

Alignment of the Malcolm Baldrige Criteria for Performance Excellence with Six Sigma, Lean Thinking and Balanced Scorecard

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Excerpted from *Insights to Performance Excellence 2004: An Inside Look at the 2004 Baldrige Award Criteria*, published by the American Society for Quality

Introduction

“Baldrige? Six Sigma? Lean? Balanced Scorecard? We don’t have time for *all* of these initiatives! Let’s just pick one and go with it!” How many times have you heard (*or perhaps even said*) something similar to this? The statement suggests the initiatives are equivalent. They are not. As has been discussed earlier in this book, the Baldrige Criteria for Performance Excellence represent a comprehensive set of processes that organizations should have in place in order to optimize performance. Six Sigma, Lean, Balanced Scorecard, and other initiatives represent some tools, albeit powerful tools, that organizations can use to enhance performance.

However, the use of these tools in isolation, without regard to the needs of the entire management system, will not produce optimum benefits or optimum performance for the organization. Many times when the concept of using the Malcolm Baldrige Criteria for Performance Excellence is discussed, Six Sigma is brought up as an alternative management system. Many articles and books tout Six Sigma as the most effective management system ever. However, it’s important to understand the assumptions upon which those opinions were based. Upon understanding these assumptions, Six Sigma can best be viewed as a tool that helps an organization drive toward performance excellence; however, each can become more useful if they are used together within the context of a Baldrige-based integrated culture of performance excellence. The use of these tools as part of an integrated approach to maximizing performance, which Baldrige represents, is the best way to drive toward better results. Such integration is more likely to lead to breakthrough, rather than incremental improvement.

Baldrige Overview

The Malcolm Baldrige Criteria for Performance Excellence have the over-arching goal of strengthening U.S. competitiveness in an increasingly global and competitive marketplace. The Baldrige Criteria help health care organizations use a focused and systematic approach to performance management that results in:

- delivery of ever-improving value to patients and other customers, contributing to improved health care quality
- improvement of overall organizational effectiveness and capabilities as a health care provider
- organizational and personal learning.

The Criteria are based on a set of Core Values and Concepts (Figure 1.1) that have been found to be integral beliefs and behaviors in high-performing organizations. These Core Values and Concepts are the underpinnings of the systematic approach and deployment methods used to drive to improved business results within organizations using the Baldrige Criteria as their management system.

The Baldrige Criteria helps an organization ensure a systematic approach to improvement by developing *approach and deployment* methodologies for Categories 1-6, and looking for how these approach and deployment methods are linked to improved business *results*. The Baldrige Criteria are non-prescriptive – they don’t tell an organization *how* to do something, they tell *what* it should be doing, then leave it to the organization to determine the processes that best fit the organization, its culture, and goals.

Many managers see the Baldrige Criteria only as an award process; however, in reality, most organizations that use the Baldrige Criteria never apply for an award (national or state level). Thousands of organizations use the Baldrige Criteria as a management model and/or assessment tool to gauge the maturity and effectiveness of their own management system. The Criteria, available in Business, Education, and Healthcare versions, are very flexible. This is demonstrated by the diversity of organizations that have used the Criteria to move to performance excellence, including a high-school classroom, churches, internal suppliers, non-profit agencies, and others who have tailored the model to their particular application.

Six Sigma Overview

Six Sigma is an extremely effective tool for systematically attacking the *highest priority* production and support/functional problems within an organization. The goal of Six Sigma is to both reduce defects and reduce variation. It is not, however, the best tool to apply to *every* problem. Six Sigma requires a significant investment in up-

front training, time and people to carry out the projects, and leadership commitment to project reviews. Some problems may not require the highly intensive methodology that Six Sigma entails. Effective leaders separate the problems that deserve a Six Sigma approach from those requiring a different methodology.

General Electric has been touted as a leading example of a corporation that has used Six Sigma effectively. Several of the key reasons that Six Sigma has been so successful at GE have nothing to do with the Six Sigma process, but are the “enablers” that have driven that success. Several of those enablers include:

- Consistent leadership that drives the organization to quantifiable results
- A culture that is relentless in driving toward continuous improvement
- Effectiveness in committing the resources that increase the chances of a successful project outcome.

Baldrige and Six Sigma Alignment

An example of the Six Sigma Define-Measure-Analyze-Improve-Control (DMAIC) problem-solving process is provided in Figure 1.2. It is easy to see how this systematic improvement process can help an organization meet the requirements of the Baldrige Criteria in Category 6 - Process Management for improving “...value creation processes (Item 6.1) and certain support processes (Item 6.2) to achieve better performance, to reduce variability, to improve products and services and to keep the processes current with business needs and direction.” In addition, Six Sigma encourages a focus on meeting customer requirements (Baldrige Category 3), a leadership-driven initiative (Baldrige Category 1), alignment of improvement projects to the organization’s strategy (Baldrige Item 2.2a(1), effective development and training of human resources (Baldrige Item 5.2), and data-driven decision-making (Baldrige Category 4). **Effective organizational alignment around the Baldrige Criteria can help drive the success of Six Sigma improvement initiatives.**

The most effective integrated management system would be one in which an organization uses the Baldrige Criteria as a method of establishing a “culture of excellence,” assessing performance, and prioritizing initiatives. Six Sigma can be used to drive deep into root causes to solve the organization’s highest-impact problems, consistent with the requirements of Baldrige Category 6, Process management. Visionary leaders will be able to see the value of both the systematic overview of the business that is provided by Baldrige integrated management system and the structured problem-solving methodology provided by Six Sigma. *One is not a substitute for the other – they align well with each other and mutually help drive toward improved business results.*

Baldrige as an Aid to Six Sigma Project Selection

A key concern with the Six Sigma process is how to choose the appropriate projects on which to spend valuable time and resources. An article by **Ronald D. Snee** in the March, 2001 edition of *Quality Progress* (published by Quality Press, Milwaukee, WI) was titled “Dealing With the Achilles’ Heel of Six Sigma Initiatives: Project Selection is Key to Success.” When Six Sigma is approached from a Baldrige management system perspective, areas of focus have already been identified in a variety of ways:

1. Completion of an Organizational Profile which walks the organization through an overview of the organizational environment in which it operates, key relationships with customer groups and suppliers and partners, the competitive environment in which it operates, the strategic challenges it faces, and its performance management system.

This Organization Profile is the first step in moving forward with a Baldrige assessment; however, it’s greatest value may lie in its ability to move the entire organization to a common understanding of its culture, its customers, its strategic challenges and opportunities. Key Business Factors naturally “fall out” of the Organizational Profile, providing a prioritization capability that aligns Six Sigma efforts around the highest priorities of the organization.

2. As the organization becomes more mature, it assesses itself against the Baldrige Criteria. These criteria are based on the characteristics of high-performing organizations. An organization is able to identify and address Strengths and Opportunities for Improvement as they address the business’s key success factors.

The organization may decide to participate in either a state- or national-level Baldrige assessment. This more formal process has trained outside examiners assess the organization against the Baldrige criteria. The resulting Feedback Report identifies Strengths and Opportunities for Improvement. A frequent comment after a Baldrige assessment is that it is the best, most cost-effective consulting the organization has ever experienced.

Other process improvement initiatives:

In addition to Six Sigma, there are various other initiatives that organizations see as opportunities for significant results improvement. Like Six Sigma, these are best viewed as tools for improvement whose deployment can be enhanced by effective alignment with the Baldrige criteria. Two of those tools are Lean Thinking (or simply Lean) and the Balanced Scorecard.

Overview of Lean Thinking

Lean Thinking can best be described as the relentless pursuit, identification, and elimination of waste in all business processes. Business processes over time tend to become “fat.” Steps are added to processes, become ingrained, after which other new steps are added. After a matter of years, unnecessary process steps become “the way we do things,” without constant re-evaluation of the value of each process step.

Lean Thinking starts with developing Value Stream Maps that describe the “current state” of the most important processes. A “future state” map is then developed to show what the process would look like if identified waste were eliminated. Various lean tools are used to help convert the process to the future state. Lean revolves around developing teams to identify waste, then reduce waste through intuitive processes such as workplace organization, safety, cleanliness, and visual management. In addition, there is a focus on reducing raw material, work in process, and finished goods inventory through Just in Time production.

Although the concepts of Lean Thinking are most easily understood and applied in manufacturing, Lean is a very important tool for all processes within an organization. Lean can be used to eliminate waste in administrative processes (*for example, reducing time to generate a bill*), human resources (*reducing time to fill open positions*), and sales (*reducing the time of the sales cycle*).

Overview of Balanced Scorecard

Balanced Scorecard is a tool that integrates the results measures of an organization. A fundamental belief of this tool is that business results are integrated – that you cannot view one measure without acknowledging the relation to other results. A Balanced Scorecard looks at four perspectives of the business:

- Financial “To succeed financially, how should we appear to our shareholders?”
- Customer “To achieve our vision, how should we appear to our customers (health care – patients)?”
- Internal Business Processes “To satisfy our shareholders and customers, what business processes must we excel at?”
- Learning and Growth “To achieve our vision, how will we sustain our ability to change and improve?”

Objectives, measures, targets, and initiatives are developed for each of the identified perspectives.

The Balanced Scorecard aligns closely with the six Results categories of Baldrige:

Baldrige Results Category	Balanced Scorecard Perspective
7.1 Health Care Outcomes and Service Delivery Results	Customer
7.2 Patient and Other Customer-Focused Results	Customer
7.3 Financial and Market Results	Financial
7.4 Staff and Work System Results	Learning and Growth
7.5 Organizational Effectiveness Results	Internal Business Processes
7.6 Leadership and Social Responsibility Results	<i>Not addressed</i>

A key value of aligning Baldrige with the Balanced Scorecard is the focus within Baldrige categories 1-6 on *how* to drive to the results expected in Baldrige Category 7 and the Balanced Scorecard. The research that develops from Balanced Scorecard development is also key input into the Category 2 – Strategic Planning of the Baldrige criteria.

Alignment of Baldrige, Lean, Six Sigma, and Balanced Scorecard Factors

The success of Six Sigma, Lean Thinking, and the Balanced Scorecard can be enhanced by a “Culture of Excellence” that is characterized by the Malcolm Baldrige Criteria for Performance Excellence. An integrated Baldrige management system is one of the best predictors of a successful Six Sigma initiative. (See Figure 1.3) The effective alignment of Baldrige, Six Sigma, Lean Thinking, and Balanced Scorecards can best be demonstrated by the model in Figure 1.4.

Note the systematic method by which the Baldrige-based culture of excellence is established, waste is eliminated from processes through Lean Thinking, processes are moved toward perfection using Six Sigma, and progress is measured using a Balanced Scorecard to assess results. The goal of this effectively aligned process is to drive beyond incremental improvement to breakthrough improvement - *and breakthrough improvement is where significant competitive advantage is gained.*

Effective alignment of the organization through use of the Baldrige Health Care Criteria for Performance Excellence can help jump-start Six Sigma initiatives by formalizing leadership commitment, ensuring appropriate resource availability based on the importance of a project to the organization, and providing an aligned management system that focuses the organization's efforts on the right improvement projects. Baldrige is a management system that focuses and aligns *performance excellence* activities. Six Sigma is a tool that focuses *performance improvement* activities.

Summary of Baldrige Core Values and Concepts	
Visionary Leadership	Managing for Innovation
Patient-Focused Excellence	Management by Fact
Organizational and Personal Learning	Social Responsibility and Community Health
Valuing Staff and Partners	Focus on Results and Creating Value
Agility	Systems Perspective
Focus on the Future	

Figure 1.1

Six Sigma DMAIC Problem Solving Process			
<i>Phase</i>	<i>Step</i>	<i>Primary Activities</i>	<i>Primary Output</i>
DEFINE	1. Establish the Focus	Review Initial Project Charter	Project Objective
		Form the Team	
		Identify and Describe the Performance Gap	
		Verify the Performance with Data	
		Complete Charter	
MEASURE	2. Examine the Current Situation	View the Process in Detail	Strategies and Strategy Measures
		Describe the Current Situation in Detail with Data	
		Develop Strategies	
ANALYZE	3. Analyze the Causes	Brainstorm and Prioritize Root Causes	Root Causes
		Use Data to Verify the Causes	
		Select Root Causes to Address	
IMPROVE	4. Act on the Causes	Brainstorm Possible Actions	Actions
		Select Actions to Take	
		Develop Action Plans	
		Implement Actions on a Small Scale	
	5. Study the Results	Study the Results and Modify Action Plans	Revised Action Plans
CONTROL	6. Standardize the Changes	Implement Actions on a Large Scale	Control Plan
		Standardize Successful Actions	
		Develop a Process Management Plan	
	7. Draw Conclusions	Identify Benefits, Difficulties and Lessons Learned	Project Summary
Discuss Future Plans			

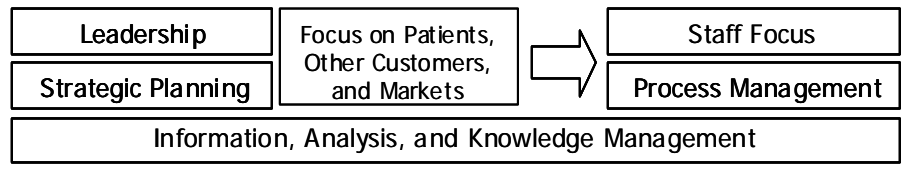
Figure 1.2 Six Sigma DMAIC Problem Solving Process

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Management Challenges	Six Sigma Solution	Baldrige Criteria Values and Requirements
Lack of linkage and alignment throughout the organization	Linkage and alignment of Six Sigma initiative to the business's "bottom line"	<p>Baldrige Core Value: Focus on Results and Creating Value</p> <p>Baldrige Alignment: Categories 1-6 These "Approach and Deployment" categories must align with Category 7 – Organizational Performance Results. Approach and Deployment processes that don't drive to improved business results contribute very little value to the organization. Baldrige Category 7 The Baldrige "Results" categories are a balanced set of measures, including Health Care Outcomes and Service Delivery, Patient- and Other Customer-Focused, Financial and Market, Staff and Work systems, Organizational Effectiveness, and Leadership and Social Responsibility results.</p>
Senior leadership delegation of leadership of TQM initiative to Quality or other department	Senior leadership responsibility for success of the Six Sigma initiative	<p>Baldrige Core Value: Visionary Leadership</p> <p>Baldrige Alignment: Item 1.1a(2) Leaders that create an environment for empowerment, innovation, organizational agility, and organizational and employee learning. Item 1.1b(2) Leaders that translate organizational review findings into priorities for improvement and opportunities for innovation</p>
An unclear concept, direction or focus	A leadership-driven, consistent, simple message	<p>Baldrige Alignment: Item 1.1a(1) Leadership that sets and deploys organizational values, directions, and expectations.</p>
An unclear goal	Strong focus on ambitious, non-ambiguous goals	<p>Baldrige Core Value: Focus on Results and Creating Value</p> <p>Baldrige Alignment: Item 2.1b Key strategic objectives and timetables for accomplishing them. These objectives are linked to the key challenges faced by the organization. Items 6.1 and 6.2 require the improvement of health care processes and support processes, including the focus on customer/market requirements and the use of key performance measures/indicators to control and improve performance.</p>
One initiative deployed at the expense of others "All eggs in one improvement basket"	A set of "tools" to address problems systematically. Integrates well with other programs such as Baldrige and Lean	<p>Baldrige Concept: Baldrige is non-prescriptive. It insists that an organization develop improvement methodologies based on its particular business requirements and current circumstances.</p>
Different organizational "silos" with different improvement initiatives	Cross-functional process focus – integration across the organization	<p>Baldrige Core Value: Systems Perspective</p> <p>Baldrige Concept: The Baldrige Criteria focus on the integrated business system, aligned with strategic objectives and related action plans, not functional "silos," in a way that demands alignment throughout the organization and ensures links with demonstrated business results.</p>
Incremental vs. breakthrough change	Incremental <i>and</i> breakthrough change	<p>Baldrige Concept: Baldrige-aligned companies continuously compare their results to best practices, both inside and outside an organization's industry. This helps them understand world-class performance to drive to incremental <i>and</i> breakthrough process improvement.</p>
Training as an end in itself	Systematic training aligned with business-critical processes	<p>Baldrige Core Values: Organizational and Personal Learning; Valuing Staff and Partners</p> <p>Baldrige Alignment: Item 5.2 focuses on using education and training to help achieve action plans and strategic objectives, helping to ensure that the organization aligns its education and delivery methods to support key business requirements.</p>
Quality as a product or service characteristic only	Improvement of <i>all</i> business processes	<p>Baldrige Core Values: Patient-Focused Excellence, Organizational and Personal Learning and Systems Perspective</p> <p>Baldrige Alignment: Baldrige Category 6 Process Management</p> <p>6.1 Health Care Processes</p> <p>6.2 Support Processes and Operational Planning</p> <p>The Baldrige Criteria go beyond reducing defects and errors, meeting specifications, and reducing complaints. Focus is on continuous improvement of all processes throughout the entire organization and ensuring that all parts contribute value to patients and other customers.</p>

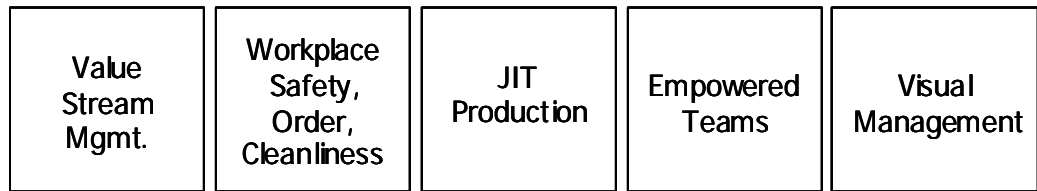
Figure 1.3

Baldrige / Lean Thinking / Six Sigma Alignment



Establish a Culture of Excellence

Baldrige as a management system **sets an overall organizational context of excellence** and **integrates and aligns improvement initiatives**



Lean Thinking: Broad and Shallow

Lean Thinking is used to **eliminate waste** from processes



Six Sigma: Narrow and Deep

Six Sigma is used to **perfect processes** from which waste has been eliminated

Better Business Results

Balanced Scorecards **measure the progress** of the organization in accomplishing its strategic and operational goals

Not just incremental, but breakthrough improvement!

Figure 1.4