Using the Baldrige Criteria and Self-Assessment as Strategic Drivers: A Case Study

By Denis Leonard, PhD

Introduction
The Baldrige Criteria for Performance Excellence provides a strategic framework that helps to align strategy and operations. It aids in the integration of various process improvement tools and techniques, and it also ensures that teams and efforts throughout an organization are coordinated. Combined with regular self-assessment, this creates an in-depth evaluation of the entire organization, allowing progress to be measured and monitored. The following case study provides one example of how a manufacturing company used the criteria and self-assessment to drive and sustain improvement.

The company in this case study (which for this paper will be called ProCo) was formed in the 1950s and has 100 employees. ProCo has used Baldrige self-assessment as an integral part of its strategic planning for ten years. For ProCo, self-assessment is where the strategic planning starts and ends as part of a Plan-Do-Check-Act cycle to ensure effective strategic planning and implementation. The self-assessment report provides crucial data used to identify strategic and operational opportunities for improvement (OFIs).

Implementing the Baldrige Criteria and Self-Assessment
Prior to exposure to the Baldrige Criteria, ProCo had poorly coordinated efforts focusing on improving customer and employee satisfaction, cycle time reduction, defect reduction, and process improvement. For ProCo the criteria provided a framework within which to organize and prioritize its efforts and critically ensure these efforts were aligned with company strategy. By embracing a wide range of efforts, tools, and training approaches within the criteria, ProCo created a sense of consistency, and what had been seen as disparate fads-of-the-month began to be understood as parts of a whole.

Training and awareness of the criteria were initiated by having the entire management team participate in a half-day introductory training session. The aim was to have the leadership understand and then train their teams on the criteria and what they meant. That initial session was followed by two half-day self-assessment workshops, again with the full management team. This interactive workshop involved a full and detailed self-assessment of ProCo that detailed strengths, opportunities for improvement (OFIs), and category/item and overall scoring. The workshop allowed the leadership and management teams to engage in their training and understand the criteria and how they could be used to evaluate and drive improvement.
Chair’s Message

By Jan Tucker

Hello again! First of all, welcome to all our new members; we are very happy to have you.

Latest news from QMD: In August our leadership team took part in our annual strategic alignment meeting with the ASQ leadership team. Bill Troy very kindly took time from his busy schedule to review with us the latest direction, risks, and opportunities at ASQ. Since QMD makes up approximately one-third of the ASQ membership, it is really important that we sing off the same hymn sheet as ASQ. One joint concern is the ability to retain our members, and we are very keen to hear from you what your needs are, in order to make sure we address all our members’ concerns. So please do not hesitate to write to us and let us know what we can do better to help you in your career development. We look forward to hearing from you. Also, we enjoyed meeting some of you at the Ottawa Quality Conference in September.

The QMD leadership would also be pleased to hear how you are managing your transition to the new ISO Standard, and what it means to you and your company. We look forward to your participation and interaction with our team.

Best wishes,

Jan Tucker, Chair
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Editor’s Notes

By Sandy L. Furterer

Quality management systems provide the foundation for quality, process, and performance excellence in organizations. This issue of the Quality Management Forum features four original articles from quality practitioners that demonstrate innovative examples of applications of quality management systems.

The first article, by Denis Leonard, “Using the Baldrige Criteria and Self-Assessment as Strategic Drivers: A Case Study,” demonstrates how a small organization uses the Baldrige criteria and self-assessment as the first step in their strategic planning process to identify strategic and operational opportunities for improvement.

In the second article, by Dawn Ringrose, “New Technological Platform for Organizational Excellence,” the author describes a technological platform that helps organizations collect data and report on the state of their organizational excellence program. The platform is based on the Organizational Excellence Framework.

In the third article, by Zachary Brennan, Sasha Manouchehripour, Shannon McCarthy, Kylor Sorensen, Lauren Waggoner, and Thomas Persoon, “Further Development of the ASQ QMS Model for Healthcare;” the authors build on an ASQ Healthcare Technical Committee article from 2016 to further develop the model by creating additional elements that can help healthcare organizations implement the Quality Management System for Healthcare (QMSH) model.

The fourth article, by Jorge Román, “Kutralwe Preschool’s Journey of Excellence: A Case Study,” exemplifies how a quality management system framework was used to assess the quality of a Chilean organization as part of the strategic planning process and to improve the organization through application of the system.

In addition to these interesting pieces, the Chair of the ASQ Quality Management Division, Jan Tucker, provides an update on the latest activities of the QMD. This edition of QMF also features a special double-book review by Dan Zalewski, wherein he critiques The Probability Handbook and The Probability Workbook, both written by Mary McShane-Vaughn. As usual, we have included the abstracts of articles being published in the latest edition of our sister publication, the ASQ Quality Management Journal. Finally, we are treated to coaching insights from J.R. McGee, who provides the fourth installment of his series on “Overcoming Adversity with Attitude!”

I want to add that I am honored and excited to be the new Vice Chair of Print Initiatives and the Editor of the ASQ’s Quality Management Forum.

Please feel free to send feedback on this issue of QMF, as well as any ideas for enhancing QMD print initiatives for our division. You can reach me at sfurterer1@udayton.edu.

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It should be noted that the president, vice-presidents, and all company managers participated in the training and self-assessment workshops.

When all of the managers had trained their departments on the Baldrige Criteria and self-assessment, a self-assessment survey involving all employees was then launched. It was made clear that this was a continuation of past improvement efforts and that the results would be used in the strategic planning process and that key improvement teams would be established to address OFIs so that the employees’ detailed input was essential.

The results of this first company-wide self-assessment showed that the overall score for all employees was only 100 points off from the management team’s score in the self-assessment workshop. The scores and summary results of the self-assessment were shared at the bi-monthly all-employee meeting and were more thoroughly evaluated during department meetings. Within four weeks began the annual strategic planning process, of which the self-assessment report was a key element.

The self-assessments were conducted annually using Baldrige Express, an employee survey based on the Baldrige Criteria. (The National Council for Performance Excellence offers Baldrige Express surveys in association with state quality award organizations.) These online or hard-copy self-assessments are organized into sections that match the Baldrige Criteria categories. Employees rate the company on a Likert scale for each criterion and can provide detailed comments on strengths, weaknesses, and OFIs. ProCo uses these strengths, weaknesses, and OFIs as the core of its SWOT analysis to drive its annual strategic planning, placing the Baldrige Criteria at the heart of the organizational strategy formation.

After determining the strategic objectives, the departmental goals and objectives are created with timelines and action plans to ensure proper strategy rollout. Action plans detail how the objectives will be implemented, as well as the target completion dates. A leader is assigned responsibility for each goal. All employees have input to the strategic planning process, and other information is also included, such as annual leadership 360 evaluations, employee satisfaction surveys, customer surveys, and other key data.

Strategic goals are linked to each employee via a planning and development process, sometimes leading to an Individual Development Plan (IDP) or a Personal Development Plan (PDP). This process helps an employee understand his or her role, priorities, resources, accomplishments, and professional development as they relate to the company’s vision, mission, strategic drivers, and departmental strategic goals.

Each month the strategic plan and its objectives are evaluated, and every six months a detailed review is conducted. This review allows changes to be made as quickly as possible. ProCo employees also have input to the strategic process at bi-monthly all-company meetings as well as during weekly departmental meetings. During the bi-monthly meeting, the vision and mission are reviewed, departments provide updates, and key company metrics are shared—including financials—and quality improvement teams report on their progress.

Self-assessment, strategic planning improvement teams and their impact became a proven cycle that resulted in employees recognizing that their feedback was being listened to and acted upon. Employees were allowed to volunteer for the improvement teams, and so they saw the impact quality was having as a result of their efforts, allowing them to make a difference in their workplace. For this reason the process was embraced enthusiastically.

Figures 1 and 2 show the results of the annual self-assessment for years one and two at ProCo.

**Using the Baldrige Criteria and Self-Assessment to Align Quality Tools & Techniques**

An integrated Quality, Environmental, Health & Safety (QEHS) Management System using ISO9001, ISO14001

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**Figure 1: Improvement in Every Category of the Baldrige Criteria at ProCo**

![Figure 1: Improvement in Every Category of the Baldrige Criteria at ProCo](image-url)
and OHSAS18001 is used to provide the infrastructure to manage ProCo’s operations. ProCo uses a range of quality tools (such as the Six Sigma DMAIC methodology, value stream mapping, process mapping, kaizen blitz, FMEA, and 5S among others) throughout the organization and especially as part of the improvement teams addressing OFIs, which are identified as key strategic projects. The “Toolbox” has created a set of tools for addressing OFIs that have been identified as key strategic projects. Together, the Baldrige Criteria, QEHS system, and quality tools provide the means for ProCo to design, manage, and improve its business.

Over 40 cross-functional improvement teams have completed projects, each directly aligned to a strategic objective. Each of these teams participated in 16 hours of communications and quality management training before developing their charters to focus and launch their projects. Each team has a team leader, facilitator, and sponsor, and each uses a team charter and A3 template (Toyota’s one-page problem solving report format) as key tools. Each team ensures that corrective and preventive actions are implemented and present financial and non-financial metrics of their impact at all company meetings. Thus every employee gets the opportunity to see the results and hear about the lessons learned, and this encourages the continuation of the improvement process.

The Impacts of Using the Baldrige Criteria and Self-Assessment

With 40 improvement projects completed, it is obvious that over the years a significant number of impacts—both financial and non-financial—have been made at ProCo. But four key metrics can be assigned:

- reduced cycle time by 15%
- reduced defects by 50%
- reduced warranty costs by 75%
- increased customer satisfaction to 97%

The cycle time, defects, and warranty cost teams all involved cross-functional teams that also incorporated members from suppliers and other partner organizations to create a diverse and inclusive team. Each team over the years has continued to address the top 80/20 issues and has created experienced teams that now form and run themselves and consider this a normal way of doing business.

ProCo has won a number of its industry’s Baldrige-based awards as well as awards for customer satisfaction and environmental management. These awards have provided feedback for ongoing improvement and created a strong sense of pride throughout ProCo.

Conclusion

For ProCo the Baldrige Criteria and Self-Assessment became an integral part of the organization’s functioning. The criteria and self-assessment have helped the organization to achieve a strategic focus and to function better, and they also have provided bottom line impacts.

Denis Leonard holds a PhD in quality management. A Fellow of the American Society for Quality, he is a Certified Manager of Quality/Organizational Excellence, Auditor, and Six Sigma Black Belt. Denis has served on the Baldrige National Quality Award Board of Examiners, the Wisconsin Forward Award and the Northern Ireland Quality Award. He has also co-authored The Executive Guide to Understanding and Implementing the Baldrige Criteria. Denis is a member of the ASQ Quality Management Division’s Organizational Excellence Technical Committee. He can be contacted at DenisLeonard@BusinessExcellenceConsulting.net.
New Technological Platform for Organizational Excellence

By Dawn Ringrose

Organizational Excellence Specialists in Canada has launched a technological platform that will help organizations and professionals around the globe gather data and generate reports on the current state of organizational excellence. The platform is based on the Organizational Excellence Framework, which integrates the principles and best management practices of excellence models (EFQM, Malcolm Baldrige, Canadian Framework for Excellence, Australian Business Excellence Framework) and provides implementation guidelines for the practitioner.

The framework is aimed at the practitioner to assist with implementation and to encourage more organizations to apply for national excellence awards and international best practice and benchmarking awards. The following illustration (Figure 1) depicts the framework at a high level: principles that depict the culture of the organization (inner ring), key management areas that house best-management practices (middle ring), and the continuous improvement methodology and balanced system of performance measurement (outer ring). For those interested, the publication is available for download (no charge) at http://organizationalexcellencespecialists.ca/.

The new technological platform (Figure 2) is intended for use by any organizational excellence professional or organization. It automates the self-assessment, improvement planning, and reporting process. To begin, the leaders, management, and/or staff must self-assess their organization against the principles and best-management practices. As the respondents move through the assessment, they can seek additional information as required by simply holding their cursor over the statement or rating scale, and they can provide open-ended comments at the end of each section. Charts to the right of the questions and a rating scale provide immediate feedback as the respondents move through the assessment.

When the self-assessment is complete, the technological platform will generate a report. The report is provided in an editable Word document that describes the methodology, the statements with the ratings and open-ended comments, and an action-oriented improvement plan to address the low-rated practices. Because the report is editable, it can be further enhanced by the user with such information as strategic linkages, analysis, recommendations, and best practice and/or best-in-class examples.

This technology can be used in a variety of ways. Incubators can use it when working with start-up businesses, consultants can use it when working with client organizations to implement an excellence model, and organizations can use it when doing annual assessments and monitoring their performance. Trainers can use the technology when conducting workshops, business and industry associations can use it when delivering value-add services to their members, and national award organizations can use it to benchmark the performance of their award recipients.

As organizations around the world use the technological platform, there will be several benefits for the operational excellence community:

- It will educate organizations about excellence models and encouraging implementation.
- It will encourage organizations to:
  - track their performance over time and strive for continual improvement
• seek recognition and earn national quality awards
• compare their performance with others
• It will feature a big data supply and a global knowledge base that will provide knowledge and reports on clusters, industries, countries, successes, and challenges.
• It will create a new and sustainable revenue stream for users.

Interested in trying the technological platform? There are two opportunities. First, the complimentary teaser assessment, Does Your Organization Have A Culture of Excellence? http://organizationalexcellencespecialists.ca/ allows the respondent to self-assess her/his organization against nine principles common to high-performing organizations. This assessment takes about five minutes. When that assessment is complete, the technological platform generates a confidential report and delivers it to the respondent’s inbox. Second, on March 31, 2015, the OETC launched the first global assessment on the current state of organizational excellence. The full assessment can be found at http://www.qlbs.com/QimonoVBA/Assessment/OrgExFramework. This assessment takes 15–30 minutes to complete, depending on organization size. It is important to note that individual respondent data will be kept strictly confidential and only aggregate data will be reported at regular intervals on the Organizational Excellence Technical Committee (OETC) LinkedIn site. Those respondents wanting a copy of their individual confidential assessment report are invited to contact me directly.

In closing, this new technological platform provides a real opportunity for the operational excellence community to work together, to further the use of excellence models, and to celebrate the results! Please join us in this exciting initiative and help bring the continents together through excellence.

Dawn Ringrose is Principal of Organizational Excellence Specialists and author of the Organizational Excellence Framework. She represents Canada on the Organizational Excellence Technical Committee (QMD, ASQ) and the Global Benchmarking Network. She is also a member of the Canadian committee contributing to the new ISO standard for management consulting. Dawn’s professional credentials include Fellow Certified Management Consultant, Certified Organizational Excellence Specialist, Certified Excellence Professional, Registered ISO 9000 Specialist, Assessor of Quality Systems, and Certified Seminar Leader. She can be reached at dawn@organizationalexcellencespecialists.ca
Further Development of the ASQ QMS Model for Healthcare

By Zachary J. Brennan, Sasha L. Manouchehripour, Shannon J. McCarthy, Kylor J. Sorensen, Lauren T. Waggoner, and Thomas J. Persoon

Introduction to Quality Management Systems

There are many definitions of quality. A synthesis of those definitions leads to a definition of quality in healthcare as predictable and dependable performance that consistently meets or exceeds the expectations of the customer, achieving the best possible outcomes in the safest manner (Motschman et al). Management is “the process, comprised of social and technical functions and activities, occurring within organizations for the purpose of accomplishing predetermined objectives through humans and other resources” (Longest, Rakich, and Darr, 19). A system is “[a] set of elements or parts that is coherently organized and interconnected in a pattern or structure that produces a characteristic set of behaviors, often classified as its function or purpose” (Meadows, 188). Thus, a management system for quality coordinates the activities of a set of elements that are coherently organized and interconnected in structure, to produce a characteristic set of behaviors that achieve predictable and dependable performance that consistently meet the expectations of the customer. Our team chose to create this somewhat “wordy” definition because it focuses on the activities of coordination, production, achievement, and meeting customer expectations.

For more than half a century, healthcare as an industry has been transforming, from one that emphasized craft work with a goal of decreasing “dis-health” or “un-wellness” (sickness care), to an industry whose ultimate goal is to produce continuously better health and wellness of populations through mass customization of condition risk diagnosis and preventive therapies. The recognition that modern healthcare requires a system that must be managed well to achieve the desired outcomes was articulated nearly three decades ago (Laffel and Blumenthal). Progress toward this goal has been slow, in part due to the complexity of the healthcare system and the lack of appropriate quality system management tools (Portela, et al), (Brennan, et al), (Crema & Verbano, 2013a), (Crema, & Verbano, 2013b). Crema and Verbano (2013a, 2013b) and Goetz et al have provided comprehensive reviews of recent approaches.

The American Society for Quality (ASQ) recently released a tool that purports to assist healthcare organizations in developing a Quality Management System (QMS). Figure 1 depicts the elements of the ASQ Quality Management System for Healthcare (QMSHC) model (Motschman, et al, 6). Our team hypothesized that this model, while conceptually true and accurate, is insufficiently detailed to be of use to the average healthcare administrator responsible for creating and maintaining a QMS for their organization. We therefore sought to further develop the model by creating additional elements that are more specific and actionable.
Understanding the Current QMSHC Model

We began our research by analyzing the QMSHC Model. The purpose of this model is to “ensure reliable processes, decrease variation and defects (waste), focus on achieving better results, and using evidence to ensure that a service is satisfactory” (Motschman, et al., 7). To better understand quality management systems in general, we analyzed the quality management system in place in the pathology and laboratory medicine department at a large Midwestern academic medical center. We also analyzed the QMS at an FDA and American Association of Blood Banks (AABB) accredited blood center at the same institution. These departments have operated under a quality management system based on the Quality Systems Essentials model (Berte) for more than a decade. We reviewed their current QMS and any relevant policies and procedures, and we looked at the similarities and differences between the two departments. To further our understanding of the workflow processes and procedures, our team took a guided tour of the pathology department operations at our institution of study. Throughout this tour, we were able to witness the operational impact of the department’s QMS in action. We used this information to generalize elements that could be applied to any department.

Understanding Interconnectivity

To help us understand the interconnectivity of the ten elements of the outer circle of the QMSHC model, we created an interrelationship digraph for all ten elements. We discovered that all elements were interrelated, diminishing the usefulness of this tool. In their evaluation of the Malcolm Baldrige Healthcare Criteria Performance (MBHCP)

(Further Development of the ASQ QMS Model for Healthcare, continued on page 10)
Excellence Model, Lee, Lee & Olson presented a research model that focused on key elements of the relationships in the MBHCP model. We therefore chose to use this approach and created our model (Figure 2), limiting the element connections to those which we thought were “strong” connections, i.e. qualitatively most important. For this purpose, we defined strong connection as an element that cannot function without assistance of the other. Our resulting model has 26 connections compared to 90 in our original interrelationship digraph. These 26 connections represent the key relationship links that must be addressed in a QMS. Our digraph clarifies the importance of relationships in quality management and demonstrates that a QMS will not work effectively without all the quality system elements present and functioning.

Expanding the Model

We took the QMSHC model and expanded it to create two additional layers that provide concrete concepts for implementing the QMSHC within a healthcare organization. The purpose of these layers is to give department managers guidelines in their implementation of a QMS system. Our additional layers take the conceptual framework of the QMSHC model and translates that into actionable tools for promotion of quality (see Figure 3).

We propose that the best purpose of the fourth layer of the QMSHC would be to clearly define the components of the third layer’s elements. We found that outlining these elements was essential to providing a roadmap for quality improvement efforts. The elements of the fourth layer are shown in Table 1.

The outermost layer of the QMSHC contains what we call the characteristic implementation tools. Here we provided the questions needed to take the concepts to concrete action (see Appendix). We propose that asking these questions will serve as a toolbox of ideas and spark further questions and discussion within the organization. In practice, we envision a team sitting down with the QMSHC model and the list of characteristic implementation questions and using them to identify ways to improve quality in their organization.

Recommendations

Our first recommendation is that every healthcare organization familiarize itself with the QMSHC and evaluate their readiness to implement a QMS. For a successful implementation of the QMSHC, there must be organizational and departmental leadership buy-in. Leadership must evaluate the readiness of their organization to implement the QMSHC and must tailor their QMS to fit their organization’s current structure. Not every organization will be ready to undertake implementation of the QMSHC immediately.

Our second recommendation is to implement an organization-wide QMS that can be tailored for each specific department once organizational readiness is deemed appropriate. All department managers should evaluate the QMSHC and identify the elements that apply to their specific department. After identifying the elements, utilizing the characteristic implementation tools will allow managers to customize a departmental QMS.

Our final recommendation is to increase the resources dedicated to expanding the literature base of this topic. Specifically, there should be more research conducted...
Conclusion

The complexity of healthcare systems and the serious nature of medical errors in healthcare have created the urgent need for the development of Quality Management Systems within the industry. There is ample opportunity to improve upon the published QMSHC model. We believe that our recommendations can be used to further the development of the QMSHC model to educate employees, improve quality of healthcare, and save lives.

Acknowledgment

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References


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Appendix

Planning and Development of Leadership

Structure of Organization

1. Describe the management structure of the organization, including how each operational unit coordinates its activities with management layers both above, below, and parallel to the unit.

2. How does performance review evaluate adherence to the mission, vision, and values of the organization?

3. How has the organization addressed the needs of the community?

Strategic Planning for Governance

1. How does the organization communicate the mission, vision, and values to all stakeholders?

2. What policies are in place to encourage change management and process improvement?

Leadership Style

1. How does the institution’s board evaluate its leaders?

2. How do leaders personally demonstrate the mission, vision, and values of the organization?

(FURTHER DEVELOPMENT OF THE ASQ QMS MODEL FOR HEALTHCARE, continued on page 12)
3. In what ways are leaders engaged in organizational operations?
4. How do leaders ensure that employees adhere to organization’s mission, vision, and values?
5. How does leadership create quality planning goals for the organization and evaluate progress toward achieving them?
6. How do leaders ensure the organization operates within compliance requirements?
7. What policies are in place to promote a non-punitive culture, so that employees are encouraged to express concerns related to errors and failures?

Feedback Loops

Feedback Systems and Processes for Generating Feedback
1. Does the organization utilize Joint Commission or other accredited organizational audits?
2. How does the organization collect feedback from employees?
3. How does the organization collect feedback from the patients and their families?
4. How does the organization collect feedback from the community to ensure that it is meeting the community’s needs?

Feedback Data Sources
1. What systems and policies are in place to collect and track performance outcomes and results?
2. How does the organization engage in benchmarking with other organizations?
3. What is the process for submitting and documenting near-miss events?
4. How often does the organization perform internal audits?
5. How does the organization utilize satisfaction survey data?

Evaluating Organizational Settings

Physical Environment
1. Describe the organization’s plans for compliance with accrediting agencies’ safety requirements.

2. Is there a disaster plan in place, and does it cover all likely potential natural and human-caused disasters (i.e. adverse weather events, infrastructure operation failures)?
3. Does the disaster plan include recovery plans for the various likely disasters?
4. How does the organization maintain cleanliness?
5. What is the system to regularly review the environment for compliance with environmental regulations, i.e. building and life safety codes?
6. How is the removal of waste materials, including hazardous materials, handled?
7. Is there a current, complete, and effective infection control system in place?

Physical Assets
1. Are there policies and procedures in place for testing all equipment for compliance with safety regulations?
2. Are safety tests completed within the time window appropriate to prevent failures from reaching patients and staff?
3. Does all equipment have manuals and safety protocols available to staff?
4. Does the organization have policies and procedures on maintaining clean equipment?
5. Is there a supply chain management system in place that includes procedures for new product evaluation, effective comparative pricing, new product training, appropriate inventory control, expiration date control, contingencies for out-of-stock conditions, and a reporting mechanism for product defects?

Equipment, Supplier, Inventory Management
1. What are the standard procedures in place for staff to submit supply requests?
2. What are the standard procedures in place for staff to submit equipment requests?
3. How is proper training conducted before staff utilizes necessary equipment?
4. Are cost effectiveness analyses performed to ensure optimal utilization of resources?
5. How is inventory tracked and managed?

Coordinating and Integrating Information

Electronic Documentation
1. Is the EHR compliant with HIPAA?
2. How is the EHR format evaluated for user-friendliness?
3. Are there effective policies and procedures in place if the EHR goes down? Are downtime procedures rehearsed and tested regularly?
4. Is the staff trained on the necessary steps to ensure productivity is maintained if the EHR goes down?

Data Reliability
1. How does the organization ensure procedures for data entry are standardized?
2. Is information readily available to staff?
3. Are policies in place to ensure care coordination among departments?

Ensuring Compliance

State
1. Have the state requirements for operating the facility been identified?
2. Is there a system in place to test if the organization is compliant with the requirements?
3. Is there a system in place to make non-compliance areas of the organization compliant?

Federal
1. Have the federal requirements for operating the facility been identified?
2. Is there a system in place to test if the organization is compliant with the requirements?
3. What system and processes will be used to make non-compliant areas of the organization compliant?

**Credentialing and Licensing**

1. Have the credentialing and licensing requirements for operating the facility been identified?
2. Is there a system in place to test if the organization is compliant with the requirements?
3. What system and processes will be used to make non-compliant areas of the organization compliant?

**Developing Teamwork**

**Department**

1. What is the department’s definition of effective teamwork?
2. How is effective teamwork in your department measured?
3. How does the department foster teamwork?
4. How does the department deal with malfunctioning teamwork?
5. How does the department select productive team members?

**Interdepartmental**

1. Has the department identified other areas in the organization with whom they can collaborate?
2. How does the department foster teamwork with other departments?
3. How does the organization deal with malfunctioning teamwork?
4. Does the organization have a method for selecting productive team members?

**Community**

1. How is effective teamwork measured in the community?
2. Have any existing collaborations within the community been identified?
3. How does the department foster teamwork within the community?
4. How does the community and organization deal with malfunctioning teamwork?
5. Who are the key stakeholders within the organization and within the community that can collaborate?
6. Does your community have a method for selecting productive team members?

**Directing Process of Change**

**Planning for Change**

1. Has the organization identified the objective of the change?
2. Does the organization have the ability to operate in a new environment?
3. Does the organization have a measurement system in place to test the effectiveness of the change?
4. What is the process for identifying the key stakeholders for a change initiative?
5. How does the organization identify the possible areas of resistance to change?
6. How does the organization communicate the change to those affected?

**Implementing the Change**

1. How does the organization document problems and unexpected results from the change?
2. How does the organization communicate the ongoing development to those affected by change?
3. How does the organization engage resistant parties throughout the implementation of change?
4. How does the organization collect data through change implementation?

**After the Change**

1. How does the organization analyze pre- and post-implementation data?
2. How does the organization determine the success of the change?
3. How does the organization modify any areas in need of improvement?
4. How does the organization communicate successes to staff?
5. How does the organization follow up with resistant parties?

**Opportunity Management**

1. Is there an opportunity management team in place to brainstorm possible areas of new risk?
2. Who comprises the membership of the opportunity management team?
3. Once an opportunity for new risk is identified, how will the decision to move forward be made?

**Management Review**

1. How does the organization respond to sentinel events?
2. Is there a system in place to measure the effectiveness of risk prevention?

**Planning for Communication, Education, and Training**

**Effective Communication**

1. How does the organization define effective communication?
2. Has the organization identified essential communication avenues?
3. Is there a system in place to ensure that effective patient communication is occurring?
4. If there a system in place to ensure that effective organization communication is occurring?

**Operational Performance**

1. How does the organization define operational performance?
2. Describe the system to test that operational performance checks are in place?

**Continuing Education and Credentialing**

**Risk Prevention**

1. How does the organization identify their specific risks?
2. Are there specific policies in place to respond to identified risks?
3. Has the organization identified and developed plans for risky events?
**Kutralwe Preschool’s Journey of Excellence: A Case Study**

*By Jorge Román, PhD*

**Introduction**

The relevance of formal quality management initiatives such as Total Quality Management (TQM), quality certification, and quality awards applied to small-to-medium enterprises (SME) has been a highly contentious issue in the quality and SME literatures over the past decade.

The company in this case study, “Kutralwe,” is an SME organization based in Santiago, Chile, with 250 students age 1–6 years old. Kutralwe uses self-assessment as an integral part of its strategic planning (based on the Baldrige Criteria for performance excellence). The Baldrige Criteria proved to be the framework that Claudia Bustos (owner/director) of Kutralwe was able to use to leverage various improvement approaches. It also gave Kutralwe a way to holistically assess and improve the organization.

**The Journey of Excellence, Based on the Baldrige Criteria**

Organizations across the world are using these business excellence frameworks as bases for continual performance improvement. In the United States, nearly two million copies of the Malcolm Baldrige Criteria for Performance Excellence Framework have been distributed since the award’s launch in 1988. This figure does not include copies that are available in books, state, and local award programs, or those downloaded from the web. In Europe alone the European Foundation for Quality Management (EFQM) believes that at least 35,000 organizations are using the EFQM model. In Chile, there are not many SMEs—perhaps fewer than 200—that use the Chilean Business Excellence Framework (CBEF).

In Chile, 99% of all enterprises are SMEs, and they employ 57% of the business sector’s labor force. Seventy-seven percent of SMEs are microenterprises, 19% are small and 3% are medium-sized. There is a huge opportunity to educate SMEs about business excellence and to assist them on their journey. If this can be achieved, the benefits to Chile’s economy and society in general would be enormous. And business excellence is not solely about financial returns; it also concerns the benefits for all stakeholders—customers, employees, and society as a whole—through minimizing negative impacts on the environment.

In quality preschool programs, the curriculum, teaching strategies, and the environment reflect research-based knowledge about the way children develop and learn. Such programs are said to be developmentally appropriate. Teachers in programs such as these consider the strengths, interests, and needs, as well as the culture and home language of each child in the group.

Kutralwe adopted the Chilean Business Excellence Framework in 2007, and the company ([www.jardinkutralwe.cl](http://www.jardinkutralwe.cl)) won the SME Quality Award in 2009 and 2011. The CBEF addresses all key areas of a small business and are compatible with other performance improvement initiatives, such as ISO 9000, Lean, Six Sigma, and Kaizen. Kutralwe began its journey of excellence in 2006 when the owner/director decided to use the continuous improvement tools “5s Program” and Benchmarking TRADE methodology from Dr. Robin Mann (2010).

Kutralwe began implementing the CBEF as their business model. The first step was to assess the organization against the criteria, but without letting the organization know it was being assessed. Claudia Bustos did this through a series of conversations and questions and by observing the preschool teachers in action. After six months, the entire organization was interviewed and received training in order to understand the criteria. Since 2007, Kutralwe has annually assessed the performance using the Chilean Business Excellence Framework in order to achieve even better results.

**Reference**


Dr. Jorge Román received his PhD from Lleida University in Spain. His areas of expertise focus on the application of quality improvement to business in service and products (TQM, Lean Management, Business Excellence Framework, QMD). Román currently leads a global management consulting firm with strategic expertise in leadership development, customer satisfaction, workforce engagement, and process excellence. Dr. Román is an ASQ Country Counselor, a member of the International Academy for Quality and the Organizational Excellence Technical Committee of the QMD. He can be reached at jroman@businessexcellence.cl.
Book Review

Reviewed by Dan Zalewski

The Probability Handbook and The Probability Workbook, both written by Mary McShane-Vaughn

By design, The Probability Handbook and The Probability Workbook are a complementary pair. The Handbook discusses essential probability topics in an inviting, conversational tone well suited to quality practitioners who are not academics. Where a typical textbook might present theorems and detailed proofs, the Handbook emphasizes understanding basic principles and relevant applications. The Probability Workbook complements the Handbook by providing a wealth of problems that span the probability topics for the reader to explore. Unlike a typical textbook, which might provide only a numerical answer for all of the odd questions, the Workbook features a more complete discussion with each of the problem solutions. Taken together, the two books solidly achieve the author’s goal: they are a suitable resource for quality practitioners to refresh their knowledge of probability.

The first three chapters of The Probability Handbook quickly guide the reader through the basic concepts of probability. At only two pages, the first chapter is a refreshingly brief introduction to probability. The second chapter discusses techniques for counting sample spaces. The discussion is augmented by a few well-considered illustrations, and the key formulas are highlighted in shaded boxes. The text also shows relevant Excel spreadsheet functions. The Probability Handbook hits its stride in the third chapter, quickly covering the basic definitions and axioms of probability. The end of chapter three illustrates the application of probability theory with discussions of the Monte Hall problem and Simpson’s Paradox.

Chapter four covers the basics of probability mass functions and the common discrete distributions, including the discrete uniform, binomial, multinomial, geometric, and Poisson distributions. The fourth chapter includes more math and more formulas than the earlier chapters, but does not get so academic that it would lose a non-academic quality practitioner.

A particular strength of this chapter of the Handbook is the inclusion of concise examples of how each discrete distribution links to familiar quality situations.

The final chapter of The Probability Handbook covers the basics of continuous distributions. This can be a daunting chapter for a quality practitioner. Simply put, a lot of information is covered in a chapter that spans over 70 pages. However, the Handbook emphasizes understanding and application without overly relying on calculus. For example, section 5.2.2 describes Markov’s Inequality in two very short paragraphs and provides an application example in a third paragraph. That’s good value in less than half a page. Similarly, the Central Limit Theorem discussion is less than two pages long. The Handbook discusses many useful continuous distributions and, as in the previous chapter, presents essential formulas and concise connections to common quality applications.

The Probability Handbook contains about 150 pages of text and an additional 50 pages of useful tables. You could read the Handbook in one long sitting, but that’s not the best way to learn (or relearn) probability. The best way is doing problems, and that’s where The Probability Workbook comes in. The Workbook presents over 400 clearly written problems in 165 pages that require the application of the concepts and formulas presented in The Probability Handbook. The solutions, presented in Appendix A, span 300 pages! This format is particularly useful for self-study since the discussed solutions reinforce that the problem solver not only finds the “correct” answer, but also thinks through the problem correctly.

For the sake of full disclosure, I played a very small part in reviewing a few of the problem solutions for the author. Please take that as an indicator of the effort that McShane-Vaughn put into vetting the readability and correctness of each of the problems and solutions, not a bias in this review.

The Probability Handbook and The Probability Workbook are solid options for those looking to refresh their memory of probability theory and application. The pair could also be effective for use as a secondary textbook for a probability course, or as a quick deskside reference.

Dan Zalewski is an assistant professor in the Department of Engineering Management, Systems, and Technology at the University of Dayton. Dan has broad experience in the creative use of modeling and simulation to assist organizations making hard decisions in complex environments. He has applied advanced data analysis and operations research to a variety of topics including strategic planning, process improvement and large capital investments.
Quality Management Journal Preview

Volume 24, Issue 4, Executive Briefs

As a continuing feature of the QMF, we are showcasing the most recent articles in our sister publication, the Quality Management Journal (QMJ). The QMF focuses on the practical application of quality principles, and the QMJ focuses on the research aspect of quality. We hope that you will visit their website and begin the synthesis process of merging theory with application to advance the field of quality. [http://www.asq.org/pub/qmj/index.html](http://www.asq.org/pub/qmj/index.html)

The QMJ provides relevant knowledge about quality management practice that is grounded in rigorous research. They seek:

- Empirical articles that provide objective evidence concerning actual quality management practice and its effectiveness.
- Research case studies that consider either a single application or a small number of cases.
- Management theory articles that present significant new insight and demonstrated practice.
- Review articles that create links to the existing academic literature and aid in the development of an identifiable quality management academic literature.

Here is a summary of their most recent articles.

**Antecedents of Hypermarket Service Quality in the United Arab Emirates**

Ahmed R. Eimelegy, Gulf University for Science and Technology, Subramaniam Ponnaiyan, American University in Dubai, and Mahamad N. Ainajem, Gulf University for Science and Technology, Kuwait

Retail format hypermarkets are emerging in numbers and contributing $2.5 billion a year to the economy of the United Arab Emirates (UAE). Despite their importance and to the best of our knowledge, no other studies specifically explore the service quality of such markets in the UAE. To fulfill this gap, this empirical study employs the SERVQUAL model to examine the antecedents of hypermarkets service quality in the UAE using Structural Equation Modeling. The study sample included 1,248 respondents from different hypermarkets across the UAE. The research findings demonstrate that reliability, assurance, and empathy are the key determinants of hypermarkets service quality in UAE, while tangibility and responsiveness were not significant. The research contributes to the literature on hypermarket service quality in an understudied region and provides information for administrators to make informed decisions. Study limitations and directions for future research are also discussed.

**Lean Six Sigma Deployment and Maturity Models: A Critical Review**

Bart A. Lameijer, University of Amsterdam, Jeroen de Mast, University of Amsterdam, and Ronald J.M.M. Does, University of Amsterdam

For guidance in implementing Lean Six Sigma, both the academic and the practitioners’ literature offer deployment models and models for assessing the implementation’s maturity. This paper makes a critical appraisal of the quality and usefulness of a sample of 19 such models. The appraisal follows a set of review criteria developed on the basis of theory. The analyzed models appear disconnected from established theory in organizational development, and the given advice lacks in specificity and operationality. The underlying notion of deployment processes seems an exclusively programmatic view, leaving little room for idiosyncrasy and learning elements. The study signals an important need for scientific insight in the process of implementing approaches such as Lean Six Sigma, and for a more effective translation of established theory in organizational development to forms that practitioners can use. The paper also bridges the gap between academic literature on organizational development and practices in the field as codified in practical deployment models, and identifies how the former could have more impact on the latter.

**The Battle for Customer Loyalty: An Examination of Customer Loyalty in the Goods and Services Domain**

Kwabena G. Boakye, Georgia Southern University, Charles Blankson, University of North Texas, and Victor R. Prybutok, University of North Texas

This research fills a gap in both quality management and marketing literatures by examining how customer co-production, experiential and situational variables in a non-personal setting influence loyalty decisions towards products and
In this issue we finally arrive at Part 4 of our series on Overcoming Adversity. In Part 1, we discussed the Three Levels of Resistance and how to recognize and overcome them. In Part 2, we examined how to deal with setbacks in life and your career. In Part 3, we examined the different areas where stress can arise. In this piece, I want to explore some strategies to deal with stress to keep you on track with your career and remain healthy enough to enjoy it. As William Arthur Ward said, “Adversity causes some men to break…Others to break records!”

I believe our career is balanced on a four-legged stool. Each leg is critical to our success. The four legs are our Intelligence Quotient (IQ), our Emotional Quotient (EQ), our Physical Quotient (PQ), and our Spiritual Quotient (SQ). Each of these is critical to our well being. A life lived “out of balance” is going to be a lot more work. Let’s examine each of these in turn to see how we can “balance” our professional and personal lives to become what we were created to become.

First up is our IQ. We need to actively learn lessons from everything we go through in life. Most of us focus on our victories. But I’ve learned more from my failures and my “skinned knees” than I ever learned from my successes. The best strategy for this I’ve found is from our SPAWAR Community (SEALS, Delta Force, TOP GUN, etc.) members. It’s simple but very powerful. It’s “The Four Questions.”

Question One is, “What went right?” Discuss in detail what specifically you and your team did that was good. Question Two is, “What went wrong?” Here is where you are required to engage in what I call “brutal honesty.” You have to be willing to admit where things did not go according to plan or to expectations. Almost everyone wants to focus on the accolades and the “attaboys.” But you don’t learn from those. You learn from the detailed analysis of what you and your team could have and should have done differently! Question Three is, “What did we learn from this?” The power of this strategy is in speaking honestly about details. Don’t settle for vague, half-baked answers like, “we need to communicate better,” or “we didn’t work well as a team.” Get into painful specifics about WHY you didn’t communicate or WHY you didn’t work well together. The power continues to be in the details! Question Four is, “What are we going to do differently next time as a result of what we just learned?” Focus on specific action items and assign accountability to be followed up at a specific time. Used with purpose and with detail, the Four Questions are the most powerful learning method for leadership and team building I’ve found. You improve your IQ by learning more about your job and your performance every day!

Next up is our EQ. As we saw in Part 3, adversity can come at us from several major areas in our lives, both personal and professional. You can simply react to the moment...or you can proactively develop a strategy that is flexible enough to handle almost anything that comes your way. One thing I tell my coaching clients is that the world has it backwards—I believe it should be, “Don’t Just Do Something… Stand There!” Take an appropriate amount of time to assess the situation and develop a plan. Even in a life-and-death crisis you can take a few seconds to accomplish this. In fact, the more dire the circumstance, the more important this becomes. And never forget, NO plan survives the first five minutes of contact with reality. Yet those with a plan to deviate from are almost invariably more successful than those who simply react to a situation. That’s why I always have a Plan B, C, D, and if it’s important enough, a Plan E. This is because it’s critical to never get “locked into” your Plan A. Circumstances change, and you should as well. People with a plan are going to be emotionally stronger in a crisis than those who are simply reacting to what is going on around them and allowing themselves to be driven by events. Also, use your network. Sound coaches, mentors, friends, and family are invaluable in times of adversity. You are never truly alone...you simply need to reach out to those who can help you. It’s never a weakness to ask for help, but it is a weakness to fail because you tried to do everything on your own.

Next up, let’s look at your PQ. Our health affects our ability to handle stress, and stress affects our health. This is a very complicated “loop” that you have to actively manage during your times of greatest adversity. If you can’t take care of yourself, how are you going to be able to take care of your team? This goes beyond eating healthy and sleeping. It requires you to evaluate yourself holistically. Are you allowing yourself enough “downtime” to remain at your best? I’ve personally learned that even though I can go for much longer periods without sleep than most people, there is a price to pay in terms of my effectiveness. And, as I become less and less young, it becomes a bigger factor than it has been in the past.

Learn your body! And listen to it! Each of us has our own patterns. Specifically plan into your schedule times for relaxation. Place yourself in situations that have nothing to do with your adversarial issues. Focus on discipline and time-management strategies. The greater the stress, the more time you need to actually build into your plan about how you are going to take care of yourself. Your family and your team are depending on you getting this part of your “balance” correct!
Last, but certainly not least, is your SQ. Even atheists have strong beliefs! Their belief in nothing is often stronger than others’ belief in something. I strongly suggest incorporating mindfulness into your plan for dealing with adversity and high levels of stress. Specifically plan into your day some time to focus inward. Rest your mind. It is precisely the same as a body doing unlimited pushups. At some point, even the strongest athletes have nothing left. So they change to a different exercise and rest the arm muscles. By changing your thought patterns, you rest the part of your mind that has been focused on the adversity. Allow yourself the time required to reflect on peaceful, pleasant thoughts. This aspect of dealing with adversity and stress is often overlooked but may be one of the most powerful tools you have to maintain your professionalism and your ability to function for extended periods in highly stressful environments. I also find that focusing on others is a fantastic way to take my mind off of my own troubles. It’s virtually impossible to feel depressed when you are helping other people. Physically take yourself to a different location, a different environment, or a different situation to help put your inner being at rest.

Adversity—it’s always going to be a part of your existence. Learning to deal with it effectively will allow you to reach your full potential. AND it will allow you to enjoy this life to the fullest. Now go tackle that challenge!

If you have questions or comments, contact me at askcoachjr@x-slg.com.

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services. Through an empirical study, an interpersonal relationship theory from social psychology, known as the Investment Model (IM), is used to develop a better understanding regarding the drivers of why customers stay loyal with product and service firms. Self-reported data from a sample of 221 college students who own an automobile or live in an apartment were collected to test our hypotheses. The results indicate that customer satisfaction and the amount of investment made by a customer positively influences their loyalty towards a firm’s offering while the quality availability of attractive alternatives negatively impacts loyalty towards the firm’s offering. Furthermore, our interpretation of the IM suggests that customer satisfaction increases a customer’s loyalty much more in a service offering, compared with a product offering. However, did not find in our service/product offering comparison any difference between investment size, quality of attractive alternatives and loyalty. These findings provide a much better insight in assessing the applicability of IM in non-personal settings, providing information that can help managers to invest in resources that trigger customer engagement and enhance loyalty levels.
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