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Assimilating The Ideals of Quality and Sustainability

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Introduction

Leading companies continuously improve the quality of their products through best practice strategy and operational efficiency. They commit to continuous improvement methodologies such as PDCA and Six Sigma. In addition to quality improvement, leading companies have added the sometimes-conflicting goals of corporate sustainability and not-for-profit initiatives.

The objective of this article is to illustrate one approach to integrating the goals of quality, sustainability, and non-profit initiatives so important to corporations, community, and individuals alike. The real-world example used for illustration deals with the performance response of collaborating organizations working together following a major disaster event.

The article first provides an overview of the Deming Wheel/Cycle methodology for continuous process improvement and the Triple Bottom Line sustainability concept. This is followed by the integration of these two methodologies for the development and continuous improvement and sustainability goals of the American Red Cross Multiagency Response Center program.

Framework for Quality

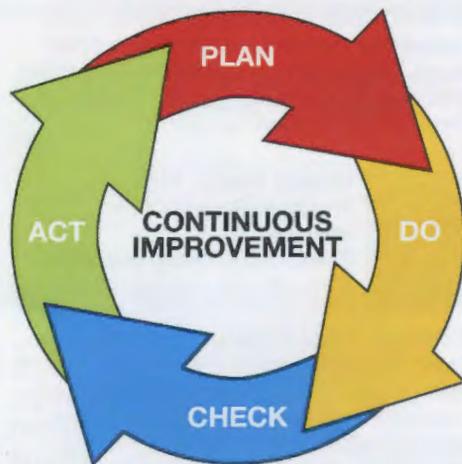
Two continuous quality improvement methodologies for existing processes were considered: 1) DMAIC (Define, Measure, Analyze, Improve and Control) continuous improvement process; and, 2) PDCA (Plan, Do, Check, and Act) often referred to as the Deming Cycle. The DMADV (Define, Measure, Analyze, Design, and Verify) continual improvement process is used to design new processes.

For purposes of this research, the PDCA process was selected for use. PDCA is the continual improvement

process used in ISO 9000 Guidelines. ISO 9000 has been implemented in over one million companies and organizations in over 170 countries. PDCA use spans decades as the basis for achieving quality improvements. Because of its widespread use there is a wealth of articles and publications that explain how to implement the PDCA approach to the continual quality improvement process. Figure 1 provides the concept of the PDCA Deming Cycle.

Figure 1: Typical Deming Cycle Illustration Framework for Sustainability

Sustainable development meets the needs of the present without compromising the ability of future generations to meet their own needs." Sustainability is a trend that has grown in interest and that has been shown to influence strategy and operations; as a result, the desire to achieve a more sustain-



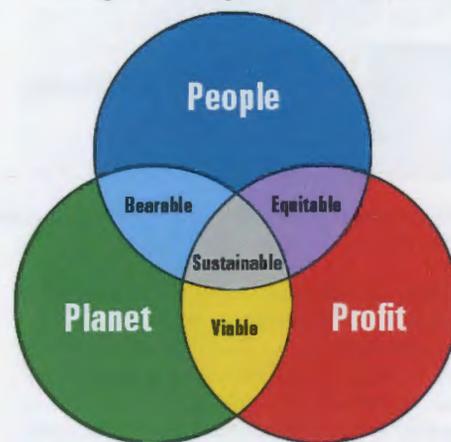
able enterprise has developed within many and various corporations. While sustainability initiatives have numerous benefits, many are intended to reduce waste, differentiate products or services by making them more "green," improve employee morale, ensure adequate working environments, or some

combination of the above.

Despite the potential benefits of sustainability, little is known about the extent to which firms engage in sustainability initiatives and the actual cost/benefit of these initiatives. In this context, sustainability applies to the Triple Bottom Line (TBL) concept that considers both the economic, environment, and social responsibilities of an enterprise. A sustainability program might include the following components as applied to the three legs of the Triple Bottom Line:

Figure 2: Triple Bottom Line & Sustainability

- Environmental – resource utilization, materials choice, resource conservation, emissions reduction, biodiversity and nature preservation, releases to land, water and air.
- Social – labor standards, health and safety, civil liberties, social justice, local community, indigenous rights, cultural issues, accessibility, equity, heritage and religious sensitivities.



- Economic – return on investment, local economy, market capacity, shareholders' value, innovation, direct and indirect economic impact, market presence, economic performance, risk, fair trade and profit sharing.

Integration of Quality and Sustainability Guidelines

Prior research to adapt industry continuous improvement methodologies to nonprofit projects (e.g. disaster response, humanitarian efforts) has led to an attempt to integrate the guidelines for quality using PDCA and sustainability using TBL.

Both PDCA and TBL have had proven success in industry and combining their use in nonprofit projects should prove beneficial. It is important to note that ISO is in the process of incorporating sustainability in standard guidelines such as quality and social responsibility. With PDCA embedded in ISO standards that include sustainability guidelines, this should help ensure consideration of the sustainability triple bottom line categories of economics, social and environment (profit, people and planet) in each step of a nonprofit project continual improvement process.

The concept of integrating TBL's three categories (economic, social, environment responsibilities) and sustainable project solution with continuous quality improvement is shown in Figure 3. The concept of the overlap of the three categories defining the degree of sustainability is referenced frequently in recent literature. The ISO concept of integrating sustainability into standards that also rely to a significant degree on PDCA is shown in Integration of Quality & Sustainability Concept Diagram figure.

The Sustainability area of the integration concept indicates the TBL as the performance target for all projects, whether commercial or humanitarian that must be considered within each step of the PDCA method. The PDCA overlays the entire initiative to ensure consideration of the TBL targets

throughout to achieve ongoing improvements and a sustainable solution.

Ongoing Application: American Red Cross Multiagency Resource Center Plan (MARC)

Volunteer work for the American Red Cross (ARC) has provided an opportunity to attempt the merging of project sustainability, continual project process improvement, and the integrated concepts of economics, social and environment, or, if you prefer, "profit", "people" and "planet". Disaster relief efforts provide the practical environment within which to discuss the merging.

ARC is the only disaster relief organization chartered by Congress to respond to disasters within the U.S. ARC currently utilizes the PDCA steps to help ensure continuous improvement. There is also opportunity to increase recognition within ARC to consider the concept of Triple Bottom Line (TBL)'s elements of Social (people), Economics (profit/costs), and Planet (conservation of resources) for all relief initiatives.

Disaster relief planning is a major challenge area in humanitarian disaster relief. The complex nature of humanitarian disaster planning and response can result in inefficient humanitarian logistics and supply chain management efforts. Obviously, every effort must be made to ensure that disaster response is well planned and efficiently executed

with use of assessment and lessons learned to gain continuous improvement.

The American Red Cross defines a Multi-Agency Resource Center (MARC) as a location where disaster relief agencies (private and public) come together under one roof during the Response Phase to provide assistance to meet immediate and emergency needs of those affected by disaster. The MARC plays a critical role in the response and initial recovery of those affected by disaster. Ideally, a MARC will open within 72 hours of an event. The goal is to provide fast and efficient services to those affected by disaster. The current development of a MARC process incorporates PDCA steps that provide formal plan, do, check, and act steps that include assessment and adjustments to provide continuous improvement.

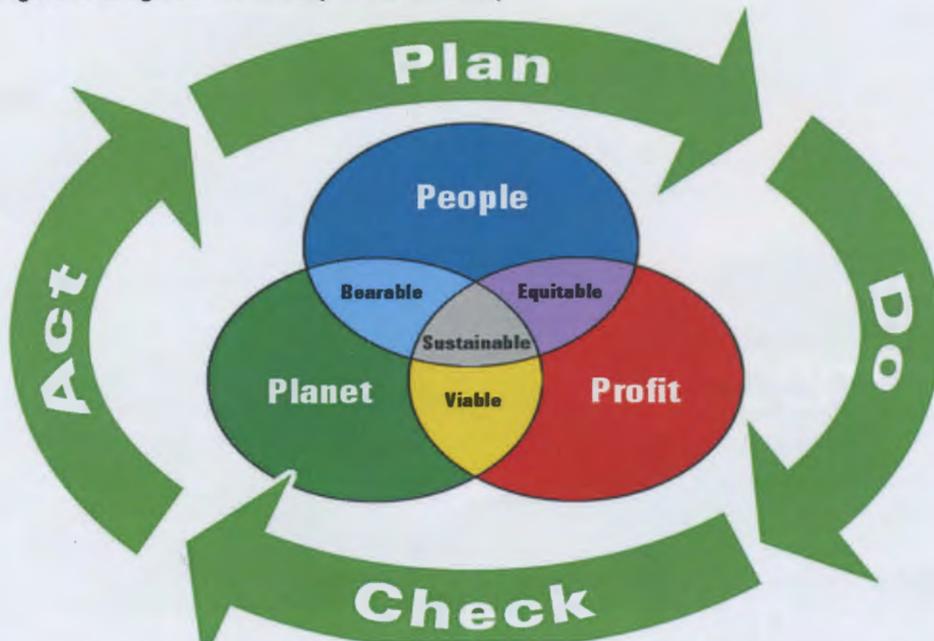
The MARC documents are being developed with the goal to consider the steps to ensure quality and sustainable operations. The objective of the MARC is to provide the information and assistance to address client needs in one visit. A method for assessing MARC performance during and after the disaster helps assure proposed changes and improvements are quickly identified, documented and implemented. The goal is, of course, to provide fast and efficient services to those affected by disaster.

The MARC Process

Some of the functions the MARC process provides are:

- A basic plan including general response theory and practices
- Promotion of close collaboration and information sharing during a disaster relief operation
- A framework for each agency active in disaster relief to collaborate by entering into formal agreements and sustained commitments to work together on a common mission
- An outline of procedures to follow when operating a MARC
- A delineation of roles and responsibilities for MARC voluntary agencies during and after disasters
- Supporting documentation and forms
- A method of assessing the MARC

Figure 3: Integration of Quality & Sustainability



during and after the disaster, assuring changes and improvements are quickly identified, documented and implemented.

Benefits Sought by MARC

Client Benefits Sought by MARC

Benefits to the Individual Client impacted by disaster event include:

- Disaster clients receive information about the casework process and how to obtain assistance, providing one place for most disaster assistance programs and reducing duplication of benefit
- Those affected by a disaster can notify family members of their condition and location by registering on the American Red Cross "Safe and Well" website
- Provides clients with referrals for off-site services
- Serves as a meeting place for families and community members for assistance, information, and emotional and spiritual care
- Snacks (and perhaps meals) may be obtained at the MARC.

Community Benefits Sought by MARC

Benefits sought for the Community include:

- Emergency assistance help to restore the local community
- Tax revenue in the affected community is not diminished
- Families receive health and mental health services immediately after the disaster, hastening community recovery
- Agencies collaborate to identify and fund long term recovery needs
- Education about the long term recovery process is provided to community leaders
- Long term recovery committees are formed by ARC leadership to address needs through an organized case management process.

Participating Organizations Benefits Sought by MARC

Benefits sought for Participating Organizations include:

- Expands each organization's opportu-

Table 1: American Red Cross MARC Process Document based on PDCA Process

MARC Process	General Content Outline for a MARC Process Document
Plan	<ul style="list-style-type: none"> * Definition * Goals/ Objectives * Benefits to: Individuals, Community, & Participating Organizations * Planning Assumptions * Participating/ Partners: Government, NGOs, and Commercial
Do-Operations Guidelines	<ul style="list-style-type: none"> * Preparing for a MARC: Need, Site Selection, & Opening Preparation * Daily Operations Procedures: Chain of Command, Site Personnel, Client services, Community partnerships, Disaster Assessment, Logistics, Mass Care, Partner Agencies, Public Affairs, & Staff Services * MARC closing
Check-Assess the MARC Results	<ul style="list-style-type: none"> * Collect surveys: Partners, Clients, Agencies, Red Cross participants, Volunteers, & External contacts for the MARC * Review the surveys and other measures for the performance metrics * Participating partners develop lessons learned * Define Immediate Improvements * Participating partners perform formal assessment with documentation
Act-Adjust the MARC	<ul style="list-style-type: none"> * Define MARC adjustments for improvements

Table 2: Ideas for Integration of Quality & Sustainability for Red Cross MARC Process

	Economic	Environment-Planet	People-Social
Plan	<ul style="list-style-type: none"> * Consider economic, social & cultural rights * Cost estimates w/budgets 	<ul style="list-style-type: none"> * Prevention of Pollution 	<ul style="list-style-type: none"> * Human Rights * Promote social responsibility
Do-Operate	<ul style="list-style-type: none"> * Consider creation of wealth & income for the community * Cost tracking 	<ul style="list-style-type: none"> * Sustainable resource use 	<ul style="list-style-type: none"> * Fair Operating Practices * Labor practices
Check-Assess	<ul style="list-style-type: none"> * Cost / benefits and review use of resources * Review distribution of economics to the community and clients 	<ul style="list-style-type: none"> * Protection of the Environment 	<ul style="list-style-type: none"> * Consumer Issues * Access to essential services * Customer service, support, & complaint resolution
Act-Adjust	<ul style="list-style-type: none"> * Adjusts to improve outcomes for the cost expenditures 	<ul style="list-style-type: none"> * Sustainable resource use 	<ul style="list-style-type: none"> * Community involvement & development

nity to serve the community and fulfill it's mission

- Builds community partnerships
- Leverages each organization's limited resources to maximize the number of clients served
- Provides an opportunity to speak with clients one-on-one to determine their needs
- Offers the ability for organizations to

continue their daily operations (non-disaster related) and/or have the ability to scale up to support more communities.

MARC Planning Assumptions

Key MARC planning assumptions include:

- The American Red Cross will take the lead for the MARC, and provide leadership, direction, facility and supplies required for its operation.

- The MARC is a critical venue for the coordinated recovery of those affected by disaster.
- MARC participating agencies have a commitment to community, mutual respect for purpose and mission, and are willing to share information and resources in the interest of a common goal.
- MARC agencies and the government will collaborate to assist disaster affected clients in their recovery.
- Advanced planning with client needs assessments and data collection requirement decisions will be made before the MARC is opened.
- A verification system (Client Assistance System 'CAS', Disaster Assessment maps, etc.) will be established to identify those who have been affected by the disaster.
- The agencies in the MARC will abide by and adhere to the MARC Code of Ethics and Conduct and may be subject to a background screening.
- Appropriate chain of command will be followed by MARC participating agencies.
- Clients will receive assistance while maintaining confidentiality and dignity.
- Persons participating in providing MARC services will participate in surveys and MARC assessments. Client surveys will be ongoing during the life of the MARC. Assessments will be documented and included in a revised Plan on a scheduled basis.

ARC, FEMA, and Participating Organizations

The American Red Cross will determine the need for a MARC, meet with FEMA to determine whether co-location and a single entrance (MARC and FEMA) are desirable, and organize the establishment of it. Once decided, ARC will convene MARC Establishment meetings so the potential MARC partners participate in decisions associated with the MARC.

Agenda items include:

- Extent of the Disaster
- The demographics of the affected population and service delivery nuances such as cultural, ethnic, religious, medical and dietary considerations.

- Suggested MARC locations.
- The services each agency will provide.
- Confirm agreements are in place to provide childcare services (site director), food (mass care), and security (logistics).
- Other agencies that should be invited to participate.
- Timetable for opening, and hours of operation.

Development of MARC and the PDCA methodology

The Plan section using PDCA includes the planning assumptions, distribution list, partner agencies, and preparing for the MARC. The Do section of PDCA presents the MARC daily operations procedures from startup through closing. The SOPs cover the procedures for the client, partner agencies, and volunteers. The Check section of PDCA (referred to as MARC Assessment) covers the review of the MARC operations performance including against the targeted performance metrics. The Act/Adjust section of PDCA presents the suggested adjustments to continue the improvement of the MARC process.

The project performance target increasingly is defined to include the - Social (people), Economics, (profit/costs), and Planet (conservation of resources Triple Bottom Line). The objective is to reach a balance of the three categories of the TBL to achieve a project that is acceptable or is satisfactory for a sustainable life of the project service objective.

The MARC document will vary by state. A general outline of the MARC Process document content is provided in Table 1.

The key to integrate the PDCA continuous improvement method and the triple bottom line is a goal for the authors in their volunteer efforts in contributing to the development of the MARC. The MARC development is active across the US with general guidelines provided through the National American Red Cross Headquarters office in Washington. Each state will follow the general guidelines with customization for the particular needs of their area. The objective of the current ongoing state

MARC process is to enable continuous improvement following each implementation of the MARC on an actual disaster response. The authors in addition to contributing to the basic development using PDCA are also interested in the potential for integrating the goals of TBL sustainability concept within the MARC process.

The integration of addressing the performance for integration of quality and sustainability at each step of the MARC is challenging. The general concept was presented in Exhibit 3. Performance measures and metrics will need to be developed for each PDCA step that considers each of the economic, environment, and social segments of TBL to achieve sustainable objectives. This is part of the ongoing research. An initial table with ideas for the integration of performance areas for each of the three TBL is presented in Table 2.

Concluding Statement- More Work to Be Done

The ARC MARC Process is an excellent example of the use of the Deming PDCA cycle to ensure the process calls for a formal assessment and update after each disaster implementation. The benefits of use of the PDCA is especially appropriate given that the MARC process is new and is at this time being rolled out across the US. The authors hope to help illustrate to ARC that the standard MARC should include use of the PDCA method.

The integration of the sustainability elements – economics, environment, and social within each step of the Plan, Do, Check and Act steps for a MARC will require additional study. The basic targets of the sustainability TBL are consistent with the ARC objectives. The challenge will be to select the specific appropriate sustainability core subjects and issues presented in the ISO 26000 and GRI G4 ISO Guidelines. The general subjects selected for the Table 2 represent only a few selected of the cores subjects and issues of social responsibility as presented in the ISO Guidelines. The authors will continue to work with incorporation of the PDCA method and sustainability to achieve ongoing improvement of the ARC MARC process documents. ■