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[Home](#) > Content

Why Management System Standards Add Value, Part 1

It's official: Companies get more revenue from using standards than they cost to implement

More than ever, businesses need ways to improve their operations to better gain, serve, and retain customers while reducing costs and improving margins. Implementing management systems and attaining third-party accredited certification can help businesses achieve success on all of these fronts. For many years, various media have discussed anecdotal information concerning the value of third-party accredited certification to management systems. Sound, documented evidence from academic studies now confirms the value of third-party accredited certification of management systems. In part one of this two-part article, we will summarize the history of management systems. In part two, we'll take a closer look at the evidence supporting their value.



The most noteworthy studies about management system standards in the last 20 years have dealt with the two most popular standards: ISO 9001 (quality management systems) and ISO 14001 (environmental management systems). In this article, we will focus not only on the value of these and other management systems, but also, in particular, on the value of accredited management systems certification. Most articles on this topic have been positive, but not many have been based on hard data. We've now reached the time to clearly communicate the data associated with the benefits of adopting management system standards.

Here are a few conclusions of recent studies (additional benefits and the specific data that supports these conclusions will be presented later in this article):

- Management systems standards return a bottom-line financial value larger than any investment or time incurred.
- Adopters of management system standards have higher rates of corporate survival than nonadopters.
- Adopters of management system standards have higher sales than nonadopters.
- Small businesses achieve proportionally more benefits than larger organizations.

How management system standards evolved

The creation and first use of management systems happened long before most people realize. In 1798, Eli Whitney signed a contract with the U.S. federal government to build 10,000 muskets. Whitney stated an intention of making the muskets with interchangeable parts—thus allowing a broken musket to be cannibalized to provide repair parts for another.

Whitney faced more than his share of problems in fulfilling this contract, especially when it came to managing changes (in products, documents, and processes, among others). When a defect was found or an improvement suggested that a change was needed, it was often difficult to manage and deploy, so Whitney came up with a set of rules to control these changes.

In addition, workers often had a preference for fixing an individual problem, rather than identifying and resolving its cause. Whitney resolved these and many other obstacles by developing a set of management practices that, when successfully implemented, prevented problems from occurring in the first place. These include:

- When a change is made, the organization must update and approve documents and then redistribute them to all users.
- When a problem occurs, the organization must identify the cause as the first step in resolution.

Whitney continued his work on the musket project between 1798 and 1810, during which time he developed many additional management practices that, over time, helped him prevent problems before they had an impact on his business and his customers.

During the next century, management practices expanded in scope and detail and were used increasingly by a variety of organizations. By the time Henry Ford began to mass-produce automobiles in 1913, management practices had grown to include components such as making sure employees are capable of a task before assigning it to them; purchasing from suppliers capable of meeting requirements, not just the ones with the lowest prices; and taking the needs of multiple business areas (e.g., production, purchasing, shipping) into consideration during product design.

World War II drove the next major additions to commonly accepted management practices. During the intense production demands, military procurement personnel realized that the suppliers whose top managers directly and actively engaged in running their operations produced the best

results. As a result, management practices associated with the roles of top management joined the list of existing management practices, including periodic review of processes and expectations, enforcement of responsibilities and accountability, establishment and regular communication of plans and policies, and requirement and support of consistent internal communication.

The need for transparency also arose from the urgent production demands of World War II. Customers (in WWII, often the military) needed to “see” what was going on inside supplier organizations so that they could have confidence in results. Because of this, transparency became an important management practice and came to include evidence of effective internal communication and task completion; documented procedures and instructions; and policies, manuals, and vision statements.

The transparency that resulted from these management practices provided value in three ways. It allowed customers and potential customers to see what was happening so that they had the confidence to make purchasing decisions; it allowed organizations to see and confirm that what they intended to be done was actually being done; and it allowed people to see and clearly know what was expected of them and what they needed to do.

Points to consider:

- Management practices are those activities used to anticipate, prevent, and resolve known problems. In the past, these practices were sometimes called “best practices.”
- Management practices were developed specifically to provide benefits to users.
- Management practices are compelling protocols for ensuring results.
- Once implemented, management practices help increase customer satisfaction and reduce costs.
- Management practices evolved into management systems.
- The list of management practices that has evolved during the last 50 years represents the collective wisdom of experts from around the world.
- The authors of current management systems standards have made great efforts to ensure that management systems are sufficiently flexible so that they add value to any organization, of any size or complexity, performing any task in any industry at any geographic location. These standards accommodate the need for both flexibility and discipline and consistency where needed.

Modern management systems

The management practices that emerged with Eli Whitney in 1798 evolved into what we today call management systems. The first internationally accepted version of a management system was adopted by the International Organization of Standardization in 1987 and published as ISO 9001—“Quality management systems—Requirements.” Following the introduction of ISO 9001, people realized that similar management practices could be developed and adopted for managing results in environment, food safety, health and safety, and many other areas where preventive practices were important in ensuring outcomes.

Points to consider:

- Management systems have been created that cover topics beyond the traditional management systems described in ISO 9001 and ISO 14001.
- Today, management systems help ensure results in many new areas, including the Private Sector Preparedness (PS Prep) advocated by the Department of Homeland Security and the newly released ISO 50001 standard covering energy management systems.

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[Home](#) > Content

Why Management System Standards Add Value, Part 2

Evidence that sets the record straight

In [part one](#) [1] of this two-part article, we looked at the history of management system standards. Part two details some of the evidence that supports the assertion that these standards add value to organizations.

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A 2008 detailed [study](#) [2] published by the Harvard Business School provides real data, gathered by external means, which emphasize the value of management system standards and the accredited certification process. The study documents compelling evidence regarding standards from the

International Organization for Standardization (ISO [3]) stating that “ISO adopters have higher rates of corporate survival, sales, employment growth, and wage increases than a matched group of non-adopters.” The study also finds that “annual earnings per employee grew substantially more rapidly, post-ISO certification, than organizations that did not adopt ISO.”

The Harvard study is compelling because it is based on an independent evaluation and does not depend upon surveys of organizations that use management system standards. It is perhaps even more striking because researchers compared and contrasted their findings against data collected from organizations that did not adopt the management system standard.

The study demonstrates broad and unexpected improvements from adoption of and certification to management system standards, derived from a matched sample of nearly 1,000 ISO 9001 adopters, as compared with non-adopters.

Organizations that adopt and certify to the quality management systems standard, ISO 9001, improved corporate survival and profit. The Harvard study indicates sales increases of nearly 9 percent after certification, as compared with non-adopters. Adopters also had a 10-percent higher increase in the number of employees than non-adopters while at the same time *increasing* profit. Total payroll in firms certified to ISO management systems standards grew 17.7 percent more than non-adopters. ISO 9001 adoption required a higher level of employee competence. The data shows an annual wage increase for the workers of 7.7 percent.

The conclusions are clear: Certification to management systems results in benefits to the organization and its employees; businesses become more profitable, and they pay their employees more. The Harvard study also indicates that “the benefits achieved with implementation of ISO 9001 were statistically higher in smaller organizations than in larger organizations.”

Conclusions from a 2007 Wharton Risk Management and Decision Processes Center study [4] relate to the adoption of and certification to ISO 14001, the environmental management systems standard. This study shows that the benefits of management system standards extend far beyond the achievement of bottom-line performance and customer satisfaction.

Organizations were much more likely to achieve performance gains from ISO 14001 certification when they targeted a specific environmental aspect:

- 96.7 percent of respondents indicated a reduction in waste
- 93.3 percent indicated an increase in the use of recycled materials
- 90.0 percent indicated a reduction in environmental incidents
- 98.3 percent indicated an improvement in emergency preparedness

- 84.6 percent indicated a reduction in permit violations
- 91.9 percent indicated a reduction of utility consumption
- 96.5 percent indicated a contribution to improved environmental performance of their product

The Wharton publication also highlighted the range of costs and savings associated with the implementation of ISO 14001. For example, 65 percent of facilities that estimated their first-year cost savings indicated savings of up to \$25,000, with 27 percent reporting savings of up to \$100,000. Another 57 percent estimated maximum continued savings of up to \$25,000 annually, while 28 percent reported savings of up to \$100,000 annually, and 15 percent reported savings of more than \$100,000 annually. Some 40 percent found a very high correlation between ISO 14001 certification and easier relationships with the government and a more positive perception by the public.

Achieving external benefits, such as fulfilling customer requirements, was by far the most important initial goal of certification; however, organizations found that the internal benefits achieved exceeded the external benefits. More than 60 percent of respondents indicated a very high correlation between the ISO 14001 management system practices and their day-to-day operations.

Points to consider:

- Management systems standards provide benefits across a broad front and affect all stakeholders, business owners, and employees.
- Management system certification is not just for large organizations. In fact, benefits to small organizations outpace those achieved by larger organizations.

Benefits of management systems certification

Management systems encourage and provide discipline across the entire organization. The Harvard data show that organizations adopting the management system found not only dramatic improvements in the areas of quality and customer satisfaction, but also “*significant reductions in employee injuries on the job,*” suggesting that organizations and people that pay additional attention to preventing problems with products or services also pay more attention to employee safety.

Organizations that only adopted ISO 9001 also reduced their environmental waste generation and toxic chemical emissions, again suggesting that an organization's attention to detail, along with clearly defined roles for employees, can have far-reaching positive consequences. These organizations also showed a greater increase than non-adopters in a variety of financial measures, including profit and stock price.

Points to consider:

- Management systems standards have been designed to provide value that outweigh the costs associated with their implementation and ongoing maintenance.
- Management system certification is not just a piece of paper. It really does deliver value.

Certification signals confidence to all parties

The preventive practices embedded within management systems and the high level of credibility associated with the management system certification process provide clear benefits to organizations that attain management system certification. When stakeholders demand confidence in results, we can think of no better management practices to achieve those results than with the formally developed and adopted management systems standards described in this article—ISO 9001 and ISO 14001. These requirements and guidelines, when successfully implemented and there is a commitment to compliance, will help any organization anticipate problems and take appropriate steps to systematically avoid them.

Any external party accredited to issue a certificate is required to confirm that an organization has demonstrated compliance to the requirements of the management systems standard. Issuance of this certificate signals confidence to the marketplace and all stakeholders. The certification bodies that issue the certificates are themselves accredited by an accreditation body such as the ANSI-ASQ National Accreditation Board ([ANAB](#) ^[5]).

Points to consider:

- Implementing a management system provides benefits and signals confidence and integrity to all parties.
- Certification to a management systems standard provides the certified organization a level of prestige because an independent and fully-qualified organization carefully examines and confirms the management system requirements are in place and effective.

ANAB's role

In the United States, ANAB ensures the integrity of the certification process. ANAB follows international requirements and the International Accreditation Forum's (IAF ^[6]) direction and oversight. In turn, ANAB provides thorough, rigorous, and ongoing oversight to ensure the integrity of its accredited certification-body customers' certification process.

Points to consider:

- An organization that chooses to pursue achievement of a certified management system will need to select a certification body that is accredited to do so by an internationally recognized authority such as ANAB. This provides confidence to the organization as well as its customers.

Adopting specific management systems standards

Given the documented success of management systems standards, their increased use is not surprising. Following the obvious success of ISO 9001 and ISO 14001, additional management systems standards have been created for a variety of applications. A quick look at these standards shows that they contain many of the basics that have evolved during the last 200 years. However, these management systems standards all include practices associated with their specific purpose. In addition to quality management systems (ISO 9001) and environmental management systems (ISO 14001), the following list offers a brief summary of other management systems standards that have been developed and deployed during the last 15 years:

- Food safety management systems, as defined by ISO 22000:2005—"Food safety management systems," contain management system principles associated with assuring safe food.
- Occupational health and safety management systems, as defined by OHSAS 1800:2007, contain management system principles associated with the reduction of human health and safety risks.
- Emergency preparedness management systems, as defined by the U.S. Department of Homeland Security (PS Prep), contain management system principles associated with emergency preparedness and organizational resilience.
- Energy management systems, as defined in ISO 50001:2011—"Energy management systems," is an important new management system related to the management of energy use.

These management systems standards were driven by the overall success of existing management systems standards and the unique needs of their respective industries. As the benefits of management systems standards become more widely understood by potential users, you can expect see more use of these standards in the future.

Points to consider:

- Development and use of management systems standards is expanding.
- Proven benefits to organizations, customers, and other stakeholders drive expansion and use of management systems.
- Management systems deliver results.

Conclusion

- Management systems standards contain basic concepts that can be applied to achieve cost-effective achievement of any desired goal. Look for additional management systems standards in the future.
- Management systems will not fix a mismanaged organization. Successful implementation and operation of the preventive programs described by management systems require good management.
- Organizations should fit management systems requirements into what they already do, rather than trying to fit themselves into the management system.
- Management systems should be designed to add value. If the management system does not add value, the organization should reassess its approach.
- Management systems focus on the prevention of problems and value, not on documents, procedures, records, and paperwork.
- Management systems promote discipline where discipline adds value, and allows for flexibility where flexibility adds value.

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[3] <http://www.iso.org/iso/home.htm>

[4] <http://opim.wharton.upenn.edu/risk/projects/iso14001.html>

[5] <http://www.anab.org/>

[6] <http://www.iaf.nu/>