oracle Application Development Framework.

MEAPs providing multichannel capability provide benefits by:

- 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 prebuilt user interfaces for small form-factor devices (this is significant because of the nuances of building optimal user experiences, which are key to user adoption)
- Reducing or avoiding testing and integration costs by reusing subsystems of the above elements and, in the case of MEAP vendors, using fourth-generation techniques, by improving the productivity of programmers, and targeting those whose cost basis is lower

As we expand our criteria to provide a single view around mobile development, we are not changing our position on the value of multichannel access capability, and we will grade vendors according to their ability to support it. Multichannel capability 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. As coding-centric approaches have improved, the gap in total cost of ownership (TCO) has shrunk between them and multichannel approaches, down from an average of 40% in 2006 to between 15% and 20% by 2010.

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. As is typical in this market, migrating software investments between platforms requires a nontrivial amount of professional services. If business process requirements need to be re-examined, then this can require the same effort as starting from scratch.

Multichannel functionality will be a part of the MEAP criteria, and some packaged mobile application vendors will provide multichannel access as well. Because these offerings are complex and intertwined with client- and server-side management, development, and application offerings, it is imperative to discuss your technology and skill base, as well as industry-specific, geographic and application needs, with a Gartner analyst before finalizing shortlists. For MEAP vendors that provide applications that are bundled with their platforms, we will factor those applications into their rating.

### Market Definition/Description

MEAPs provide tools and client/server middleware for mobile (targeting any mobile application on any device, ranging from a smartphone to a PC) and multichannel (highly device/OS- and network-adaptive) thick (offline) enterprise AD.

However, the number of enterprises adopting these approaches is limited — only consider these if legacy investments dictate. Gartner will monitor these approaches, but none have matured into mainstream enterprise mobile application development options. We believe that more than 95% of organizations will be choosing MEAP or packaged mobile application vendors as their primary mobile development platforms through 2012. Multichannel (sometimes formerly referred to by Gartner as “MAG”) functionality will be explicitly reviewed as a part of MEAP and packaged mobile application vendor offerings.

The MEAP Magic Quadrant is designed for use by organizations intent on building mobile or multichannel solutions; the packaged mobile application MarketScope is designed first for organizations that want to buy platform-based applications. Gartner often sees a mixture of these types of vendors on shortlists, and, in a few cases, there is cross-licensing of offerings among vendors. We anticipate that trend will continue. The critical capabilities that we considered in rating vendors in this market are:

- **Integrated development environment (IDE) and tooling** — code development and debugging, and pluggability into PC-focused AD tools, including what-you-see-is-what-you-get (WYSIWYG) editors and form builders.
- **Mobile AD and debugging (client and server)** — explicit support for devices, peripherals and networks within the provided tools. Some vendors provide server-side capability and tools, so that applications can be rendered as thin, rich or thick. Some vendors provide device/OS diversity (multichannel capability). In most cases, code generation capabilities are included. There is little portability of application code among platforms.
- **Management and security (all kinds, such as application and device)** — the ability to manage all aspects of deployment, such as application management and updates, security management and updates, and device capability management (for example, power consumption and networking).

- **Enterprise application integration (tools and libraries)** — because composite application integration and support is often a requirement for mobile applications, we considered the type of database, application programming interface, XML-based tools and SQL-based tools. Prepackaged libraries for application suite support were also considered.
- **Device integration and peripheral support** — the range of devices supported, and the ease of integration and porting of business logic to the devices.
- **Application client runtime** — the suitability and performance of client runtime environments.
- **Device/OS platform support (including smartphones, ruggedized PCs, tablets, notebooks and kiosks)** — the range of target devices and OSs supported by the vendor.
- **Packaged mobile applications** — the breadth and depth of the mobile applications that are integrated with the MEAP and/or multichannel platform capability.
- **Hosting** — some MEAP vendors also host significant numbers of installations, so we considered customer feedback regarding how well vendors performed.
- **Architectural flexibility** — additional credit is given for MEAPs that can be configured so that business logic can run across thin-client, rich-client or thick-client architectures without recoding.

We consider these critical capabilities across four use cases or scenarios in assessing how IT organizations use MEAPs, to come up with a portion of the execution and vision scores:

- **Single application, single platform** — the mobilization of a single business application targeted toward a single device/OS.
- **Multiple applications, single platform** — the mobilization of multiple business applications to a single platform independently — this use case mirrors organizations that may have independent project teams. The need to integrate multiple back-end (server-based) functions into a composite experience on a single mobile platform.
- **Single application, multiplatform** — the need to support a single application across many platforms.
- **Multiple applications, multiplatform** — the need to support many different applications across a spectrum of OSs. The need to integrate multiple back-end functions, and to present a composite experience across a range of mobile platforms.

For a summary of how Gartner rated each vendor in this Magic Quadrant on these capabilities, and for these user scenarios, see “Critical Capabilities for Mobile Enterprise Application Platforms.”



For those considering MEAPs, within IT organizations, two distinct job functions are addressing mobile AD:

- Traditional developers who demonstrate leanings toward Java or .NET programming languages
- Technical business analysts who prefer high-level (fourth-generation) languages and form builders

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

In some cases, MEAPs are seen on shortlists with tactical vendors, because most of the 300-plus vendors tracked by Gartner that offer mobile software are tactical in nature, specializing in certain industry processes, sales channels or geographies. Tactical vendors include those that offer mobile e-mail; thin-client mobile application servers; mobile platform, tool and point solutions; mobile device management (MDM); CRM (including field service management and sales force automation); ERP (including enterprise asset management and IT asset management); supply chain management (including warehouse management); and supplier relationship management.

Software sales in the mobile software/platform market are difficult to estimate for the following reasons:

- The software-to-service ratio on a per-deal basis varies.
- Mobile middleware and application pricing are bundled into core application or toolkit pricing by vendors. Some vendors offer their packaged applications through software as a service (SaaS), and, in some instances, amortize service costs on a per-deal basis over time.
- Revenue claims from privately held vendors are difficult to corroborate. Larger software vendors typically do not break out revenue associated with mobile software or middleware.
- In some cases, MEAP platforms and/or multichannel-based software is offered free of charge by larger software vendors to sell traditional products.
- Sales channels tend to make it difficult to identify all associated revenue.

Given such challenges in assessing this market, Gartner estimates that the overall size of the MEAP and packaged mobile application platform market was \$675 million to \$800 million during the past 12 months, and that it grew at a rate of about 5% since Gartner's 2008 update, compared with a decline in the overall software market of 5% in the same time frame. While uptake is still relatively strong, we

project that our previous estimates from 2006 and 2007 will prove to be slightly high, and are revising our estimate for the MEAP and packaged mobile application market downward, from \$1 billion to approximately \$850 million to \$900 million by 2010. We now expect market growth annually of 15% to 20% through 2013. This figure includes server licensing, tool suite licensing and client software licensing, including device management, built-in security, databases, prebuilt applications and connectors. There is also a considerable service market tied to mobile platform deployments, which is slightly larger than the mobile software market, but relatively small compared with overall enterprise spending on mobile projects.

MEAPs are continuing to slowly evolve from today's offerings, which are, for the most part, database-synchronization-centric. They will become more Web-oriented and 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 mobile consumer application platforms (MCAPs) complement existing MEAP multichannel functionality; a limited set of MEAP vendors can leverage their server-side capabilities to also offer thin-client experiences. The best MEAP platforms treat thin clients as just another transaction medium. We do not anticipate MEAPs that are OS-centric — such as those from Microsoft, RIM and Apple — to make significant progress on multichannel applications in the near to midterm. Gartner does expect to see some MEAPs to evolve into what would effectively be partial code generators for HTML5 targets, or at least into architectures where the target user experience layer, perhaps data caching and the basic screen validation logic, etc., was in HTML5, even if there was additional code as well.

By 2013, the market for unified communications platforms, which complement MEAPs and multichannel capability, will further overlap with the mobile development and platform market as the distinction between voice- and data-centric applications narrows. Competitive situations are arising in which voice-centric unified communications approaches compete with data-centric applications (for example, when the integration of voice-enabled front ends for enterprise applications, such as warehouse management or healthcare, complement or compete with MEAPs). However, for the present, these platforms can be chosen separately. Gartner is not seeing as much overlap with wireless e-mail platforms as in the past. RIM and Microsoft dominate the integration efforts of e-mail on the server side, and interest in e-mail clients (such as Good) that may offer rich-client capability has diminished.

## Inclusion and Exclusion Criteria

### Inclusion Criteria

Unlike the transition from 2007 to 2008, the inclusion criteria from 2008 to 2009 featured only small changes. The number of companies meeting Gartner's criteria remained the same at 11, with one vendor being acquired and one added. A summary of the vendors in the market, and how Gartner is covering them, is included in the Inclusion/Exclusion section.

To qualify for this Magic Quadrant, a vendor must:

- Have more than 100 employees. We see a group of vendors distinguishing themselves by creating and participating in “ecosystems” that have expanded their breadth. MEAP vendors need to have significant presence or operations in at least two regions worldwide.
- Show financial viability. A vendor must have more than \$20 million in revenue in 2008, and must be profitable or have sufficient sales in its pipeline and cash reserves to guarantee viability for 12 months.
- Provide 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 (stand-alone or within the context of an encompassing solution development platform) and be visible to Gartner in the marketplace. MEAP vendors need to provide 10 reference customers that have used the platform in production environments for six to 12 months. Those that didn’t received a lower execution score and were included only on the basis of independent observation of their platforms in production.
- Support application integration for multiple commercial enterprise applications (such as those from SAP or Oracle), as well as homegrown applications through common interfaces, such as Java, XML, SQL and BizTalk.
- Show support for composite AD, specifically the ability to update disparate data stores, based on one transaction by a mobile user.
- Support a wide range of devices, preferably at least two of these 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. Additional credit is given to vendors if they support transformation to sub-Video Graphics Array screen resolutions and nonqwerty input formats. Fewer supported platforms result in lower vision and execution scores.
- 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. Gartner expects partial or cached support to become the main technique for MEAPs by 2013.
- Have strong system integration capability, directly or through partners.

Multichannel is optional, but limited device diversity support, limited application examples and below-par device/application management capabilities will adversely affect a vendor’s score.

## Exclusion Criteria

Reasons for excluding vendors are:

- There is lack of support for a range of application architectures — for example, some sales force automation vendors support only thin-client (browser) architectures.
- They do not allow enterprises to create composite applications.
- Most do not enable management and security of devices.
- Most do not enable offline access to these applications and data.
- Most do not market and sell to enterprises.

Companies excluded from Gartner’s Magic Quadrant for MEAPs include vendors of thin-client mobile application servers that support only browser or applet-based applications, AD or form toolkits, terminal server products, mobile virtual private network (VPN) products, and carrier-based or thin-client mobile application servers.

In addition to MEAPs, there are three other possible approaches:

- Open-source approaches using high-level languages, such as Python
- Java Platform, Micro Edition (Java ME) approaches, where enterprises standardize on Java, then create their own libraries and techniques to handle the extreme fragmentation of Java support
- Emerging toolkits (such as Nokia Qt, formerly Trolltech) that abstract a wide range of OS features, including the user interface

## Other Vendors Providing Mobile Capabilities for Enterprises

Gartner observes MEAP vendors being evaluated with other types of offerings. Following is a partial list of vendors or offerings that Gartner has observed in these situations:

- Vendors of thin-client mobile application servers, mobile VPNs, mobile device management software, carrier-based platforms and MCAPs — for example, Air2Web, IBM Service Provider Delivery Environment, InfoGin, Motorola, Motricity, Openwave and Volantis. For more information on these vendors, see “Specialized Mobile VPNs: A Niche Market Skirts the VPN Mainstream” and “Magic Quadrant for Mobile Consumer Application Platforms.”
- Vendors of AD, form toolkits or open-source products with mobile support — for example, Qualcomm’s Binary Runtime Environment for Wireless (BREW).
- Vendors providing field service automation back-end systems (such as Astea and Click Software) or sales force automation (such as salesforce.com). Mobile capability is considered when rating these vendors, so it is not duplicated in the MEAP Magic Quadrant or in the packaged mobile application MarketScope.

- Terminal server products — for example, Citrix and Microsoft Windows Terminal Server.
- Packaged mobile application and mobile point solutions — for example, Agentek, Anyware Mobile Solutions, Appear Networks, Flowfinity Wireless, Global Bay Mobile Technologies, Mobile Data Solutions, Vaultus, Wonderware, Xora and Trimble.
- Companies providing elements of multichannel functionality that don't appear in the Magic Quadrant or in the packaged mobile application MarketScope, including Sky Technologies, MobileFrame, Sun Microsystems, Formotus, Field2Base, Neoris (primarily Latin America), MC1 (Latin America) and salesforce.com.

### Added

Company added:

- Pyxis Mobile

### Dropped

Company dropped:

- Dexterra (acquired by Antenna Software in 2Q09)

## Evaluation Criteria

### Ability to Execute

#### Product/Service

Do the vendor's mobile server software, client software, AD toolkits, application management capabilities, device security and management abilities meet the buying requirements of enterprise users? Does the vendor include multichannel capability to support OS/device diversification? Are the offerings pluggable and modular? Does the vendor also supply packaged mobile applications; if so, then are they well-integrated and supported by the MEAP?

#### Overall Viability

By increasing the criteria for inclusion, we are dropping this parameter from High to Standard. To qualify, small vendors need approximately \$20 million in annual revenue, need to be profitable or nearly profitable, and/or need to 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 the 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 criterion, as do pricing models and TCO.

#### Market Responsiveness and Track Record

How long has the company been in the mobile enterprise application market, and, in particular, how has it innovated around not only multichannel capability, but also all facets of enterprise mobility? 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 mobile tools or capabilities to specific vertical industries, locations or end users in IT? What is the strategy based on? Is it tooling, database, device, application or system integration channels? What is the level of market awareness of the company's mobile enterprise offering? How does the company work with its partners to create a healthy ecosystem?

### Customer Experience

Along with the core product category, this is the most important category, and requires actual customer and partner experience (for example, from IT organizations, lines of business and end users) for the entire engagement life cycle of mobile applications — from initial contact through to sales, procurement, development, integration, deployment and support. Given that many customers interact more with the VAR and/or the SI than with 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, MEAPs need to be able to support multinational deployments. How does it support vendor partners, training centers and developer relations? How well-run are the sales, marketing, finance, research, development, testing, system integration, help desk and other key functions? Are proper quality assurance processes in place (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	high
Market Responsiveness and Track Record	standard
Marketing Execution	high
Customer Experience	high
Operations	low
Source: Gartner (December 2009)	

## 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 MEAPs' functionality — beyond mobile application enablement — including vertical-industry understanding, voice, instant messaging, location and presence, are also important factors. Carrier relationships, as well as hosted and nonhosted offerings, will also be factored in.

### Marketing Strategy

This entails a market understanding of the requirements for security, management and integration with existing platforms, and of departmental/functional groups with requirements for rapid ROI and frontline applications. Existing relationships in adjacent markets, such as field service or enterprise-targeted offerings, weigh heavily in this category.

### Sales Strategy

This includes the number of sales professionals and their geographic spread, the 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. This category seeks to take account of partner strategies and how they will relate to future sales efforts.

### Product Strategy

Does the 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? Does the company's business model dissuade it from multichannel support?

### Vertical Market Strategy

Does the vendor add extra value through focused packaged mobile applications in growth vertical industries, 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 vertical industries, 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? Is the company a trendsetter in mobile applications, or a follower? 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; however, 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 marketing and sales activities in at least two regions? What is its track record for multilingual support, including products, sales and partners? What are its international expansion plans, and do they mirror the regional market maturity rates that Gartner expects (see Table 2)?

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

Evaluation Criteria	Weighting
Market Understanding	high
Marketing Strategy	standard
Sales Strategy	standard
Offering (Product) Strategy	high
Business Model	high
Vertical/Industry Strategy	high
Innovation	high
Geographic Strategy	low
Source: Gartner (December 2009)	

## Leaders

As this market reaches early mainstream, Gartner expects leaders to be profitable or very near profitability, to lower risk as growth is slowing and tougher economic times equate to greater risks for venture-capital-backed firms. Leaders must not only be good at supporting their own platforms, but they also must have a good vision of the multichannel enterprise, a solid understanding of IT requirements, and scalable channels and partnerships to market. They also have to provide platforms that are easy to purchase, program, deploy and upgrade. These leading vendors that have focused on key elements of multichannel functionality and offer application-centric solutions compete head-to-head with broad, single-OS-focused platforms, and, rather than do so, some are side-stepping direct competition by evolving their toolsets to be pluggable.

## 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 roll-outs. 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 strong technical or business vision — especially in the areas of diversity and multichannel support — or have lingering gaps or confusing overlaps in products or channels to market.

## Visionaries

Visionaries in this market have a compelling vision of the product's and market's future, as well as the technical direction to take them there. However, they have not backed up that vision in one of these areas: history of execution, size of client base, extensiveness of production installations, low TCO (which may indicate immaturity in parts of their offerings) or strong financial results.



## Niche Players

Niche players are not as strong in one or more of these criteria: geography, product breadth/completeness or focus, or number of customers. Although they may be a particularly good choice because of vertical or customer knowledge, Gartner suggests pairing niche players with stronger MEAP or packaged mobile application platform vendors, and that enterprises ask niche MEAP vendors to show how they will remedy their shortcomings through partnering or integration on a project-by-project basis.

## Vendor Strengths and Cautions

### Antenna Software

Antenna Software, a venture-backed firm based in Jersey City, New Jersey, moved into the leader's portion of the quadrant in 2008, and remains there in 2009. It has built a customer base through acquisitions (RPA Wireless in 2003, Vetro in 2008 and Dexterra in 2009) and through focused partnerships with large software vendors, such as Oracle for mobilization of Siebel on Demand. In 2009, Antenna Software continued to increase the breadth of prebuilt mobile applications based on its Antenna Mobility Platform (AMP). It sells the majority of its software hosted as a service (75% and more) and typically blends hosting, customer support and maintenance services into its monthly charge.

The vendor also formed a strategic partnership with AT&T in 2008, in which AT&T is licensing its AMP platform and reselling it under the AT&T MEAP brand. Gartner has yet to see this relationship blossom into numerous customer references; however, we believe that this relationship, as well as the Vodafone relationship Antenna Software inherited with the Dexterra purchase, will enable it to sell and service small or midsize businesses and other markets it would have been unable to reach without the carriers. The Dexterra acquisition (in early 2009) gave Antenna Software several assets of its long-standing competitor — Dexterra's Concert product line, partner relationships and a presence outside the U.S., particularly in Europe. Antenna Software plans to reconcile and merge the Concert and AMP product lines by mid-2010.

Gartner sees Antenna Software AMP's best fit in sales forces and in companies with mobility requirements to support Oracle users; look to its Concert platform for field service management and more-process-intensive applications. Antenna Software is a good fit for organizations that are embracing SaaS. For Antenna Software to remain in the Leader's portion of the Magic Quadrant, Gartner expects significant results from its relationship with its carrier partners.

### Strengths

- With the AT&T and Vodafone carrier partnerships, Antenna Software adds scale/market reach. Specifically, the Vodafone relationship provides a base outside the U.S., while AT&T can help grow scale by delivering its own set of applications based on AMP.
- AMP Studio (version 4.0) has greatly improved as an IDE, covering a wide variety of developers and adding significant application management capabilities. Gartner rates Antenna Software's packaged mobile applications — which include field sales, field service, IT service management, consumer packaged goods, pharmaceutical, direct store delivery and merchandising — as positive.

- Antenna Software continues to provide support for a wide range of devices and OSs, including RIM BlackBerry, Windows Mobile, Palm OS and iPhone.
- The AMP platform presents a good match for organizations whose business models align with packaged mobile applications delivered via SaaS — its hosted model enables enterprises to scale to raise or reduce user counts or to effect short-term rollouts. Antenna Software plans to consolidate the AMP and Concert platforms, and this will broaden the choice of delivery.

### Cautions

- Gartner observed that market interest in AMP slowed in 2009. In addition, Gartner observed some inconsistencies in company performance during sales and assessment periods, particularly for new or existing customers of Vetro and/or Dexterra.
- Dexterra's viability and performance with customers before the acquisition was dropping significantly, and Gartner believes that this was due to the amount of resources devoted to the carrier-based offering (further detailed in the 2008 "Magic Quadrant for Mobile Enterprise Application Platforms").
- Future product road map consolidation will mean that Antenna Software's R&D will be internally focused for at least half of 2010, while we believe the combined product will be stronger than its separate parts, and that the integration will consume resources, potentially slowing other product developments.
- With some customers, we observe a relatively higher long-term TCO for AMP, driven by the combination of slightly larger professional services costs coupled with recurring monthly fees and, in the case of Concert-based solutions, higher-than-industry-average upfront customization costs.

### Apple

While interest remains high for the iPhone and the lightweight applications it supports, enterprises are more realistic with their expectations in 2009. Gartner believes Apple's approach to enterprise AD will remain tactical, and that focus will remain on the consumer market. Apple continues to lag in addressing gaps in development tools maturity and completeness in some important feature sets, particularly security, management and application distribution. Apple's tools target only a single device, with fewer carrier relationships than Nokia, RIM or Microsoft. As a requirement of the platform, to distribute applications, an enterprise must apply for the Apple enterprise licenses (which, although a trivial process, adds to learning curve). Note that the rating given to Apple in this Magic Quadrant is in contrast to its leadership rating in the MCAP Magic Quadrant, where considerations such as application stores are considered.

For organizations or employees that do not require the highest level of security, battery life and manageability, Apple may be an appropriate choice for sales force applications and/or lightweight business processes in 2010.

## Strengths

- Due to the OS and ease of use, Apple continues to drive keen interest from enterprises and consumers. However in 2009, expectations for its enterprise capability are lower, and most organizations are planning for mobile e-mail, dashboard capabilities and lightweight sales force automation applications, many delivered through portals.
- The vendor has strong integration between the development platform and commercial application distribution, causing tremendous interest and development from traditional and nontraditional mobile software vendors, with more than 100,000 mobile applications available for the platform today (with the majority of them consumer-driven).
- Enterprises wanting to create better user experiences for sales force applications or knowledge work can benefit from Apple's user interface paradigm.

## Cautions

- Apple remains in the early stages of the mobile enterprise maturation cycle; support for enterprise applications remains narrow in scale and function.
- The vendor has no multichannel support for thick clients — developing mobile enterprise applications implies lock-in to Apple — resulting in higher TCO, due to the need to source another set of tools to support diverse device/OS requirements.
- Expect high TCO and higher security risks. iTunes will be required as an application that IT organizations must install on end-user desktops for enterprise management and security. The iPhone configuration utility works via unencrypted XML, which can be changed to be signed, but most management tools have not yet made this option available to end users.
- Apple's decision to limit background application-tasking abilities (to preserve battery life) forces business applications to foreground processing, and limits management and security capabilities available to third parties.
- Challenges exist regarding Apple's MDM software, including additional costs/complexities of IT and end users supporting Apple iTunes on PCs. We expect Apple to support non-iTunes-based application distribution of enterprises shortly.
- One consequence of architectural limitations, such as background processing, is that classic multiplatform MEAP vendors (such as Antenna Software, Syclo or Sybase) cannot easily provide the full portability to, or range of features on, the iPhone because they must be ported to a different execution architecture or be cross-compiled. Thus, MEAP-based iPhone applications will require more testing and may work differently on the iPhone. Issues such as limited data sharing between separate applications reduce the iPhone's relevance for corporate users. Lastly, Apple bans scripting engines on the iPhone, again limiting the functionality available to developers.

- Apple's platform lacks any mainstream languages (such as C#, C++ and Java) and forces developers into a niche language, Objective-C. Apple development can only be done on Macs, which is a limitation for organizations that don't use them.

## IBM

IBM continues to win deals using its Eclipse plug-in and Lotus Expeditor, including for notebook- and kiosk-based applications. IBM's mobile middleware offering for thin-client support was rebranded as the IBM Mobile Portal Accelerator 6.1 in 3Q09, and included enhancements to image conversion, iPhone support and integration with Lotus Web Content Management. Its thick-client toolkit remains branded as Lotus Expeditor, targeted at thick-client support. IBM launched new support for handheld devices on BlackBerry, Nokia, iPhone and Windows Mobile, and delivered new mobile AD tools. For e-mail/collaboration integration, it offers IBM Lotus Mobile Notes Traveler, partner offerings (RIM and Sybase) and IBM Lotus Mobile Connect for secure mobile access. IBM added Lotus support for Nokia and Samsung in Domino 8.5 (shipped in January), and iPhone in Domino 8.5.1 (shipped in October).

IBM's mobile enablement of line-of-business applications through IBM Global Services is often a combination of other mobile middleware, when its WebSphere-based or Lotus Expeditor tools prove too costly or cannot be scaled down to size. This leads to reports from clients of overlapping functionality and long implementation cycles that, in the long run, can have high TCO.

While IBM has won business for thin-client (MCAP) support at large carriers in the U.S. and India, it appears that enterprise mobility currently languishes in product silos, and lacks corporate-level executive management support and visibility. IBM rebranded its MDM offering to Lotus Mobile Connect. Concerns regarding IBM's mobile AD strategy include its complexity, the fragmentation of Java implementations on client devices to support offline business logic, and the lack of modularity and scalability of the offering — simply put, it is difficult to scale down for departmental or small business units.

## Strengths

- IBM Global Services gives IBM strong insight with regard to enterprise mobile requirements. IBM has articulated that it will be launching broader support for a new set of handheld devices in 2010.
- The vendor has made some investments in simplifying its platform (for example, its Expeditor client can be provisioned with Tivoli Provisioning Manager, WebSphere Portal, Eclipse Web Update or Microsoft Systems Management Server).
- IBM is still one of the largest vendors in enterprise mobility, with more than \$1 billion in service revenue; however, little of that is related to IBM's MEAP platform.

## Cautions

- We have found that only the most loyal and locked-in IBM customers deem Lotus Expeditor appealing, because they can typically leverage their experience with Java Platform, Enterprise Edition (Java EE), Eclipse and WebSphere programming models.

- Customers using the Lotus Client report performance and footprint problems (for example, the inability to load more than one thick-client application at a time on Windows mobile platforms, due to the overhead from the IBM client).
- Although IBM's Lotus Expeditor client is competitively priced, on average, TCO on notebook-based applications using Lotus Expeditor for a rich portal interface remains high.
- The fragmentation of Java implementations on client devices to support offline business logic means that enterprises must build or work with IBM to source a suitable Java ME client.

## Microsoft

A significant percentage of large enterprises choose to build mobile capabilities from the ground up with Microsoft, which is particularly attractive if an enterprise needs to custom-code mobile applications that run on two or more Microsoft-based tablets, desktops, notebooks, smartphones and/or ruggedized devices. Microsoft has chosen not to support other platforms; the idea of OS/platform diversity support is at odds with its licensing and go-to-market strategy.

Overall, Microsoft's execution score slipped in 2009; however, in Gartner's estimation, Microsoft remains alongside RIM as the most frequently used MEAP vendors. We lowered Microsoft's rating, as we observed diminishing dominance in mobile SFA and lightweight field service applications, implementation costs with their MDM software, and stagnation in their mobile enterprise partner ecosystem relative to RIM and Apple.

Gartner believes Microsoft will change the positioning of its tools by 2012, in response to HTML5 and the fact that smartphone platforms, like Android and the iPhone, will cause more enterprises to look for frameworks that do not lock them into a specific device OS.

## Strengths

- Microsoft gives enterprises the ability to construct multichannel servers using Visual Studio, SQL Server CE, its direct push capability in its mobile e-mail offering and its thin-client profile support for other device types.
- It has a large installed base for mobile solutions across all types of device platforms, including Windows 7, Vista, XP for mobile tablets, notebooks, laptops, Windows Embedded CE and Windows phones.
- Microsoft has long-standing relationships with enterprise IT departments, desktop/notebook/tablet market leadership, a stable base of Windows Mobile in the smartphone market and dominance of that OS in the ruggedized handheld market.
- Given its dominance in the ruggedized handheld OS market, and the coming split between Windows Mobile 6.5 and Windows Mobile 7 for smartphones, Gartner expects Microsoft will continue with strong support for the ruggedized market.
- The vendor has a huge .NET developer base, and some skills transfer to the compact .NET framework, lowering the learning

curve for mobile support. Microsoft's strong AD tools and support aid debugging.

## Cautions

- In 2009, Microsoft's ability to execute in the area of device management fell sharply, as Gartner observed numerous Microsoft customers that were either dissatisfied with the capability of System Center Mobile Device Manager (SCMDM) or that actually canceled implementation plans. Responsibility for SCMDM (which lags behind in both seats deployed and working installations) shifted from Microsoft's MCB to its network management business, and Microsoft has been slow at articulating its new strategy for this important aspect, as it can contribute heavily to the total cost of supporting users in the field.
- Microsoft doesn't have any offerings with multichannel functionality. Many organizations need to augment a Visual Studio-focused AD approach with multichannel IDEs or packaged mobile application suites, which entail additional integration and support for Microsoft and non-Microsoft tools using low-level constructs to provide an end-to-end offering. This presents cost, expertise and deployment timing issues.
- Using Visual Studio (compared with multichannel tools paired with packaged mobile applications, such as Syclo or Antenna Software) requires more-expensive third-generation-level (3GL) programmers and, in many instances, leads to a higher TCO.
- In 2010, Microsoft will begin to fragment in its client-side support as it branches with its Windows Mobile 6.5 release supporting ruggedized devices, while Windows Mobile 7 targets smartphones. Organizations that wish to broaden their mobile SFA support must understand the future support plans for each platform.

## Oracle

In 2009, Oracle completed its tooling effort for its MEAP offering by integrating Oracle Fusion Middleware with ADF Mobile, a Java-based client framework. Oracle currently is fielding ADF-mobile-based thin-client applications, and plans to begin supplying a Java client-side supplicant in 2010 that will allow it to support thick-client applications. Oracle now has customers using its Mobile Sales Assistant (a native application) for the iPhone and BlackBerry. In addition, Oracle offers thick-client mobile support for Siebel users.

In 2008, Gartner stated that Oracle was facing a crossroads in terms of choosing a primary user interface of Oracle applications going forward. Oracle has decided to continue to support multiple user interfaces; it appears that ADF Mobile's Java approach is only well-suited for the BlackBerry, as we have not observed any Windows mobile or Windows CE-based applications. Such progress is evidence that Oracle has been putting many more resources into R&D and into partner and channel management; however, in Gartner's opinion, the vendor has sidestepped one important decision — which user interface will be the primary one for internal Oracle applications from this point on.

Gartner rates Oracle's packaged mobile applications as promising, but enterprises need to take into account that the most-prominent applications observed in the field are not based on ADF Mobile. For

Oracle to retain this promising rating, they must exhibit substantial customer references and show that its mobile application teams are committed to its MEAP framework.

Despite the fact that Oracle has, since 2006, increased its investment in mobile platforms, and that Gartner has observed progress, the market requirements have outpaced that progress. Gartner has observed a lack of visibility among senior management who do not see mobile as a strategic priority for Oracle.

### Strengths

- Oracle's breadth of mobile offerings remains a strength (ranging from warehouse to thin-client to Oracle's E-Business Suite), as it supports mobile collaboration, including mobile PIM and push capabilities.
- Oracle's high-level vision for the products has improved, and it has made acquisitions and incremental investment to support that vision.

### Cautions

- Many parts of Oracle's mobile application portfolio are not built on ADF Mobile yet.
- Realignment across consulting practices and application portfolios is moving slowly, and we anticipate that 2010 will not bring significant new mobile products based on ADF Mobile thick-client capabilities. Given the overall weakness in execution on Windows Mobile devices, we expect that, by 2012, Oracle will need to place more focus on mobile partnerships, on revisiting its commitment to client-side Java or on an acquisition to support increasing demand for mobile applications.
- As Gartner observed in 2008, Oracle's Siebel mobile offline client is still in need of re-engineering. Where Oracle products do not meet the full requirements of the end user, the Oracle Partner Network brings valuable relationships to meet needs, such as for lighter weight or more highly customized Siebel enablement. For example, the strong partnership with Antenna Software has allowed several customers to build complete solutions. In other cases, some larger customers are choosing to build custom solutions using components of ADF Mobile.

### Pyxis Mobile

Located in Boston, Pyxis Mobile is well-known in the financial services industry for its complete application suite. Based on upgrades to its technology stack (it supports Java ME, Objective-C and .NET compact framework), a growth in revenue and activity outside its financial services, Pyxis Mobile returns to the Magic Quadrant from the packaged mobile application platform MarketScope, and is the only vendor to do so. We rated Pyxis packaged applications as strong positive.

### Strengths

- Pyxis Mobile has an innovative toolset, available iPhone client support and an aggressive road map, which includes coming support for Android.

- The vendor has a very flexible development environment, enabling modifications of applications and source data to be enacted rapidly.
- Its highly scalable infrastructure enables the integration of Web-based data models into rich-client applications running on all relevant device platforms.
- Rich-client support is best of breed.

### Cautions

- Pyxis Mobile is the smallest MEAP vendor in terms of number employees and revenue. It is venture-funded, and very weak outside North America.
- The vendor's platform favors online or cached data over deep, offline functionality.
- Pyxis Mobile needs to continue to expand to other vertical markets, as it still finds much of its MEAP customer base in insurance and financial services.

### Research In Motion

In 2009, Gartner observed an increase in the activity around native RIM applications, particularly lightweight field service and sales, as a reflection of the BlackBerry's penetration in that user base. RIM's ecosystem and global network architecture, which enhance application reliability and efficiency, are core **strengths**, and RIM has gained considerable market share for MEAP-based applications during 2009.

Developers can choose between the BlackBerry Java Developer Environment plug-in for Eclipse, BlackBerry plug-in for Microsoft VS (Gartner has seen only modest uptake of this plug-in) and BlackBerry Mobile Data System (MDS). Organizations that are already using RIM for the majority of mobile e-mail access, that don't have requirements for ruggedized devices and especially those that can dictate the BlackBerry OS across an entire business function will find RIM's MEAP offering to be strong candidate.

### Strengths

- RIM is the largest single e-mail vendor, with strong ties to IT and C-level decision makers. This puts it in a strong position for "e-mail + 1" application adoption. RIM's enterprise software partnerships are broad and deep, and, for organizations with significant numbers of devices deployed with core (mobile e-mail) application functionality, the use of RIM's BlackBerry Enterprise Server (BES) can reduce the development cost of additional application deployments. However, in 2009, Gartner has observed some enterprises applying pressure on pricing for the BES.
- Security, transport and battery life efficiency, and push and management of RIM devices remain among the industry's best. Applications or other platforms that are SOA-based with modular designs can benefit from RIM's MDS and MVS platforms for transport, security and voice integration.



- RIM has a strong ecosystem for application-neutral mobile enterprise enablement, including a large number of developers (more than 500 for enterprise applications) and partners producing applications based on RIM's mobile components.
- The availability of a wide variety of devices, and the carrier support of those devices, will continue to place RIM as the first choice for enterprises looking for a single-platform solution.
- RIM is particularly strong in financial services, SFA and lightweight field service AD.

### Cautions

- RIM's approach requires more-expensive 3GL Java programming skills.
- Progress with SAP on the RIM/SAP mobile SFA integration has been limited, with English-only versions of the software delivered, primarily in Germany. Customization remains high in these installations.
- RIM supports a narrow set of device types. It has no server-side capability between smartphones and ultra-mobile PCs, tablets and PC applications, other than abstraction and layering through Java, then recoding in Visual Studio. Software-licensing programs have shown little uptake among non-RIM device vendors, and lessening support from RIM itself, meaning that fewer non-RIM devices are addressable for e-mail and other applications.
- Device management and security capabilities on non-RIM devices are supported by the BES or MDS only in conjunction with BlackBerry Connect, which also has been all but abandoned in RIM
- RIM's Java ME is proprietary with Java extensions; functions that use these extensions should follow good architecture practices to localize OS dependencies.
- Many application customer references are deployed via secure BES access. Enterprises can leverage BES access, but they need to choose the browser or desktop implementation carefully for the user interface.
- An important design consideration is to enhance the user experience by coding caching logic (such as having a server push cache updates every 15 minutes) to provide offline capability.

### SAP

In 2009, SAP continued its shift toward a three-prong strategy that includes support for its own portfolio, support for SAP NetWeaver Mobile and support for its partners. Its partnerships are now the cornerstone of its strategy for many of its CRM and ERP offerings (including RIM for sales force automation [SFA], Sybase for SFA and Mobile Inbox, and Syclo for enterprise asset management [EAM] and field service) that focuses on coinnovation. SAP repositioned R&D to focus on its Data Orchestration Engine server capability, rather than extending its mobile client in those areas.

However, it is obliged to support current NetWeaver mobile client customers through 2015, and has delivered mobile offerings in the areas of defense and direct store delivery.

SAP continues to support packaged mobile applications in sales force, field service, EAM and time/expense management. It also launched SAP Mobile Defense and Security (MDS) 1.6, which includes maintenance, materials management, and organization and staffing capability. In addition, it released version 4.0 of SAP Mobile Direct Store Delivery. Gartner continues to rate SAP's packaged mobile application functionality as promising.

As far as NetWeaver Mobile, SAP released a minor upgrade to 7.11, and continued to move resources (it has 250 engineers dedicated to the platform) to focus on the Data Orchestration Engine.

For SFA, SAP made little progress with RIM, which has delivered a tightly integrated client for RIM OS with hooks into Mobile Infrastructure's server-side capability. Customer adoption has been limited to Europe (English-only versions of the software were delivered; Gartner has observed this only in Germany), and customization costs for the client are very high. SAP canceled plans to follow up with a Windows Mobile client for SFA by 4Q09. Instead, it is relying on a cobranded partnership with Sybase for mobile SFA. Gartner expects the Sybase-based mobile SFA solution to be in the field by 1Q10.

For field service and EAM, SAP selected Syclo to be its mobile partner at the same time as Sybase, and, given that Syclo had SAP implementations overlapping Mobile Asset Management (MAM) and Mobile Asset Management for Utilities (MAU), it is already fielding production projects in Europe.

Beyond these cobranded partnerships, SAP also certifies Antenna Software, Spring Wireless, Neoris (for direct store delivery), Sky Technologies and other mobile partners.

As Gartner predicted, limitations in SAP's Mobile Infrastructure architecture, coupled with Apple's OS X limitations, pushed out support for mobile SFA on iPhones until 2010 or beyond.

SAP's rating for packaged mobile applications is a caution, based on the number of field issues and changes in support during the past year. Overall, it moves back into the Niche Players quadrant, from the Visionaries quadrant. While Gartner believes SAP continues to be more mature than Oracle in this area, Gartner believes that the shift to partners carries the tactical risks of execution, as well as the strategic risk that SAP will focus on tactical execution of mobile projects, rather than using it as a differentiator from Oracle, IBM or Microsoft. Like other application vendors, its MEAP will remain only interesting to organizations aiming for SAP-dominated environments. SAP needs to focus on execution with its partners in 2010; its shift toward partnering puts them on a trajectory toward the Challengers quadrant if it can create successful customer references for the cobranded offerings.

### Strengths

- SAP has one of the largest mobile development efforts, both in internal resources devoted and in partner management, and,

in contrast to Oracle, it has visibility and the support of senior management.

- Extended improvements to the development environment, reduced synchronization times and the expansion of the product to include production prepackaged applications have enabled lower TCO and more-rapid deployment time frames.
- SAP has a single-source strategy with its partners, where it has shown commitment in branding, product road map, support and contractual obligation.

#### Cautions

- The shift toward partnering, although promising because SAP has selected mobile specialists with strong execution track records, is still in its early stages. Customers will need to work closely with specific product managers to be clear on when to evaluate SAP or coinnovation solutions versus certified partners to understand technology, price points and support level for each offering. Numerous customers reported escalations regarding SAPs MAM and MAU product lines during 2009.
- Non-SAP application-based examples of mobilization customers, although increasing, remain infrequent.
- There is some channel confusion due to the breadth and overlap of SAP's mobile partners and offerings.
- SAP has high customization costs. Several customers using MAM and MAU report rewriting or discarding more than half of the client-side code provided with Mobile Infrastructure.

#### Spring Wireless

Based in Brazil, venture-backed Spring Wireless faced the challenge of expanding its presence beyond Latin America into North America and Europe during the recession. The vendor's international expansion has run directly into the global economic slowdown, but it did win new customers in North America and elsewhere. Its South American user and customer base has continued to exhibit strong growth. Spring's mix of prebuilt applications and support of all relevant mobile device platforms has won it a growing base of customers. Spring Wireless has one of the largest R&D staffs for mobile middleware in the industry, with more than 75% of its employees based in Brazil. Few enterprises use Spring Wireless for behind-the-firewall solutions, but rather mostly hosted ones.

Gartner rates the vendor's packaged mobile applications as promising. Its sweet spot, in terms of applications, is around SFA, direct store delivery and consumer packaged goods. The vendor is a good fit for organizations that prefer SaaS.

#### Strengths

- Spring Wireless has a high seat count, with a wide range of applications and customers.
- It has a large customer base of multinational companies across RIM, Windows Mobile, Symbian and many Java-based platforms.

- Spring Wireless has a strong technology platform with a robust AD platform, a good catalog of prebuilt applications (supplemented with recent acquisitions) and decent management/security tools.
- It also has fielded implementations for iPhone support with customers and carrier partners.
- The vendor has a low TCO because of the availability of prebuilt applications (across a wide range of vertical- and horizontal-based requirements) and the ease of customization of those applications in the development environment.

#### Cautions

- Spring Wireless is still in its early stages of geographic expansion beyond South America and Spanish-speaking Western Europe. The vendor did win and place into production mobile customers in North America and other parts of the world in 2009.
- While TCO remains relatively low, Gartner did observe a trend toward higher project TCO, driven by larger customization efforts, for Spring Wireless implementations. This is normal for MEAP vendors expanding into new markets and vertical processes, but enterprises need to spend more time in due diligence regarding project scope.

#### Sybase

Sybase has continued to advance the strategy it laid out at the launch of the Sybase Unwired Platform (SUP), including a renewed focus on the integration of its disparate product lines. Those lines include Afaria (Device management and security) Mobile Office (e-mail and limited application runtime) and the traditional iAnywhere, which includes the device runtime environment, mobile database and AD studio. Sybase has also inked a deal with SAP (similar to its competitors, Antenna Software and Syclo) for a portion of SAP's application mobilization portfolio, as well as for custom development and workflow. It now has mobile applications in Beta test with customers including CRM modules.

Like most other vendors in this market, 2009 was one of moderate growth for Sybase's mobility business. Once the growth engine of the company, iAnywhere saw its growth limited to between 4% and 7% (year over year) per quarter in 2009. Sybase continued to invest in the platform (although it made no significant acquisitions directly related to the technology). Through its VAR and SI relationships, it has a complete offering of packaged applications, hosted and behind-the-firewall offerings, and a burgeoning iPhone capability. In hosting, it has relationships with Samsung for mobile device management and sales force applications. In the case of Verizon, the arrangement is for mobile device management.

Sybase's go-to-market strategy depends highly on its VAR and SI channels to provide entry to untapped markets and deliver a consistent experience to end users. Quality within its VAR/SI channel was steady in the past year. Sybase continues to have the broadest device support among all the multichannel vendors.

## Strengths

- Sybase offers best-of-breed, multiplatform management tools, with Afaria enabling management of all the popular device platforms, through direct, on-client runtime (for MS or Sybase) or execution integrators (for RIM).
- The vendor has the most flexible AD environment, offering plug-ins for Eclipse and Visual Studio, as well as a proprietary studio.
- Sybase has flexible application connectors for all the popular application platforms and databases, and an ability to create composite applications with input from multiple applications. It provides source code for its emerging application offerings.
- Device management remains a key differentiator. Afaria, as an integrated part of the Sybase Unwired Platform, gives the vendor entry into increasing numbers of IT organizations, as it tries to address the growing issues around MDM.

## Cautions

- Competition from smaller MEAPs with packaged mobile applications and single-target MEAPs, such as RIM and Microsoft, are putting functional and pricing pressures on Sybase.
- Sybase is still fully reliant on its channel partners (VARs and SIs) to produce its applications (packaged and custom), and this has made it more difficult for the vendor to build compelling, value-based agreements for its product lines.
- Hosted offerings have lagged behind the competition, with few examples of Sybase's Relay server in use by partners or carriers.
- Its staging database, while it enables very granular integration of the application data from disparate sources, may not be the most scalable solution for rich-client, Web-based applications. However, this is optional for enterprises that want more control over this key implementation decision.
- Sybase's iPhone environment still lags behind in deployments; thus, while its vision is solid, enterprises that embrace Sybase's iPhone support must take into account that it is an early-stage product.
- Sybase is often a higher-cost alternative when all modules are selected despite the fact that Sybase Unwired Platform is a step in the direction of consolidation. This approach can mean that integration timing (in the cases where partners are not used) remains a bit longer than for application-focused vendors.

## Syclo

Syclo, based in Hoffman Estates, Illinois is a privately owned vendor. Gartner estimates that Syclo grew much faster (it added 72 new customers) than the market average pace in 2009. In 1Q09, SAP announced a coinnovation, cobranding partnership with Syclo in EAM and field service, joining RIM and Sybase as the only MEAP

vendors to do so. Syclo also added a partnership for MDM through B2M, embedding its suite into Agentry 5.1 at no extra cost to its customers. This is a move directly aimed at stand-alone MDM offerings.

Gartner has observed Syclo in new EAM deployments for IBM's MRO Software offering, and through its Ventureforth relationship, also in Oracle installations. Overall, Gartner sees Syclo's packaged applications as a strong positive, with strong customer uptake and satisfaction. Enterprises that fit best with Syclo include those focused on EAM and field service, particularly for SAP, Oracle or IBM Maximo back-end systems.

## Strengths

- Syclo's breadth of customers and its history of providing complex mobile solutions at relatively low TCO are its **strengths**, despite seat-licensing costs that may be above that of other vendors. Syclo's approach is to trade off higher software licensing fees with lower system integration costs.
- The vendor's industry and process knowledge in enterprise asset maintenance and field service remain particularly strong suits.
- For SAP customers, the Syclo/SAP cobranding gives them "one throat to choke," and gives Syclo an advantage in remaining aligned with SAP's product road map.
- A focus on mobile security and Syclo's application expertise in enterprise asset management has enabled significant penetration into government, energy and regulatory agencies. As Gartner predicted last year, this area has fared better than average during the recession.

## Cautions

- Syclo's market message and value proposition are clear and consistent: high-value field service and enterprise asset maintenance are its forte. However, its brand awareness/marketing message is weak, when compared with other mobile enterprise platform vendors. As the MCAP and MEAP markets and technologies converge, this limits Syclo as a choice for general enterprise mobility platform, hence the lower vision score.
- Syclo has less experience in larger deployments of mobile SFA applications. Syclo does provide mobile solutions in these areas, and also in delivery, inspections and consumer packaged goods, but these projects require more customization and result in higher TCO.

## 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 presales activities and the structure that supports them. This includes deal management, pricing and negotiation, presales 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.