

Managing *Lots of* Stuff

EVERY ORGANIZATION, REGARDLESS OF SCALE, HAS SOME investment in or dependence on the real property it occupies and the equipment it uses to produce or deliver its products and services.

Among the five largest of Fortune 500-class corporations, the Property, Plant and Equipment line on their balance sheets represent anywhere from 9% to 56% of total assets. In dollar terms, those percentages translate to a range of approxi-

mately \$61 billion to nearly \$105 billion.

Either way you look at the numbers, they represent a significant in-

And by the Way,
Doing it Virtually

vestment and an equally significant source of operating leverage if those assets can be more effectively managed, or if the people using and maintaining the assets can be more efficient in how they use them. The same is likely true of your organization — even if it isn't one of the top five on the *Fortune Magazine* list.

Integrated Workplace Management Systems, Enterprise Asset Management Systems, emerge as powerful tools to help manage an increasingly mobile, wired workforce

BY DAMIAN RINALDI



IWMS and EAMS Market Drivers

As a result of financial and competitive pressures on large, asset-intensive businesses, two software markets have emerged to help companies maximize the leverage they get from their infrastructure assets and to increase efficiency. Integrated Workplace Management Systems (IWMS) have real estate portfolio management as their central focus. Enterprise Asset Management Systems (EAMS), which grew out of the Computerized Maintenance Management Systems (CMMS) market, focus on the operational management and maintenance of a company's facilities and equipment, typically in large manufacturing, energy/utilities or transportation/logistics industries.

Perhaps an even bigger factor in the development of the two markets has been the number and pace of changes in the way people work — increased mobility, telecommuting and “hoteling” — and in where they work, as well. Larry Barkley, senior vice president of Consulting Services at CFI LLC, says, “The notion of what is being managed by these software systems has changed dramatically. In the real estate and facilities management world, typically what was being managed was bricks and mortar space. Over the past five years, we have begun to escalate into an alternative workplace environment where people are working from multiple places.”

That escalation translates into what Stan Vuckovich, vice president of Sales and Marketing at KBM Workspace, a Bay-area office furniture and facilities management firm, describes as the notion of a “zero-address” workstation. “Because of the cost of real estate, this zero-address workstation emerged — a shared workstation that allows any user to come in and have access to power and data, telephone and voice mail service.” Managing the physical assets — the workstations and the facilities where they are situated — is one aspect of the IWMS problem. Allowing or enabling rapid expansion or contraction of workplace capacity in the event of a merger, or some other corporate event is another, and more significant part of the IWMS solution.

The pace of workplace virtualization

IWMS and EAMS Definitions

IWMS have four key functional elements: real estate portfolio management, project management, facilities management and maintenance management — along with several other functions, depending on industry or organization

Real-estate management Strategic planning, transaction management, RFP analysis, lease analysis and administration and portfolio management

Project management Design, construction, workflow, bidding and procurement, project documentation, scheduling and critical path analysis

Facilities management Space management; moves, adds and changes; telecommunications and cabling management; IT and other equipment inventory and tracking; site and employee services (including self-service); office hoteling and room reservations; physical security assessments; and environmental health and safety assessments

Maintenance management Preventative maintenance, predictive maintenance, warranty management, work order administration and maintenance scheduling

Other Fleet management; interoperability with other enterprise systems (ERP); interoperability with enterprise databases (Oracle, Microsoft SQL Server, IBM DB2); bidirectional operability between computer-aided design files and workplace data files; scalable and extensible; flexible; and able to be customized to customer specifications

EAMS also have four key functional elements: asset management, materials management, human resource management and financials

Asset management Its application functionality assists in identifying assets and activities and manages requests for service and work schedules. These applications also manage job costing, work orders, asset registration, fixed assets, and predictive and preventative maintenance.

Materials management The application functionality in this segment assists in planning parts and material requirements for maintenance. This is the true origin of Maintenance, Repair, Operations (MRO) procurement.

The applications in this segment have capabilities to integrate with procurement management; enable automatic assignment of activity-based costing (ABC) classes to stock, multiple alternative parts codes, manufacturers and supplies for a single stock code; calculate optimal inventory based on forecast usage and prior usage; support cycle counting.

Modules in this segment include parts, inventory, orders management and bill of materials (BOM) oriented toward job, rather than BOM for manufacturing.

HRMS Although it is part of an integrated solution, the pure-play HRMS functionality will be tracked under the HRMS segment.

Financials Although part of an integrated solution, the detail of financial management system (FMS) functionality will be tracked under the FMS segment.

Source: Michael Bell, et. al and Kristian Steenstrup, et al., Gartner Group

has also been accelerated as a result of globalization and outsourcing trends. Customers, suppliers, service providers and the like have to work hard to collaborate as effectively — if not more effectively — than they might have in the past when they all worked for the same organization under the same roof.

Finally, a wave of investment and new company formation that occurred dur-

ing Peregrine Systems' efforts to expand beyond IT asset management — and before its subsequent collapse and re-emergence as an IT-focused asset and service management solution provider — has also been a contributing factor in the two markets' growth.

Both classes of products start off with a focus on things — buildings and equipment, for example, — but both

IWMS and EAMS have as a key element the notion that the real assets they help manage are part of an overall ecosystem. That ecosystem includes the people — employees, business partners, service providers and customers who work in the buildings, service the equipment, manage the financial and logistics events and processes that are the normal part of any business operation. The interactions among those stakeholders and the assets they are using can be optimized, and that optimization effort can yield cost savings, help avoid unnecessary expense, or decrease time to market.

Although the two solutions intersect at a common concern with the maintenance of assets, including facilities and equipment, they are different enough in their overall approach that they are likely to remain distinct markets. Kristian Steenstrup, an analyst who focuses on EAMS at Gartner, observed, “IWMS is a broader coverage that includes more of the facilities utilization and workplace issues, and a light version of CMMS for reactive or inspection work. EAM is a heavy-duty maintenance application with a lot of detail in preventative and predictive maintenance, but often less in the way of space utilization and assignment.”

The two solutions also have different buying centers. Meta Group analyst Barry Wilderman points out, “The IWMS purchaser is usually a VP of Real Estate and Property Management, and reports to the CFO. EAMS are usually purchased by a VP of manufacturing, energy or engineering.” But as corporations learn more about the benefits stemming from the use of these products and implementation of best practices around the

Magic Quadrant for IWMS in North America

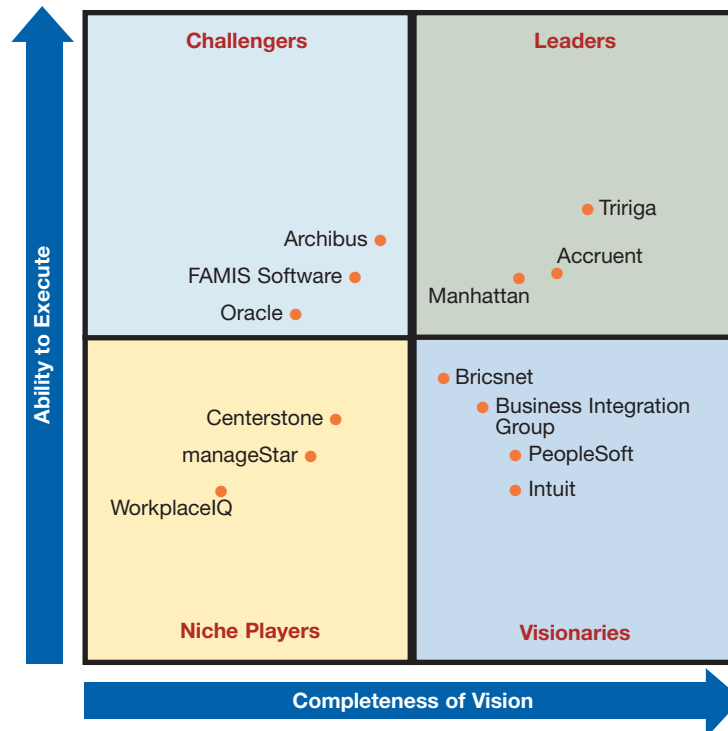


FIGURE 1

Source: Gartner Research, November 2004

underlying business processes they support, the scale of their investment in IWMS and EAMS technology appears to be increasing. That causes the buying center to rise higher on the organizational chart. On the IWMS side, Michael Bell, IWMS analyst at Gartner, notes, “We do see the size of deals increasing. We are now seeing deals over a million dollars.”

Consolidation and Convergence

As a result, on the market side, there is some consolidation and convergence within the two markets and rising interest from adjacent market players. Today, both IWMS and EAMS markets are dominated by relatively small, niche-type players, but the rising size of deals and the increased visibility of some of the spending on these

solutions has attracted interest from ERP companies such as SAP and Oracle.

Why? As in the case with most emerging market segments, opportunity for growth is the primary driver. IWMS and EAMS software purchases no longer qualify as relatively minor departmental purchases — they have clearly graduated to enterprise application status. And as enterprise-class applications, they often overlap and interact with other elements of an organization’s software infrastructure such as ERP. Surprisingly, however, there is little overlap between IT Asset Management initiatives and IWMS and EAMS — yet Gartner’s Bell says, “The question of IT asset

management continues to come up. There is no evidence that they [IWMS and EAMS vendors] will expand their offerings, but it’s an open question.”

On the customer side, the escalation — driven by the shift to virtualization of the workplace — raises some significant implementation challenges. CFI’s Barkley says, “As we move to a more virtualized environment in the workplace, the implementation of these systems is no longer the primary responsibility of IT alone. It is critical that the triumvirate of Human Resources, IT and Real Estate deliver these systems.” The collaboration among those three groups yields much more successful implementations.

According to Meta Groups’ Wilderman, one other problem dictating broader involvement is that IT alone has difficulty convincing management to make the investment argument for IWMS. It is easier for real estate management to quantify the costs of missing a handful of leases, for example. On the

EAMS License Revenue Growth Projections

	2003	2004	2005	2006	2007	2008	Compound Annual Growth Rate 2004-2008 5.1%
Enterprise Asset Management (EAM) License Revenue (\$ in millions)	\$349	\$364	\$381	\$403	\$426	\$448	
EAM Annual Growth	-3%	4%	5%	6%	6%	5%	Source: Gartner Research, June 2004

EAMS side the issue is quantifying cost of equipment failure. The EAMS problem becomes even more complicated when it comes to determining the timing of a repair vs. replenish decision. In some organizations, such as transportation, "it's not just at the individual asset level, but at fleet level. It's a huge issue when to start to replace one generation of assets with the next. IWMS and EAMS become an essential part of capital budgeting and planning."

Gartner's Bell has identified three major IWMS market trends. First, within the realm of IWMS opportunities, he is observing much more specialization and focus on specific industry segments. Accruant's efforts in the retail market and Manhattan's within the financial services sector are two examples of that trend. Focus on specific asset classes is another trend. Bell identified Aperture, a data center-oriented asset management supplier as an illustration of that trend. Finally, he pointed to consolidation and integration within industry itself. "We will likely see some combinations," he says, but when asked about new company formation at this stage, he noted "we are probably past the point where you'll see lots of new start-ups — but if there are, there will be some twist from the old approach."

IWMS Overview

Gartner's recently published "Magic Quadrant" analysis of the leading IWMS vendors operating in North America, named TRIRIGA (Software 500 2004's fastest-growing vendor), Manhattan and Accruent as the Visionary suppliers — all private organizations. (See Fig. 1.) Gartner plans to update the analysis to include European suppliers sometime in 2005.

TRIRIGA has roots in the Las Vegas construction industry, having been founded as a spin-off of Marnell Corrao Associates in 2000. Marnell Corrao has been the designer and general contractor for some of the largest resorts in Las Vegas

EAMS Isn't for Everybody

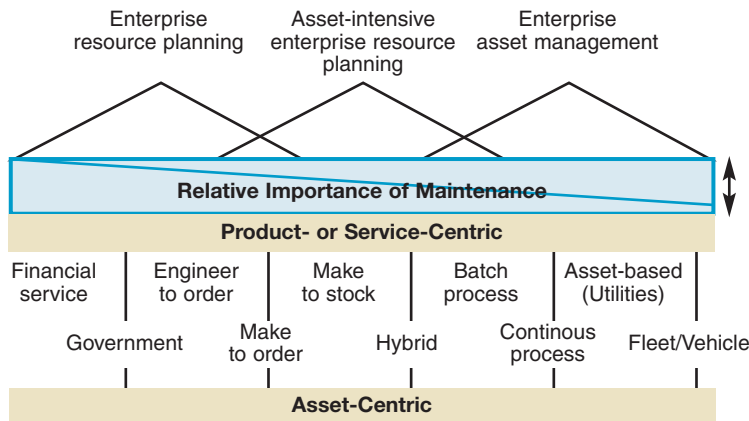


FIGURE 2

Source: Gartner Research

and Atlantic City, including The Mirage, Treasure Island and the Bellagio. The company has built more than 70,000 hotel rooms at casinos and resorts around the world since its founding in 1974. It was Tony Marnell's idea to commercialize software the company has been using to run its construction business. "The language of facilities management and the language of construction are very closely tied together," says Mike Daffer, vice president of business development and marketing with TRIRIGA. In 2002, the company acquired the Facilities Center 7 platform from Peregrine, which had been built in PowerBuilder, and they integrated into their own product, TRIRIGA IBS. "We saw a great partnership in the technology," says Dave Karpook, director of product marketing with TRIRIGA.

Gartner's analysis and rankings weigh ability to execute, functionality, total cost of ownership, service/support, positioning, technology, viability and completeness of vision. Furthermore, only vendors that acquired 12 or more customers in 2003, had more than \$5 million in total billings, have a primarily North American presence and support at least two of the key IWMS functions were included in the chart.

From a technology standpoint, Meta Group's Wilderman points to the following characteristics of a well-designed IWMS. "It ought to be a thin client im-

plementation, and Internet-based. This is not like a call center; you don't need huge data entry. Content is what's critical, and the ability to capture that content and decompose it and recombine it to help with the processes of management is where the value is."

EAMS Overview

While IWMS may be increasingly relevant solutions for many organizations as they respond to — or prepare for — globaliza-

tion and virtualization trends, EAMS are not necessarily so well aligned to the broad spectrum of corporations. EAMS solutions fit best for industries ranging from product- or service-centric, such as financial services, to asset-centric, such as fleet management, in Gartner's view. (See Fig. 2.) Clearly, in those segments where maintenance is relatively more important and asset dependencies are highest, EAMS is a better fit than traditional ERP solutions.

Market positions of the leading EAMS suppliers did not change dramatically in 2003 (the last year for which Gartner/Dataquest has published data). While Datastream and Intenia changed places in the top five of market share, and while both passed PeopleSoft/JD Edwards, the shifts were small. (See Fig. 3.)

Overall, Gartner expects only modest growth of 5% to 6% annually for the Enterprise Asset Management market to reach \$448 million in volume in 2008.

IWMS and EAMS constituency's interests overlap — and complement

EAMS Market Share Rankings

Vendor	2002	2003
MRO Software	12.7%	13.5%
SAP	12.0%	12.1%
Datastream	7.5%	8.0%
Intenia	8.0%	7.6%
J.D. Edwards (PeopleSoft EnterpriseOne)	9.8%	7.3%

FIGURE 3

Source: Gartner Dataquest, August 2003

Enterprise Asset Management Products & Services Buyers Guide

Company	Focus Area(s)	Products	Services
ADB Systems	AR, CM, EH, MAIM, MATM, PUR, SUPC,	x	
AssetPoint	PRVM, PUR	x	x
DataStream	AM, MATM, PM, PUR, WORM, EH, PRVM	x	x
Indus International	PUR, MAIM	x	x
Intentia Americas Inc.	VIS	x	x
Ivara Corporation	AM	x	x
Invensys	AM, PRVM, PUR	x	x
Mainsaver Software	MAIM, PUR, WORM	x	x
Maximus	MAIM	x	x
Mincom	EH, MOS, PRVM, WORM	x	x
MRO Software	AM, MATM, PUR, WORM, WORM	x	x
NRX Global	AM	x	x
Oracle	AM, PUR, PM	x	x
Ramco Systems	MAIM, MOS	x	x
SAP	AM, MAIM, PUR	x	x
SPL Worldgroup/Synergen (GFI Energy Ventures)	AM, EH, MAIM, MATM, MOS, PRVM, PM, PUR, SUPC, WORM, WORM	x	x

Key to Categories

AM Asset Management	PRVM Preventive Maintenance
AR Auto-replenishment	PM Project Management
CM Contract Management	PUR Purchasing
EH Equipment History	SUPC Supplier Collaboration
MATM Materials Management	VIS Vertical Industry Support
MAIM Maintenance Management	WORM Work Management
MOS Mobile Support	WORF Workflow

IWMS Buyers Guide

Supplier	Focus Area(s)
Accruent	CONM, PC, REM
Archibus	LM, REM, SPAM
Bricsnet	LM, PM, REM, SPAM
Business Integration Group	PM, REM, SPAM
Centerstone	FM, LM, OM, PM, REM, SERM, SPAM
Famis Software	FM, PM, REM
Intuit	FM, LM, REM
Manhattan	CONM, COSF, FM, LM, OM, PC, PM, REM, SERM, AM, WFM
manageStar	LM, REM, SERM
Oracle	PM, SERM
Sequentra Solutions	LMPM
TRIRIGA	FM, LM, OM, PM, SERM, SPAM, WFM
WorkplaceIQ	LM, PM, REM

Key to Focus Areas

CONM	Contract Management
COSM	Cost Management
FM	Facilities Management
LM	Lease Management
OM	Operations Management
PC	Procurement
PM	Project Management
REM	Real Estate Management
SCHM	Schedule Management
SERM	Services Management
SPAM	Space Management
WFM	Workforce Management

each other — around their common concern about effective use of these corporate assets. “One of the concepts corporate real estate professionals use is the life cycle of real estate. You have the costs of getting into a space and on the back side you have costs associated with getting out of a space,” says Eric Bowles, Director of Global Research at CoreNet Global, an international association of corporate real estate professionals and service providers. Those costs can be very different depending on how the

space is going to be used, what sort of employees are going to work there and what equipment is going to be used in it.

United Technology Realty’s experience may be instructive. The firm uses its IWMS system, Sequentra, to manage all real estate transactions in any business unit that is more than 50% owned, around the world. The system helps United Technologies manage its global real estate portfolio. “Today, we can take a snapshot of our entire portfolio around the globe whenever we want,” says Eric

Masna, Global Finance and Operations Manager. “Before we implemented this system we were only able to do that once a year.”

Over a three-year period, Masna estimated that use of the system has produced more than \$100 million in savings. Like many of the modern IWMS systems in the adjacent buyer’s guide,

the Sequentra system is accessible via a Web browser from outside United Technologies’ firewall. Its business partners, who help handle the specific real estate transactions in their geographic region of responsibility, as well as internal employees of United Technologies and its business units, can access the information they need from wherever they are — as long as they have proper security clearance and Internet access. Within United Technologies, the system is 100% dedicated to manage real estate assets. It is not used for enterprise asset management beyond real estate.

Prospective IWMS or EAMS buyers should recognize that while the two solutions overlap, they are distinct in their focus. One is not a substitute for the other, and buyers should stay focused.

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Additional Resources

Computerized Facility Integration (CFI) LLC:
<http://www.gocfi.com/index.htm>

Cornell University International Workplace Studies Program:
<http://iwsp.human.cornell.edu/default.html>

CoreNet Global Corporate Real Estate Network:
<http://www2.corenetglobal.org/home/index.vsp>

Gartner Group: <http://www4.gartner.com/Init>

KBM Workspace:
<http://www.kbmonline.com/index.html>

META Group: <http://www.metagroup.com/us/home.do>