

Maximizing the Return from Asset and Service Management Systems

An MRO Software “Best Practices Series” White Paper

Managing the Balancing Act Between Operational Excellence and System Consolidation

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Contents

1Executive Summary
1Understand Your Business Processes
2Improving Productivity
2	.....Figure 1— Enterprise Application Portfolio
2	.....Figure 2 — Moving Asset Management into the Enterprise Application Portfolio
3	.....Why Consolidate Systems?
3	.....Why Architecture Matters
4	.....Figure 3 — Modern System Architecture
4	.....Assessing Readiness for System Consolidation
5	.....Initiating a Consolidation Program
5	.....Systems Consolidation Example
6	.....Figure 4 — Business Processes
6	.....Figure 5a — Analysis: Business Processes Supported by ERP
6	.....Figure 5b — Further Analysis: Looking for Commonality and a Rational Suite
7	.....Conclusion
7	.....Source

Maximizing the Return from Asset and Service Management Systems

Executive Summary

When it comes to maximizing your return from asset and service management software systems there are two primary ways that you can add dollars to the bottom line: productivity gains and lowering the total cost of ownership of the technology itself.

Improved productivity is the reason why you implement software systems in the first place. In essence, you are using these systems to create a competitive advantage for your organization. Software systems enable organizations to improve upon current operations to: reduce cost, improve revenue generation, mitigate risk, manage regulatory compliance and maintain a competitive edge.

There are two components to lowering the cost of owning and operating the technology: architecture and consolidation.

In today's ultra competitive and dynamic business environment it is a strategic imperative that you deploy systems whose architecture is based upon recognized technology standards. Why? The cost of owning and operating can differ by tremendous amounts, and projected productivity gains can quickly turn into losses. You may not be able to move to these systems overnight, but they should be part of your strategy. In essence, choosing a system with the right architecture is a critical aspect of recognizing the benefits that capitalize upon your investment.

Consolidating applications can yield significant savings. The logic is simple — if you can operate better with fewer systems and resources, it is a win for everyone. At the same time, it is important to recognize that consolidating for the sake of consolidation is a fool's game. In fact, there is a tipping point where consolidation no longer provides a meaningful return and can actually erode savings and productivity gains.

This paper focuses on the *why* and *how* aspects of system consolidation in order to provide you with a base of knowledge to manage the balancing act between improving productivity and lowering the total cost of ownership.

Understand Your Business Processes

The most important part of a consolidation strategy, one designed to achieve the benefits outlined above, is for the organization to understand the business processes utilized throughout, and which systems are managing those processes. Once understood, an analysis can take place to ensure consolidation plans are rational, while grouping domain expertise and like business processes.

The risk of not performing the analysis, or performing it poorly, is a serious one. Following an IT system or application consolidation, systems consolidate; however, business processes do not disappear. So, what happens when business processes are ignored or left without a home? An IT subculture forms to develop and maintain isolated applications that must fill the void left by the irrational consolidation. The promise of lower IT costs and improved productivity *will* reverse itself if consolidation of IT systems is not rational.

Improving Productivity

Productivity gains and losses are a significant factor in any solution consolidation program as too many disparate systems can lead to inefficiencies with the work force, which leads to the disruption of business processes. However, it is possible to swing the pendulum too far in the other direction as one system can not possibly serve the organization's needs for asset and service management, financials, human resources, supply chain and customer relationship management. In essence, rational groupings of applications exist to form an enterprise application portfolio (see Figure 1), one where business processes have a logical home.

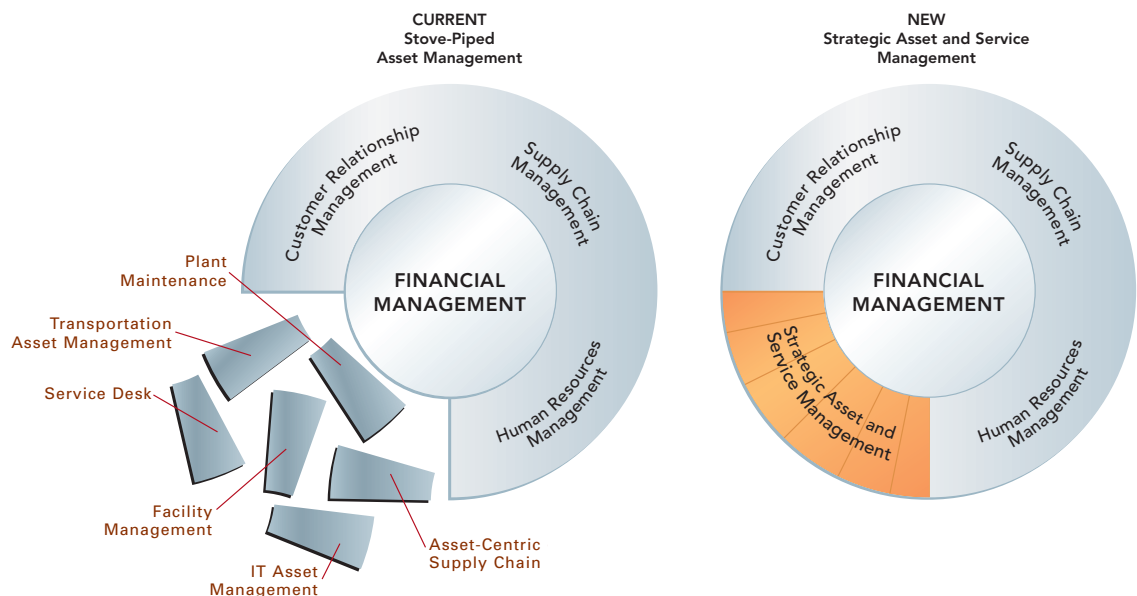
Figure 1 — Enterprise Application Portfolio



Overshadowed by recent focus on revenue growth and profitability, asset management has also been undermined by the lack of a single, organization-wide system capable of managing a vast and diverse asset base. Now, however, with cost-effective, standards-based technologies entering the mainstream, organizations can turn to strategic asset and service management systems to eliminate the counter productive disparate commercial and “home-grown” systems. In essence, strategic asset and service management is joining the enterprise application portfolio (see Figure 2). Why? The

solution unites business processes across organizational lines where critical assets, and their supporting systems, have historically been fragmented. Managing assets is challenging enough, why complicate matters with disparate systems that disrupt business processes, eat away at productivity and increase costs.

Figure 2 — Moving Asset and Service Management into the Enterprise Application Portfolio



Why Consolidate Systems?

A system consolidation strategy and program requires financial and human resources, thus a hard benefit must be recognized to justify the investment. One should expect three primary benefits from a successful strategy and program implementation: improved operational efficiency, lower overall total cost of IT system ownership and agility. These benefits will come in many shapes and sizes based upon the state of your business prior to consolidating systems, and the period of time over which a program is implemented. The benefits from a successful consolidation are real and should not be understated, as your competition is likely to have their own system consolidation program in place.

Improved Operational Efficiency: Take your average employee and imagine how many systems he or she might touch during a typical day. How about the maintenance mechanic who uses one system for work management, one for ordering parts, and yet another for reporting his or her time at the end of a shift? Imagine the time spent if these were three distinct systems with differing user interfaces, and the duplication of data that must occur. Imagine a streamlined process in which the mechanic utilizes one system that supports the deliverables and objectives set forth by their work requirements. A rational grouping of systems clearly enables all workers leveraging information technology to be more efficient and effective, whether maintaining a nuclear power plant or supporting mission-readiness requirements for the military.

Lower Overall Total Cost of Ownership: Take the example above with the maintenance mechanic — how much is it costing you to maintain the three systems vs. one? Take into account maintenance fees, upgrade costs, integration costs, IT efficiency, etc. IT provides a service to the business, and hence directly supports operational efficiency and effectiveness. However, IT departments can improve their service and likely lower their costs of doing so via a system consolidation program; provided they perform the balancing act of lowering cost of ownership while respecting the needs of the business (do not exceed the tipping point). Hard dollar savings can be found in: reduction of data center size and scope, reduction in personnel costs as IT administrators can do more (thanks to technology standards), reduction in software licenses and maintenance fees, and reduction in business continuity/data backup expenses, etc.

Agility: Competitive advantage is a broad term that indicates strength over one's competition, be it another company in your industry or a military foe. It is no secret that technology can be applied to create competitive advantage; you just need to find the right pieces at the right time. Think about the last acquisition you completed, or the last audit you had. Did your IT systems support or hinder the process? Could they have helped more? Do you feel that your investment in IT systems is a "sunk" cost that is providing little return? A system consolidation program can move you towards an agile IT infrastructure, based upon standards, that will support the business better by providing a streamlined and integrated set of rational systems, coupled with a likely decrease in investment requirements.

Why Architecture Matters

Do you like music? How about movies? Well, these entertainment offerings leverage standard technology to ensure they will operate in a variety of devices, regardless of manufacturer. For example, who is the manufacturer of the CD player in your car? How about the one in your living room? Your son's bedroom? As you know, the CD plays in each one, but did you ever wonder how? It is because the manufacturer of the CD and the players support a standard that enables portability. Did you know

that similar standards have evolved for enterprise software? Technology based on industry standards now exists for both enterprise software suppliers and corporate IT departments to leverage. Imagine your IT staff using one set of tools and services to operate, develop, and maintain your system portfolio. This is a reality today!

Figure 3 — Modern System Architecture

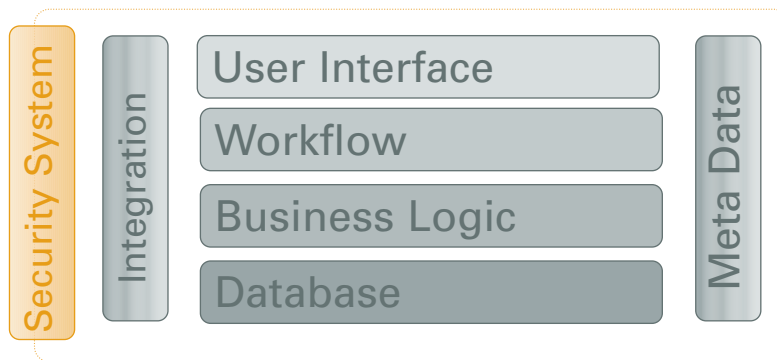


Figure 3 shows the basic architecture for a modern system often called n-tier, or sometimes Internet-architected. Whatever the term, here are some tips to validate that the jewel case housing the CD is not hiding an old 8-track cassette. First, there are three distinct layers that make up a system: data

storage, business logic and content presentation. Other system components like workflow engines, integration buses, and security are important, but ultimately leverage one of the three layers. The three layers should be separate from each other, ensuring flexibility to adapt the system over time to your changing business requirements. That sounds pretty good, but what about forward compatibility, otherwise known as upgrading?

Upgrading your systems is an important part of a consolidation strategy. Your suppliers are likely expanding their offerings with each release, thus enabling you to examine what is new to determine if existing “point” or “stove-pipe” systems may be consolidated. However, what is the balance between a flexible standards-based architecture and the ability to upgrade? The key is meta data, or information about your systems’ design and elements. Meta data enables software systems to track changes that have been made to enable a reapplication of those changes come upgrade time. In essence, you can configure the software over time to meet changing business, regulatory, and mission-readiness requirements without sacrificing your ability to move the system forward — avoiding a costly situation known as “release lock.”

Assessing Readiness for System Consolidation

A system consolidation program requires a solid strategy and recognition of the need for investment to achieve the promise of increased productivity, lowered total cost of system ownership and agility. The tough part of a consolidation strategy is that in the real world these two variables — improving productivity and lowering the total cost of systems — are often moving in different directions. It’s tough to maximize both variables while finding the right balance between the two.

A common mistake is to focus too heavily on one half of the equation to the detriment of the other half, as both have to be working in concert. Therefore, a system consolidation strategy and program requires a strong command of overall company objectives and the business system strategy; and will



require fearless decision-making and strong cooperation — talents tough to come by in the increasingly political landscape often found in modern organizations. IT and operations can't function in vacuums when it comes to choosing, running and maintaining systems.

Management Support: Given the resource requirements to develop and implement a system consolidation program, and the need to communicate among the various stakeholders in the organization, management must actively support the project with personal and financial commitment. That is not to say that those running the program are not responsible, but more so that the scope of such a program is required to move beyond IT into operations, maintenance, and other critical business functions. As such, management support is likely required to facilitate an air of urgency and communicate the business imperatives.

Understanding Business Processes: Understand and catalog business processes, and the systems that are managing them! You must understand each process, who owns it, who uses it, what system(s) support it — how are they integrated, and how frequently does the process change. This is the most critical piece in any consolidation strategy, without it your journey to achieve benefits has no map and no benchmark to rate success or failure.

Business System Strategy: In order to embark on a system consolidation program, an organization must understand where the business is headed and how IT can support those goals. That translates into a business system strategy that focuses on a core set of standard technologies, tools, and suppliers. But remember the principle of the tipping point — focusing too narrowly or too broadly can have detrimental effects!

Initiating a Consolidation Program

Consolidation strategies range from simple to complex, from short-term to long-term, from one business unit to multiple business units. Therefore, it is difficult to suggest a proper form for implementing a consolidation program. However, one can either initiate a consolidation process, or determine if one is under way that might be open for suggestion.

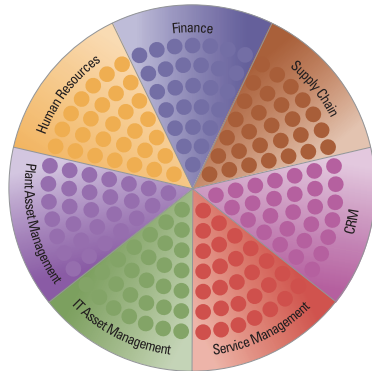
You might initiate or become involved in the consolidation process by analyzing niche or stovepipe systems that you are familiar with and find out if they overlap with an existing system, or if an existing supplier offers similar systems. You might find out if there are other people within your company doing like processes across asset types or geographies in areas such as purchasing, lease management, warranty tracking and materials management. Are there artificial stovepipes that can be consolidated which will save the company time and money? Just be sure to weigh both the IT and operational impacts of your suggestions.

Systems Consolidation Example

A power generation utility is embarking on a system consolidation strategy to reduce IT costs, improve productivity of the organization, and position itself for future growth via acquisitions. The utility has significant assets ranging from nuclear and fossil generating stations, to corporate facilities, and of course a significant IT infrastructure. The organization is looking to rationally consolidate a significant number of systems used to support its major business processes, including; finance, human resources, supply

chain, customer relationship management, and management/maintenance of its assets. Figure 4 shows the groupings of major business processes the organization is looking to consolidate.

Figure 4 — Business Processes



After establishing a need for the program, and executive level support, the first step undertaken by the organization is an effort to catalog the major business processes. With a goal of grouping like processes together to facilitate a consolidation strategy, the organization invested the effort analyze the processes for commonality, and to understand the frequency of change. The organization is well aware that processes will remain, even if systems change/consolidate, thus great care is taken to ensure the strategy and subsequent execution will not leave processes behind.

Next, the organization used the knowledge of its business processes to evaluate the desired systems for the consolidation program. After considering and analyzing a variety of niche systems, best of breed systems, and various forms of enterprise resource planning offerings; the organization’s analysis led them to agree upon an ERP system to provide the finance, human resources, and supply chain capabilities, along with a system for CRM and a system for asset and service management.

Why three versus one? During analysis and comparison of the business processes the ERP system was found to support the majority of business processes required by finance, human resources, and supply chain. However, it did not support a majority of processes that the organization relies upon for the assets under management, and its customer relationship management. In essence, the organization selected rational suites to meet its needs, and thus ensure the benefits promised by system consolidation will be realized and not undermined by the isolated applications that would have inevitably been developed and support to fill the gaps left by irrational consolidation. Figure 5a shows the organization’s business processes which were determined to be supported by the ERP system. Figure 5b illustrates the outcome of the organization's analysis designed to look for commonality amongst the processes not supported by the ERP system. This further analysis was designed to facilitate selecting a rational suite to support these business processes, as opposed to selecting niche solutions for each process or grouping of processes — remember the balancing act!

Figure 5a — Analysis: Business Processes Supported by ERP

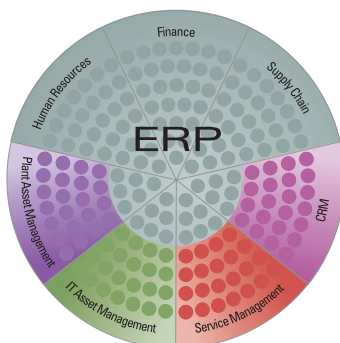
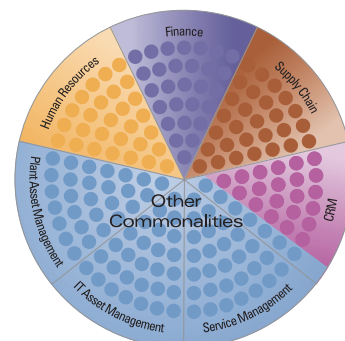


Figure 5b — Further Analysis: Looking for Commonality and a Rational Suite





Conclusion

A system consolidation strategy should center on an umbrella of core competency. To use an everyday example, your accountant and your dentist are both well-educated, competent service professionals. However, just because they share those traits doesn't mean you would trade one for the other just to "consolidate" the bills you receive and the checks you have to write. Think about their processes, and the services they provide. You don't want your accountant filling your cavity. The same is true for your systems' needs. Your organization's accounting or human resource software does not possess the unique capabilities to help you manage your mission-critical production, facilities, transportation or IT assets.

Consolidating systems offers huge opportunities for gains in productivity, elimination of cost from the IT budget, and certainly improves an organization's agility. It eliminates the historical drift towards stovepipe or niche systems by providing appropriate systems for critical roles and stakeholders within the organization. In effect, grouping like business processes and utilizing rational suites to eliminate duplication, waste and false prioritization due to lack of visibility, training requirements, and a host of other activities that waste critical resources like time and money. It is a consolidation strategy under an umbrella of core competency — it is consolidation that makes sense!

Source

Keynote address at MRO World 2004 by Chip Drapeau, President and CEO, MRO Software, Inc.

About MRO Software, Inc.

MRO Software is the leading provider of solutions for strategic asset management. The Company's integrated suite of applications optimizes performance, improves productivity and service levels and enables asset-related sourcing and procurement across the entire spectrum of strategic assets.

The Company's asset management solutions allow customers to manage the complete life cycle of strategic assets including: planning, procurement, deployment, tracking, maintenance and retirement. Using MRO Software's solutions customers improve production reliability, labor efficiency, material optimization, software license compliance, lease management, warranty and service management and provisioning across the asset base.

MRO Software (Nasdaq: MROI - News) is a global company based in Bedford, Mass., with approximately 900 employees, 10,000 customers and more than 260,000 end-users. The Company markets its products through a direct sales organization in combination with a network of international distributors. MRO Software has sales offices throughout North America, Europe, Asia/Pacific and Latin America. Additional information on MRO Software can be found at <http://www.mro.com>.

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