Stop Greenwashing:
Start Authentic Social Responsibility

By Daniel Zrymiak

Introduction

Organizations purporting to have Corporate Social Responsibility (CSR) systems, while engaging in practices that are incompatible with social responsibility, are guilty of Greenwashing. Legitimate CSR represents the plans and endeavors of an organization or enterprise to acknowledge and quantify the aspects of its products and services to its stakeholders and society. By engaging in activities that will mitigate the impacts and risks and enhance the communities and societies affected by its operations, a company can use CSR to improve itself and its surrounding ecosystem. In contrast, Greenwashing is an undesirable approach that is done simply for public relations appeal or to deflect further scrutiny. Over time, the betrayal of public trust creates more harm and proves more costly than a legitimate CSR system would have been, while imparting none of the benefits that a proper enterprise management system normally bestows on an organization.

For example, Greenwashing can be inspired by the need to complete a checklist for a Request For Proposal or the need to be included on a list of favorable businesses by the local Chamber of Commerce. When Greenwashing is performed, the effects can actually do more harm than good to the reputation of the organization. Compare the relative profits and returns experienced by socially innovative manufacturers such as Toyota and Volvo (Agence France-Presse, 2016), with ecological products and cost-effective designs emphasizing safety and reliability, to Greenwashing competitors, who have been severely penalized for violating emissions regulations and using defeat devices to improperly pass air quality standards (Trefis Team, 2017).

“Greenwashing can be loosely defined as the times in which an organization falsely conveys to consumers that their products, service, or operating practices are socially and/or environmentally responsible” (Pontefract, 2016). The practice of Greenwashing has no legitimate impact, while authentic social responsibility is desired and offers true benefits. Extensive studies have been conducted to determine some of the motives and drivers stimulating organizations to adopt CSR programs. In one study, the motives are not altruistic but tactical. For example, having the appearance of a CSR system that lacks the validation of actual metrics and reporting does more to create cynicism than reassurance.

Substantive CSR vs. Greenwashing

Lim & Tsutsu (2012) performed research to review companies that adopted one or both of the most popular international CSR standards, the Global Reporting Initiative and the United Nations Global Compact. These two voluntary programs request that companies report on, and improve, their economic, environmental and social practices
Chair’s Message

By Jan Tucker

Hello everyone. Welcome to the winter 2017 edition of the Quality Management Forum!

As winter draws closer and the days get shorter, it is a time for reflection. This past year, how well did I do in promoting and enforcing a quality ethic at my workplace? I often think I could and should have done better, and this thought leads me to perhaps wanting to improve my skill set.

Now is when to spend time improving your skills by utilizing the many ASQ courses available at the weekends at your local community college. In my area (Greater Detroit) there are many courses covering virtually every aspect of quality. You might decide to take a course out of curiosity rather than necessity and find that you have stumbled upon an area of great interest previously undiscovered.

These Saturday courses are often taught by lecturers who have much “trench time.” Their teaching is often interspersed with real war stories relative to the subject matter at hand. Therefore I hope my comments inspire you to take a look at what is offered and go try an “off-subject” course.

This is my last message as chair; I hand things over to the capable hands of Jerry Rice in January, 2018. Please support Jerry and keep promoting quality and ASQ at every opportunity!

Best regards for a happy 2018.

Jan Tucker, Chair
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This special issue of QMF is focused on Corporate Social Responsibility (CSR). CSR is an element of many Quality Management Systems, including the Baldrige Performance Excellence Framework and ISO 26000. The main goal of the focus on social responsibility is to ensure that organizations operate in a socially responsible way in their communities and in the world. Although ISO 26000 is not a management standard, it does provide guidance for incorporating social responsibility into an organization’s strategies and systems. According to the ISO 26000 guidance, the following benefits can be realized through incorporating CSR within an organization, through enhancing performance in the following areas (ISO 26000, 2014, www.iso.org):

- Competitive advantage
- Reputation
- Ability to attract and retain workers, customers, clients, and users
- Maintenance of employee morale, commitment, and productivity
- Perception of investors, owners, and the financial community
- Relationship with companies, governments, the media, suppliers, peers, customers, and the community within which the organization operates.

This special issue is comprised of four articles from our quality practitioners. The first three describe different aspects of Corporate Social Responsibility. The first piece, by Daniel Zrymiak, “Stop Greenwashing: Start Authentic Social Responsibility,” discusses the difference between authentic social responsibility and merely symbolic CSR, also called “Greenwashing.” Jennifer Stepienowski describes the different stakeholders’ expectations related to social responsibility in her article titled, “Stakeholder Theory Perspective: A Case for SR Integration.” In the last article on CSR, “Achieving Social Innovation and Shared Value Using Design Thinking Techniques,” Daniel Zrymiak discusses innovative Design Thinking techniques including Social Innovation and Shared Value, concepts related to social responsibility. Our final special article is written by Richard Shainin. “The Shainin Medal: Recognizing Innovation” describes the Shainin Medal, an award given by ASQ to recognize innovation in the development of methods and techniques that improve the quality and reliability of products or services.

We are fortunate to have the chair of the ASQ Quality Management Division, Jan Tucker, provide her reflections on learning and updating your quality skills. This will be Jan’s last Chair’s Message as Jerry Rice takes over as the ASQ QMD Chair in January. Welcome Jerry! We’d like to thank Jan for her leadership and commitment as the chair of the ASQ Quality Management Division. As a bonus, we also have our Vice Chair of NextGen, Stefanie Thompson’s update, sharing exciting activities of our next generation members of ASQ.

We have the abstracts for the articles that are being published in the latest issue of our sister publication the ASQ Quality Management Journal. And finally, we have a book review by Dan Zalewski, where he comments on A Six Sigma Approach to Sustainability: Continual Improvement for Social Responsibility, written by Andrea Hoffmeier and Holly Duckworth.

We’d like to wish everyone a wonderful and relaxing holiday season, and a very Happy New Year! Please feel free to provide feedback on this issue of the Forum, and any ideas for enhancing QMD print initiatives for our division. I can be reached at sfurterer1@udayton.edu.

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related to CSR. The researchers identified companies existing in 99 countries, including 72 developing countries and 27 developed countries. The adoption of these standards spanned the years from 2000 to 2007. This research found that the companies in developing countries had more substantive CSR practices than companies in the developed countries, whose practices were shallower and less often provided appropriate reporting related to their CSR efforts. The authors proposed to make CSR reporting mandatory in order to hold companies accountable. (Lim and Tsutsui, 2012).

Many organizations have made the commitment and investment to develop and sustain a suitable CSR management system. Other organizations may desire the same perceptions but without undertaking equivalent efforts. Greenwashing permits a conspicuous display of symbolic activities characteristic of social responsibility. However, when public demonstrations are not supported by ongoing convictions and similar ethics conducted in private, the authenticity is compromised.

Impact on Employees

Donia, Tetrault Sirsly & Ronen (2017) studied the impact on employees when an organization's CSR efforts are substantive compared to when they are merely symbolic. They found that benefits accrue to the individual and to the organization when CSR efforts are substantive. When CSR efforts are viewed by the employees as symbolic, negative employee reactions are seen, including viewing the organization as a “taker” rather than a “giver.” Their 14-item CSR-SS scale was found to be a reliable measure for assessing substantive versus symbolic attributions of CSR (Donia, Tetrault Sirsly, & Ronen, 2017).

If the employees do not adopt nor believe in the sincerity of the efforts, the cynicism will be detrimental to employee morale, engagement, and retention. Although social responsibility and social innovation are associated with best-in-class organizations that also lead with profitability and reputation, this must be substantiated with actual results, not fabricated narratives.

Impact on Reputation and Integrity

The impact of a valid CSR has been revealed as contributing positively to the reputation and integrity of the organization. Consequently, Greenwashing could be attempted in order to give the appearance of being socially responsible without actually compromising the perceived optimization of profits. This fallacy does not incorporate the inevitable costs of risk realization, remediation, and damage control that awaits all organizations that lack a properly functioning CSR management system.

At the 2004 World Economic Forum in Davos, Switzerland, a survey of 1,500 delegates, who were mostly business leaders, found that only 5% named CSR as the single most important measure of corporate success. However, 24% indicated that reputation and integrity of the brand matters most, which is presumed to contribute to good corporate citizenship. Interestingly, this study found that the quality of the product was the highest scoring category at 27% (No author, 2004).

If businesses view their scope as simply to generate capital and returns on investment, then CSR is incorrectly viewed as only an unwelcome distraction from optimal financial returns. However, this view does not consider the impacts on the organization or corporation made on its greater stakeholders. In an article by Jordi Calvo Rufanges (2012), believes that CSR becomes viable due to interest groups monitoring the behavior of companies. However, many companies still have a long way to go to attain CSR.

Cost of Doing Business

In today’s economy, CSR is viewed as a cost of doing business and a necessary component of achieving greater financial returns and customer growth. However, this financial trade-off has made the public cynical about the sincerity and validity of CSR, reinforcing the impression of Greenwashing.

In John Browne’s book, Connect, he identified that 30% of a company’s value is based on how the organization interacts with society. A study by Alex Edmans found that the companies that were on the “100 Best Companies to Work for in America” out-performed their peers by 2.3% to 3.8% each year between 1984 and 2011. A conclusion from the study is that CSR can improve stock returns (Edmans, 2012). In a research study conducted by YouGov with Kohli Ventures, they found that only 28% of British businesses believe that CSR is a central driver of modern business success. They also found that only 13% of the British public believe that CSR is important for business success and 62% of the UK public does not know what to think about CSR or thinks that it is merely a “check the box” exercise (Kohli Ventures, 2016).

New Standard for CSR

If Greenwashing is now unacceptable, what is the new standard for CSR? The measure or indicators of valid CSR programs are revealed by the direct actions and the impact those actions to the affected stakeholders, community, and society. These impacts must be publicly available in a transparent and meaningful manner.

Geoff Livingston (2012) proposes that for companies to ensure authenticity in their CSR program, they should align the CSR strategy with their mission, with the problem they are trying to solve, and with seeing the corporation as a family. He defines the mission as the product or service that fulfills a need. Companies should invest in the community aligning to their core competency and their marketing initiatives. The company should realize that they can impact the community in a negative way, and that the company should focus their CSR
efforts to fix the problems that they create. For example, they believe that Exxon Mobile should increase their investment in green energy to align to their negative environmental impact. Lastly, the author sees companies as large families that should invest in solving real human problems such as autism or homelessness through their CSR efforts (Livingston, 2012).

Conclusion

The CSR system should be defined and driven by specific purposes, aspects, and impacts that are pertinent to the organization and its stakeholders. By aligning social responsibility to organizational and stakeholder interests, the fulfillment of CSR objectives will support and enhance the strategic objectives of the organization. The impacts and risks will be mitigated and controlled using CSR, permitting organizations to improve and enhance their surrounding ecosystem. Greenwashing creates more harm and proves more costly than a legitimate CSR system would be, while imparting none of the benefits that a proper enterprise management system normally bestows on an organization.

Greenwashing’s limitation is that CSR efforts do not lead to meaningful and impactful outcomes addressing actual social responsibility impacts, social innovation, or best-in-class performance. Greenwashing also disengages and alienates employees. It is imperative that organizations replace Greenwashing with authentic social responsibility management systems, for success and sustainability.

References


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Stakeholder Theory Perspective: A Case for Social Responsibility Integration

By Jennifer J. Stepniowski

Introduction

In contrast to Milton Friedman’s idea of profit as the primary motivator of an organization, ASQ and others now consider the Triple Bottom Line, which expands from strictly economic terms and incorporates societal and environmental considerations. ASQ provides the following direction:

“Social responsibility (SR) is a means of achieving sustainability. Adopting key social responsibility principles such as accountability and transparency can help ensure the long-term viability and success of any organization or system” (ASQ: Learn About Quality).

Stakeholder Analysis

Stakeholders, the primary entities affected by the activities of an organization, realize several benefits and greater value from organizations that integrate social responsibility (SR) into their management systems.

The ISO 26000 SR guideline refers to stakeholders as an “individual or group that has an interest in any decision or activity of an organization.” In fact, respect for stakeholder interests is included as one of the Seven Key Principles of ISO 26000. A stakeholder analysis is a commonly used and recommended grid tool for stakeholder identification, including their roles, interests, influence, and expectations.

Edward Freeman (2010) described Stakeholder Theory as a proactive approach to corporate social responsibility (CSR). Looking outward to groups or individuals impacted by an organization’s activities, Stakeholder Theory encourages organizations to identify key entities affected and to consider their interests and rights as they relate to that organization’s actions.

Considering the most common key stakeholders, the case for SR within an organization is made by demonstrating tangible benefits and value within each. Five key stakeholders for further examination include customers, suppliers, employees, shareholders, and the local community.

Customers

Peter Drucker referred to the purpose of a company as “creating customers.”

According to a CECP report analyzing corporate giving and employee engagement, 55% of customers are willing to pay more for products from socially responsible companies (Giving in Numbers, 2014).

In addition, a 2013 study by Cone Communications and Echo Research concluded that 82% of US consumers consider CSR when deciding which products or services to buy and where to shop. The same study found nine out of ten global citizens would boycott if they learned of irresponsible behavior (Cone Communications, 2013).

Corporate Social Responsibility (CSR) is also known to build brand loyalty among consumers, with 93% of those surveyed in a follow-up Cone Communications survey in 2015 indicating they would have a more positive image of that company. In addition, 90% communicated they are more likely to trust the company and 88% to be more loyal. When given the choice between two products with similar pricing, 90% will switch to the brand with a better CSR perception (Cone Communications CSR Study, 2015).

Overall, these studies clearly demonstrate diverse market support for SR, resulting in tangible benefits to the organization.

Consumer issues are expanded on and identified as one of the Seven Core Subjects within the ISO 26000 SR guideline. Consumer issues include health and environmental impacts of products and services, waste reduction, privacy, and fair marketing.

Suppliers

If product is destined for Walmart, Lowe’s, Dick’s Sporting Goods, or other large retailers, compliance to supplier-specific codes of conduct or other requirements are mandatory and often confirmed through 3rd party on-site evaluations.

Retailers and several other key industry groups have adopted components of various standards/guidelines, such as SA8000 (SR), ISO 26000 (SR), ISO 14001 (environment/sustainability), and C-TPAT (security); and they require ongoing compliance verifications that can be costly if a reactive approach is in play. SA8000 and ISO 26000 are commonly used to evaluate on-site compliance where non-industry or specific vendor requirements exist.

SA8000 is used as a voluntary, on-site supplier assessment standard with nine elements:

- Child labor
- Forced or compulsory labor
- Health & safety
• Freedom of an Association & right to collective bargaining
• Discrimination
• Disciplinary practices
• Working hours
• Remuneration
• Management system

The ISO 26000 guideline includes human rights and labor practices as part of the Seven Core Subjects addressed.

Dialogue and cooperation to improve CSR performance is noted as strengthening relations with suppliers and contributing to increasing productivity and reducing costs.

Responsible supply-chain management protects organizations from negative public relations as a consequence of SR issues within the supply chain. In some cases, legal liability can also occur where human rights and/or labor violations are concerned.

**Employees**

SR issues related to employees include recruitment, development, retention, safe working environments, and fair wages.

A primary benefit of proactive SR within an organization’s management system is the increased ability to attract and retain workers. A 2014 Nielseni survey examined more than 30,000 consumers in 60 countries to better understand the impact of CSR on behavior. The study concluded that 67% of those surveyed prefer to work for socially responsible companies (Nielsen Global Survey on Corporate Social Responsibility). The survey also concluded that implanting employee-related CSR activities over the long term reduces costs, increases loyalty and commitment, and improves the overall quality of process performance.

Where applicable to the supply chain, organizations are increasingly partnering with non-governmental organizations (NGOs) and others to ensure lawful, fair treatment and a healthy work environment. For example, Leadership Group for Responsible Recruitment (LGRR) is a collaboration of business and NGO partners working to ensure ethical recruitment and treatment of workers worldwide. The Fair Labor Association (FLA) is considered a collaborative approach and seeks to protect workers who manufacture clothing, footwear, agricultural products, and others. Apple made headlines in 2012 as the first electronics company to join FLA after the SR debacle with Foxconn in China (Fair Labor Association Begins Inspections of Foxconn, 2012).

According to information revealed during the 19th International Scientific Conference in 2014, “The cause-effect Ishikawa diagram and analysis of the employees’ survey showed that causes of the employees’ rotation are poor conditions of working place and weak leadership. The quality

**Shareholders**

Shareholders demand social responsibility due to the positive impact on the long-term financial results. Academic research on the topic includes a meta-analysis of over 40 articles with empirical evidence from 16,119 companies. The results noted that 31 studies supported the idea that CSR pays, compared to 11 that were mixed or neutral and two that noted CSR is more of an expense. One of the two studies concluding that CSR does not pay had a sample of 27 and was conducted back in 1988. Overall, the evidence is heavily weighted in support of CSR and the associated financial benefits.

In summary, almost 94% of analyzed studies found a non-negative correlation between corporate social responsibility and corporate financial performance. The study also referenced that $1 out of our every $9 in US assets in 2012 under professional management was invested in some form of sustainable investment (Comparative Economic Research, 2016).

**Local Community**

Community involvement and development are also included as a core subject within the ISO 26000 SR guideline. Issues within that subject include:

- Community involvement
- Education & culture
- Employment creation
- Technology development
- Wealth & income creation
- Health
- Social investment

Organizations offering volunteer opportunities, for example, realize a number of benefits associated with the employee and community involvement. Research from the University of Georgia Terry College of Business demonstrates that employee volunteering is linked to greater workplace productivity and satisfaction (Rodell, et al, 2016).
In UnitedHealth Group’s 2013 Health and Volunteering Study, “64% of employees who currently volunteer said that volunteering with work colleagues strengthened their relationships” (United Group volunteering study, 2013).

Furthermore, according to a Deloitte Volunteer Impact Study, “92% of surveyed corporate human resources executives agree that contributing business skills and expertise to a nonprofit can be an effective way to improve employees’ leadership and broader professional skill sets” (Building leadership skills through volunteerism, 2016).

During the 19th International Scientific Conference noted previously, it was concluded that, “in the future organizational awareness of CSR strategy implementation will increase and it will become the essential part of organizational culture and policy. CSR and quality management principles provide organization sustainability and business excellence. Quality management systems provide a framework for implementing CSR policy, strategy, activities and culture in all management levels of an organization, that create the basis for establishment of sustainable development policy and provide overall employee and management commitment and continuous improvement of the system. Key for organizational excellence is the combination of focusing on quality in the process level and following the needs of stakeholders, giving the valuable contribution to the well-being of society” (Frolova and Lapina, 2014).

To learn more about an organization’s SR activities, look for the company’s CSR report. Organizations are increasingly formalizing CSR efforts. For example, in 2011, only 20% of S&P 500 companies published CSR reports. By 2013, it increased to 53%, and by 2014, 75% of companies published detailed sustainability reports.

Louis D. Coppola, the executive VP of the G&A Institute, noted that the “findings highlight a clear corporate commitment in the US towards sustainability and sustainability reporting—Leaders increasingly understand the critical importance of adopting and implementing strategies, programs and initiatives reflecting the 21st century business environment, and the interest of investors and important stakeholders” (Globe Newswire Press Release, 2016).

Concluding Remarks

Stakeholders, as the key entities affected by an organization’s activities, realize several benefits and greater value form organizations that integrate SR into their management systems (Table 1).

For these reasons, Stakeholder Theory supports and justifies the integration of SR into an organization’s management system, further demonstrating that adopting key social responsibility principles helps ensure the long-term viability and success of any organization or system.

Table 1: Stakeholder Benefits

<table>
<thead>
<tr>
<th>Stakeholder</th>
<th>Benefits of Integrating Social Responsibility (SR)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customers</td>
<td>Increased levels of trust and loyalty, supports market retention, growth and expansion, with premium pricing models enabling greater profitability and returns</td>
</tr>
<tr>
<td>Suppliers</td>
<td>Increased levels of compliance, productivity, and reliability while reducing risk and cost</td>
</tr>
<tr>
<td>Employees</td>
<td>Increased productivity and knowledge management due to improved ability to attract, develop, and retain desired employees</td>
</tr>
<tr>
<td>Shareholders</td>
<td>More attractive investments with increased likelihood of positive long-term and sustainable results</td>
</tr>
<tr>
<td>Local Communities</td>
<td>Improved interaction and community support of the enterprise</td>
</tr>
</tbody>
</table>

References

United Group volunteering study, 2013.

Jennifer Stepniowski offers over eighteen years of experience working with a quality assurance and engineering organization based in Taipei, Taiwan. She has published articles in various publications, including Quality Progress and Journal for Quality & Participation. An ASQ Fellow, Jennifer is active within the quality community. She is currently the Chair for the Social Responsibility Technical Community, a member of the WQCI Technical Planning Committee, and she assists with coordinating judges and related training for the PAR Excellence award. Jennifer is a Certified Quality Manager (CMQ/OE). She can be reached at www.jjenn.me.
Achieving Social Innovation and Shared Value Using Design Thinking Techniques

By Daniel Zrymiak

Introduction
The purpose of this article is to provide innovative and applicable Design Thinking techniques. The intent is to achieve and realize the benefits and potential impacts promised by two evolved concepts within the Social Responsibility continuum: Social Innovation and Shared Value. Social Innovation (SI) can be defined as the strategic and proactive planning and deployment of socially responsible practices specifically to gain a competitive market advantage (Suriyachantananont, 2015). Shared Value (SV) is a concept by Porter and Kramer intended to redefine and recalibrate business decisions (Porter and Kramer, 2011). The conflicting trends of increased economic demands, threats of scarcity, irreversible waste and consumption require society to adopt practices that serve our collective needs. Solutions must address our existing requirements, be sustainable for future generations, and adapt to changing preferences and technologies available to humanity.

Design Thinking
Design Thinking should be considered as a natural extension and maturation of Design Quality. Two examples of applying Design Thinking are the Braun/Oral-B Smart Brush and a foot-activated car door (Leon, 2017). Design Thinking has been applied to generate successful outcomes to the Braun/Oral-B Smart Brush to improve how the device was recharged and how replacement brushes were provided (Budds, 2016). Design Thinking also led to the development of a foot-activated car door to permit people to open their doors without dropping the items they are holding or carrying (Krishna, 2013).

Unlike prescribed methods that rely on sequential actions and procedural reviews, Design Thinking offers increased levels of collaboration, interaction, and qualitative inputs elicited from a very broad cross-section of stakeholders and participants. Designers can conceive and deploy reasonable and practical approaches to both Social Innovation and Shared Value systems.

Design Thinking frameworks and techniques can be selected and applied to generate creative and innovative management systems and programs. Social Innovation and Shared Value enhance the power of quality management beyond product assurance to address concurrent challenges of increasingly interdependent risks, scarcity of capital and resources, stakeholder demands, and competitive pressures.

Social Responsibility Principles and Core Subjects
Social Responsibility (SR) is an emerging field of study and management science. Extending beyond charitable good works and community service, the

Table 1: SR Principles, Core Subjects, Impacts, Cost Categories (ISO 26000:2010)

<table>
<thead>
<tr>
<th>SR PRINCIPLES</th>
<th>SR CORE SUBJECTS</th>
<th>IMPACTS, AFFECTED AREAS</th>
<th>SR COST CATEGORIES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accountability</td>
<td>Organizational Governance</td>
<td>Governance across all levels and functions</td>
<td>• Governance</td>
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<td></td>
<td></td>
<td></td>
<td>• Mitigation and Contingencies</td>
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<td></td>
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<td>• Treatment, Recovery, Remediation</td>
</tr>
<tr>
<td>Transparency</td>
<td>Consumer Issues</td>
<td>Visibility of decisions and outcomes</td>
<td>• Governance</td>
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<td>• Mitigation and Contingencies</td>
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<td></td>
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<td></td>
<td>• Treatment, Recovery, Remediation</td>
</tr>
<tr>
<td>Ethical Behavior</td>
<td>Fair Operating Practices</td>
<td>Rationale and basis for practices</td>
<td>• Oversight, Advocacy</td>
</tr>
<tr>
<td>Stakeholder</td>
<td>Community Involvement and Development</td>
<td>Organization employees, financiers, vendors, customers, users,</td>
<td>• Governance, Adoption</td>
</tr>
<tr>
<td></td>
<td></td>
<td>communities, society</td>
<td></td>
</tr>
<tr>
<td>Rule of Law</td>
<td>Environment</td>
<td>Adherence to legal and regulatory framework</td>
<td>• Oversight</td>
</tr>
<tr>
<td>International Norms</td>
<td>Labor Practices</td>
<td>Abide by treaties and memorandum of understanding</td>
<td>• Oversight</td>
</tr>
<tr>
<td>Human Rights</td>
<td>Human Rights</td>
<td>Protection and safeguarding of rights</td>
<td>• Advocacy</td>
</tr>
</tbody>
</table>

(Achieving Social Innovation and Shared Value Using Design Thinking Techniques, continued on page 10)
practice of SR requires the joint and interdependent involvement of multiple corporate functional areas, as well as those stakeholders contributing to and affected by the SR impacts of the organization. These impacts can be linked to SR principles and associated SR cost categories shown in Table 1 (Zrymiak, 2016).

As SR becomes more complex and incorporates more attributes of cost, risk, and business planning, there is a desire to pursue SR systems that go beyond legal compliance toward strategic corporate advantages.

**Future of Social Responsibility: Social Innovation and Shared Value**

As more organizations adopt SR systems and integrate these practices into their regular activities, SR will no longer be a differentiator but simply an expected cost of doing business—with the absence of SR representing a competitive deficiency. As new performance standards are adopted, progressive organizations with mature SR management systems will aspire to adopt the ideals that will address SR commitments in a way that enhances and strengthens the business.

**Social Innovation**

The Social Innovation mindset is distinct from traditional approaches that treat Corporate Social Responsibility (CSR) as a discretionary public relations activity. By positioning themselves primarily in terms of social innovation, SI-driven companies measure success in terms of its achievements in diverse areas including environment (such as controlling pollution from manufacturing and hybrid vehicles) and safety (such as traffic safety and manufacturing). Social Innovation complements and enhances financial and market growth successes.

The SR violations of other vehicle manufacturers due to safety or pollution issues (such as excessive emissions from diesel engines) has been detrimental to financial and commercial success and has reinforced the visibility and importance of SR as a core business priority. By taking an innovative mindset, socially responsible organizations are leading and redefining SR standards to differentiate themselves from less safe alternatives.

**Shared Value**

Shared Value redirects organizations to explore social problems (such as pollution, poverty, and waste management) and to identify solutions that will not only improve social responsibility but will do so in a manner that provides a competitive advantage for the organization. By treating social problems as business objectives, organizations can identify and realize opportunities for innovation and growth.

Shared Value places more emphasis on successfully addressing societal needs and social progress. Unlike SR, which most organizations perceive as a discretionary layer of business overhead, SV is a core practice intended to reduce internal costs and capture the true value of operations. This will lead to more prosperity and economic returns. Economic value, as measured by its societal impacts, improves through higher productivity and waste reductions as measured by the following criteria:

- Supplier capability and viability (procurement, access to technology and financing)
- Employees’ portfolio (skills, health, safety, fulfillment)
- Environmental impact (energy, water, resource use)

Shared Value considerations adopt and integrate SR practices, but do so in a way that drives improved results by increased throughput and yield, reduced waste and rework, and more integrated interaction with stakeholders. These attributes are consistent with the ideals of SR and quality management and should be considered as a future state of an ideal quality management system.

**Design Thinking Concept and Framework**

Design Thinking is an approach that is being increasingly adopted in order to rapidly achieve breakthroughs from prototyping and frequent interactions with the eventual stakeholders. Since SR and its derivations (SI and SV) are largely adapted to many moving parts from interdependent businesses, regulations, systems, stakeholders, and expectations, Design Thinking offers many interesting approaches that could be very constructive to these endeavors.

There are multiple frameworks for Design Thinking. The process advocated by Brown and Wyatt involves three phases (termed as “spaces”): inspiration, ideation, and implementation (Brown and Wyatt, 2010). Inspiration is the initial phase where the problem or opportunity is recognized. Ideation is the creative portion of eliciting or developing the ideas. In the implementation space, the ideas are deployed in order to address the problems or opportunities to make impactful changes. This process is not a linear sequence, but rather it is iterative and reliant on the development of evolving and enhanced prototypes.

For SR, the inspiration would come from the ideals and aspirations promised from the benchmark examples of leading practitioners of Social Innovation and Shared Value. The examples derived from existing successes can be leveraged to support new applications. For example, the inventory pull system scheme was actually inspired by grocery supermarkets that could not keep perishable food products for more than 24 hours at a time (Manos and Vincent, 2012).

The pull system for parts and components supported and contributed to what is now known as Just-In-Time (JIT). JIT strives to reduce and ultimately eliminate excessive capital devoted to inventory and storage, physical space needed for inventory transport and storage, and the wastes from inventory...
that may become spoiled, damaged, or defective after receipt but prior to use or deployment. When JIT was applied to manufacturing, carrying costs were substantially reduced, along with risks of damage, wastes, and losses from raw materials and work-in-progress inventory (Manos and Vincent, 2012).

**Design Thinking Techniques and Applications**

Within the phases of inspiration, ideation, and implementation, there are specific techniques. As SR is already a mature and widely documented branch of management science, this article highlights the Design Thinking techniques that already overlap with existing SR practices. Such an approach reveals the immediate applicability of Design Thinking to SR brainstorming and the predictive success of these techniques in realizing the promises of SI and SV solutions (Table 2).

**Benefits To Society**

Adopting advanced SR practices such as Social Innovation and Shared Value promises economic advantages as well as sustainable opportunities for organizations and their stakeholders. The complexities, interdependencies, and expectations demand that innovative practices such as Design Thinking be applied to generate relevant and realistic solutions.

Because SR is constructive and beneficial by nature, even a flawed solution can be superior to inaction. Prototypes provide the lessons from proven experiences that permit evolution and advancement. As lessons are captured and learned, new inputs and details can be integrated into the Design Thinking framework of inspiration, ideation, and implementation. Over time, society will benefit from Social Innovation and Shared Value solutions derived from Design Thinking techniques.

As quality professionals, this approach and maturity level represent highly advanced manifestations of a Quality Management System that encapsulates our professional ideals and aspirations.

**References**


Daniel Zrymiak, from Surrey, Canada, has over 24 years of international quality experience. Daniel manages projects at Accenture specializing in services and software engineering. An ASQ Fellow, Daniel is a Crosby and Feigenbaum Medalist. His credentials include CSSBB, CMQ/OE, CSEQ, CQE, and multiple lead auditor certifications. Daniel is an ASQ and Quality Press author and reviewer, conference speaker and moderator, and member-leader for multiple ASQ divisions and committees. He can be reached at dzs@shaw.ca.
The Shainin Medal: Recognizing Innovation

By Richard D. Shainin

Background

In 2003, ASQ established the Shainin medal to recognize innovation in the development of methods and techniques that improve the quality and reliability of products or services. To date the medal has been awarded 11 times.

Dorian Shainin (1914–2000) was an aeronautical engineer, certified management consultant, and innovator. He was a founding member of ASQ and was recognized as an honorary member in 1996.

Dorian’s first statistical innovation was the Hamilton Standard Lot Plot. It used sample data to determine if a lot of incoming material was acceptable or suspect: flagged for 100% inspection. The analysis was graphical, and it quickly became a standard for acceptance sampling with variables data. When it was published in 1950, ASQ recognized it with the Brumbaugh Award as the most influential paper of the year.

After his discovery of the Red X® principle in 1947, Dorian’s innovations focused on finding and controlling the Red X®. The Red X® principle recognizes that system variation follows a power function—for example, Juran’s Pareto principle. It means that no matter how many sources of variation have been discovered and controlled, the remaining variation is dominated by one cause-effect relationship (often an interaction). Discovering and controlling that relationship is essential for improving system performance. In complex systems, that cause is often hidden.

Dorian developed a highly structured and disciplined approach to converge on the identity of the Red X® through a progressive search. He invented 20 unique statistical tools ranging from Component Search™ through Tolerance Parallelogram™ to Pre-Control. Overall, Dorian had a passion for developing statistical methods that were powerful and easy to use. When analysis was required, it was almost always graphical. He wanted his methods to be accessible to shop floor personnel.

Evaluating Innovation

Innovation is hard work. Ideation (the process of forming ideas) is the recognition of a need and the flash of brilliance that leads to a new approach. Realization is the development work that turns the idea into a usable method. It often requires refinement and multiple iterations to make the technique simple. Leonardo da Vinci is reported to have said: “Simplicity is the height of sophistication.” It may be sophisticated, but it is not easy. Innovations must be honed and refined to reach such a level of sophistication. The final step is utilization. An innovation’s impact can be judged only by the benefits derived from its use.

Consider the development of component search. Dorian was faced with a difficult challenge. His client had high rework costs on an aircraft hydraulic pump with 40 components and was unable to meet shipping schedules. By this time, Dorian was very familiar with Sir Ronald Fisher’s work in designed experiments. He was also looking at the world through the lens of the Red X® paradigm. He recognized that if he swapped a component between a low output pump and a high output pump, he would be testing the effect of that component as both a main effect and a piece of an interaction. But years of problem-solving experience also made him aware that he needed to assess the contribution to variation from the assembly process before he swapped anything. Swapping parts wasn’t a new idea. Aircraft and auto mechanics often swapped out suspect components when trying to repair a plane or car.

Dorian’s innovation was swapping between “Best of the Best” (BOB) and “Worst of the Worst” (WOW) units to assess the contributions from the various components and discover interactions. The realization phase involved the formal development of rules for estimating the assembly variation (stage 1), the graphical representation of the elimination phase (stage 2), and the evaluation algorithm (stage 3).

Since its development in 1956, Component Search™ has been used thousands of times to identify the assembly process step or the component(s) that contain the Red X®. Seventeen years later, in 1973, Dorian awoke in the middle of the night with an inspiration. He could use the same thought process with a modified algorithm to test the influence of many variables. That was the beginning of Variable Search™, Shainin’s alternative to fractional factorial experimental designs.
In evaluating submissions for the Shainin Medal, the nominating committee considers uniqueness of the technique (ideation); the degree of development required (realization); and the impact of the new method (utilization). Below are two examples from previous Shainin Medalists.

Patricia Cyr—Shainin Medalist 2014

Harris Corporation designs and manufactures radios for both first-responder and military use. Typically, each radio is tested for numerous performance parameters at multiple frequencies in both receive and transmit modes to ensure and document performance and compliance to requirements.

During 2010, Harris was planning to consolidate 600,000 square feet of manufacturing and test equipment to a new facility. The operations team’s challenge was to break everything down, move it, and have everything set up in production again within two weeks. The quality team’s challenge was to verify that post-move, all test equipment would produce the same results as before the move. The last step before production could resume was station validation. The analysis had to be thorough but quick so as not to delay the resumption of production.

Using univariate statistics was not an option. The sheer number of test parameters across multiple frequencies and power bands tested would have required a small army of engineers several weeks to collect and analyze data. The Type I error associated with such an approach was unacceptable. This challenge had to be overcome to prevent a work stoppage without accepting the additional risk of using a greatly reduced data set.

Patti Cyr, a statistician with a background in chemical engineering, had experience with multivariate analysis from previous work at Kodak. Multivariate analysis is most often applied in the pharmaceutical, chemical and biotech industries. Ms. Cyr recognized the opportunity to apply multivariate methods to a pseudo-spectrum from the radio frequency and functionality data (ideation).

Orthogonal Partial Least Squares (OPLS) is normally used to see the influence of multiple inputs on a single output. This electronics adaptation astonished the developer of the original technique. A key feature of the new methodology is the comparison of numerous outputs in a before-and-after analysis to reveal areas for further investigation. It is a Y-to-Y analysis as opposed to a more typical X-to-Y analysis (realization).

The data were collected using a Measurement System Analysis (MSA) style Design of Experiment (DOE). Selected units were tested three times each before and after the move. This allowed for consideration of impacts on both average performance and variability because of the move. SIMCA, a software package for multivariate analysis was used. Although SIMCA uses the correlation matrix for analysis, where each variable has its data centered and scaled to unit variance, additional preprocessing was needed for the data. The responses gathered in the final test have values as small as $10^{-8}$ and as large as $10^8$. It was found that even using the correlation matrix, the responses on the order of $10^8$ overwhelmed the analysis. To handle this difficulty, these responses were first deviated from their target values before the analysis began.

The true advantage using OPLS was in the isolation of the move as the driving force for differences. The use of SIMCA, or another statistical software package, was essential to communicate the findings in terms that the engineering community could understand and act upon.

The use of OPLS and preprocessed data allowed for the quick and systematic analysis of over 500 electronic functionality responses, focusing on the tests with the largest shifts in value. The methodology was used by three additional engineers who could successfully assist in the analysis of the data without understanding the intricacies of multivariate analysis.

As desired—and thanks in no small part to this clever application of SIMCA—the team at Harris RF Communications could successfully disconnect, pack, transport, relocate, reinstall, calibrate, and verify that all test equipment was running correctly and producing comparable test results before and after the move within the timeframe required.

This same technique is also used extensively at Harris RF to validate changes before they become part of products. Although a change may be made to address a function of the device, OPLS allows for thorough analysis to determine if there are any unintended consequences in other areas of functionality. It is deemed the “control radio process” and is now part of the documented Harris standard procedure for introducing software or hardware changes to existing product lines. Within Harris, it has been applied successfully to dozens of product and process improvements across several product lines and has allowed changes to be implemented successfully without this risk of unforeseen or undiagnosed performance shifts (utilization).

Patricia has developed a new methodology comparing the holistic change in system performance following a process or product modification. While the modification is validated, there can be unintended effects that might impact the system’s performance characteristics.

Her methodology has been applied (utilization) to numerous changes at Harris, including:

- Product design changes
- Process design changes
- Test equipment relocation
- Test equipment changes
- Supplier changes such as new supplier or new source lot

The methodology is user friendly, allowing quality engineers and managers to identify potential important changes without needing to understand the underlying statistics.

(The Shainin Medal: Recognizing Innovation, continued on page 14)
Jane Hoying—Shainin Medalist 2008

In 2003, Jane Hoying, a senior consultant with Shainin, faced a difficult challenge. An important client had requested the development of a simple and efficient means to solve complex business problems that paralleled the Red X® methodology for solving complex technical problems. Ms. Hoying was tasked with the assignment. Her management specified a few key parameters: the system had to be true to Dorian’s principles, including an investigative approach that converged on hidden root causes based on evidence rather than expert opinion; it had to be statistically simple and statistically sound; and the analysis and communications needed to be graphical.

Jane brought 25 years of automotive manufacturing experience, a degree in chemical engineering, and strong success in applying Red X® problem solving across a wide range of industries and manufacturing technologies.

Red X® problem solving uses strategies based on the physical nature of a manufacturing system or product. It also relies on insights gained in talking to the parts. In a business process, though the system may have some physical elements, the key components are procedural, and there are few physical objects to be measured. Jane had two key insights (ideation): she would have to find a way to talk to the occurrences, and she would use a functional description of the system rather than a physical description.

Jane developed a system for talking to the occurrences that revealed which system function had failed. She adopted function models, a simple-to-understand graphical method for documenting system functional relationships to business processes (realization).

The first application solved a logistics problem that had resisted previous traditional methods, such as process sequencing or value-stream mapping. By revealing surprising breakdowns in functions, a $1 million annual cost was eliminated, and the client had a deeper understanding of how their process was supposed to function.

The TransaXional® Methodology has evolved recognizing that there is a hierarchy of functions in every system and that foundational functions must be addressed first.

Within a few years, TransaXional® had been applied at six companies on a variety of business processes, including:

- Logistics
- Production material control
- Information technology
- Sap implementation
- Quality systems
- Engineering systems
- Finance
- Accounting
- Purchasing
- Personnel
- Service operations prototype vehicle operations
- Manufacturing operations

The methodology has proven effective in solving business process problems, optimizing business processes, and coordinating the implementation of new business systems. Within a few years, it has saved tens of millions of dollars (utilization).

Summary

The Shainin Medal has been awarded 11 times to date. Each medalist has been recognized for an innovative method that has improved the quality or reliability of products or services. A nomination form is available on the ASQ website (search for Shainin medal). The submission should communicate ideation, realization, and utilization. Testimonials from end users are appreciated. Submissions are due to ASQ by October 1.

Richard Shainin leads the training services team for Shainin—The Red X Company. In this role, he is responsible for the development and delivery of classes and hands-on coaching for Shainin clients worldwide. Richard has published articles in ASQ’s Quality Engineering, and Six Sigma Forum. His chapter on Multi-vari charts appears in the John Wiley and Sons Encyclopedia of Statistics in Quality and Reliability. His insights on quality, reliability and technical problem solving have been quoted by Bloomberg News, Automotive Engineering, The Detroit Free Press, The Detroit News and Automotive News. In 2015, the ASQ Automotive Division named him the Quality Leader of the Year. Richard can be reached at rshainin@shainin.com.
A Six Sigma Approach to Sustainability: Continual Improvement for Social Responsibility written by Holly A. Duckworth and Andrea Hoffmeier

A Six Sigma Approach to Sustainability sets itself apart from the existing catalog of quality improvement literature by focusing on sustainability and social responsibility. The authors aim to provide a text that is suitable for audiences ranging from the complete novice to the experienced Six Sigma practitioner who wants to gain some familiarity with sustainability.

In the first chapter the authors begin to build the argument that a logical next step from the current continual improvement paradigm is to develop and pursue a new organizational culture. That new culture centers on sustainability and social responsibility. Chapter two follows with a concise review of the evolution of the quality movement. The reader certainly can't expect a complete coverage of the topic in only thirty pages. But the reader will find a useful refresher starting with Deming and progressing through DMAIC. The authors illustrate the application of DMAIC with a case study of a tomato-growing operation. Although they discuss some of the most common quality tools and the essential aspects for each of the five DMAIC steps, the authors clearly do not intend this chapter to serve as a replacement for a more rigorous and complete treatment of the Six Sigma toolkit. The second chapter ends by describing the logical evolution from continual improvement to sustainability.

Chapter three continues the discussion with an introduction to the SOFAIR method. SOFAIR is proposed as a replacement for DMAIC and includes additional considerations to properly incorporate social responsibility into a process improvement project. Each of the six SOFAIR phases is discussed (although SOFAIR is really SSOFAR): Stakeholders and Subjects; Objective; Function and Focus; Analysis; Innovate and Improve; and Report and Repeat. The third chapter concludes with a reprise of the tomato-growing case study, this time using the SOFAIR method.

The deployment of the SOFAIR method is discussed in more detail in chapter four. A variety of the familiar tools from the Six Sigma toolbox are used in the SOFAIR method. Again, this does not replace a more rigorous coverage of those tools. The tools are used to illustrate and explain how a SOFAIR project occurs. For current Six Sigma practitioners who are familiar with the ISO 9000 quality standards, the discussion of ISO 26000 is likely valuable new material. ISO 26000 provides guidance for organizational decisions by defining eight human rights issues to be considered. Unlike the ISO quality standards, the ISO human rights issues don't yet have established metrics. Integrating the eight issues into organizational decisions is clearly a laudable endeavor although a more analytic practitioner might be uneasy with the lack of metrics. Chapter four continues the discussion of the SOFAIR method. It provides some of the best motivation for adopting SOFAIR by presenting examples of successful applications.

The last chapter of the book is the authors’ final push to urge readers to take action. The chapter is organized by four possible roles within an organization. Current Six Sigma project leaders will find a list of ten actions they might take to help move their organization toward a more sustainable future. Each listed action is described in a few paragraphs so that readers can visualize the impact of taking the action within their organization. There is a similar list for organizational leaders, for quality improvement team members, and even for the somewhat nebulous organizational communicators. Your personal first action might be to read this book.

A Six Sigma Approach to Sustainability will be a useful reference for a variety of readers. It provides a clear introduction to sustainability and social responsibility within the familiar Six Sigma framework.

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.
NextGen 2017 Update for Quality Management Forum Winter 2017

By Stephanie Thompson

Eight years ago I fell in love. As a student at Arizona State University, Dr. Jane Humble identified my inherent understanding and genuine interest in process improvement (Lean Six Sigma). I was upset that it was my last semester of undergraduate work and I was learning tools and techniques that I wish I had learned in elementary school. At that moment, I fell in love with quality and wanted to share it with the world! Dr. Humble suggested that I join ASQ as a student member, so I did. I never imagined that I would become a volunteer member leader of ASQ, pursuing my life’s dream and personal mission to share quality with the next generation of transformational leaders. My name is Stephanie Thompson, and I am currently the Quality Management Division (QMD) Council’s Vice Chair NextGen (formerly Vice Chair Students).

QMD is committed to supporting student members with scholarships, conference registration, and quality connections during college and as they transition into their careers. NextGen encompasses both student members and full members transitioning into careers after graduation, and this has a unique set of challenges. QMD’s commitment to engaging and involving the NextGen in authentic leadership opportunities is apparent, as our newest official position added to the council is Deputy VC NextGen.

It is with great pleasure I introduce the newest QMD council member, Alexander O. Tucker, a creative and innovative visionary. He traveled to Canada to meet the QMD council, presented our NextGen strategy in QMD’s annual business planning meeting, attended the Canadian Quality Conference representing NextGen, and facilitated a student event at the Second Annual South Asia Quality Conference in Delhi, India. Shringa Vatas is the Student Branch Chair at NorthCap University (India) and has accepted the student deputy position. She has already addressed over 200 students and professionals in her role, traveling for the first time without her family to share her story of successes through ASQ@NCU. Congratulations to our former student deputy, Nisarg Shah, who has graduated from Sheridan University (Canada) student status, and is still making an impact on the NextGen Subcommittee as a full member focused on enhancing value for the budding quality professional! For those interested in adding value to the next generation, a great way to get involved is on our QMD NextGen Subcommittee, chaired by Hema “Sriker” Kruthiventi.

So far 2017 has been a great year of events for QMD NextGen:

We had student presence at the Lean Six Sigma Conference in February, sponsoring Naveen Gajula’s travel from the University of Central Missouri (UCM) to volunteer at the conference. University of Central Florida (UCF) hosted their 2nd annual Quality Conference in Orlando, Florida, co-sponsored by QMD and the Orlando section in April. Speakers included industry experts from companies such as Disney and NASA, with QMD representation by Grace Duffy and me. Student representatives from UCM, Sharat Basa and Hema Kruthiventi presented on student branch best practices at WQCI member leader training. They both attended the member leader events with Sari Almaturi from Wichita State University. This was made possible through a QMD travel sponsorship.

QMD provided registration reimbursement to 29 QMD student members who attended the World Conference (WCQI) in Charlotte, North Carolina.

ASQ Ahmedabad LMC put on Student Symposiaus at Navrachana, PDPU, and Nirma Universities in Gujrat, India where Shringa Vatas accompanied me as a keynote speaker. We also had the opportunity to address an international seminar on academia-industry collaboration with the Rajkot Management Association.

I enjoyed speaking to over 400 students at the ASQ Student Event on October 27th, 2017, at Anahuac University in Queretaro, Mexico on “Personal Excellence using Quality Tools.”

My favorite part of 2017 was providing opportunities for others to see new places, meet new people, learn from others, and share their knowledge and experiences through ASQ.

All ten publication scholarships have been awarded for 2017, including three publications from Ahmedabad, Gujrat (India). We will be revising the scholarships for 2018, so stay tuned! Alexa Druckmiller, an impressive high school student, has joined the NextGen Subcommittee as the NextGen Editor for publications and has done a great job thus far.

We have reached our goal of 50 Quality Connections at www.asqnextgeneration.org and will be accepting NextGen requests for a Quality Connection mentor starting January 1, 2018. This program is a four-month, 24-hour commitment where leaders of today are connected with leaders of tomorrow with a specific learning objective and deliverable for the NextGen connection to share their learnings on a social platform.

I am both proud and excited to be part of the NextGen movement to inspire the NextGen to utilize quality management
in their personal and professional lives. It has been an honor and a privilege to meet so many remarkable student members and budding quality professionals.

To get connected, email NextGenQualityConnection@gmail.com.

Stephanie Thompson holds a master’s degree in technology management from Arizona State University. She is a Certified Six Sigma Green Belt and Certified Quality Auditor. She is a Senior Member Leader of the ASQ and an advocate for sharing quality with the next generation of quality leaders. Stephanie is currently the Vice Chair of NextGen with the QMD, where her focus has been on enhancing the value of student membership and support of student branches across the globe. Her efforts have helped increase QMD student membership by over 1000 members. She can be reached at NextGenQualityConnection@gmail.com.

Quality Management Journal Preview

Volume 25, Issue 1, Executive Briefs

S. Thomas Foster Jr., Brigham Young University

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

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.

The Effect of Waiting Time on Patient Perceptions of Care Quality

Quinton J. Nottingham, Virginia Tech
Dana M. Johnson, Michigan Tech
Roberta S. Russell, Virginia Tech

This research explored the effect of waiting time on patient satisfaction in a new context of rural healthcare clinics, with data from a three-year time period. Patient satisfaction was measured by overall quality of care, likelihood of recommending the care provider, and likelihood of recommending the practice. Our analysis showed that waiting times impact patient satisfaction, with differences being more pronounced by gender and clinic type. A deeper analysis using ordinal logistic regression and additional time-related variables revealed some interesting results. For example, in this setting, only when waiting time was 45 minutes or greater did there begin to be an effect on overall patient satisfaction. Male patients tended to be more satisfied if kept abreast of delays. Female patients were more tolerant of delays, and receiving delay information did not link to satisfaction. Finally, patients who were highly satisfied with the time spent with their care provider were 94% likely to refer the practice to others. However, patients who were very dissatisfied with time spent with the care provider were 81% likely to not recommend the care provider. Understanding what aspects of a patient’s experience drive care quality and patient satisfaction is useful to healthcare managers who operate with increasingly limited resources.

Managing Quality Crossroads in Healthcare: An Integrative Supply Chain Perspective

John W. Gardner, Brigham Young University
Kevin W. Linderman, University of Minnesota
Kathleen L. McFadden, Northern Illinois University

Managing quality in healthcare involves critical decision-making at the intersections of multiple supply chain and operations processes. These intersections occur within an interdependent healthcare system, where changes in one part of the system affect another part of the system. Building on an integrated supply chain perspective, we develop the concept of

(Quality Management Journal Preview, continued on page 18)
"quality crossroads" to explain crucial intersections between quality processes and those related to strategy, purchasing, operations, customer relationship, and logistics processes. These intersections form a network of crossroads in which decisions about quality can create substantial consequences throughout delivery systems. To explore and apply the concept of quality crossroads in healthcare, we review and examine research articles related to healthcare quality published in The Quality Management Journal. We also explore applications of quality crossroads in the papers found in this special issue on healthcare quality management. We find that existing works on healthcare more frequently address quality crossroads with strategy, operations processes, and customer relationships, but less often address crossroads with sourcing and logistics processes. We discuss these implications and propose multiple avenues for examining healthcare quality crossroads.

Managing Service-Specific and Open-Posting Block Sizes When Allocating Operating Room Time

Kevin Taaffe, Clemson University
Lawrence Fredendall, Clemson University
Rebecca Weiss, Booz Allen Hamilton

The Perioperative Services (periop) manager establishes policies to manage the operating room (OR) resources that affect both patient and surgeon satisfaction with the hospital’s service. Both the surgeon and the patient are customers of the periop department and their satisfaction is a measure of the service quality. The periop manager uses block scheduling to allocate OR time. This technique gives one surgical practice (or service specialty) priority access to a block of time for scheduling procedures in an OR. Hospitals seek to obtain more of the surgeon’s practice by allocating blocks to the surgeon, but the hospital must balance this OR time allocation with the risk that the OR time may not be used. In doing so, the periop manager creates a schedule that balances the hospital’s risk of staff working overtime (beyond the OR’s scheduled hours of blocked time) with the risk of staff being idle during a block of time reserved for a surgical practice that did not use it. We propose an OR management policy that creates service-specific blocks of OR time as well as open-posting blocks (those blocks shared by all surgical practices) and propose that this policy can increase access to the OR for more surgeons and consequently increase both surgeon and patient satisfaction. Through the use of two quality metrics—averseness to overtime and flexibility in sharing block time across services, this paper examines how the setting of these two metrics affects OR performance. Historical data was used as an input into a modeling framework that created a feasible block schedule for a set of ORs. The block allocation schedule was then evaluated with a portion of the data set reserved for testing. In an experiment at a large teaching hospital, results indicated that for every 20% increase in a manager’s averseness to overtime, the hours in reserved blocks increased by 3% and utilization decreased by 2%. Similarly, a 33% increase in open posting flexibility translated into a reduced need of one OR.

Towards A Triadic Quality Measurement Framework for the U.S. Healthcare Ecosystem

Subhajit Chakraborty, Coastal Carolina University
Hale Kaynak, University of Texas, Rio Grande Valley

The primary aim of a healthcare system should be to deliver high quality care to its patients. Although there are various measures of healthcare quality such as those used by the Centers for Medicare and Medicaid Services (CMS), an inclusive perspective, which considers the patient, the hospital’s external and internal relationships and the nodal organizations, is missing. The practitioners’ comments from our interactions, coupled with the findings from our review, have motivated us to focus on a holistic quality of healthcare measurement in a hospital’s extended ecosystem. In this study, we offer an overarching conceptual framework for measuring quality in the U.S. healthcare system that utilizes a triadic approach integrating various aspects of quality care having different levels of measurement. At the micro-level, we focus on patients admitted and treated, and their perceptions of a hospital’s service as well as outcomes. At the macro-level, in which the organization interacts with external entities, the focus is on the measurement of hospital clinical quality performance. We conclude with the managerial implications of the framework and suggest future directions for triadic healthcare quality measurement.
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