

Magic Quadrant for Power-Generating Company EAM Software, 2007

Gartner RAS Core Research Note G00150935, Kristian Steenstrup, Dan Miklovic, 21 September 2007

For power-generating companies searching for enterprise asset management maintenance software solutions, we analyze stand-alone software products that solve asset management problems.

WHAT YOU NEED TO KNOW

We have previously published generic, cross-industry, enterprise asset management (EAM) software (referred to as “components” instead of “best of breed” to be more literally correct) and ERP suite MarketScopes for this category. Changes in customer buying criteria and vendor offerings, resulting in more-industry-specific solutions, needs and expectations, are reflected in our new market separation. Hence, we evaluate EAM products for distribution utilities, manufacturing and natural resources in separate publications because of the differing functional requirements and, consequently, differing vendor performance.

Component EAM (and computerized maintenance management system [CMMS]) products suitable for generating companies have been increasingly a specialized area of software. Some suite vendors also actively market their EAM modules as stand-alone offerings and sell them as specialized maintenance solutions. (Other suite vendors only offer them as part of the ERP suite being marketed, and so have a market for EAM limited to their own customer bases.)

Generating companies should also make key architectural decisions, such as going with a component approach or single ERP suite solution, a part of their EAM selection processes. Based on the relative importance of asset reliability and availability to the overall success of the business, a company should select the vendor that best fits into its architecture while offering the optimum mix of functionality for the generating portfolio and location. Vendors vary widely in scalability and functionality, and a solution appropriate for one client may lack critical functionality appropriate for another.

Although the scope of this assessment is global, some vendors specialize in geographies, so do not choose vendors based on their size alone. Because the Magic Quadrant process is, by necessity, an “averaging” of vendor offerings and performance, we always recommend consulting the authoring analyst to get specific advice on your needs, location and industry subsector – such as nuclear or hydroelectric.

MAGIC QUADRANT

Positioning on this Magic Quadrant reflects the customer view of the market, being focused on the component solutions available, but not to the exclusion of the suite offerings, and taking into consideration functionality, experience available and fit to purpose.

Market Overview

EAM packages focused on power-generating company needs primarily have material and maintenance management functionality (or at least the vendor packages and sells in that

format) that is scalable to multiple sites and caters to advanced maintenance management functions. (A term sometimes used is “CMMS packages,” which include material and maintenance functionality, but they are simpler in scope and are focused on single-site deployments. They may be used by large enterprises if a site-by-site or departmental solution is required.)

For generating companies, the functionality must be capable of complex fixed plant support, with particular importance attached to hierarchical plant structures, condition and performance monitoring, preventive maintenance, and shutdown planning for refurbishments. This is reflected in the requirements listed here, which will be satisfied by the best software products in this category:

- Detailed asset registry, combined with detailed parts and support descriptions
- Long-term maintenance, project and work schedules
- Support for complex inventory relationships for indirect (blue-collar maintenance, repair and overhaul [MRO]) goods that are associated with forecasts of planned and unplanned work on installed assets
- Supply chain capability for indirect goods, with demand planning linked to maintenance and repair schedules
- Probability-based “just in case” inventory and procurement, rather than “just in time”
- Support for manufacturer logistic processes for equipment under warranty
- Human capital management (HCM) capabilities to match skills, training and availability with work requirements
- Statistical analysis of equipment performance and reliability
- Remote electronic monitoring of asset health and performance
- Serial number tracking and tracing for equipment and parts
- Financial support via detailed cost analysis
- Integration with whatever financial and HR package is deployed
- Extensive warranty tracking to component levels
- Shutdown project planning

Figure 1. Magic Quadrant for Power-Generating Company EAM Software, 2007



Market Definition/Description

Gartner bases the concept of a Magic Quadrant on a customer-oriented market analysis. Consistent with the approach espoused by business author Geoffrey Moore, a market is “a set of actual or potential customers for a given set of products or services who have a common set of needs or wants, and who reference each other when making a decision” (see his book, “Modern Technology Markets Defined”).

The Magic Quadrant is copyrighted September 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.

This particular market is often referred to by buyers as the “best of breed” or “point solution” market for EAM, but might be more correctly described as the EAM “component” market. It is focused on the EAM software component in the same way a customer might buy an amplifier as a top-end component in an entertainment center. Power-generating companies evaluate and procure EAM products as maintenance modules to solve physical asset care requirements – that is, providing maintenance support in the power-generating facility, which may be fueled by coal, gas or oil, and might be hydroelectric, nuclear (with some specialized additional functionality) or renewable (such as wind generation). The high availability, fixed location, precision, safety and complex engineering of these facilities create a different set of functional requirements from other industrial uses of EAM.

EAM functionality evolved from the CMMS applications that encompass work and material management for fault repair, regular preventive maintenance and service activities. An EAM solution includes work order creation, planned maintenance, maintenance history, MRO inventory and procurement, as well as equipment, component and asset tracking for hierarchical assemblies of equipment. In its most evolved form, the functionality is extended by the addition of basic financial management modules, such as accounts payable, cost recording in ledgers, and HR management for rostering and skill recording.

Technically, the EAM applications are designed to scale to larger numbers of users (typically, beyond 100 concurrent users) and run on multiple sites from a single central database, thereby catering to whole-of-business requirements, rather than departmental or site requirements. Because buyers usually evaluate products from multiple vendors and look for component solutions rather than suites (on a ratio of 76-to-24 based on a Gartner analysis of license fee expenditures in 2006), the ability to sell the EAM module by itself is an important criterion.

What the EAM Market Isn't

The market does not include IT asset management, facilities workplace management (integrated workplace management system) or treasury/financial asset management, which are separate markets for software covered by Gartner elsewhere. Nor does it encompass the related service parts planning market, which is related to EAM because it supports the provisioning of spare parts for a repair environment. Clients should separately consider coverage of these topics, particularly the financial asset management to plan and manage the depreciation of and investment return from generating assets over time.

Inclusion and Exclusion Criteria

Software products must address the majority of the functional capabilities listed here. Globally, there are more than 400 vendors

in the CMMS/EAM class of software, and most of these are too small in company size or product scope to be of interest to Gartner clients. We evaluated only the top products worldwide. They have demonstrable track records in power generation (at least 10% of their license revenue is from power generation companies), have an estimated license fee revenue of at least \$2 million that they generated during the last 12-month period, and have coverage of multiple geographies.

Added

This is the first iteration of this industry-specific Magic Quadrant. However, this initial generation company EAM Magic Quadrant does differ from previous cross-industry editions by including only those vendors that have a focus on power generation.

Some vendors that served the manufacturing sector are omitted. They may be included on the EAM Magic Quadrants for their appropriate manufacturing services.

Oracle and SAP have been added because they are commonplace in utilities, although not implemented as component solutions.

Dropped

This is the first iteration of this industry-specific Magic Quadrant, so there are no deletions.

Evaluation Criteria Ability to Execute

For electricity generation companies seeking EAM software, the ability to execute is primarily a combination of factors driven by product functionality, global strength and ability to deliver as a component solution (or best-of-breed, as it is sometimes known) market.

Completeness of Vision

For electricity generation companies seeking EAM software, completeness of vision is primarily a combination of focus on the EAM segment, an appropriate go-to-market strategy and focus on innovation in EAM functionality.

Leaders

Leaders in this market have a global presence, an installed base in generation companies of all kinds, strong viability, and a combination of rich features, including functionality, interfaces to different ERP applications, and a capable and global implementation partner community. IBM Maximo Asset Management (Maximo or MXES formerly of MRO Software) is the leader in the component EAM space as we shift to an industry-focused view. Although it also has clients outside power generation, it remains the vendor that should be on any generation company shortlist of EAM applications for evaluation.

Table 1. Ability to Execute Evaluation Criteria

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

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	Standard
Vertical/Industry Strategy	Standard
Innovation	High
Geographic Strategy	Standard
Source: Gartner	

Challengers

Challengers in this market show good execution, but may lack a focus on functional or technological innovations that restricts their desirability, particularly as stand-alone applications. Mincom, the only challenger in this market, shows stronger viability since its acquisition, improved performance and improved delivery capability for what it does, but it has a relative lack of technical advancement, functional initiatives (particularly for nuclear) and global strategy (particularly for Europe and North America).

Visionaries

Ventyx (formed as a result of Vista Equity Partners acquiring Indus and MDSI (and further expanded with the acquisitions of Global Energy Decisions and NewEnergy Associates) exhibits classic visionary characteristics. It has a strong focus on EAM and increasingly broad functionality, is suitable for all types of generation companies, and has displayed technical and functional innovation. However, even with the acquisition by Vista Equity, the overall viability is believed still less than competitors. Additionally,

users should be aware that its client relationships, installation track record and geographic presence are sometimes less than the performance of industry peers.

Niche Players

The Niche Players quadrant contains three classes of vendors:

- Those that offer best-of-breed EAM as a stand-alone application (Avantis, Mainsaver and Oracle Utilities – formerly SPL WorldGroup)
- Those that offer EAM as part of a suite, which are not designed to be used in conjunction with a different application suite (such as Oracle E-Business Suite, Oracle PeopleSoft and SAP)
- Those that can be delivered either as a component or as a suite (IFS)

Clients need to pay particular attention to the choice of Oracle EAM applications. Because of the growth through acquisition, Oracle has six distinctly different offerings covering EAM. The products targeted and sold to generating companies are assessed here: Oracle E-Business Suite eAM; Oracle PeopleSoft [sometimes referred to as “Enterprise”], which is a module developed by the PeopleSoft group after its acquisition; and Oracle Utilities, which started life as Synergen, was acquired by SPL WorldGroup and then came to Oracle. In addition, not assessed here because of a lack of applicability to generating companies, are Oracle ComplexEAM [for aerospace], EnterpriseOne [the old JD Edwards One World product] and the old JD Edwards World product.

In the latter case of suites, the limitation of being usable (for all practical purposes) only within the larger ERP suite, along with the client cost associated with that strategy, limits demand and affects execution and vision. We have found that two-thirds of implementations are of a component solution; for the suite vendors, no more than a third of their own client bases use the “standard” EAM module. So for most clients, it is an important buying criterion.

In the case of the EAM component vendors, these are classed as niche players due to one or more of several factors, including:

- Narrow platform support
- Lack of global presence
- Inability to assess long-term viability due to nontransparent or poor financial performance
- Very limited presence in the power generation market

Vendor Strengths and Cautions

IBM Maximo Strengths

- Under IBM ownership, MRO software has moved to extremely high viability
- Global sales and implementation resources makes the solution widely available
- Combined with Tivoli software, IBM Maximo Asset Management offers the opportunity of being able to manage IT-enabled assets with the same solution used to manage traditional EAM assets

- High EAM investment and the leverage of IBM’s research capabilities is bringing advanced reliability-centered maintenance (RCM) functionality to market in the near future
- A specialized version is available for nuclear operations
- It supports integration with a wide variety of ERP suites
- Versatility exists across multiple platforms

Cautions

- Now part of IBM, contracts and negotiations are moving to a standard IBM format, and some previously demonstrated flexibility may not be available
- IBM is not known as a business application software company, and this is the only business application product that IBM markets
- Future innovation may be compromised by seeking multiple markets
- It is one of the most expensive products on the market (but with very high functionality)
- Moderate customer satisfaction exists, in terms of product quality

IFS Strengths

- Can be implemented as part of an ERP suite or as a component EAM
- Supports nuclear requirements
- Componentized service-oriented architecture (SOA) provides high flexibility
- Innovative and rich maintenance functionality (however, this may affect deployment times to achieve maximum functionality)
- Good customer references for satisfaction

Cautions

- Only supports Oracle database
- Not widely deployed in power generation
- The existing customer base is weighted toward Europe, the Middle East and China
- Available resources need to be examined closely prior to project commencement
- Limited global marketing and commitment to this sector

Invensys Avantis Strengths

- Well-regarded and efficient implementation methodology
- Good native business intelligence
- Linkages to automation and support of RCM functionality
- Generation is the best performing of Avantis’s target markets
- Global sales and support presence globally from Invensys
- Versatility across multiple platforms

Cautions

- EAM is not central to the Invensys product portfolio
- Fewer resources internally for development
- Limited generation industry experience
- Pricing at upper end of affordability for midsize companies
- Microsoft-centric user interface and platform focus (a strength for some clients)

Mainsaver Strengths

- A component EAM application with open integration and multiple ERP suites
- Affordability with a good high functionality/cost ratio
- High customer satisfaction with good references

Cautions

- Implementation outside U.S. exclusively via channel partners
- Microsoft-only platform option
- Privately held small company with more-limited resources for development

Mincom Strengths

- Flexible deployment as a component or a suite
- Strong performance in its home country of Australia, along with the UK, Latin America and sub-Saharan Africa, and it is currently growing its presence in Russia
- High level of functionality
- Focused on asset-intensive industries, such as generation
- Versatility across multiple platforms
- Highly scalable
- Improved financial performance

Cautions

- No nuclear experience
- Limited Asian, North American and European presence
- Technology is in transition to a Java-based Web service architecture
- Small company size compared to major vendors gives rise to a shortage of resources and partners

Oracle E-Business Suite Strengths

- Oracle's E-Business Suite's eAM functionality is approaching parity with best-of-breed applications with release 12
- Good customer references
- Good usability
- Strong project management functionality
- Oracle eAM application should be on the shortlist in any evaluation of EAM solutions for Oracle E-Business Suite customers

Cautions

- Oracle eAM has not been integrated with other ERP solutions as a component solution and is not marketed as such; for non-Oracle customers looking for an EAM solution, Oracle is not a practical candidate
- Only Oracle database support
- Limited engagement from large system integrators, but boutique providers exist
- Limited but growing power generation experience (no nuclear experience)

Oracle PeopleSoft Strengths

- Modern, easy-to-navigate user interface
- Most-recently developed EAM functionality (2005)
- PeopleSoft EAM should be on the shortlist in any evaluation of EAM solutions for PeopleSoft Enterprise customers on the current release (version 9)
- Suited to small-scale or simple deployments
- Includes financial and IT asset management in the scope of the solution

Cautions

- Gradually improving the limited functionality in EAM
- Only available as an integrated suite
- Limited experience in power generation
- No generation sites outside of North America

Oracle Utilities Strengths

- Although well-suited to municipalities (which are often smaller in scale than pure power generators), the system is scalable to larger environments
- Lower cost and complexity
- Open integration with multiple ERP suites

Cautions

- Acquired first by SPL WorldGroup and then Oracle, resulting in product overlap within Oracle E-Business Suite
- Focused on field service and distribution utility needs, rather than generation
- Only available on the Oracle database
- Limited functionality for complex environments

SAP Strengths

- Has the majority of the EAM functionality most power companies would require
- Has a well-developed partner program to fill functional gaps
- When integrated with the SAP ERP suite (now referred to as ERP 60), the combined solution provides a single view into all aspects of EAM – from HR to material management
- Potential to leverage SAP SCM for material planning
- The program of enhancement packages (currently at No 2) will provide progressive functional improvements
- Recent improvements in warranty management, clearance control, configuration management derived from other industry solutions
- Versatility across multiple platforms
- SAP EAM should be on the evaluation list of any SAP ERP customer

Cautions

- SAP's EAM application, while theoretically capable of being implemented as a stand-alone, requires extensive implementation of other components of SAP's suite solution such as material management, financial and HR; as such, for all practical purposes, it is always marketed, sold and implemented with a full SAP ERP deployment

- SAP EAM has not been integrated with other ERP solutions as a component solution and is not marketed as such; for non-SAP customers looking for an EAM solution, SAP is not a practical candidate
- Future (broadly defined) enhancement packs are expected to make available the features from other industry versions that are desirable
- Clients must check whether functionality such as an improved user interface and visual parts selection are available only as an xApp, which requires additional investment and NetWeaver to get maximum benefit

Ventyx Strengths

- Focused utilities specialist
- Long history and experience in the nuclear industry with high customer loyalty
- Vision for expanding the solution set through complementary acquisitions
- Recently re-architected the product to modernize the application

Cautions

- The current architecture and product (Asset Suite) are less established than the prior product, Passport
- Customer satisfaction varies from poor to good, depending on software version and the support experience
- Limited resources in Asia/Pacific
- Slow sales in the marketplace, with few new accounts
- Viability and performance still in question, albeit now supported by private equity

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 and so on, 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 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 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 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.