

WHITE PAPER

A Pragmatic Approach for Asset Management Planning

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Strategy and planning should be at the heart of every organization. Success depends on many factors, including maintaining line of sight from organizational strategy to operational challenges.



Asset management has everything to do with strategy. According to ISO 55000, asset management is the coordinated activity of an organization to realize value from assets. The description used in the British Standards Institution’s Publicly Available Specification-55: 2008 predates ISO 55000, but builds on it by describing asset management as “the systematic and coordinated activities and practices through which an organization optimally and sustainably manages its assets and asset systems, their associated performance, risks and expenditures over their life cycles for the purpose of achieving its organizational strategic plan.”

This definition covers a complex array of interrelated components that must be considered together to optimize overall organizational performance. In breaking this definition down — even at a high level — a need for an assessment framework to understand and guide improvements for these components can be seen:

- “... systematic and coordinated activities and practices” indicates that the activities involved in asset management need to be systematic — that is, the need for creation and adoption of methods and practices that are organized and coordinated together as parts of a formal asset management system. Coordinated activities and practices require a strategy.
- “... through which an organization optimally and sustainably manages its assets and asset systems” highlights the fact that the goal of the framework is to optimize the management of assets. Many drivers and constraints must be considered in this optimization process and these are often in conflict with each other. Also indicated here is the idea that some assets may be individually managed, whereas others may be grouped together in an asset system to be managed together.

- “... their associated performance, risks and expenditures” exposes the decisions that need to be made on a quantifiable and auditable basis to optimize overall asset management. It also highlights some of the trade-offs and decisions that need to be made in terms of balancing expenditure and risk and how they impact performance of the assets and asset systems. This necessitates careful planning.
- “... over their life cycles” highlights the importance of inter- and intrabudget cycle decisions that impact different parts of the organization and the impact of temporal components of asset performance on their overall optimization such that short-term false economies are not claimed at the expense of long-term optimization against organizational objectives.
- “... for the purpose of achieving its organizational strategic plan” brings the focus back to the business and organizational objectives and the effects of changing demands over time on the asset portfolio. It also recognizes that a strategic plan is necessary.

A Strategic Plan

Strategic planning is an organization’s process of defining its strategy, or direction, and making decisions about allocating its resources to pursue this strategy. At the highest levels, corporate strategy takes a semiabstracted portfolio approach by aggregating all resources across the enterprise to determine optimized value creation. This top-down intent directs business units on growth and profitability expectations in which they subsequently make utilization and allocation decisions regarding their assets.

It is this process that provides clean line of sight to management. It provides orchestration and the ability for organizations to adapt to market demands, accommodate changes in technology or supply chain, or make other necessary macro shifts. It links the financial performance and health of an organization to the physical assets at the operational level. A comprehensive strategic planning process down to the individual asset level can equate to greater value generation out of each layer of a corporate hierarchy than would be achievable if done absent of a process and framework.

Further, for an organization’s vision and mission to be effective, they must become assimilated into the organization’s culture. They should also be assessed internally and externally. The internal assessment should focus on how members inside the organization interpret their mission statement. The external assessment (including assessment from the business’s stakeholders) is valuable, since it offers a different perspective.

Discrepancies between these two assessments can provide insight into the effectiveness of an organization’s strategy. While failing to plan is not always a plan for failure, planning and strategy provide a foundation for deciding what an organization wants to do and how it intends to achieve it.

It is also said that no plan survives implementation. This is not a bad thing. Spending too long creating the “perfect” plan creates a tendency to adhere strictly to plan and blindly follow it rather than asking why the plan has been disrupted, looking for the causes, and adapting to or mitigating them. We create strategies and plans so that we can achieve our objectives. This usually includes improving what we do through the “plan, do, check, act” (PDCA) method of continual improvement.

Refining the plan to account for changes in implementation is necessary to stay aligned with strategy. If we don’t have an organizational strategy or plans for implementation, then how do we know if we are effectively executing on the strategy and delivering the benefits that the organization is expecting?

Line of Sight

Many, if not most (or all), organizations have business silos. Seeing that these business units collaborate to provide line of sight for asset management is no simple task. The simple approach taken by many for day-to-day operations is to stick to the same routine in the short term as opposed to examining what outcomes the organization expects to achieve and whether they are being delivered at all levels. In other words, it is easy to simply keep doing things the same way and focusing on what needs to be done, or appears so, in the short term.

Line of sight means aligning the top-down aspirations of an organization with the bottom-up realities and opportunities of operational use of assets. It is making sure that the focus stays on the outcomes — requiring information sharing and optimization between silos that begins before an asset is purchased and continues after it is retired.

As noted in Hammer & Champy’s “Reengineering the Corporation: A Manifesto for Business Revolution,” “without strong leadership, there will be no one to persuade the barons running functional silos within the company to subordinate the interests of their functional areas to those of the processes that cross their boundaries.” Silos typically perform well in terms of how they are being measured because they are being measured by the performance of the silos and not the entire organization. That means that processes can break down — and that hurts an organization’s ability to meet objectives.

The ability to support multiple hierarchical structures is important so that costs, risks and benefits can be aggregated, and plans can be combined and compared. From a planning perspective, whether capital or operating expense, this will sometimes mean executing separate projects. Sometimes it will mean combining related projects within a portfolio. Sometimes it will mean that projects do not get funded at all or are deferred due to how they contribute (or don’t) to organizational objectives.

Taking a holistic approach to processes is one of the keys to seeing that line of sight is not broken within asset management. If everyone is only focused on their individual piece of the process, intraprocess handoff problems can languish for long periods of time, leading to missed deadlines and inconsistent results. Silos performing their subprocesses well while the overall process is compromised is not helpful to an organization.

Confirming that line of sight exists means getting alignment between people, processes and technology. We can make more informed decisions and track our alignment with goals through business intelligence, and for the three elements to be aligned also requires good information.

People

The effectiveness and success of an organization lie not only in the organization's products or services, but in its resources. Most organizations have three major resources available to them to use; these resources include physical resources, financial resources and resources that relate directly to organizational behavior.

Physical resources include things such as buildings, property, vehicles, supplies and other items that the organization has at its disposal. Physical resources are generally tangible items — such as computers, paper, delivery vehicles, cooking supplies, telephones, etc. — that the organization uses to do what it needs to get done. The types of physical resources that an organization has or needs depends greatly on what services or products the organization offers.

Financial resources are less broad and include things such as budgets for expenditures and funds available to the organization.

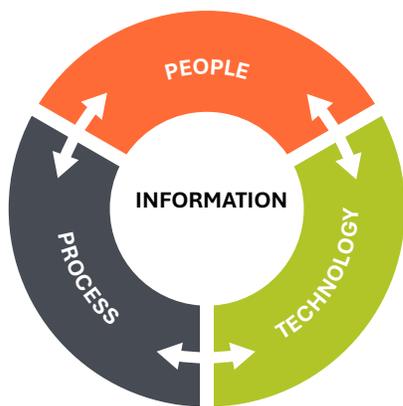


Figure 1: People, processes and technology are all connected, influencing one another through the creation, exchange and consumption of information.

The last type of resource available to organizations is a resource that is directly linked to organizational behavior. This resource focuses mostly on the people within the organization, their experiences, their work ethics, their attitudes and abilities, knowledge and decision-making skills.

People are of paramount importance in the organization — they comprise the human element of the organization. As noted by the Institute of Asset Management's (IAM) "Asset Management — An Anatomy," it is people who do asset management, providing the hands that do the work of the organization, and leading and managing the organization. The integrity of any organization, its effectiveness in achieving its purpose and even its continued existence all depend entirely on the people who work there.

Process

At its simplest level, a process is a set of interrelated activities where resources are utilized to transform inputs into outputs. Processes are interconnected because the output from one process becomes the input for another process. Ask any ISO 9001 auditor and the chances are you'll hear that the handoff between processes is where most problems occur. This means that the management of the processes that make up the organization, its vendors and service providers, the interrelated processes, and the inputs and outputs that tie these processes together need to be part of an overall management strategy.

The Capability Maturity Model (CMM) was initially introduced to help the Department of Defense choose contractors for software development projects. It showed that an organization with a higher maturity level, as measured by CMM, deserved a lower risk premium because it was more predictable and capable. Predictability and capability are what we desire with processes. Without capability, quality will be poor; without predictability, quality will be uncertain.

Having to go back to fix problems in processes can be expensive and difficult to plan for since it is the result of a breakdown in quality. Determining the root cause of rework requires good documentation and investigation. If problems persist with mature, predictable processes, then quality can be improved by modifying the process.

Information

It has been said that information is power. The importance of information to individuals and organizations, and therefore the need to manage it, is growing rapidly. Now more than ever, we need to understand the critical role information plays in business. It drives communication, decision-making, and reactions to the industry and market environment. Information is the lifeblood of modern organizations and will continue to become even more important.

Information is a critical resource for performing work in organizations. Business managers spend most of their day in meetings, reading, writing and communicating with other managers, subordinates, customers, vendors and other stakeholders in person, virtually, or by email. Management is, in one sense, information processing. It involves gathering, processing and disseminating information. Managing information involves coping with myriad information sources and, ultimately, making decisions about which sources to use and what to do with the information from those sources.

Decision-making is the process of identifying, selecting and implementing alternatives. The right information, in the right form, at the right time is needed to make decisions. Each alternative can then be evaluated based on feasibility, cost, time to implement, consistency with corporate strategy and other criteria.

On the basis of their assessments, executives can select the alternative that makes the most business sense and begin implementation. Finally, information can be gathered to assess the quality of the decisions that were made. For organizations today and in the future, there must be a focus on master data management and secure, yet rapid, information sharing.

Technology

Technology helps businesses to expand in a more rapid, effective and efficient manner. Information technology is important to the business sector as a management tool to optimize the processing of information to produce goods and services. The effective and efficient processing of information related to achieving quality assurance goals is key to the delivery of quality goods and services to customers. Information and operational technologies have become fundamental to situational awareness, and analysis of new risks and opportunities is critical to ongoing success.

GFMAM and IAM Strategy Elements

Over time, through collaboration and thought leadership by both the Global Forum on Maintenance & Asset Management (GFMAM) and IAM, early concepts of asset management were refined, classified into six primary topics and subdivided into 39 subject areas. These subject areas have been outlined in the GFMAM publication “The Asset Management Landscape” and the IAM publication “Asset Management — An Anatomy.” The following discussion focuses on the subjects that fall within the Strategy & Planning group in this landscape.

Asset Management Policy

Asset management policy, according to IAM, comprises the principles and mandated requirements derived from and consistent with the organizational plan, to provide a framework

for the development and implementation of the strategic asset management plan (SAMP) and the setting of the asset management objectives.

Asset management policy forms the foundation for asset management within an organization. For the foundation to be effective it needs to have authority and needs to be authorized by a corporate sponsor in senior management. The policy does not need to be complicated but should be consistent with other organizational plans and policies. Consistency is important and necessary for processes to be effective. The policy also needs to be appropriate for the types and scale of the assets it addresses and commit to satisfy statutory requirements.

There is a large degree of variability in organizational size and the types of legislation and regulation that each is required to comply with and the requirements that this creates. This means that policy for different organizations and assets will look different but should still address the same basic requirements including supporting continual improvement, developing a framework that enables specific management objectives, and building a multidisciplinary stakeholder base both internally and externally.

Asset Management Strategy and Objectives

There needs to be a strategic plan for the management of an organization’s assets to achieve organizational objectives. ISO 55000 refers to this asset management strategy as a strategic asset management plan, or SAMP. The strategy describes the long-term approach for the management of physical assets; specifies how organizational objectives are to be converted into asset management objectives; describes how to develop asset management plan(s); and defines the role of the asset management system (AMS) in supporting the achievement of asset management objectives.

The AMS — not a software solution, but a set of processes that enable the various roles to work together — must consider the people, processes, information and technology that will be used to implement the strategy as described earlier. Communication of the strategy helps to maintain alignment of objectives and maintains line of sight. While this may not eliminate silos, the use of the framework described in the organization’s asset management policy can encourage performance goals that include collaboration with other operating units and that are holistically focused on achieving success for the whole process, not just one department’s subprocess and individual requirements.

Demand Analysis

Demand analysis, according to IAM, is the name given to the processes an organization uses to both assess and influence the demand for, and level of service from, an organization’s assets.

It typically includes the analysis of future demand for the product or services being offered and the requirements this demand will place on the asset portfolio.

Clearly there are many factors that can and do influence demand analysis. These will vary considerably from industry to industry, with the result being that different types of organizations become more adept at different parts of this type of analysis. Ultimately, poor demand analysis will result in suboptimal strategic asset management plans or introduce risk of failures.

Historical demand is often used as a baseline for future demand but, depending on the nature of the business and its susceptibility to evolve or be somewhat unpredictable, this may be either a significant driver of demand analysis or it could play a much less significant role. Understanding the drivers for changes in demand is a valuable skill and this includes staying aware of changes in external policy, such as legislation and regulation as these also play an important role in demand analysis.

Strategic Planning

Strategic planning represents the processes an organization uses to undertake strategic asset management planning, (SAMP) to establish asset management objectives and develop the SAMP. It includes:

- How the organization is to address the outputs from demand analysis.
- The processes for determining long-term renewal, enhancement and maintenance work volumes.
- The associated risks and costs to meet the asset management objectives.

IAM says asset management strategic planning is usually undertaken as part of the overall organizational strategic planning process.

Strategic planning should address various scenarios and potential changes that will affect the organization. These plans need to reflect potential changes that may occur from a variety of sources — both internal and external — that may impact demand, funding and, therefore, risk.

Asset Management Planning

The activities needed to develop the SAMPs must be specified as resources, responsibilities, time scales and risks for the achievement of the asset management objectives. Asset management planning follows on from the strategic planning process.

As one might expect, the asset management planning subject is where the process of creating detailed asset management plans starts. This means looking at all the activities required to implement the AMS including the specific activities to be performed, the costs and resources to deliver those activities, the outcomes expected of them, and how risks and opportunities will be addressed.

Conclusion

Taking an ad hoc approach to asset management forces organizations to be reactive, which limits their ability to manage their asset infrastructure efficiently, including the people who do the work. Having a senior sponsor for asset management allows the development of policies and plans that help coordinate asset management activities and create a consistent approach that is aligned with the organization's objectives. By not being reactive, the process enables a more prepared response to current activities and provides a solid foundation for planning ahead while preparing an organization for change and risk that may occur.

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