

A Vision of an ISO 55000 Compliant Company

This document describes the characteristics of an organization that reflects the benefits of adopting the ISO 55000 requirements for an Asset Management System.



Introduction

ISO 55000 refers to a series of three standards outlining the purpose, requirements, and implementation guidance for an Asset Management System. They are intended to enable an organization that is adopting them to achieve sustainable business objectives through effective and efficient management of assets. They also enable the organization to extract maximum value from their assets by balancing risk, cost, and asset performance.

The ISO 55000 requirements for an Asset Management (AM) System are similar to other ISO Management System standards, including ISO 9001 for Quality Management and ISO 14001 for Environmental Management. It consists of requirements for leadership, planning, support mechanisms, performance evaluation, and continual improvement. So what are the characteristics of an organization that would benefit from adopting it?

Definitions

First, we need to define an asset. Per the standard, an asset is “a thing, item, or entity that has potential or actual value to an organization.” Assets can be tangible (like property, plant, or equipment) or intangible (like product brands or intellectual property). The perception of that value will be different to different parts of the organization and its internal and external stakeholders. For example, if we consider a chemical process plant, the value to the business unit may be the revenue produced by its output. The value to the accounting department may be its depreciated book value. The value to the plant’s neighbors may be the jobs produced by its operation—and the avoidance of hazards produced by chemical spills and releases.

Second, we need to define asset management. Per the standard, it is a discipline that “involves the balancing of costs, opportunities, and risks against the desired performance of assets, to achieve the organizational objectives.” Asset management, as a discipline, aligns the organization’s objectives with the abilities of the assets to carry out those objectives and produce their maximum value.

Finally, we need to define an asset management system. Per the standard, it is “the set of interrelated and interacting elements of an organization, whose function is to establish asset management policy and asset management objectives, and the processes needed to achieve those objectives.” It is the means by which the organization practices the discipline of asset management. The elements of the asset management system are an integrated set of tools, such as policies, plans, processes, and information systems that ensure that the asset management objectives are achieved.

The implementation of ISO 55000 is not expected to be a Herculean undertaking for most organizations; most companies we have worked with have some of the elements already in place, but the elements are not brought together in a cohesive plan that is linked to the overall business strategy of the organization. As a result, the effort may be geared more toward refining existing elements and tying them together than developing the entire system from scratch. However, it is unlikely that a single element (such as a software package) can fulfill all the requirements of an ISO 55000 compliant system as will be discussed in the remainder of this paper.

Characteristics of an ISO 55000 Compliant Organization

The organization that practices asset management in compliance with the ISO 55000 Standard will have several characteristics that set it apart from its peers. First among these will be a clear understanding how their assets—physical or non-physical, tangible or intangible—enable them to attain the mission and goals of the organization. There will be clear alignment and “line of sight” between their overall business objectives and the tactical activities that take place every day related to those assets. This “line of sight” will enable all functions in the organization to understand how what they do translates to business results, helping them to avoid making decisions that would result in sub-optimizing one function at the expense of another to the detriment of the assets.

Ownership and accountability for asset management remains at a top-management level, and they continually demonstrate the leadership traits necessary for effective asset management. The executive team fosters a culture of discipline that is focused on delivering the asset management objectives. They use asset management related decision criteria when making capital deployment

decisions and work to ensure that the organization views asset management at the same level of importance as safety, environmental, quality, and other considerations. They monitor the performance of the asset management system and ensure corrective or preventive actions are implemented as appropriate. In addition, they ensure that the function of asset management and the operation of the asset management system are aligned with all other organizational functions and that personnel in critical roles within the asset management system have the responsibilities, authorities, and competencies to carry out that role.

Employees in such an organization will speak more in terms of value than cost, and will clearly understand how the assets produce that value. Their behaviors will reflect this understanding and will be consistent in capturing and preserving that value. Decisions will be made by considering a “whole life” view of asset management rather than a short-term focus, and lower life-cycle costs will be the result.

The organization will have conducted a stakeholder analysis that determines all stakeholders in the enterprise—both internal and external—along with their needs, expectations, and their perception of the value that the organization brings. There will be specific requirements for stakeholder communication to the level appropriate to the stakeholder group. This will include routine communications as well as guidance for communication in non-routine circumstances.

The organization will have a clear understanding of the risks and opportunities presented by the assets. They will understand the potential negative consequences to business value (whether financial, reputation, or other value characteristics) that the assets present if not managed correctly. With this in mind, they will be able to demonstrate competency in any function that is related to the assets, including design, procurement, installation, operation, maintenance, or disposal. There will be transparent conformity to any regulatory requirements related to the assets. The company will also be better positioned to capture opportunity by deploying capital where it would produce the greatest value. Understanding and addressing both risks and opportunities in this fashion will enhance the ability of the organization to meet its corporate and social obligations.

Developing the Management System

When reviewing the standard’s requirements in detail, it becomes obvious that gaining compliance is, by necessity, a top-down initiative driven by those responsible for setting strategic direction for the organization. The standard’s requirements force alignment between the business strategy, the asset’s abilities to carry out that strategy, and the tactical activities that ensure that the assets can continue to carry out that strategy. The organization must have the requisite level of discipline to do the little things necessary to maintain this “line of sight” alignment, and top management is responsible for creating a culture that maintains this discipline.

An Asset Management Policy must be developed that clearly defines how the organization will apply the discipline of Asset Management to achieve its organizational objectives. The policy will set the expectations and guidelines for decisions, activities, and behaviors concerning Asset Management that all personnel must follow. Implied within this policy will be objectives (called “asset management objectives”) that the Asset Management System will be responsible for achieving. The policy statement will be posted in prominent locations in the facility.

Top management will have clearly articulated the scope of the Asset Management System, including such elements as the assets that make up the portfolio within the system, interfaces with existing management systems (such as ISO 9001), and any organizational functions will be part of or interact with the system. This scope and its boundaries will have been communicated to all relevant internal and external stakeholders.

A high-level Strategic Asset Management Plan will have been developed that articulates the way in which the principles outlined in the Asset Management Policy will be implemented. The policy is the document that provides the link between the business objectives and the asset management objectives, and provides the framework for achieving those objectives. The Strategic Asset Management Plan is used in a cascading effect to create individual asset management plans that define the activities that will occur at the asset level.

Each asset (be it at the business unit, plant, asset system, or individual asset level) is covered by an Asset Management Plan. This plan defines how that asset is to be managed over its entire life cycle. It will consider any regulatory requirements and environmental influences that may be present and contain the asset's risk profile, including provisions for mitigating this risk to a tolerable level. It will spell out the asset's desired level of service and define the actions necessary to maintain this level of service and any changes in future demand. It will also give details of the capital and operating costs necessary to maintain this level of service, so the total life-cycle costs of the asset will be understood. There will be a line of sight to the organizational goals and vision, including provisions for adjustment or revision in the event of changes to the business or market influences.

The organization will have performed a "gap analysis" between resource requirements defined in the asset management plans and the available resources. A resourcing plan will have been developed to address these gaps, whether they are financial or human in nature. A separate gap analysis will have been performed between the competencies required in the asset management activities and the current knowledge, understanding, skills, and experience needed to fulfill them. This gap analysis will lead to training and development plans as well as succession plans for critical roles within the asset management system. Every individual with responsibilities and accountabilities that could have an impact on the asset management system will understand their roles and will be provided the support, training, and education needed to execute their duties effectively. In the event any of these responsibilities are outsourced to external service providers, the accountabilities for the effectiveness of the action are retained within the organization, so there is a method to identify any competency gaps with these external service providers as well.

The organization will have a communication plan in place to define the frequency and content of communication concerning asset management activities to both internal and external stakeholders. This will help build awareness among internal stakeholders about the importance that the organization places on asset management and the contribution each individual makes to the success of the asset management system. It also builds awareness about the potential risks inherent in operation of the assets to drive compliance with the asset management plan. For external stakeholders, this communication builds trust via the transparency and accountability that such communications provide.

The ISO 55000 compliant organization places a high value on its asset information, including process and service capabilities, technical and physical attributes and limitations, maintenance and repair history information, and performance data. Asset-related decisions are routinely made on the basis of information derived from data. The asset information is well maintained and retained for the life of the asset plus any period beyond disposal of the asset to satisfy legal and regulatory requirements.

Processes are in place that define how the different elements of the asset management system are to be executed and that ensure all personnel understand their role in making the processes work. Each process has performance measures that illustrate how well the process is functioning and provides early warning in the event of a deviation. A well-defined Management of Change process is in place that requires advanced scrutiny of proposed changes to identify and mitigate any potential unintended negative consequences. In the event that a change to the asset is made, all asset-related information is updated to ensure accuracy.

Any asset management activities that are outsourced have controls in place to ensure that the activities are executed as intended in the asset management plan, and the competency of the outsourced service provider to perform those activities is adequate. Processes are in place for governance of the outsourced activity, including performance monitoring, data capture, information exchange, and regular management review.

The organization continually monitors the performance of the asset management system through the use of performance measures, internal and external audits, and regular management review. This is done to ensure that the asset management system and policy continue to align with the business goals, the assets and the asset management system are functioning as intended, and the risks presented by the assets are within the organization's risk tolerance. Any problems or nonconformities that are identified through the above reviews are resolved via a formal corrective action system. The organization practices continual improvement by reviewing asset management plans, benchmarking other organizations, attending trade shows and conferences, and consulting with their suppliers and customers.

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Benefits

There are several significant benefits that accrue to an organization that is in compliance with ISO 55000. Because the organization clearly understands the risks inherent in its asset base and has taken proactive steps to mitigate threats, they should enjoy reduced regulatory scrutiny as well as lower insurance rates. Regular communication with the stakeholders and fewer unexpected issues should drive an enhanced reputation in the marketplace and an improved ability to meet social and corporate obligations. Their assets will not deteriorate unexpectedly because there is an asset management plan in place, leading to improved organizational sustainability. Finally, ISO 55000 compliant organizations should expect improved financial performance because the system in place extracts maximum value from its assets while minimizing operational risks. When a single asset management failure can erase billions of dollars in shareholder value, the organization's executive management team (the key to ISO 55000 implementation) are likely to find these benefits compelling.

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