

QUALITY INITIATIVES IN THE HOME BUILDING INDUSTRY
BALDRIGE AS THE DRIVER
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Leaders in the home building industry have embraced quality and developed a range of customized initiatives that focus on the particular needs of the industry.

The National Association of Home Builders Research Center (NAHBRC) has been the main advocate and resource for quality the industry providing a range of services which promote best quality practices for builders and trade contractors such as market research, best quality and green building practices, building innovation and an annual quality conference.

The core of these efforts since 1993 has been the National Housing Quality Award (NHQA) which is modeled on the Malcolm Baldrige National Quality Award (MBNQA). As with the MBNQA, applicants receive expert feedback on their business management practices based on their written application, and if earned a site visit.

The NHQA categories are

- 1 Leadership 100 points
- 2 Strategic Planning 100 points
- 3 Performance Management 100 points
- 4 Customer Satisfaction 100 points
- 5 Human Resources 100 points
- 6 Construction Quality 100 points
- 7 Supplier Partnerships 100 points
- 8 Business Results 200 points
- 9 Customer Satisfaction 3rd Party Survey 100 points

There are a number of key differences between NHQA and MBNQA. One is the specific focus on construction quality in Category 6 to ensure high performing, trouble free products and services. This includes reviewing the setting and improving performance standards for services and product specifications, assuring quality results, established corrective and preventive systems and warranty service systems. Another key difference is that the NHQA process includes a 3rd party independent survey of the applicant's customers. This focuses on satisfaction throughout the entire home building process, from design through construction to moving in right through the first year living in

the home. Finally, during site visits trade partners and suppliers are interviewed and Judges tour neighborhoods, may interview customers and walk through homes at various stages of construction to inspect the standard of the product and if they conform to specification, safety and other standards.

The NHQA provides the ability to conduct self-assessment and therefore a means to identify Opportunities for Improvement and as a result strategically co-ordinate and drive improvement efforts. The NHQA program also serves as a key source of information on best practices, which are disseminated through presentations, seminars, training programs, publications and benchmarking. The NAHBRC provides a range of other quality initiatives that directly link to categories in the NHQA.

The National Certified Trade Contractor Certification Program is based on ISO9000 and focuses on driving quality assurance to the home builder's contractor companies who represent the core of the residential construction industry as they provide nearly all of the skilled labor used to construct the homes. This program is strongly supported by builders with some paying for over 12 hours of training and manual reviews usually conducted at the builders offices to support the contractors in adopting the systems and becoming certified. The emphasis has been to ensure that a complete chain of quality processes is achieved with all partners. Trade contractor certification has resulted in up to 25% reduction in cycle time per home and significant reductions in callbacks.

The National Builder Certification Program is the home builder's version. This covers almost all departments within a company and includes Quality, Safety and Environmental Management. Both of these programs involve annual third party audits. While based on ISO9000, ISO14000 and OHSAS18000 and includes the critical issues of continual improvement, corrective and preventive actions the program has particular focus construction industry issues. Sections exist for scheduling of work or project management, job ready conditions to ensure that each trade is working effective with each other to ensure an effective hand over from one to the other, and the requirement that Builders integrate their programs with those of their trade contractors. This also requires the Builder to actively support the establishment of quality initiatives procedures with all its trade contractors.

Home builders have also developed a range of customer surveys which are administered at various points during the home building experience from design through to one year after moving into their home. Surveys specifically designed for the home building industry allow for regional and national benchmarking. A national benchmarking conference presents awards for customer satisfaction and uses this as a venue for sharing best practices and benchmarking.

Under the NHQA criteria and Certification, tools such as PDCA, value stream mapping, FMEA, 8D and other tools are used. Best practices that have emerged within the homebuilding industry include weekly meetings where all trade contractors gather with the homebuilder to review production schedules and address as a team 'Hot Spots' or trending problems that are emerging in the production process, which can become OFI's. This highlights the fact that the production process is a team effort and not a series of disjointed activities. This has improved communication, cooperation, reduction in cycle time and a reduction in defects.

Green building practices have been developing in the industry and have natural connections to quality for example they address the corporate social responsibility aspect of quality management and are reflected in the leadership criteria of the NHQA and MBNQA. National and state programs

drive green building practices allowing builders to become Certified such as the Green Built Homes program through the Wisconsin Environmental Initiative. The national and state Certified Energy Star programs integrated with the green programs provide benefits for the homeowner including reduced energy costs and improved indoor air quality as a result of water and energy conservation through energy efficient (Energy Star) appliances, high insulation and reduced maintenance of products and materials. Homeowners also have the knowledge that their home has a reduced impact on the environment due to recycled products and materials. Builders certified under these programs undergo reviews of their building plans, specifications and onsite audits to insure that the criteria are met. The criteria includes waste reduction, recycling and disposal of materials, energy efficient insulation and air sealing, storm water management and water conservation, landscape conservation, energy efficient mechanical systems, use of recycled materials and energy efficient materials and construction products.

These quality initiatives have increased the integration of Quality, Safety and Environmental management and increased the focus customer satisfaction. While these examples of quality management are specific to the home building industry they allow for an easy transition to the setting of standards of excellence against other industries through self-assessment to the criteria of the MBNQA.