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Social Responsibility, ISO 26000, and Sustainable Buildings

Denis Leonard

AT A GLANCE

- Integrated management systems will ensure that we have the capacity to produce more sustainable buildings.
- The Baldrige criteria make up a non-prescriptive model for driving business excellence throughout an organization.
- ISO 26000 provides a set of guidelines that can be incorporated into the Baldrige criteria and supports and integrates with ISO 9001, ISO 14001, and OHSAS 18001.
- Sustainable and environmentally friendly buildings are the leading edge in building design today.

INTRODUCTION

As new technologies and methodologies help us improve our sustainable and environmentally friendly buildings, we should not forget that how we manage the process of developing, designing, constructing, maintaining, updating, and ultimately decommissioning these buildings is equally important. Managing this process with strong environmental stewardship through the support of integrated management systems will ensure that we actually have the capacity to produce more of these sustainable buildings. The efficiency and effectiveness of how we manage the entire lifecycle process will have a larger impact on society, and without such a well-managed process or highly effective management standards, we continually reinvent the wheel and miss out on the unique assistance the processes and standards provide.

THE NEED FOR SUSTAINABLE BUILDINGS

- Almost 135 million residential housing units existed in the United States in 2009.
- More than 5 million office buildings exist in the United States today.
- Buildings accounted for 38.9% of total U.S. energy consumption in 2005.
- The average household spends \$2,000 a year on energy bills.
- Between 1950 and 2000, the U.S. population nearly doubled. In that same period public demand for water more than tripled.
- Building occupants use 13% of the total water consumed in the United States each day.
- On average, Americans spend about 90% or more of their time indoors.
- Indoor levels of pollutants may be two to five times higher and occasionally more than 100 times higher than outdoor air.
- Building-related construction and demolition debris totals approximately 160 million tons per year, representing 48% of the total waste stream per year.
- Impervious surface coverage in the United States is estimated at 33,335 square miles.
- Urban runoff is the sixth leading source of impairment in rivers, ninth in lakes, and fifth in estuaries.
- Typically, architects and builders do not design homes with easy renovation or deconstruction in mind.

(Figures provided by the U.S. Environmental Protection Agency.)

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By focusing on energy efficiency, such impacts can be addressed. For example, more than 1 million energy star homes have been built in the United States, saving \$270 million on energy bills and avoiding emissions equivalent to 370,000 vehicles. (Energy Star)

SUPPORTING SOCIAL RESPONSIBILITY THROUGH INTEGRATED MANAGEMENT SYSTEMS

The initial standards and models that addressed elements of social responsibility (SR) include OHSAS 18001 for Health and Safety and most important ISO 14001, the environmental management standard. The systematic ISO 14001:2004 approach requires that organizations take a hard look at all areas where its activities have an environmental impact.

There are now more than 1 million certified ISO 9001 organizations in 176 countries and 200,000 certified to ISO 14001 in 155 countries. (ISO) With this increased application of ISO 9001, ISO 14001, and OHSAS 18001, the traditional approach of operating quality, environmental, health, and safety management systems independently began to give way to an integrated approach. The key advantage of the integration of these management systems is the synergy created, resulting in increased efficiency and effectiveness in the management of organizations. The integration of ISO management systems can become just the first step in highlighting the complementary nature of various initiatives and the opportunity to enhance their leverage to improve strategic performance. This synergy can be enhanced through their alignment with the Malcolm Baldrige National Quality Award's Criteria for Performance Excellence, which increases their strategic impact.

The Baldrige criteria, developed by the National Institute of Science and Technology (NIST), is a non-prescriptive model for driving business excellence throughout an organization in just this way, whether it is manufacturing, service, nonprofit, education, healthcare, or a small business. The criteria strive to promote a systems approach to organizations. It becomes an umbrella under which various initiatives, standards, and programs can be strategically coordinated for the monitoring, measurement, and implementation of continuous improvement.

ISO 26000 provides a framework focused on SR. It includes a set of guidelines that can be incorporated into the Baldrige criteria and supported and integrated with ISO 9001, ISO 14001, and OHSAS 18001. Also, as a voluntary standard, it can help facilitate organizations in achieving requirements in a very different manner than the usual format—without requirements of a contractual nature and with environmental and safety standards that are based on regulatory requirements.

Baldrige will continue to provide a platform for its integration with the development of new ISO systems, such as ISO

26000. For example, SR fits under 1.2 governance and social responsibilities: “How do you govern and address your social responsibilities” and 7.6 (a) “Leadership and social responsibility results.” Of course the synergy between Baldrige and these management systems is a two-way street; while Baldrige can promote strategic integration, the management systems provide operational best practices to help address and impact sub categories of Baldrige.

MANAGEMENT SYSTEMS AND SUSTAINABLE BUILDINGS

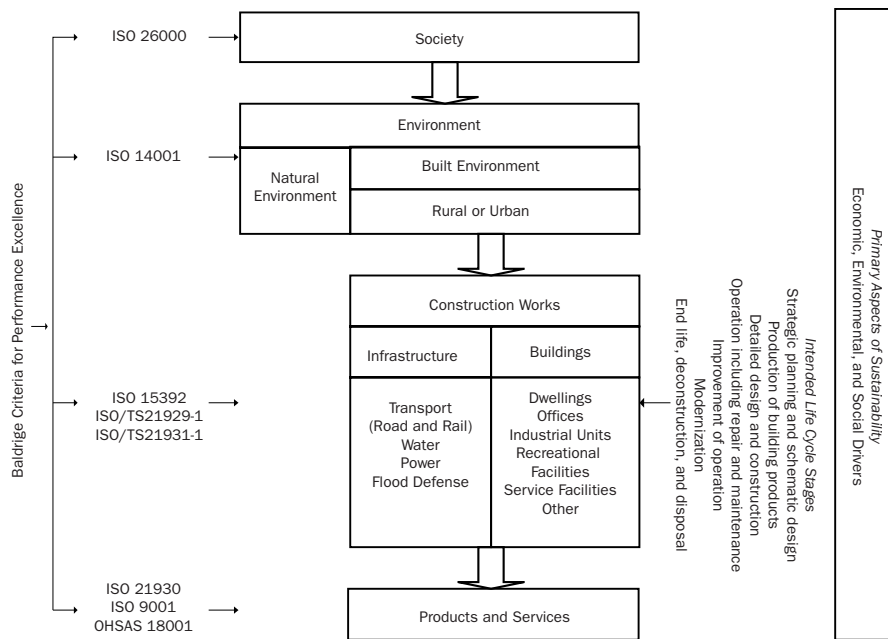
The management standards and Baldrige criteria discussed above can coordinate and integrate the various stakeholders involved in a project such as the engineers, architects, builders, contractors, clients/owners, those using the building, and those in its vicinity. This approach can be leveraged to impact both large and small building projects in commercial, government, and residential sectors across the country and the world. The key is using them in an integrated format and incorporating specific construction sustainability management standards such as Sustainability in Building Construction—General Principles and ISO/TS 21931-1:2006 Sustainability in Building Construction—Framework for Methods of Assessment for Environmental Performance of Construction Works. The impact put forth in ISO/TS 21931 for its assessment methods for the environmental performance of buildings could also be considered as the reason for using these integrated management standards. To “provide a common and verifiable set of criteria...provide a reference as a common basis...gather and organize detailed information ...[and] assist the design process.”

Other related building standards can also be integrated. These include: ISO/TS 21929-1:2006 Sustainability in Building Construction—Sustainability Indicators, Part 1: Framework for Development of Indicators for Buildings; ISO 21930:2007 Sustainability in Building Construction—Environmental Declaration of Building Products; ISO 16813:2006 Building Environmental Design—Indoor Environment, General Principles; and ISO 15686-3:2002 Buildings and Constructed Assets—Service Life Planning, Part 3: Performance Audits and Reviews. Each of these standards supports the other with a common focus if used in concert.

Diagram 1 shows the full integration in a graphical format, reflecting the core flow that needs to be considered in building planning, design, construction, use, improvement, maintenance, and eventual demolition. This life cycle needs to be considered in conjunction with society, the environment, and the users/occupants, owners, and builders. There is a standard for each step in the process; the steps are complementary and when aligned create efficiencies. The issues of gaining input from the community, evaluating the environmental impact, communicating with stakeholders, driving continuous

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(Elements of diagram adapted from ISO 15392 & ISO/TS21931-1.)

Diagram 1 Integrated Aspects of Building and Sustainability

improvement, and tracking corrective and preventive actions at all levels of the project can be supported by the infrastructure of these standards. While these can be used on an individual project basis, they can of course be implemented within organizations to create a consistent and seamless supply chain.

INTEGRATING THE BALDRIGE CRITERIA AND ISO STANDARDS IN REGARD TO SR AND SUSTAINABLE BUILDINGS

Clause 5.3.4 Global Thinking and Local Action in ISO 15392 connects to ISO 26000 when it states, “The building and construction sector is highly important for sustainable development because it has a significant interface with poverty reduction through the basic economic and social services provided in the built environment and the potential opportunities for the poor to be engaged in construction, operation, and design.” Clause 5.3.2 Continual Improvement in ISO 15392 again makes the connection to Baldrige as well as ISO 9001 when it states, “This principle encompasses the improvement of all aspects of sustainability related to the built environment including the buildings and other construction works over time. It includes the performance of construction works as well as processes, and addresses means of assessment, verification, monitoring, and communication.”

One of the Baldrige core values and concepts is SR. The Baldrige criteria “provides a systems perspective for managing your organization and its key processes to achieve results—

and to strive for performance excellence. The seven criteria categories, the core values, and the scoring guidelines form the building blocks and the integrating mechanism for the system.” ISO/FDIS 26000 clause 2.18 states that SR is the “responsibility of an organization for the impacts of its decisions and activities on society and the environment through transparent and ethical behavior that contributes to sustainable development including health and the welfare of society; takes into account the expectations of stakeholders; is in compliance with applicable law and consistent with international norms of behavior; and is integrated throughout the organization.” Part of the Baldrige view on SR is that “leaders should be role models for your organization in focusing on ethics and the protection of public health, safety, and the environment....organizations should emphasize resource conservation and waste reduction.” Baldrige addresses SR again in 1.2 b1 when it considers legal and ethical behavior. “How do you address any adverse impacts on society of your products and operations? How do you anticipate public concerns with current and future products, services, and operations? How do you prepare for these concerns in a proactive manner, including using resource sustaining processes as appropriate?” Baldrige considers the actual detailed measurable impacts of SR in category 7.0 Results, under Leadership Outcomes.

In ISO/FDIS 26000 clause 2.23, sustainable development is considered to be meeting “the needs of the present without compromising the ability of future generations to meet their own needs.” Baldrige sees very similarly sustainability as “your organization’s ability to address current business needs and to

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have the agility and strategic management to prepare successfully for your future business market and operating environment.”

As ISO systems continue to be integrated, it is essential that the construction industry make use of these systems. At this level we are recognizing the fully integrated life cycle of a building and the extended community in which it exists and functions. With green building, Energy Star, Leadership in Energy and Environmental Design (LEED), and ANSI-NAHB National Green Building Standard for the residential home building industry gaining momentum, it is the perfect time for the promotion of integrated standards in the construction industry.

CONCLUSION

Sustainable and environmentally friendly buildings are the leading edge in building design today. They must obviously meet local, state, and other requirements and standards, but they must also go beyond that. The only way this can be achieved in an efficient and effective manner is by using an integration of the best management system standards available. While standards are mandatory in regard to the technical aspects of designing and constructing buildings and of the building components themselves, they are significantly overlooked in regard to the actual management of the design and construction processes. As new technologies and challenges allow us to stretch our abilities in the buildings we construct, especially in terms of how efficient they are in regard to environmental and energy issues, we also need to focus on improving how we manage the planning, design, and construction processes. This will translate into sustainability in regard to how effectively and efficiently the planning and building processes are conducted, resulting in saving time and money and ultimately increasing our ability to build more sustainable and environmentally friendly buildings.

REFERENCES

- Energy Star, energystar.gov
- Environmental Protection Agency, Green Building, Buildings and Their Impact on the Environment: A Statistical Summary, 2009.
- International Organization for Standardization, iso.org

DENIS LEONARD BIOGRAPHY

Denis Leonard has a degree in construction engineering, an MBA, and a Ph.D. in quality management. He is an ASQ Senior member, CMQ/OE, CQA, and CSSBB.



He has served on the Baldrige National Quality Award Board of Examiners and has been an examiner and judge for the Wisconsin Forward Award, the National Housing Quality Award, and the International Team Excellence Award process. He is a member of several boards including the U.S. (ANSI) Z1 Standards Group for Quality Management and ASQ's Quality Management Forum and Quality Press review boards. He has also co-authored *The Executive Guide to Understanding and Implementing the Baldrige Criteria*.

A former visiting assistant professor at the University of Wisconsin-Madison, Leonard has experience in management, engineering, training, auditing, and consulting, with expertise in strategic and operational quality improvement.

He developed and implemented integrated quality, environmental, and safety management systems at Veridian Homes in Madison, WI, earning it the National Housing Quality Award, Energy Value Housing Award, Innovative Housing Technology Award, NAHB Safety Award for Excellence, and *Professional Builder* magazine's Builder of the Year. In 2007, Leonard won *Big Builder* magazine's APEX Award for his work in quality management.

Leonard was a member of the ANSI accredited U.S. TAG to ISO/TMB/WG 26000 on Social Responsibility in 2006. He has published and presented on social responsibility and its alignment with environmental and quality management. He was a member of the team that developed the Wisconsin Green Tier Clear Lakes Initiative. He also implemented an ISO 14001 equivalent Green Tier Management System, developed by the Wisconsin Department of Natural Resources in 2006.

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