

The Future of Asset Management

Written by S. Bradley Peterson, Strategic Asset Management, Inc.
Saturday, 01 May 2004 10:23

Strategic asset management integrates all aspects of an organization into the process, easing the implementation and leading toward financial success.

Strategic asset management (SAM) is a broader vision for asset management than previously has been articulated. SAM is an integrated set of processes that systematically derive the highest value from plant assets through a consistent philosophy, plans and objectives, and cooperative involvement by everyone in the plant.

For strategic asset management to be successful, it must have three key elements: lead, execute, and enable ([Fig. 1](#)).

Lead

Leadership in the plant involves creating consistency of purpose and action. Manufacturing is a set of complex and interrelated systems of marketing, technology, finance, human resources, execution functions, and equipment. Physical asset management must take all of these into account.

Putting things as simply as possible into the SAM model, leading consists of the managing system, strategic planning, and information management.

Managing system. Disciplined, aligned action is the underpinning of any human endeavor. That is the purpose of the managing system ([Fig. 2](#)). Among the elements found here are:

- Top down and cascaded goals. Goals of profitability at the company level become volume and product mix goals for the plant. At the unit level, these become volume goals, equating to equipment availability and product quality goals. For the operator, these become daily production and equipment surveillance goals. For the craftsman, they become equipment condition goals.

- Plan, do, review. Even a planned and scheduled job does not improve the system without a review process to examine the effectiveness of the plan, the execution of results, and a critical understanding of what is happening with the equipment.

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- Measurement systems. Assuring that in addition to outcome (lagging) indicators, each job in the plant has process (leading) indicators will enable each worker to make a more positive contribution.
- Reward systems. A plant may reward behavior through promotion, admiration, or overtime pay. However, be careful that the reward systems actually encourage proactive behavior. Proactive maintenance cannot happen in a reactive managing environment.
- Clear roles, responsibilities, and accountabilities. If job expectations are not clear and results are not measurable, there is muddled accountability. Because fingers point in all directions, being proactive in such a system takes more courage than most people will risk.
- Feedback. This is part of the plan, do, review process but it gets special emphasis. We shape behavior by giving honest feedback without punishment. Under the right circumstances people want to improve. Leadership fails if it does not capture that spirit.

Strategic planning. In every plant environment there are the same (legitimate) complaints: "Improving maintenance is important, but we just do not have time. We have four major plant initiatives and five corporate initiatives and do not know how any of them are going to get done!" Or, "Everything we do is a 'flavor of the month.' We seem to start lots of stuff, but never finish."

The product of functional strategic planning is alignment around a multi-year improvement plan. To get alignment requires more than a few words in a book; it requires that every level of the organization believes the plan makes the best use of the company's resources. This means there must be a real and compelling business case for the senior executives. For plant executives, it means working on those things that are most practical and that make a difference in daily control of the work and reduction of variance. For the staff, it means an understanding of the support they must render to enable the plan to be successful.

Creating the strategic plan involves:

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- Benchmarking the function. Where are we today? What are the measures saying?
- Developing a vision for the future of plant operations. This difficult task sometimes requires “industrial tourism” to see the bigger picture, and using outside help to understand what is possible. This part has to be done right, or the plan will fall apart.
- Identifying gaps. Where do we fall short of the vision?
- Identifying strategies to close gaps. It would be easy to shortcut this task, but it is one strategy that may cover several gaps. For instance, a distributed control system may be a strategy that helps with product quality, product mix direction, faster changeovers, and equipment condition monitoring.
- Describing projects to implement strategies. This can be a creative step—an integrating force. For instance, a planning and scheduling project may combine with a safety improvement initiative, or a preventive maintenance improvement may combine with an ISO calibration standard.
- Developing the implementation plan. This step will require resources—do not shortcut or lowball what the implementation will require.
- Developing the business case. Integrating the initiatives into a single strategic plan can avoid the silliness of double-counting for results. Was contractor reduction due to the purchasing initiative or planning and scheduling? No one will care, as long as the goals for contractor reduction were met, and the project stayed within the resource guidelines requested and approved.
- Creating the implementation governance structure. Plant leadership integrates the strategic plan into the annual planning cycle, and the entire managing system is engaged to see that the results of the strategic plan have accountabilities built into the entire organization.

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Information management. As of the end of the last century most plants are working with an ERP system. Initial results are typically negative—the new system is hard to use and it is difficult to get reports. But slowly organizations learn to live with and even like the new systems.

A deficiency typically found in IT is confusion regarding the difference between the system and the tool. The system is a set of internal processes and procedures. The tool may be the SAP PM module. When actual work process and methods are not reflected in the tool, the disconnect creates great dissatisfaction and waste; when integrated, there is great synergy to get information to manage the business.

Execute

Four areas are the typical focus of the execution of the SAM process. If done well, they lead to excellence.

- Capacity development is usually considered to be the design engineering and project management function, which consumes millions of dollars in what are often risky bets made on optimum market assumptions. A thoughtful and disciplined method to assure excellence in the assumptions, design, construction, and preparation for production can be a valuable tool.
- Production management is the vehicle for value creation. Everyone in the plant understands that production is the reason for being.
- Asset healthcare management might be considered maintenance and reliability, but it is concerned with optimizing and integrating all parts of the business based on risk and value and so goes beyond the traditional boundaries of maintenance and reliability.
- Logistics include materials management, purchasing, and movements of people and materials. This function can make or break the production and asset healthcare management functions.

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For an image of how these four components of the execute level work, visit www.samicorp.com/methodspages/samipyramid.html.

Enable

Many programs for change are viewed as a simple matter of documenting procedures and providing training. If these things are done, change should happen.

However, human nature does not work that way. Prescriptive formulations may work for machinery, but the human machine is more complex. Some criteria for change of any kind to take hold in the plant are:

- Intellectually it makes sense to the plant population. The workers must understand that improved productivity will likely result from the program.
- The plant population has a major say in how it will happen. They have the power, collectively, to determine whether it will proceed and how it will proceed.
- The plant population sees true commitment to the results, which could mean an executive's future is tied to making this happen, it has worked somewhere else that is similar to their environment, the leadership team are all on board with no quibbling or sidebars, the results are measured and posted at visible locations in the plant, or valuable line people are assigned to the job, taken from other important tasks.

Enabling employees to execute the plan works best when three elements are in play: consensus, peer support, and empowerment.

Consensus. Both leaders and workers should have some sort of a say. The plant's leadership team, at the appropriate level, must have consensus to proceed. Do not violate the cardinal rule: Anyone who has not been consulted does not feel he has to support the decision. No matter how assured the person at the top of the organization is that the group

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will follow the decision, lack of commitment by the entire leadership team is the number one cause of failure for improvement initiatives.

In many cases, leadership wants the hourly workers to be willing to change; the hourly workers in turn challenge leadership to do its job and lead with strength of purpose, consistency, and high standards. The assessment process brings these views together, enabling them to see they want the same results: a productive, safe, and competitive workplace where people are valued.

Peer support. It is also important to develop a workable process and passionate owners. Most plants have a work process design phase. The designers, typically a team of 8-10 part-time people, represent all types of jobs and all levels of the organization. This team goes through the forming, storming, norming, and performing stages of development. They should be prepared for the "J curve" effect (they go down emotionally before they go up). Their product is a completely thought out work management process, with all the details that will enable it to work in their environment.

Usually the product is 95 percent the same at any plant. The 5 percent difference is critical, though, in making the process work. The most important result of the design is a team of people who see the future and are passionate about making that future happen.

Only when workers see peers passionate about change will they pay attention. Outsiders (consultants) are seen as nuisances to be avoided. But if a respected peer is deeply committed to a new method of work, team members will pay attention.

Empowerment. Empowerment has a bad connotation from the failures of quality programs in the 1980s and early 1990s. The popular method of empowerment was a week's worth of training in "soft skills," and an admonition that employees should step up and be their own bosses. The result was lack of direction, anger, disempowered supervisors and management, and a decrease in productivity. Empowerment as implemented not only did not work, but it made things worse.

Actual empowerment is enabling a worker to do more and to take responsibility for his own performance. This is best done with a disciplined, well-defined system that the worker can

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follow and be successful in.

Next, the worker should be successful in an expanded role. It is possible that employees can work at much higher levels than they are today. (See accompanying section "[Roles of Employees in Reactive vs Proactive Environments](#)".")

Changing these roles is partially a matter of removing obstacles to being proactive and clarifying expectations, roles, and responsibilities. But to a significant extent there is a requirement to assist people to be able to fill new roles. This requires training, coaching, and testing the limits of the individuals in the job. Some operators are mechanically inclined, and some are not. Some will be eager to take on new roles, and some very resistant. Development takes time and energy for a supervisor to be able to understand what is possible and work with each person on a specific development program, customized to the specific task, and the native abilities of the worker.

Finally, a worker needs the tools to understand whether he is mastering the job including measures, feedback, coaching, and encouragement. Empowerment is the result of a disciplined system of work, not a prerequisite.

Results

Leadership alignment around the strategic direction of the organization may be the single most important result of implementing the SAM model. This cohesiveness within an organization will lead to financial results as well. [Fig. 3](#) depicts an actual cost/benefit analysis detailing financial benefits from increased efficiency and increased plant capacity vs the costs of implementing the SAM model over a period of a number of years.

SAM emphasizes a logical approach to best practices. However, functional excellence will never be enough to be the best. Leadership brings all the pieces together in an optimized set of systems, especially through the managing system and strategic plan. Also, success will follow if workers endorse and participate in the process. They must be enabled to bring the desired success. **MT**

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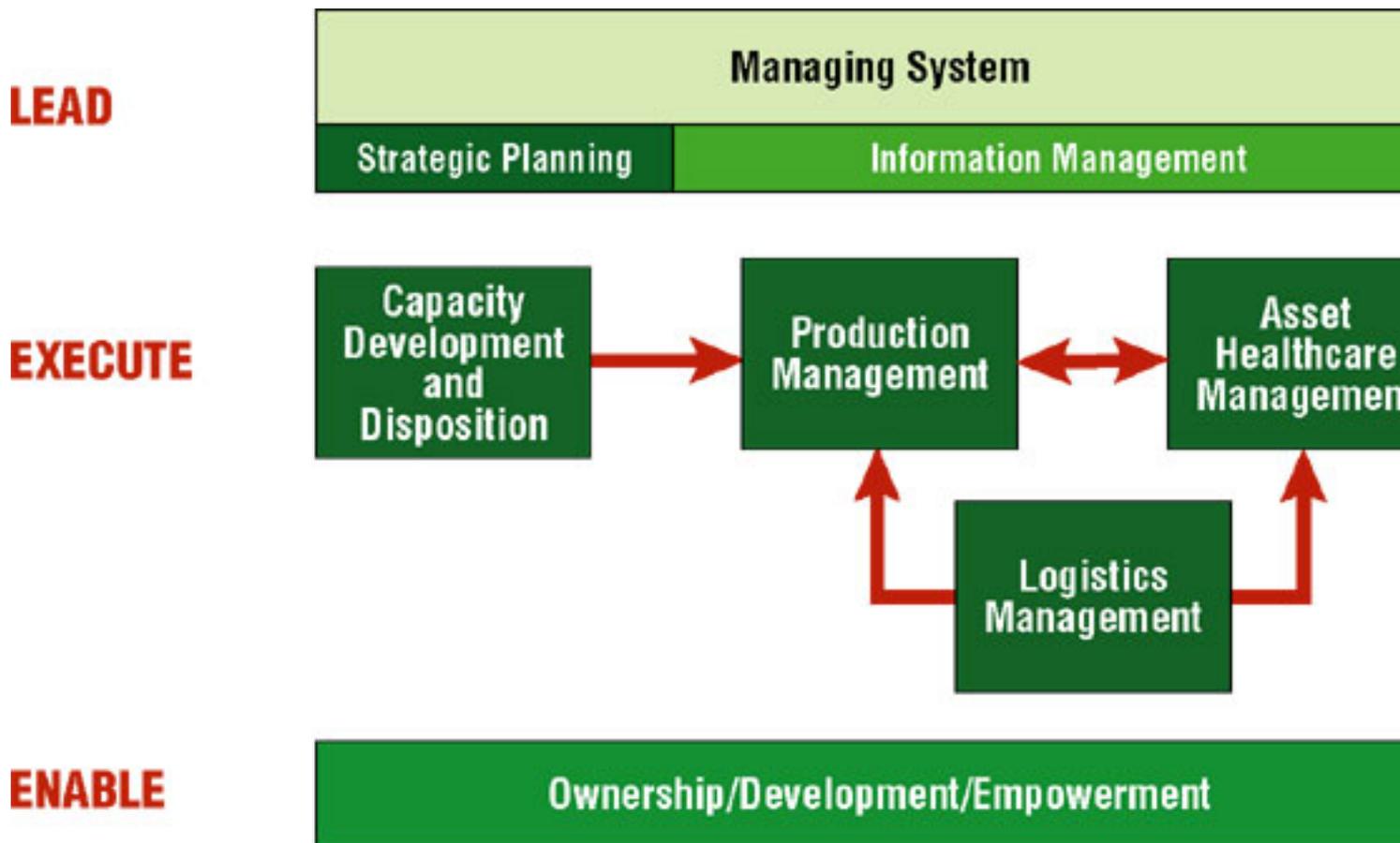


Fig. 1. Implementing a successful strategic asset management program involves three key elements: lead, execute, and enable.

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The Managing System

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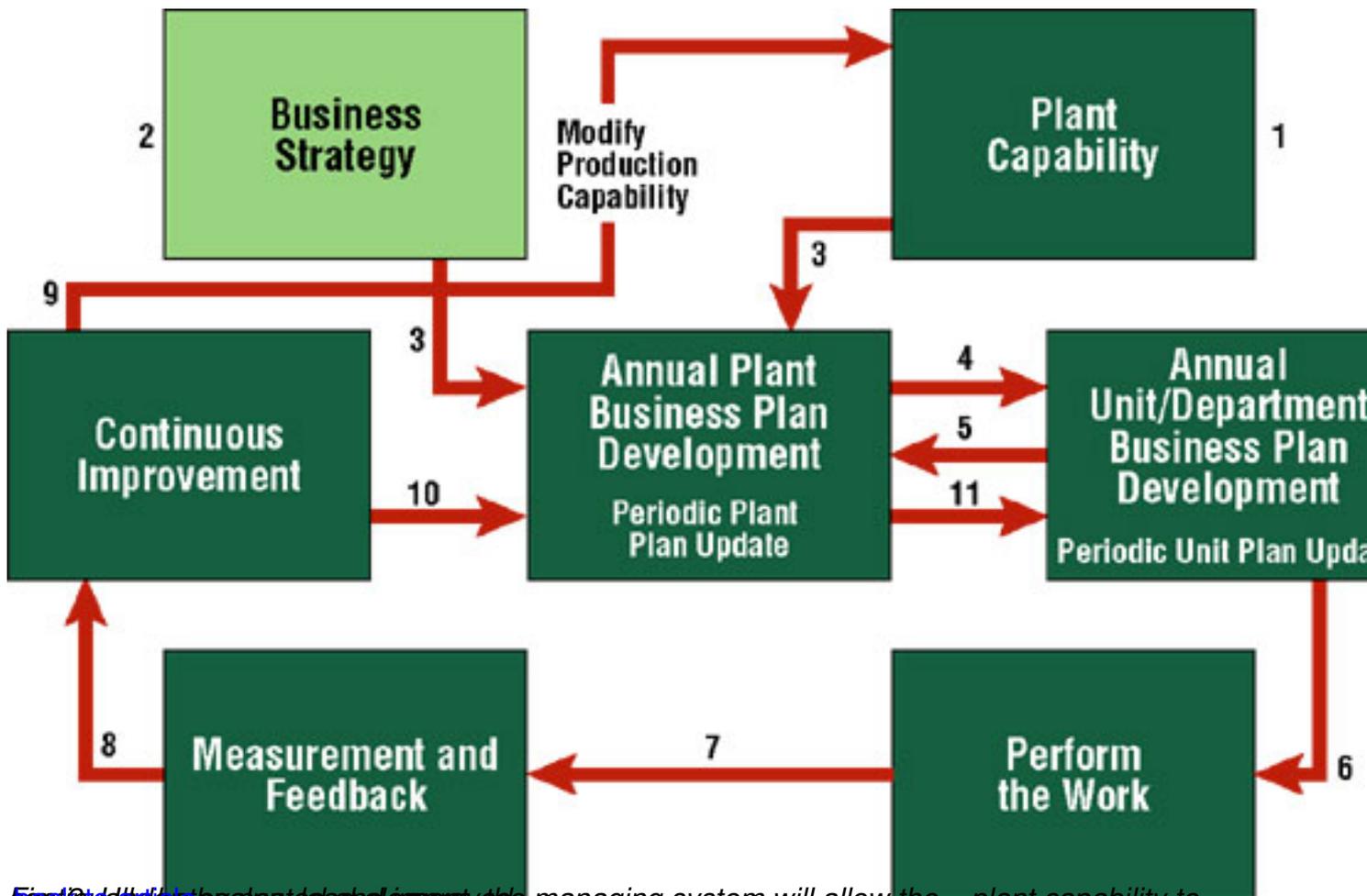
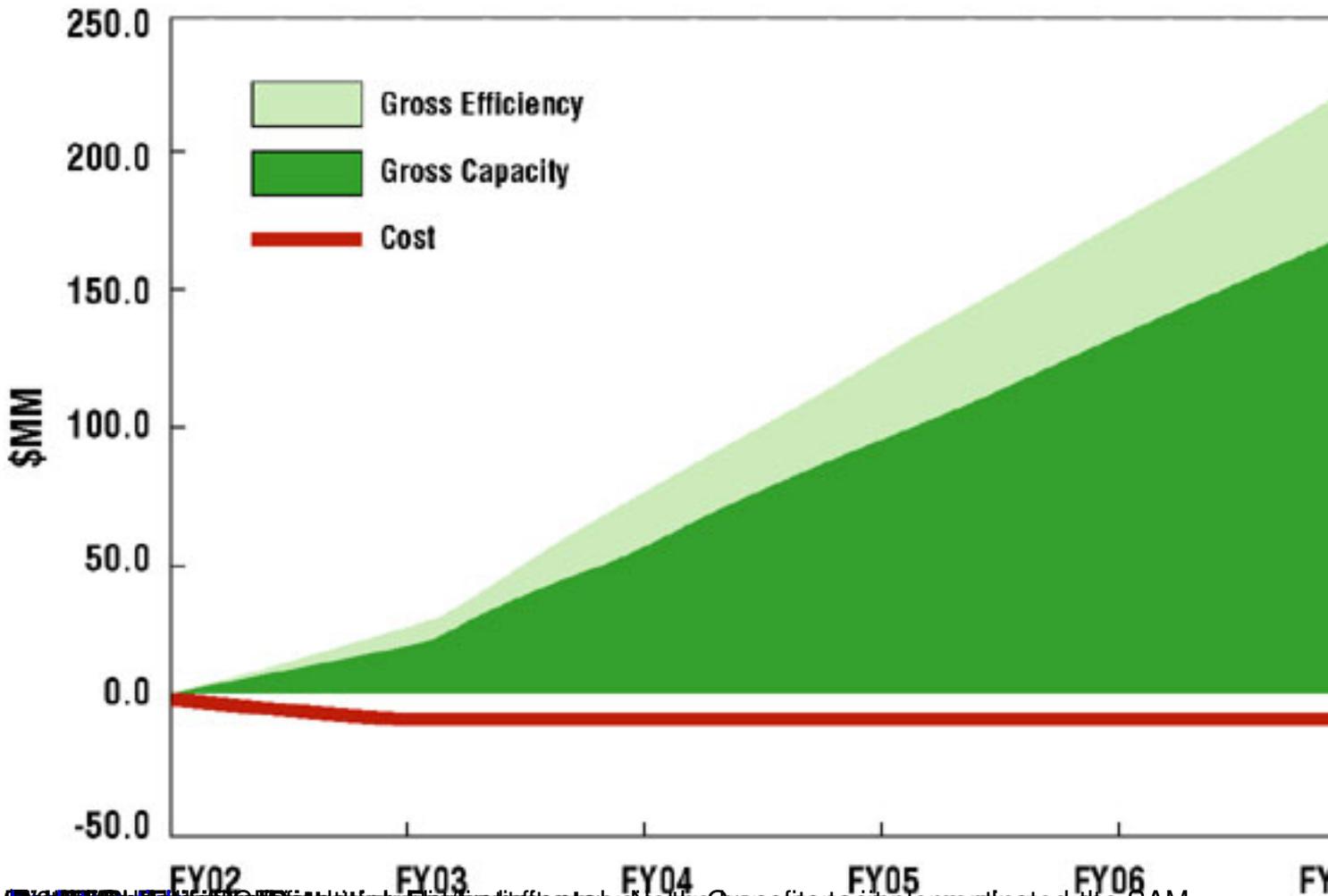


Figure 10 illustrates how a decentralized, multiple managing system will allow the plant capability to
Cumulative Cost/Benefit for Implementing Strategic Plan

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Characteristics of Success

Any useful model to guide action will have several characteristics:

- Simplicity. All of the greatest ideas are simple in concept. If not kept simple, they are not fully understood or remembered and fail as guiding principles.
- Intuitiveness. Readers should be able to understand the underlying principles without guidance.
- Utility. The model should work consistently in application.
- Completeness. All necessary elements of success should be contained.